Annual Report, 2013

THE COLLEGE OF SCIENCE
TEXAS A&M UNIVERSITY

College Station, Texas
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A. Foreword from Dean H. Joseph Newton

As dean of the College of Science at Texas A&M University, it is my obligation and privilege each fall to take stock of our progress toward our three-part university mission – teaching, research, and service – and to reevaluate our collective commitment to ongoing excellence in all respective phases.

I am pleased to report that the Texas A&M College of Science continues to deliver on its unspoken yet inherent promise to advance discovery and solve real-world problems. In the past year alone, our scientific ingenuity has resulted in hundreds of top-notch graduates and roughly $46.3 million in sponsored research projects that create new knowledge and drive economies around the world. Each year despite economic downturn across all sectors and subsequent funding unpredictability, we continue to persevere in both basic and applied research efforts – an Aggie tradition established by and rooted in the strength of our programs and overall reputation for excellence.

In major administrative and curriculum-related news, Texas A&M Science added two new associate deans: Biology’s Ginger Carney (undergraduate research) and Mathematics’ Paulo Lima-Filho (international programs). The college also took its traditional go-to service teaching role a step further in fulfillment of Texas A&M Engineering’s 25BY25 initiative, teaching nearly 6,200 additional semester credit hours than we did in 2012 to benefit Aggie undergraduates across all majors. Along with Engineering, Texas A&M Science celebrated the birth of the campus’ newest academic department – Materials Science and Engineering – and also inaugurated a Texas A&M student chapter of the American Mathematical Society.

Meanwhile, the Department of Statistics announced its own pioneering partnership with Mays Business School on a new master’s of science in analytics program designed to help students and their employers better navigate and maximize “big data.” Statistics also celebrated its 50th anniversary in May, rolling out the red carpet for a grand gala attended by current and former faculty, staff, and students from all over the world and as far away as Nigeria.

As in years past, our individual teaching, research, and service highlights in 2013 were many and magnified. To name but a representative few, Biology’s Xiaorong Lin was honored as Texas A&M’s first Burroughs Wellcome Fund Investigator and only the second BWF-related prizewinner among all university faculty. Chemists Kevin Burgess and John Gladysz earned 2013 Royal Society of Chemistry Awards (Pedler Award and Organometallic Chemistry Award, respectively). Physicist Marlan Scully secured a three-year, $10.8 million Chancellor’s Research Initiative grant to promote interdisciplinary research in quantum biophotonics through the Institute for Quantum Science and Engineering, while physicist Jairo Sinova was recognized with Germany’s most valuable international research award, the Alexander von Humboldt Professorship. Two faculty also received National Science Foundation CAREER Awards (Mathematics’ Andrea Bonita and Chemistry’s Steven Wheeler).

In other notable accolades, biologist Matthew Sachs and statisticians Raymond Carroll, Bani Mallick, and Joe Newton were among seven Texas A&M faculty members recognized as 2013 Fellows of the American Association for the Advancement of Science. In addition, chemist Frank Rauschel was named a 2013 Fellow of the American Chemical Society, while fellow chemists Abraham Clearfield and Francois P. Gabba were admitted as Fellows of the Royal Society of Chemistry. Mathematicians’ Harold Boas received the Mathematical Association of America (MAA)’s 2013 Texas Section Award for Distinguished College or University Teaching of Mathematics, and fellow mathematician Vince Schielack was inducted into the Chancellor’s Academy of Teacher Educators. Mathematician Jean Marie Linhart and chemist Sherry Yennello each were listed among the Top 25 Women Professors in Texas, while Statistics’ Cliff Spiegelman was one of nine national experts...
selected to advise the Houston Police Department on technical forensic matters.

In global research breakthroughs, our high-energy physicists celebrated several major results, from a Nobel Prize in Physics for discovery of the Higgs Boson to tantalizing hints of and new limits on dark matter. Astronomers Vithal Tilvy and Casey Papovich helped detect the most distant spectroscopically confirmed galaxy ever found – a finding deemed one of Texas Monthly’s top five Texas-based scientific discoveries for 2013. Chemist Karen Wooley’s magnetic oil-absorbing nanoparticles also merited an honorable mention. Fellow chemist Joe Zhou’s laboratory earned a national innovation award for Texas-based commercial startup Framergy. Statistician Alan Dabney published a novel book, The Cartoon Introduction to Statistics, teaming with cartoonist Grady Klein to make statistics learning more accessible and fun.

On a campus achievement front, Physics and Astronomy’s Nicholas Suntzeff was selected as a university distinguished professor, Texas A&M’s highest academic honor for faculty. He also received the Bush Excellence Award for International Research. Chemist Larry Brown became the sixth college faculty member to earn a Presidential Professor for Teaching Excellence Award, Texas A&M’s highest recognition for classroom excellence. Biologist Deb Bell-Pedersen was honored with the 2013 Texas A&M Women Former Students’ Network Eminent Scholar Award, while mathematician Sue Geller earned the Texas A&M Women’s Faculty Network’s 2013 Outstanding Mentor Award. Chemist Holly Gaede was recognized with a 2013 President’s Award for Academic Advising, and Physics and Astronomy’s Bryan Jones received a President’s Meritorious Service Award, the university’s top recognition for staff excellence.

Students shared equally in the accomplishment spotlight. Physics and Astronomy’s Indara Suarez was honored with a 2013 CMS Achievement Award, given to 23 of the roughly 3,000 scientists from around the world working on the Compact Muon Solenoid experiment at CERN. Mathematics senior Daniel Miller was named a 2013 Barry M. Goldwater Scholar and also received a Society for Industrial and Applied Mathematics (SIAM) Award at the MAA’s MathFest 2013. Fellow seniors Nicole Gardner and Matthew Barry earned the Bio-SIGMAA Environmental Math Prize and a Pi Mu Epsilon award, respectively. Mathematics’ Robert Carpenter and Chemistry’s Stephanie Florez-Malaver made a clean sweep of the 2013 Brown-Rudder Awards, presented at spring commencement to the top two Texas A&M seniors. Chemistry doctoral student Tiffany Pinder received a 2013 Phil Gramm Doctoral Fellowship, while fellow chemistry doctoral students Jinhee Park and Sandani Samarajeeva were honored with 2013 Distinguished Graduate Achievement Awards. In addition, Biology’s Pablo Delclos and Sarah Flanagan, Chemistry’s Simcha Felder, and Mathematics’ Jennifer Bryson each received 2013 NSF Graduate Research Fellowships to support their continued study in science and engineering. Finally, the Texas A&M University Society of Plastics Engineers (SPE) – led by president Jacqueline Pope, a Ph.D. candidate in chemistry – received a national 2013 SPE Outstanding Student Chapter Award in recognition of its noteworthy excellence in programs, activities, and participation levels.

From an educational outreach perspective, Texas A&M’s STEM Teacher Preparation Academy was honored with a CREATE Award for Exemplary Faculty Practice. The Center for Mathematics and Science Education’s Timothy Scott was selected to serve a two-year term as a member of the Executive Committee of the Association of Public and Land-Grant Universities (APLU) Commission on the Science and Mathematics Teacher Imperative (SMTI). In addition, Chemistry hosted the 26th edition of its award-winning Chemistry Open House and Science Exploration Gallery, while record crowds attended both the Math MiniFair and Physics & Engineering Festival. Thousands of students and teachers also participated in annual events hosted by our Educational Outreach and Women’s Programs Office as well as myriad others within each department.
So often with good news comes the inevitable bad. On July 26, 2013, Texas A&M Science, along with the entire campus and overall state of Texas and nation, marked the monumental loss of George P. Mitchell ’40, a great man, global visionary, and irreplaceable Aggie. Earlier in the year, Mr. Mitchell had been honored with a 2013 History-Making Texan Award, and just four days after his death, the Houston Chronicle declared him “Houstonian of the Century.” Mr. Mitchell also was celebrated in Tucson with a tribute video featuring, among others, Cambridge University theoretical physicist Stephen W. Hawking as part of third-mirror-casting events for the Giant Magellan Telescope, one of Mr. Mitchell’s primary philanthropic and scientific passions.

In 2013 as in years past, I thank each of you, not only for another year of great achievement, but also for the continued distinction you bring to both Texas A&M University and the College of Science in your efforts to deliver the highest quality of science education, scholarly research, and technical expertise and service to benefit the world.
B. Statistical Snapshots

The following statistics are cited as follows:

Faculty
▷ Compiled from the College of Science Faculty Database. (Fall 2009, Fall 2010, Fall 2011, Fall 2012, Fall 2013) FINAL Title, Gender, Ethnicity.

Research
▷ Compiled from the College of Science Dean Database and Sec 7.1 of Each Corresponding Department.

Student
▷ Office of Institutional Studies and Planning (OISP). (Fall 2009, Fall 2010, Fall 2011, Fall 2012, Fall 2013) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Teaching
▷ SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Spring 2009 - Fall 2013) SCH Summaries by College for [Semester] [Year].
▷ FTE: 2008-2013 - Office of Institutional Studies and Planning (OISP). (Fall 2009, Fall 2010, Fall 2011, Fall 2012, Fall 2013) Semester Teaching Analysis Report (STAR), Analysis of Department by Level and Funding Code, Fall [Year].

Calculations to obtain WSCH/FTE:
▷ WSCH/FTE (Dept) = \( \frac{\text{WSCH for Dept}}{\text{FTE for Dept}} \)
▷ WSCH/FTE (College) = \( \frac{\sum (\text{WSCH for all CLSC Depts})}{\sum (\text{FTE for all CLSC Depts})} \)
## Faculty Snapshot

### Total TTF (Fall)

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<tr>
<th>Department</th>
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<th>Assoc. Prof.</th>
<th>Asst. Prof.</th>
<th>Total</th>
</tr>
</thead>
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<tr>
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### Female/Total (Fall)

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<td>5</td>
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<tr>
<td>STAT</td>
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<td>7</td>
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<td><strong>TOTAL</strong></td>
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### Minority/Total* (Fall)

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<td><strong>TOTAL</strong></td>
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*Minority= Black and/or Hispanic
## Research Snapshot

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SEC. B.  STATISTICAL SNAPSHOTS  9
## Student Snapshot

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<th>Undergraduate Majors (Fall)</th>
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<th>2010</th>
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<tr>
<td><strong>TOTAL</strong></td>
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<td><strong>2,677</strong></td>
<td><strong>2,372</strong></td>
<td><strong>2,376</strong></td>
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<table>
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<th>Graduate Majors (Fall)</th>
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<th>2010</th>
<th>2009</th>
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<tbody>
<tr>
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<td>PHYS</td>
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<td>162</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>842</strong></td>
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## Teaching Snapshot

### SCH: Undergraduate

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<td>35,510</td>
<td>39,214</td>
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<td>14,571</td>
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### SCH: Graduate

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<td><strong>21,749</strong></td>
<td><strong>21,464</strong></td>
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### WSCH (Weighted Semester Credit Hours) in thousands

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<th>2009</th>
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<td><strong>TOTAL</strong></td>
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<td><strong>293.1</strong></td>
<td><strong>284.6</strong></td>
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<td>WSCH Fall/Per FTE Faculty</td>
<td>2013</td>
<td>2012</td>
<td>2011</td>
<td>2010</td>
<td>2009</td>
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Any information reported or learned after 08/04/2014, may not be included due to report deadlines. Please forgive any errors, and continue to report them, so that we might make corrections to maintain the accuracy of our long-term reports.
1. Intro to Cross-Departmental Faculty

In recognition that science is more and more crossing traditional academic departmental lines, the College of Science has established a process for creating and searching for occupants of tenured or tenure-track faculty positions where the tenure might not reside in any department. It is assumed that such positions would be rare and not be used to take the place of traditional department-oriented positions.

Such faculty will be reported in this section marked cross-departmental.
2. Cross-Departmental Statistics

This section contains information, clarified by dean’s office staff and gathered from the following sources:

I. Personnel

Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2013) FacultyList_FINAL.

Non-Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2013) FacultyListNonTTF_FINAL.

II. Research Activities

Research Publications

▷ Queried from Web of Science® and compiled from the College of Science Dean Database Publications_COUNT.

Research Presentations

▷ As reported by faculty and compiled from the College of Science Dean Database Presentations_COUNT.

Federal/State/University/Private/Industrial/International/Other Government

▷ Gathered from research proposals, research award notices, as reported by faculty, compiled from the College of Science Dean Database, Sec. 7.1 of following department annual report.
## 2.1 Statistical Abstract

### 2013 Cross-Departmental Faculty annual report

### I. Personnel

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Tenured and Tenure-Track Faculty</strong></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
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<tr>
<td>Assistant Professor</td>
<td>1</td>
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<tr>
<td>Associate Professor</td>
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<tr>
<td>Distinguished Professor</td>
<td>0</td>
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<tr>
<td><strong>b. Non-Tenure-Track Faculty</strong></td>
<td>0</td>
</tr>
<tr>
<td>c. Postdoctoral Fellows</td>
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</tr>
<tr>
<td>d. Graduate Majors</td>
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<tr>
<td>e. Undergraduate Majors</td>
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<tr>
<td>f. Support Staff</td>
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</table>

### II. Instructional Activities

<table>
<thead>
<tr>
<th>Category</th>
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</thead>
<tbody>
<tr>
<td><strong>a. Graduate Semester Credit Hours</strong></td>
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</tr>
<tr>
<td><strong>b. Undergraduate Semester Credit Hours</strong></td>
<td>0</td>
</tr>
<tr>
<td>c. PhD Degrees</td>
<td>0</td>
</tr>
<tr>
<td>d. Masters Degrees</td>
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</tr>
<tr>
<td>e. Undergraduate Degrees</td>
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</tr>
</tbody>
</table>

### III. Research Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Research Publications</strong></td>
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</tr>
<tr>
<td><strong>b. Research Presentations</strong></td>
<td>21</td>
</tr>
<tr>
<td>c. Federal</td>
<td>783,446</td>
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<tr>
<td>d. State</td>
<td>115,653</td>
</tr>
<tr>
<td>e. University</td>
<td>0</td>
</tr>
<tr>
<td>f. Private/Non-Profit</td>
<td>117,030</td>
</tr>
<tr>
<td>g. Industrial/Corporate</td>
<td>0</td>
</tr>
<tr>
<td>h. International</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,016,129</strong></td>
</tr>
</tbody>
</table>
3. Faculty*, 2013

Charles M. Folden..................................................Assistant Professor
Timothy P. Scott.....................................................Associate Professor

* For the Annual Report, faculty are defined as tenured, tenure-track and non-tenure track employees who were employed at any time during 2013 (01/01/2013-12/31/2013).
3.1 Professional Activities, 2013

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2013.

Subsections of professional activities are defined as follows:

Honors and Awards
▷ All professional honors and awards, both internal and external.

Service Activities
▷ All professional service and leadership roles, including: departmental, college, university, state, national and international.

Teaching
▷ Classes taught during the Spring, Summer and Fall sessions of 2013.
▷ Any missing enrollment numbers were gathered from the Student Information Management System (SIMS) at Texas A&M University.

Research Projects
▷ All research projects, funded and unfunded.
▷ Whenever possible, all research-related employees of that faculty member are listed along with the citation. Key for employees: (P)=Postdoc, (G)=Graduate Student, (U)=Undergraduate Student.
▷ Renewals are marked by “(REN)” at the beginning of their title.
▷ Unfunded grants are marked by “(UNFUNDED)” at the end of the citation.
▷ Additional information (including PIs, CoPIs, and funding) on all funded grants are listed in Section 7.

Presentations
▷ All posters, invited and contributed lectures (plenary, conferences, colloquia, seminars, etc.).
▷ Whenever reported, posters, invited and contributed lectures are noted in parentheses following the citation.
▷ Citations are in chronological order.

Publications
▷ All printed materials published during 2013.
▷ Pre-press, in-press and submitted publications were not included.
▷ Citations were formatted in APA Style and are in alphabetical order by lead author.
CHARLES M. FOLDEN, III

ASSISTANT PROFESSOR (979) 845-1411
CLSC-Nuclear Chemistry folden@comp.tamu.edu

• SERVICE DURING 2013

National
▷ Event: Nuclear Chemistry Summer School, Brookhaven National Laboratory (Speaker), Young Investigators in Nuclear and Radiochemistry (Organizer)
▷ Editorial/Board: Atomic Data and Nuclear Data Tables and Chinese Journal of Physics (Referee: Journals)

University
▷ Committee/Panel: Radiation Safety Committee (Member)

Department
▷ Committee/Panel: Cyclotron Institute Space Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 328. — Physical Chemistry II (total enrollment: 50)

Fall
▷ CHEM 328. — Physical Chemistry II (total enrollment: 35)
▷ CHEM 464. — Nuclear Chemistry (total enrollment: 16)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy
▷ Providing the Roadmap for New Element Discoveries and New Chemistries of the Heavier Elements, Department of Energy
▷ Experimental and Computational Assessment of Unique Trace Elements and Isotope Ratios in Separated Plutonium from Depleted Uranium Irradiated in Fast Reactor Blankets, Domestic Nuclear Detection Office

Private
▷ Chemical Investigation of the Heaviest Elements, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2013

▷ “Production of Nuclides Near the N = 126 Shell Using Projectiles with Z > 20,” American Physical Society April Meeting, Denver, CO, April, 2013. (Individual)
the Frontiers of Nuclear Science, New London, NH, June, 2013.(Poster Individual)
▷ “Analysis of Vanadium Activation Products from NIF Irradiations,” Lawrence Livermore National Laboratory Summer Programs Poster Session, Livermore, CA, August, 2013. (Individual)
▷ “Effects of Projectiles with $Z \geq 20$ on Fusion-Evaporation Cross Sections,” Exotic Beam Summer School, Berkeley, CA, August, 2013.(Poster Individual)
▷ “Excitation Functions of $^{45}$Sc-Induced Reactions: Towards Superheavy Elements Synthesis,” International Workshop on Nuclear Dynamics and Thermodynamics, College Station, TX, August, 2013.( Individual)
▷ “Experimental and Computational Assessment of Unique Trace Elements and Isotopes Ratios in Plutonium from Depleted Uranium Irradiated in Fast Reactor Blankets with Sunil S. Chirayath,” DNDO ARI Grantees Program Review, Leesburg, VA, August, 2013.( Individual)
▷ “Heavy Element Research at Texas A&M University,” FRIB Community Meeting, East Lansing, MI, August, 2013.( Invited)
▷ “Influence of Projectiles with $Z > 20$ on Synthesis of Heavy Evaporation Residues,” International Workshop on Nuclear Dynamics and Thermodynamics, College Station, TX, August, 2013.( Individual)
▷ “Prospects for Discovery of the Next New Element in Complete Fusion Reactions,” International Workshop on Nuclear Dynamics and Thermodynamics, College Station, TX, August, 2013.( Individual)
▷ “Influence of Projectiles with $Z > 20$ on Synthesis of Heavy Evaporation Residues Near $^{208}$Pb,” 246th American Chemical Society National Meeting, Indianapolis, IN, September, 2013.( Individual)
▷ “Heavy Elements Research,” Texas A&M University, American Chemical Society Western Regional Meeting, Santa Clara, CA, October, 2013.( Invited)

- PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Professor (J), Biology, [2012]
  ▶ Associate Dean for Undergraduate Programs and Development, Undergraduate Studies
    Office, College of Science, [2009]
  ▶ Co-Director, Center for Mathematics and Science Education (CMSE), College of Science,
    [2001]

• AWARDS DURING 2013
  University
  ▶ Exemplary Faculty Practices Award, Center for Research, Evaluation and Advancement
    of Teacher Education

• SERVICE DURING 2013
  International
  ▶ Committee/Panel: Crocodile Specialist Group/Species Survival Commission/World Con-
    servation Union (Member), International Student Placement Committee (Undergraduate)
    (Chair), National Association for Research in Science Teaching - External Policy and
    Relations Committee (Appointed Member)

  National
  ▶ Committee/Panel: American Association for the Advancement of Science (Member), Asso-
    ciation for the Study of Transfer Students (Member), Executive Committee of the Associa-
    tion of Land-Grand Universities Commission on the Science and Mathematics Teacher Im-
    perative (Member), NASA Professional Development Network (Member), National Con-
    ference Planning Committee (Member), National Science Teachers Association (Member)

  State
  ▶ Committee/Panel: Diversity and Innovations for Geosciences (DIG) in Texas (Member),
    Texas Higher Education Coordinating Board College and Career Readiness Initiative Sci-
    ence Faculty Collaborative (Member), Texas Regional Collaborative for Excellence in Sci-
    ence and Mathematics Teaching Board (Member)

  University
  ▶ Service Position: ATMentors (Member)
  ▶ Advisory Board: Center for Teaching Excellence, Faculty (Member), Retention through
    Remediation Enhancing Calculus I Success (Member)
  ▶ Committee/Panel: Academic Calendar Task Force (Member), Academic Operations Com-
    mittee (Member), Academic Scholarship Committee (Member), Advisors and Counselors
    (Member), Career Center Advisory Council (Member), Community Engagement (for Di-
    versity) Committee (Member), Council of Teacher Education (Member), Phi Kappa Phi
    Programs and Awards Committee, Study Abroad Committee (Chair), Search Advisory
Committee for Program Coordinator for Supplemental Instruction and Tutoring for the Academic Success Center (Member), Search Advisory Committee for Senior Associate Director for the Office of Admissions (Member), Texas State Certified Mediator (Member), Tier One Program (TOP) Selection Committee (Member), University Curriculum Committee (Chair)

College
▷ Service Position: Student Information Management System/Compass Primary (Authorizing Agent)
▷ Committee/Panel: Executive Committee (Member), Undergraduate Program Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 388. — Principles of Animal Physiology (total enrollment: 61)
▷ BIOL 481. — Seminar in Biology (total enrollment: 31)
▷ SCEN 301. — College of Science Study Abroad (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Texas A&M UniversityAggie Teach Robert Noyce Scholarship Program, National Science Foundation
▷ Expanding Opportunities through the Science Scholars Program, National Science Foundation
▷ USDA/HSINP Future Scientists Program: Sowing the Seeds of Science Success, U.S. Department of Agriculture

State
▷ Texas A&M UniversitySTEM Collaborative for Teacher Professional Learning, Texas Higher Education Coordinating Board
▷ Texas Regional Collaborative for Excellence in Science Teaching, University of Texas

Private
▷ aggieTEACH Expansion & Improvement Program, Greater Texas Foundation
▷ Challenge Grant for aggieTEACH Program, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2013
▷ “Focusing on STEM: Science and Engineering in the Classroom,” Teacher Summit, College Station, TX, 2013.(Invited)
▷ “Conference of the National Institute for the Study of Transfer Students,” The Science Scholars Program, Palo Alto College and the College of Science, Texas A&M University, Frisco, TX, January, 2013.(Poster Individual)
▷ “Transfer Learning Community Orientation: Supporting STEM Student Success,” Conference of the National Institute for the Study of Transfer Students, Frisco, TX, January, 2013.(Individual)

“Academic Success Boot Camp for STEM Majors,” SACNAS Annual Conference, Strengthening the Nation through Diversity, Innovation & Leadership in STEM, San Antonio, TX, October, 2013. (Individual)

“Supporting STEM Student Success,” College of Science Transfer Learning Community, Atlanta, GA, October, 2013. (Poster Individual)
4. Research Activity, 2013

This section contains information on all funded research activity for the calendar year 2013. Information was initially reported by faculty and verified whenever possible through the granting agency. Because of calculations and rounding there is a small margin of error.

Information reported by faculty:
▷ Title
▷ Granting Agency
▷ PIs, Co-PIs, and co-workers (internal/external)
▷ Total Funding
▷ Indirect Costs
▷ Start & End Dates

Calendar year calculations:
▷ Total - Indirect = Direct
▷ # Days Total Grant = End Date - Start Date
▷ Daily Grant Award = Total Funding Reported / # Days Total Grant
▷ Grant Award for 2013 = # Days 2013 × Daily Grant Award
4.1 Summary of Research Support, 2013

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>Federal Agencies</strong></td>
<td></td>
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<tr>
<td><strong>Department of Energy</strong></td>
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<tr>
<td>Folden, C.M.</td>
<td>Providing the Roadmap for New Element Discoveries and New Chemistries of the Heavier Elements</td>
<td>7/1/2012</td>
<td>6/30/2017</td>
<td>150,000</td>
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<td>150,000</td>
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<td><strong>Subtotal: Department of Energy</strong></td>
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<td><strong>Domestic Nuclear Detection Office</strong></td>
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<td><strong>Subtotal: Domestic Nuclear Detection Office</strong></td>
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<tr>
<td>Scott, T.P.</td>
<td>Expanding Opportunities through the Science Scholars Program, (with: T. Scott, S. Yennello)</td>
<td>1/1/2008</td>
<td>12/31/2014</td>
<td>42,840</td>
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<td><strong>U.S. Department of Agriculture</strong></td>
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<td><strong>Subtotal: U.S. Department of Agriculture</strong></td>
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<td><strong>Subtotal: Federal Agencies</strong></td>
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<td>Grantee</td>
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<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------</td>
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<tr>
<td><strong>Private/Non-Profit Agencies</strong></td>
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<tr>
<td><strong>Greater Texas Foundation</strong></td>
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<tr>
<td>Scott, T.P.</td>
<td>aggieTEACH Expansion &amp; Improvement Program</td>
<td>7/1/2012</td>
<td>6/1/2015</td>
<td>51,408</td>
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<td>51,408</td>
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<td><strong>Subtotal: Greater Texas Foundation</strong></td>
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</tr>
<tr>
<td>* Subtotal: The Robert A. Welch Foundation</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Scott, T.P.</td>
<td>Challenge Grant for aggieTEACH Program</td>
<td>7/29/2011</td>
<td>8/6/2013</td>
<td>44,046</td>
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<td><strong>Subtotal: The Robert A. Welch Foundation</strong></td>
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<tr>
<td>* Subtotal: Private/Non-Profit Agencies</td>
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<td></td>
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<td>117,030</td>
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<tr>
<td><strong>State Agencies</strong></td>
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<tr>
<td><strong>Texas Higher Education Coordinating Board</strong></td>
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<tr>
<td><strong>Subtotal: Texas Higher Education Coordinating Board</strong></td>
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<tr>
<td>* Subtotal: University of Texas</td>
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<tr>
<td><strong>Subtotal: University of Texas</strong></td>
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</tr>
<tr>
<td>* Subtotal: State Agencies</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* * * Total: All Grantees</td>
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<td></td>
<td>911,162</td>
<td>104,967</td>
<td>1,016,129</td>
</tr>
</tbody>
</table>

SEC. 4. RESEARCH ACTIVITY 29
### 4.2 Summary of Individual Support, 2013

<table>
<thead>
<tr>
<th>Granting Agency</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Energy</td>
<td>Providing the Roadmap for New Element Discoveries and New Chemistries of the Heavier Elements</td>
<td>7/1/2012</td>
<td>6/30/2017</td>
<td>150,000</td>
<td>0</td>
<td>150,000</td>
</tr>
<tr>
<td>The Robert A. Welch Foundation</td>
<td>Chemical Investigation of the Heaviest Elements</td>
<td>6/1/2009</td>
<td>5/31/2013</td>
<td>21,575</td>
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<tr>
<td><strong>Subtotal Felden, C.N.</strong></td>
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<td></td>
<td></td>
<td>566,330</td>
<td>104,967</td>
<td>671,297</td>
</tr>
</tbody>
</table>

| **Scott, T.P.** | | | | | | |
| National Science Foundation | Texas A&M UniversityAggie Teach Robert Noyce Scholarship Program, (with: C. Schroeder, T. Scott) | 7/1/2009 | 6/30/2015 | 49,974 | 0 | 49,974 |
| National Science Foundation | Expanding Opportunities through the Science Scholars Program, (with: T. Scott, S. Yennello) | 1/1/2008 | 12/31/2014 | 42,840 | 0 | 42,840 |
| Greater Texas Foundation | aggieTEACH Expansion & Improvement Program | 7/1/2012 | 6/1/2015 | 51,408 | 0 | 51,408 |
| The Robert A. Welch Foundation | Challenge Grant for aggieTEACH Program | 7/29/2011 | 8/6/2013 | 44,046 | 0 | 44,046 |

**2013 Cross-Departmental Faculty Annual Report**
<table>
<thead>
<tr>
<th>Granting Agency</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
</thead>
</table>

• Subtotal Scott, T.P. 345,833 0 345,833

*** Total: All Faculty 911,162 104,967 1,016,129
Any information reported or learned after 05/12/2014, may not be included due to report deadlines. Please forgive any errors, and continue to report them, so that we might make corrections to maintain the accuracy of our long-term reports.
1. Foreword from the Department Head

2013 was an outstanding year for the Department of Biology, with many of our faculty receiving well-earned rewards. In June, associate professor Dr. Xiaorong Lin was appointed as a Burroughs Wellcome Fund Investigator in the Pathogenesis of Infectious Diseases. This award is accompanied by a three-year, $500,000 grant for her research on infectious fungal diseases. In October, Dr. Joseph Sorg was named a Montague Scholar, an award given each year to an assistant professor who excels both in research and in the classroom. Dr. Sorg is our department’s first Montague Scholar in 20 years. Professor Deborah Bell-Pedersen was selected as the Texas A&M’s Women’s Former Student Network Eminent Scholar in October. This award recognizes a faculty member who demonstrates extraordinary achievements in research and helps Texas A&M University become a place of preeminence among public universities around the world. Nominations for many other awards are still pending, and I am confident that our faculty will continue to garner the praise and recognition they deserve.

On September 1, four of our assistant professors, Xiaorong Lin, Robyn Lints, Hongmin Qin, and James Smith, were promoted to associate professor with tenure, and two of our associate professors, Adam Jones and Gil Rosenthal, were promoted to professor.

We also hired two new assistant professors in the fall, Drs. Jerome Menet and Christine Merlin, as part of our effort to strengthen our already strong program in biological clocks. Dr. Menet works with mice to investigate and understand how rhythmic gene expression is regulated at the molecular level by inputs from the clock and how this process can be affected by the timing of food intake. Dr. Merlin works with monarch butterflies to understand interactions between the sun compass they use to direct their migration and their internal circadian clock.

In January, 2013, Dr. Jack McMahan stepped down from his position as department head to devote more time to his research lab. The entire department is grateful for his admirable leadership during difficult times. Shortly after he arrived at A&M, the university and the department were faced with severe budget cuts and erosion of moral and political support inside and outside the university. However, under Jack’s guidance, we managed to weather the storm without too much permanent damage to our academic programs and our students. Fortunately, the funding crisis seems to be abating at both the local and national levels, and the Department of Biology is well positioned to capitalize on this improvement.
2. Departmental Statistics

This section contains information, clarified by each department and gathered from the following sources:

I. Personnel

Tenure-Track Faculty
▷ Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyList_FINAL.

Non-Tenure-Track Faculty
▷ Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyListNonTTF_FINAL.

Postdoctoral Fellows
▷ Provided by the Department

Graduate Student/Undergraduate Majors
▷ Office of Institutional Studies and Planning (OISP). (Fall 2012, Fall 2013) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff
▷ Provided by the Department

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours
▷ SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2013) SCH Summaries by College for [Semester] [Year].

PhD Degrees/Masters Degrees
▷ Queried from COGNOS and the College of Science Dean Database Degrees_Grad.

Undergraduate Degrees
▷ Queried from COGNOS and the College of Science Dean Database Degrees_Undergrad.

III. Research Activities

Research Publications
▷ Queried from Web of Science® and compiled from the College of Science Dean Database Publications_COUNT.

Research Presentations
▷ As reported by faculty and compiled from the College of Science Dean Database Presentations_COUNT.

Federal/State/University/Private/Industrial/International/Other Government
▷ Gathered from research proposals, research award notices, as reported by faculty, compiled from the College of Science Dean Database, Sec. 7.1 of following department annual report.
## 2.1 Statistical Abstract

### I. Personnel

<table>
<thead>
<tr>
<th>Type</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Tenured and Tenure-Track Faculty</td>
<td>43</td>
<td>45</td>
</tr>
<tr>
<td>Professor</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>11</td>
<td>8</td>
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<tr>
<td>Associate Professor</td>
<td>16</td>
<td>18</td>
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<tr>
<td>Distinguished Professor</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>b. Non-Tenure-Track Faculty</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Visiting Professor</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Visiting Assistant Professor</td>
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<tr>
<td>Visiting Associate Professor</td>
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<tr>
<td>Instructional Assistant Professor</td>
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<tr>
<td>Lecturer</td>
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<td>2</td>
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<tr>
<td>Senior Lecturer</td>
<td>7</td>
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<tr>
<td>c. Postdoctoral Fellows</td>
<td>18</td>
<td>15</td>
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<tr>
<td>d. Graduate Majors</td>
<td>99</td>
<td>96</td>
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<tr>
<td>e. Undergraduate Majors</td>
<td>1,606</td>
<td>1,636</td>
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<tr>
<td>f. Support Staff</td>
<td>53</td>
<td>51</td>
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### II. Instructional Activities

<table>
<thead>
<tr>
<th>Type</th>
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<th>2013</th>
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</thead>
<tbody>
<tr>
<td>a. Graduate Semester Credit Hours</td>
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<td>b. Undergraduate Semester Credit Hours</td>
<td>35,441</td>
<td>35,980</td>
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<td>c. PhD Degrees</td>
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<td>17</td>
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<tr>
<td>d. Masters Degrees</td>
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<td>2</td>
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<tr>
<td>e. Undergraduate Degrees</td>
<td>328</td>
<td>291</td>
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### III. Research Activities

<table>
<thead>
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<th>Type</th>
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<tr>
<td>a. Research Publications</td>
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<td>b. Research Presentations</td>
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<td>c. Federal</td>
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<td>4,110,722</td>
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<td>d. State</td>
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<td>e. University</td>
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<td>f. Private/Non-Profit</td>
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<td>g. Industrial/Corporate</td>
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<td>h. International</td>
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<td><strong>Total</strong></td>
<td><strong>7,555,075</strong></td>
<td><strong>5,231,677</strong></td>
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</table>
3. Honors & Awards, 2013

By Faculty
  ▶ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2013.

By Students
  ▶ This section contains all honors and awards, as reported by the department, during the calendar year 2013.
### 3.1 Honors & Awards Received by Faculty, 2013

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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</thead>
<tbody>
<tr>
<td>X. Lin</td>
<td>Investigator in the Pathogenesis of Infectious Disease, Burroughs</td>
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<tr>
<td></td>
<td>Wellcome Fund</td>
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<tr>
<td>M. Sachs</td>
<td>Fellow, American Association for the Advancement of Science</td>
</tr>
<tr>
<td>J. Sorg</td>
<td>Montague-Center for Teaching Excellence Scholar, Center for</td>
</tr>
<tr>
<td></td>
<td>Teaching Excellence</td>
</tr>
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</table>
3.2 Honors & Awards Received by Students, 2013

Graduate

- NSF Graduate Research Fellowships
  - Pablo Delclos
  - Sarah Flanagan

- Society for Integrative and Comparative Biology, Best Student Presentation in Phylogenetic and Comparative Biology
  - Rongfeng “Ray” Cui

Undergraduate

- Barbara S. and Julian B. “Barry” Coon ’61 Scholarship
  - Nicholas Kiefer

- Brenda A. (Brunick) ’86 and Timothy E. Scronce Scholarship in Science
  - Caitlin Clark
  - Cecilia Mauricio

- College of Science General Scholarship Fund
  - Holland Kaplan
  - Hannah Starke

- Crawford and Hattie Jackson Doundation Scholarship
  - Callie Bauser

- Dr. Gerald W. Crouch ’79 Endowed Lifelines Scholarship
  - Megan Kukielski

- Emily & Robert Walker ’45 Endowed Scholarship
  - Jay Lim

- Gathright Scholar Award
  - Himanshu Patel

- George Reichel ’70 Endowed Scholarship in Science
  - Jennifer Rumpf

- H.R. Lewis Scholarship
  - Jamal Malik
  - Irina Neretin
  - Nathan Oehring
  - Aditya Panta

- Howard Gravett Endowed Scholarship
  - Leah Barnett

- Hugo F. Elmendorf, Jr. MD ’44 Lifelines Scholarship
  - Eliza Contreras
  - Michelle Kukielski
▷ J. W. Birdwell '28 Endowed Scholarship in Science
   Hector Martinez

▷ Jack Orrick '45 Endowed Lifelines Scholarship
   Lindsay Rubenstein
   Kendra Smale

▷ Jessica Jon Chancellor Memorial Lifelines Scholarship
   Jocelyn Antony

▷ Joheph H. Emmert, Jr. '69 Endowed Scholarship in Science
   Bradley Leiker

▷ John B. and Ora Mae Dougherty Memorial Lifelines Scholarship
   Mario Arredondo
   Jeremy Rawlings

▷ John C. Calhoun III Scholarship in Science
   James McClintic

▷ John Todd Willis '44 Endowed Memorial Scholarship in Biology
   David Garcia

▷ Julia Ball Lee Scholarship
   Heather Baumann
   Amy Jacks
   Lily Luc

▷ Lifelines Endowed Scholarship Program
   Kinjal Mehta

▷ Lola Mae & Charles LaMotte Memorial Endowed Scholarship
   John Peters

▷ Melvin Hamilton '71 Memorial Endowed Scholarship
   Enena Lischau

▷ Patricia & William Gordon '67 Scholarship in Science
   Alexander Constantine

▷ Patsy Ruth & Delma P. Posey ’59 Endowed Scholarship in Science
   Paige Petersen

▷ Richard B. Grant, Jr. ’29 Endowed Scholarship in Science
   Alicia Hubbell

▷ Susan Luehr ’84 Endowed Lifelines Scholarship in Biology
   Ramy Zaza

▷ Walter S. McGregor ’38 Lifelines Memorial Scholarship
   Travis Miller

▷ William A. Triche and Homer A. Triche Endowed Scholarship Fund in Engineering,
Science and Medicine

Katharine Blackert
Kristen Coffman
Michelle Kelly

▷ William James Crenan ’49 Endowed Scholarship
   Kristen Thoede

▷ Wimmiam E. Wheeler ’46 Lifelines Scholarship in Biology
   Vien Nguyen

▷ Woodie Bennett Mike Scholarship
   William Estes
4. Students, 2013

This section contains all degrees awarded, as reported by the department, during the calendar year 2013.
4.1 Graduate Degrees Awarded, 2013

Fall

▷ M.S.

Aldrin Benzon Lugena

Advisor(s): A. Lekven

▷ Ph.D.

Kevin D Baker
The Role of Wnt8 in Ventrolateral Mesoderm Patterning and Posterior Growth
Advisor(s): A. Lekven

Lindsay Danielle Bennett
Mapping Circadian Output Pathways in Neurospora Crassa
Advisor(s): D. Bell-Pedersen

Kara Alicia Boltz
Telomere Regulation in Arabidopsis Thaliana by the CST Capping Complex and DNA Damage Response Proteins
Advisor(s): T. McKnight, Dorothy Shippen

Allyson Kendall Martinez
Tryptophan Regulation of the Escherichia coli Tryptophanase (tna) Operon
Advisor(s): M. Sachs

Pallavi Mukherjee
Live Imaging of Subcellular Phosphate Pools in Plants
Advisor(s): W. Versaw

Pinnaduwage Nadisha Silva
Maternally Inherited Endosymbiotic Bacteria of Drosophila: Spiroplasma and Wolbachia
Advisor(s): J. Erickson

Kam Ho To
Biochemical and Genetic Characterization of Bacteriophage Holins
Advisor(s): R. Young

Spring

▷ M.S.

Archana Venkataraman
Differential Protein Expression in the Insular Cortex and Amygdala after Taste Memory Acquisition and Retrieval

▷ Ph.D.

Neha Bhat
Developmental Mechanisms Regulating Specification of Preplacodal Ectoderm and its Morphogenesis into Sensory Placodes in Zebrafish
Advisor(s): B. Riley

Mugdha Ravindra Deshpande
Behavioral and Molecular Characterization of the Early Phase in Vocal Learning in the Zebra Finch
Advisor(s): T. Lints

2013 Biology annual report
Jenna Nicole Jarvis  Vocal Timing in the Bat
Advisor(s): M. Smotherman

James Bradley Johnson  The Architecture of Phenotypes in a Naturally Hybridizing of Xiphophorus Fishes
Advisor(s): G. Rosenthal

Eric Dana Rosch  Response to Consoecific Chemical Cues in the Fiddler Crab Uca Rapax
Advisor(s): M. Wicksten

Summer

Ph.D.

Terrence Michael Boyle  Effects of Local Adaptation of Invasion Success: A Case Study of Rhithropanopeus harrisii (GUOLD)
Advisor(s): M. Wicksten

Imade Yolanda Nsa  A Novel Cryptochrome-Dependent Oscillator in Neurospora Crassa
Advisor(s): D. Bell-Pedersen

Jarret Keith Richardson  Transient Mixed Synapses Regulate Emerging Connectivity in Simple Neuronal Networks
Advisor(s): M. Zoran

Jiajie Wei  Translational Control Mechanisms Analyzed in Neurospora Crassa
Advisor(s): M. Sachs

Carla Jo Logan Young  Comparative Genomics of Gossypium spp. Through GBS and Candidate Genes - Delving into the Controlling Factors behind Photoperiodic Flowering
Advisor(s): A. Pepper
## 4.2 Undergraduate Degrees Awarded, 2013

**Fall**

- **B.A.**
  - Jade Lauren Bedell
  - Eric Logan Bruton
  - Karla Araceli Gutierrez
  - Bassem Tawfik Hanalla
  - Cynthia Karina Lora
  - Olivia Edenn-ivey Philpot
  - Vitoria Staniszewski

- **B.S.**
  - Jillian Rea Anderson
  - Sandra Carolina Artieda
  - Adewunmi Rekiat Babalola
  - Kayla Rose Balding
  - Blake Latham Biediger
  - Mariya S Bobrovnyk
  - Amanda Grace Bower
  - Angelica Calderon-Rodriguez
  - Blake Gregory Caspari
  - Colton Robert Chambliss
  - Neelam M Charolia
  - Rachael Nicole Cooper
  - Jacob Rae Daehnke
  - Emily Rae Davidson
  - Weldon Don Davis
  - Jennifer Agnes Alpha Deluca
  - Edgar Omar Diaz
  - Elena Jean Douglass
  - Lynde Rene Frazier
  - David Garcia Sanchez
  - Brandon Michael Gay
  - Stephanie Chumphunoot Gommert
  - Monica Renee Greene
  - Kristin Aronsson Halverson
  - Austin Steele Hardegree
  - Catherine Marie Hernandez
  - Meagan Adele Hodges
  - Caitlin Beth Huber
  - Kimberly Diane Jones
  - Christopher James Kline
  - Monisha Prabhudev Konana
  - Amelia Ann Law
  - Brandon Yee Kow Lee
  - Rebekah Elizabeth Marie Lopez
  - Pamela Nikole May
  - Andrew Terry Moehlman
Charles Robert Moore
Michael David Mueller
Sabrina Anne Myers
William Christopher Ong
Kevin Thomas Ozment
Ashish Patel
Regino Perla
Christian Michael Ponder
Shelby Adell Proctor
Patrick Howard Ruggles
Daniel Terry Schmidt
Kalpan Sandipkumar Shah
Lauren Elizabeth Siwald
Kathleen Ann Trent Sturrock
Brittany Marie Taylor
Zachariah Austin Tiner
Keith Allen White
Anna C. Williamson
Kathleen Nell Wilson

Spring

▷ B.A.

Callie Ann Bauser
Michelle Ashley Boecker
Christopher Ryan Chen
Timothy Nathan Dunn
Mary Claire Ellis
Mack Jovan Hightower
Holland Manon Kaplan
Derek Yiu-cheun Le
Jeremiah Jungmin Lee
Lucero Valeria Lopez-Baldwin
Lily Thu-thao Thi Luc
Jamal Sadiq Malik
Christopher Robert Martin
Travis Michael Miller
Alexandra Christina Muir
Truc-vien Dinh Nguyen
Shayan Nizami
Hannah Elizabeth Starke
Edward Michael Wuensch
Ramy William Towfek Zaza

▷ B.S.

Wiley Kyle Abbott
Kimberly Isabel Adkins
Patricia Delos Santos Alcoseba
Robert William Allen
Mary Grace Allison

SEC. 4.2 UNDERGRADUATE DEGREES
Juan Antonio Gallegos
Gloria Galvan
Chelsea Danielle Garcia
Chelsea Alexandra Gartman
Jessica Julia Gerard
Ashley Parisa Ghazizadeh
Stephen Patrick Gonzalez
Robert James Good
Sushanth Gouni
Allyson Brooke Graf
Sarah Catherine Greenberg
Faulynne Nikole Grice
Lauren Ashley Hall
Colton Kurtz Hammond
Christopher David Hancock
Matthew Keller Harberson
Jonathan Wells Harding
Blake A. Hartgraves
Daniel Aparicio Hernandez
Jonathan David Hernandez
Jamie Tay Higuera
Thien An Lam Ho
Amber Brittany Holzman
Evelyn Maria Hoover
Rachel Lauren Hoyle
Alicia Claire Hubbell
Robert William Hudgens
Derek Michael Hundt
Ashley Huynh
Steve Huynh
Kirolls Karam Daoud Ibrahim
Mariko Aurora Rivka Itchkawich
Amy Elizabeth Jacks
William Taylor Jackson
Cameron Burke Jacobs
Alan Mammen John
Jason Dharmendra John
Sean Christopher Karbach
Sarah Michelle Keith
Michelle Marie Kelly
Samantha Lynn Ketcham
Holland Marie Kitten
Ashley Marie Koster
Sandra Dominika Krauzewicz
Megan Margaret Kukielski
Michelle Joelle Kukielski
Parker Andrew Lachowsky
Brittany Elise Lammert
Bryan C. Lee
Jeffrey Joon Taek Lee
Bradley James Leiker
Henry Joseph Lessen
Ariana Lepri Lewis
Jay Lim
Elena Elisabeth Lischau
Amelia Lorraine Looper
Omar Alberto Lopez
Andrew Grant MacDonald
Danielle Carter De Macedo
Roxsan Manshouri
Enrique Martinez
Hector Martinez
Jibie Elizabeth Mathew
Cecilia Mauricio
James Arthur Mcclintic
Tyler John Mcelwee
Amanda Lee Melendez
Ramiz Rajabali Momin
Jared Moore
Karina Estelle Mora
Chelsea Morgan Nelson
Irina A. Neretin
Brittany Alayne Newsham
Nathan A. Oehring
Kitty Ng Oro
Oguzhan Ozguc
Nicole Mari Ozoa
Aditya Panta
Shannon Renee Parma
Lindsay Ashlyn Patek
Veena Basavaraj Pawate
Drew Matthew Perkins
Paul Ngoc Pham
Catherine Victoria Pollock
Christopher Wayne Polzin
Brandon Clark Poskevich
Angélique Pauleen Ratilla Ramirez
Irving Antolin Ramirez
Jeremy Aaron Rawlings
Kevin Joseph Records
Ismael Reyes
Carly Suzanne Rice
Nick Ryan Rinkenberger
Elizabeth Denise Robison
Brandon Parker Ruehle
Christina Marie Ruiz
Diana Nauroi Sagiroi
Andrew John Sakla
Oswaldo Francisco Salmeron
Carla Iris Sanchez
Hector Alejandro Saucedo
Sarah Louise Schmidt
Nicole Elizabeth Schrock
Grace Marie Schweitzer
Stephen George Seibel
David A. Sher
Vishal Kumar Sonthalia
Chelsea Marie Spain
Leah Anne Speaks
Adam Taylor Stewart
Gus James Straus
Miranda Lynn Taing
Natalie Justine Tedford
Kirsten Marie Thoede
Andrew Farrell Thomas
Mitchel Douglas Towns
Alfredo Trejo
Lauren Elizabeth Tufts
Alicia Michelle Vyvjala
Christopher Jackson Walker
Luke Stewart Wallis
Mark Stewart Wallis
Rachel Helen Westbrook
Ashley Lauren White
Matthew Christopher Whitton
John Michael Wilson
Elaine Christine Wood
Jesse Lee Worsham
Taryn Shaye Wright
Cody Mitchell Wright
Po-lin Wu
Elyse Victoria Wudeck
Laura Alice Zinke

Summer

▷ B.A.

Grady Cook
Jo L Hargrove
David Allen Pollard

▷ B.S.

Sophia Chiemela Anyatonwu
Cayetano Christopher Cavazos
Christina Elizabeth Cisar
Ashley Ann Clarry

SEC. 4.2 UNDERGRADUATE DEGREES
## 5. Colloquium and Seminar Speakers, 2013

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
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<tr>
<td>1/15/2013</td>
<td>Steve Vokes</td>
<td>University of Texas, Austin</td>
<td>Small Molecules for Manipulating Circadian Rhythms to Improve Physiological Well-Being</td>
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<td>1/22/2013</td>
<td>Lani Wu</td>
<td>University of Texas Southwestern Medical Center, Dallas</td>
<td>Visualizing the Lipidome of Plant Tissues</td>
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<td>1/29/2013</td>
<td>Rebecca Zufall</td>
<td>University of Houston</td>
<td>When the Sleepers Awaken - Germination of Spores of Bacteria of Bacillus Species</td>
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<td>2/5/2013</td>
<td>Jonathan Pierce-Shimomura</td>
<td>University of Texas, Austin</td>
<td>Thoughts on the Origin of Microbial Virulence</td>
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<td>2/12/2013</td>
<td>Jay Dunlap</td>
<td>Dartmouth Medical School</td>
<td>Identification and Characterization of RefZ, a New Regulator of FtsZ Assembly</td>
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<td>2/19/2013</td>
<td>Molly Cummings</td>
<td>University of Texas, Austin</td>
<td>Adaptive Evolution of Voltage-Gated Sodium Channels: Stories from Electric Fish, Scorpions and Mice</td>
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<td>2/26/2013</td>
<td>Husniye Kantarci</td>
<td>Texas A&amp;M University</td>
<td>Insights into Metabolic Energy Regulation Through Metabolomic Analysis</td>
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<tr>
<td>2/26/2013</td>
<td>Amrita Sherlekar</td>
<td>Texas A&amp;M University</td>
<td>Determining Signaling Pathways in Aspergillus Fumigatus in Response to Human Neutrophils</td>
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<tr>
<td>3/5/2013</td>
<td>Greg May</td>
<td>University of Texas MD Anderson Center, Houston</td>
<td>A Screen to Identify Genes Regulating Development of Stato-Acoustic Neurons</td>
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<tr>
<td>3/19/2013</td>
<td>Daniel Alexander</td>
<td>Metabolon</td>
<td>Cellular and Molecular Mechanisms of Decision making in C. elegans Male Mating Behavior</td>
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<td>3/26/2013</td>
<td>Harold Zakon</td>
<td>University of Texas, Austin</td>
<td>From Fish Brains to Fish Skins-Understanding Behavioral and Signal Diversity via Mechanistic Studies</td>
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<td>4/2/2013</td>
<td>Jennifer Herman</td>
<td>Texas A&amp;M University</td>
<td>Genetic and Molecular Dissection of a Simple Circadian System</td>
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<tr>
<td>Date</td>
<td>Presenter</td>
<td>Institution</td>
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<tr>
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<td>-----------------------------------------------------------</td>
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<tr>
<td>4/9/2013</td>
<td>Arturo Casadeval</td>
<td>Albert Einstein College of Medicine</td>
<td>Studying Mechanisms and Medicine for Alzheimer’s Disease Using C. elegan</td>
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<tr>
<td>4/16/2013</td>
<td>Peter Setlow</td>
<td>University of Connecticut Health Center</td>
<td>Mutation, Migration, and Sex: Evolutionary Genetics in Tetrahymena Thermophila</td>
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<tr>
<td>4/23/2013</td>
<td>Kent Chapman</td>
<td>University of North Texas</td>
<td>Reverse Engineering Cell Polarity Circuits</td>
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<tr>
<td>4/30/2013</td>
<td>Zheng Chen</td>
<td>University of Texas Health Science Center, Houston</td>
<td>Transcriptional Mechanisms Underlying Hedgehog Mediated Regulation</td>
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<tr>
<td>8/1/2013</td>
<td>Danny Segal</td>
<td>Tel-Aviv University</td>
<td>Novel Small Molecules for Inhibiting Protein Misfolding and Aggregation in Disease: Alzheimer’s as an Example</td>
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<tr>
<td>8/27/2013</td>
<td>Luis Rene Garcia</td>
<td>Texas A&amp;M University</td>
<td>Molecular Regulation of Feed Forward and Feedback Circuits used in Motivated Behaviors of Young and Aging C. elegans Adult Males</td>
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<tr>
<td>9/3/2013</td>
<td>Emily Kasl</td>
<td>Texas A&amp;M University</td>
<td>Evolution of Life Cycle Complexity in Parasites: To Use or Not to Use a Host</td>
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<td>9/3/2013</td>
<td>Sharvani Mahadevaraju</td>
<td>Texas A&amp;M University</td>
<td>X-Signal Amplification by Runt in Drosophila Sex Determination</td>
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<td>9/10/2013</td>
<td>Charles Criscione</td>
<td>Texas A&amp;M University</td>
<td>Parasite Inbreeding: More than Meets the Eye and the Interplay of Transmission and Incest</td>
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<tr>
<td>9/17/2013</td>
<td>Ming Zhou</td>
<td>Baylor College of Medicine</td>
<td>Gating of the TrkH Ion Channel by its Associated RCK Protein TrkA</td>
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<td>9/24/2013</td>
<td>Josep Rizo</td>
<td>University of Texas Southwestern Medical Center, Dallas</td>
<td>Reconstituting Basic Steps of Synaptic Vesicle Fusion</td>
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<tr>
<td>10/1/2013</td>
<td>Kristen Maitland</td>
<td>Texas A&amp;M University</td>
<td>Enabling Early Detection of Oral Cancer with Optical Imaging Technology</td>
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<tr>
<td>10/8/2013</td>
<td>Felix Yarovinsky</td>
<td>University of Texas Southwestern Medical Center, Dallas</td>
<td>Cell Type-Specific Regulation of Host Defense to Microbial Infection</td>
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<tr>
<td>10/15/2013</td>
<td>Carla Finkielstein</td>
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Virginia Tech
The Circadian Factor Period 2 Modulates p53 Stability and Function in DNA-Damage Signaling

10/22/2013 Bruce Riley
Texas A&M University
Formation of Mechanosensory Cells and Neurons in the Zebrafish Inner Ear: Sound Mechanisms for Development and Regeneration

10/29/2013 Patricia Brennan
University of Massachusetts
Sexual Conflict and Genital Evolution in Waterfowl

11/5/2013 Dale Clayton
University of Utah
The Ecological Basis of Coevolutionary History: Lessons from Lice

11/12/2013 Saikat Murkhopadhyay
University of Texas Southwestern Medical Center, Dallas
GPCRs, Hedgehog Signaling, and Primary Cilia

11/19/2013 Borden Lacy
Vanderbilt University Medical Center
Understanding the Structures and Mechanisms of Action for Clostridium Difficile Toxins A and B

11/26/2013 Susan Buchanan
National Institute of Diabetes and Digestive and Kidney Diseases
Structural Basis for Iron Piracy by Pathogenic Neisseria

12/3/2013 Mike Sussman
University of Wisconsin
Quantitative Phosphoproteomics with Arabidopsis Plasma Membranes Reveals a Novel Mechanism of Growth Control
6. Faculty∗, 2013

Rodolfo Aramayo .................................................. Associate Professor
Karl J. Aufderheide .................................................. Associate Professor
David E. Baumgardner ............................................. Senior Lecturer
Laura Beaster-Jones .............................................. Senior Lecturer
Deborah Bell-Pedersen ........................................... Professor
Michael J. Benedik .................................................. Professor
Joseph Bernardo .................................................... Research Associate Professor
Lisa Campbell ....................................................... Professor (J)
Ginger E. Carney .................................................... Associate Professor
William B. Cohn ..................................................... Senior Lecturer
Charles D. Criscione .............................................. Assistant Professor
David J. Earnest ..................................................... Professor (J)
James W. Erickson .................................................. Associate Professor
Rene Garcia .......................................................... Associate Professor
Richard H. Gomer ................................................... Professor
Ira F. Greenbaum .................................................... Professor
Lawrence R. Griffing .............................................. Associate Professor
Timothy C. Hall ..................................................... Distinguished Professor Emeritus (A)
Paul E. Hardin ....................................................... Distinguished Professor
Mark L. Harlow ..................................................... Assistant Professor
Andreas K. Holzenburg ........................................... Professor
Carol B. Johnson ................................................... Senior Lecturer
Adam G. Jones ...................................................... Professor
Jae Hoon Jung ........................................................ Research Assistant Professor
Walter M. Kemp ..................................................... Professor
Arne C. Lekven ....................................................... Associate Professor
Xiaorong Lin ........................................................ Associate Professor
Robyn Lints .......................................................... Associate Professor
Thierry Lints .......................................................... Assistant Professor
Steve W. Lockless .................................................. Assistant Professor
Duncan S. MacKenzie .............................................. Associate Professor
Keith A. Maggert .................................................... Associate Professor
Michael D. Manson ................................................ Professor
Thomas D. McKnight .............................................. Professor
U.J. McMahan ........................................................ Professor
Jerome Menet ....................................................... Assistant Professor
Christine Merlin ..................................................... Assistant Professor
Rita B. Moyes ..................................................... Instructional Assistant Professor
Alan E. Pepper ....................................................... Associate Professor
Brian D. Perkins .................................................... Associate Professor
Darrell Pilling ....................................................... Research Assistant Professor
Hongmin Qin ........................................................ Associate Professor
Asha Rao ............................................................ Lecturer
Bruce B. Riley ....................................................... Professor
Gil G. Rosenthal .................................................... Professor
Kathryn J. Ryan ....................................................... Assistant Professor
Matthew S. Sachs .................................................. Professor
Timothy P. Scott ........................................ Associate Professor (J)
Deborah A. Siegele ........................................ Associate Professor
James L. Smith ............................................. Associate Professor
Michael Smotherman ........................................ Associate Professor
Joseph A. Sorg ............................................. Assistant Professor
Joseph Szule ................................................ Research Assistant Professor
Andrew Tag ..................................................... Lecturer
Lathrop Taylor ............................................. Senior Lecturer
Terry L. Thomas ............................................ Professor
Wesley J Thompson ......................................... Professor
Wayne K. Versaw ........................................... Associate Professor
Wei Wan ........................................................ Senior Lecturer
Mary K. Wicksten .......................................... Professor
Leslie K. Winemiller ........................................ Senior Lecturer
Ryland Young ............................................. Professor (J)
Wangjie Yu .................................................... Research Assistant Professor
Mark J. Zoran ................................................ Professor

* For the Annual Report, faculty are defined as tenured, tenure-track and non-tenure track employees who were employed at any time during 2013 (01/01/2013-12/31/2013).
6.1 Professional Activities, 2013

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2013.

Subsections of professional activities are defined as follows:

Honors and Awards
▷ All professional honors and awards, both internal and external.

Service Activities
▷ All professional service and leadership roles, including: departmental, college, university, state, national and international.

Teaching
▷ Classes taught during the Spring, Summer and Fall sessions of 2013.
▷ Any missing enrollment numbers were gathered from the Student Information Management System (SIMS) at Texas A&M University.

Research Projects
▷ All research projects, funded and unfunded.
▷ Whenever possible, all research-related employees of that faculty member are listed along with the citation. Key for employees: (P)=Postdoc, (G)=Graduate Student, (U)=Undergraduate Student.
▷ Renewals are marked by “(REN)” at the beginning of their title.
▷ Unfunded grants are marked by “(UNFUNDED)” at the end of the citation.
▷ Additional information (including PIs, CoPIs, and funding) on all funded grants are listed in Section 7.

Presentations
▷ All posters, invited and contributed lectures (plenary, conferences, colloquia, seminars, etc.).
▷ Whenever reported, posters, invited and contributed lectures are noted in parentheses following the citation.
▷ Citations are in chronological order.

Publications
▷ All printed materials published during 2013.
▷ Pre-press, in-press and submitted publications were not included.
▷ Citations were formatted in APA Style and are in alphabetical order by lead author.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: Biology and Fungal Biology, Israel Science Foundation, The Israel Academy of Sciences and Humanities (Reviewer), Consejo Nacional de Ciencia y Tecnología, Conselho Nacional Desenvolvimento Scienciifico e Tecnológico CNPQ (Referee: Journals), International Journal of Biological Sciences (Editor), The International Journal of Biological Sciences (Referee: Journals)

  National
  ▶ Editorial/Board: Fungal Genetics Newsletter, Fungal Genetics Stock Center, The Open Mycology Journal, Bentham Open (Editor), National Science Foundation and National Institutes of Health (Review: Proposals), Genetics, PLoS ONE (Referee: Journals)

  University
  ▶ Research Group: Laboratory for Genome Bioinformatics (Director)
  ▶ Committee/Panel: Dean Search Advisory Committee (Member), University Disciplinary Appeals Panel (Member), Whole Systems Genomics Computational Advisory Group (Member)

  Interdisciplinary/Intercollegiate
  ▶ Research Group: Chromosome Biology Interest Group (Member), Program for the Biology of Filamentous Fungi (Member)
  ▶ Committee/Panel: Aggie Research Scholars (Member), Graduate Faculty of the Health Science Center (Member), Intercollegiate Program in Genetics (Member), Texas A&M University Undergraduate MiniPharma (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BICH 491. — Research (total enrollment: 3)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 3)

  Summer
  ▶ BIOL 689. — Special Topics in (total enrollment: 5)
  ▶ BIOL 691. — Research (total enrollment: 3)

  Fall
- BICH 450. — **Genomics** (total enrollment: 1)
- BIOL 450. — **Introduction to Genomics** (total enrollment: 4)
- BIOL 491. — **Research** (total enrollment: 1)
- BIOL 650. — **Genomics** (total enrollment: 14)
- BIOL 685. — **Directed Studies** (total enrollment: 1)
- BIOL 691. — **Research** (total enrollment: 2)

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### RESEARCH PROJECTS DURING 2013

**State**

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### PRESENTATIONS DURING 2013

- “Using the Model Organism Neurospora Crassa to Elucidate the Genetic and Molecular Mechanism of Meiotic Silencing, an RNA-like Phenomenon,” 113th General Meeting of the American Society for Microbiology, Denver, CO, May, 2013. (Individual)
- “Comparative Proteomic Analysis of Two Stages of Sexual Development in Neurospora Crassa Reveals an Association Between Secondary Metabolites and Fruiting Body Maturation,” ENG-LIFE Workshop, Interface of Engineering and Life Sciences, Texas A&M University, College Station, TX, November, 2013. (Individual)

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### PUBLICATIONS DURING 2013

• SERVICE DURING 2013

National
▷ Professional Affiliation: ETS Advanced Placement Exam Grading (Question Leader)
▷ Editorial/Board: Journal of Cosmology (Review Panel)

University
▷ Event: Grading Workshops, Critical Thinking Assessment Test Program (Participant)
▷ Advisory Board: Student Fiscal Appeals Panel (Member)
▷ Committee/Panel: Blinn College/Texas A&M University Liaison Committee (Member), Security Awareness Committee (Member)

College
▷ Event: AP Biology Teachers at College of Science AP Biology Summer Workshop (Speaker)

Department
▷ Committee/Panel: Graduate Recruiting and Admissions Committee (Member), Safety Committee (Member), Sterling Evans Library Science Specialist (Liaison)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 112. — Introductory Biology II (total enrollment: 240)
▷ BIOL 413. — Cell Biology (total enrollment: 47)
▷ BIOL 491. — Research (total enrollment: 1)

Summer
▷ BIOL 491. — Research (total enrollment: 1)

Fall
▷ BIOL 213. — Molecular Cell Biology (total enrollment: 79)
▷ BIOL 491. — Research (total enrollment: 1)

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2013]

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), *Ecotoxicology and Environmental Safety* (Referee: Journals)
  Department
  ▶ Committee/Panel: Academic Appeals Committee (Member)
  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Faculty of Ecology, Evolution and Behavior (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 357. — Ecology (total enrollment: 161)
  ▶ BIOL 358. — Ecology Laboratory (total enrollment: 36)
  ▶ BIOL 491. — Research (total enrollment: 5)
  Fall
  ▶ BIOL 357. — Ecology (total enrollment: 134)
  ▶ BIOL 358. — Ecology Laboratory (total enrollment: 32)
  ▶ BIOL 491. — Research (total enrollment: 9)

• PRESENTATIONS DURING 2013
• SERVICE DURING 2013

Department
  ▶ Committee/Panel: Biology Undergraduate Poster Session (Judge), Lab Safety Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 263)
  ▶ BIOL 489. — Special Topics in (total enrollment: 8)

Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 548)
  ▶ BIOL 414. — Developmental Biology (total enrollment: 35)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ⊲ Member, Interdisciplinary Faculty, Genetics, [1998]

• SERVICE DURING 2013

  National
  ⊲ Advisory Board: Eukaryotic Cell (Editorial Board), Fungal Genetics and Biology (Associate Editor), Fungal Genetics and Biology (Editor)
  ⊲ Committee/Panel: NIH Cellular Signaling and Regulatory Systems Study Section (Panel Member), Society for Research on Biological Rhythms (Chair)

  University
  ⊲ Committee/Panel: PBoFF Seriers (Chair), Center for Research on Biological Clocks (Executive Director), Advance Research Subcommittee (Member), Advance Speaker Series Committee (Member)

  Department
  ⊲ Service Position: Graduate Student Association (Faculty Advisor)
  ⊲ Committee/Panel: Executive Committee (Member), Awards Committee (Member), Faculty Search Committee (Member), Faculty Search Committee (Member), Seminar Committee (Member)

  Interdisciplinary/Intercollegiate
  ⊲ Committee/Panel: UBM Faculty, PBOfF Faculty, Genetics Membership Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ⊲ BIOL 452. — *Fungal Functional Genomics* (total enrollment: 14)
  ⊲ BIOL 491. — Research (total enrollment: 1)
  ⊲ BIOL 685. — Directed Studies (total enrollment: 1)
  ⊲ BIOL 691. — Research (total enrollment: 4)
  ⊲ GENE 691. — Research (total enrollment: 1)

  Summer
  ⊲ BIOL 691. — Research (total enrollment: 4)
  ⊲ GENE 691. — Research (total enrollment: 1)

  Fall
- BIOL 445. — Biology of Viruses (total enrollment: 72)
- BIOL 491. — Research (total enrollment: 1)
- BIOL 691. — Research (total enrollment: 5)

- RESEARCH PROJECTS DURING 2013

Federal

- 2012 Society for Research on Biological Rhythms Conference-SRBR, National Institutes of Health
- Determining the Mechanism of Biological Compensation, National Institutes of Health
- Functional Analysis and Systems Biology of Filamentous Fungi, National Institutes of Health, coworkers: R. Dekhang (G), R. McCormick (G), Z. Brady (U), T. Dalton (U), E. Kim (U), B. Pennartz (U)
- (REN) Molecular Genetic Analysis of Fungal Circadian Rhythms, National Institutes of Health, coworkers: T. Lamb (P), L. Bennett (G), S. Castor (G), J. Fazzino (G), C. Goldsmith (G), B. Boettger (U), K. Finch (U)
- (REN) UBM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation

Private

- Functional Analysis and Systems Biology of Filamentous Fungi, Dartmouth College

- PRESENTATIONS DURING 2013

- “Circadian Clock Control of MAPK Pathway Activation,” Albert Einstein College of Medicine, Bronx, NY, January, 2013.( Invited)
- “Circadian Clock Control of MAPK Pathway Activation,” University of Texas, Health Sciences Center, Houston, TX, February, 2013.( Invited)
- “Circadian Clock Control of MAPK Pathway Activation,” SECTS for Clocks, March, 2013.( Invited)
- “Circadian Clock Control of MAPK Pathway Activation,” State University of New York System, Albany, NY, April, 2013.( Invited)
- “Circadian Clock Control of MAPK Pathway Activation,” Virginia Tech, Blacksburg, VA, April, 2013.( Invited)
- “Complexity of the Clock in Neurospora,” June, 2013.( Invited)
- “How to Secure Funding for Your Graduate Research,” July, 2013.( Invited)
- “Circadian Control of Translation,” Engineering/Life Sciences Conference, November, 2013.(Poster Individual)

- PUBLICATIONS DURING 2013


Lamb, T.M.; Vickery, J.; Bell-Pedersen, D. (2013) Regulation of Gene Expression in Neurospora Crassa with a Copper Responsive Promoter *G3: Genes, Genomes, Genetics*.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Dean of Faculties and Associate Provost, Office of the Dean of Faculties and Associate Provost, [2012]
  ▶ Faculty Ombuds Officer, Office of the Dean of Faculties and Associate Provost, [2010]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: *International Biodeterioration & Biodegradation* (Referee: Journals)

  National
  ▶ Editorial/Board: *Applied and Environmental Microbiology, Enzyme and Microbial Technology, Applied Microbiology and Biotechnology, Journal of Industrial Microbiology & Biotechnology, Future Microbiology* (Referee: Journals), *Bioengineered Bugs, Journal of Microbial and Biochemical Technology* (Member)
  ▶ Committee/Panel: SEC Academic Leadership Development Program (Liaison)

  University
  ▶ Committee/Panel: Special Situations Team (Member), Faculty Senate Executive Committee (Member)

  College
  ▶ Committee/Panel: International Programs Committee (Member)

  Department
  ▶ Committee/Panel: Executive Committee (Member), Honorary Degrees Committee (Chair), Student Affairs Advisory Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Teaching Proposals Review Committee (Co-Chair)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ MICR 691. — Research (total enrollment: 1)

  Summer
  ▶ BIOL 691. — Research (total enrollment: 1)

  Fall
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ MICR 691. — Research (total enrollment: 1)
• RESEARCH PROJECTS DURING 2013
  
  State
  ▸ (REN) Cyanide Remediation: Enzyme Modification and Immobilization, Texas Hazardous Waste Research Center
  ▸ (REN) Cyanide Remediation: Evolving Improved Enzymes, Texas Hazardous Waste Research Center

• PUBLICATIONS DURING 2013
  

No report received from faculty member.
GINGER E. CARNEY
ASSOCIATE PROFESSOR (979) 845-6587
BIOL-Behavior and Genetics gcarney@bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Dean for Undergraduate Research, Undergraduate Research Office, College of Science, [2013]
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2010]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2007]

• SERVICE DURING 2013
  National
  ▶ Event: Ecdysone Workshop at the Annual Drosophila Research Conference (Organizer)
  ▶ Editorial/Board: Genes, Brain, Behavior, Hormones and Behavior, Oxford University Press (Referee: Journals)
  ▶ Committee/Panel: Genetics Society of America Women in Genetics Committee (Member), NSF Animal Behavior Review Panel (Member)

  Regional
  ▶ Event: Super Techno Science Night, Southwood Valley Elementary (Participant)

  University
  ▶ Committee/Panel: CTE Faculty and Student Advisory Committee (Member), Phi Beta Kappa Members-in-Course Committee (Member), Phi Beta Kappa PhD Selection Committee (Member)

  College
  ▶ Committee/Panel: Diversity Committee (Member), Executive Committee (Member), Faculty Advisory Council (Elected Member)

  Department
  ▶ Event: Chemistry Open House (Participant)
  ▶ Committee/Panel: Annual Review Committee (Member), Department Head Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 401. — Critical Writing in Biology (total enrollment: 101)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 2)
  ▶ GENE 491. — Research (total enrollment: 2)

  Summer
BIOL 491. — Research (total enrollment: 1)

Fall
BIOL 291. — Research (total enrollment: 1)
BIOL 401. — Critical Writing in Biology (total enrollment: 74)
BIOL 491. — Research (total enrollment: 2)
BIOL 691. — Research (total enrollment: 2)
BIOL 698. — Special Topics Behavior, Genes and Evolution (total enrollment: 9)

- RESEARCH PROJECTS DURING 2013

Federal
- His Fat Made Him Do It: Modulation of Drosophila Courtship Behavior by an Adipose-Expressed Gene Product, National Science Foundation, coworkers: S. Saleem (G), J. Schultzhaus (G), C. Schwedes (G), W. Abbott (U), R. Adams (U), T. Forman (U), P. Ruggles (U), S. Vanier (U), J. White (U)

- PRESENTATIONS DURING 2013
- “How do I fund my Research?,” 9th Annual Research Symposium, Louis Stokes Alliance for Minority Participation (LSAMP) Program, Texas A&M University, College Station, TX, February, 2013. (Individual)
- “Careers in Science,” Bryan Collegiate High School, Bryan, TX, October, 2013. (Individual)

- PUBLICATIONS DURING 2013
• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 319(H) — Integrated Hum AN/PHY I (total enrollment: 2)
▷ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 407)

Summer
▷ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 124)

Fall
▷ BICH 491. — Research (total enrollment: 2)
▷ BIOL 291. — Research (total enrollment: 2)
▷ BIOL 319(H) — Integrated Hum AN/PHY I (total enrollment: 2)
▷ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 715)
▷ BIOL 491. — Research (total enrollment: 4)

No report received from faculty member.
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2013]

• **SERVICE DURING 2013**
  **International**
  ▶ Editorial/Board: *International Journal for Parasitology* (Referee: Journals)

  **National**
  ▶ Editorial/Board: *Molecular Ecology, Infection, Genetics and Evolution, PLOS Neglected Tropical Diseases, Parasitology, Comparative Parasitology, Journal of Parasitology* (Referee: Journals)
  ▶ Committee/Panel: Student Awards Committee, American Society of Parasitologists (Member), Priorities and Planning Committee American Society of Parasitologists (Member)

  **University**
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 05)

  **Department**
  ▶ Committee/Panel: Head Search Advisory Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
  ▶ BIOL 491. — Research (total enrollment: 3)
  ▶ BIOL 691. — Research (total enrollment: 2)

  **Fall**
  ▶ BIOL 214. — *Genes, Ecology and Evolution* (total enrollment: 100)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2013**
  **Federal**
  ▶ Testing Mechanisms of Parasite-Mediated Selection of MHC Genetic Diversity, *Department of Health and Human Services*
  ▶ Biodiversity in the Parasitic Fluke Genus Alloglossidium: Evolutionary Origins and Outcomes of Changes in Life Cycle Complexity, *National Science Foundation*, coworkers: E. Kasl (G), A. Sakla (U)

SEC. 6.1  PROFESSIONAL ACTIVITIES  75
• Presentations during 2013
  ▶ "Parasite Inbreeding: more than Meets the Eye and the Interplay of Transmission and Incest," Texas A&M University, Department of Biology, College Station, TX, September, 2013. (Invited)
  ▶ "Parasite Inbreeding: more than Meets the Eye and the Interplay of Transmission and Incest," University of Houston, Department of Biology and Biochemistry, Houston, TX, September, 2013. (Invited)

• Publications during 2013
JAMES W. ERICKSON

ASSOCIATE PROFESSOR (979) 862-2204
BIOL-Transcriptional Regulation in Development jerickson@bio.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  - Member, Interdisciplinary Faculty, Genetics, [2006]

- SERVICE DURING 2013
  University
  - Committee/Panel: Committee for Academic Freedom, Responsibility and Tenure (Member), Institutional Biosafety Committee (Member)

  Department
  - Committee/Panel: Annual Review Committee (Member), Graduate Program Committee (Member)

- TEACHING ASSIGNMENTS DURING 2013
  Spring
  - BIOL 213. — Molecular Cell Biology (total enrollment: 66)
  - BIOL 691. — Research (total enrollment: 4)

  Fall
  - BIOL 491. — Research (total enrollment: 1)
  - BIOL 691. — Research (total enrollment: 4)

- RESEARCH PROJECTS DURING 2013
  Federal
  - Signal Amplification Mechanisms in Primary Sex Determination, National Science Foundation, coworkers: A. Gonzalez (G), S. Mahadara (G), J. Rama (G), Y. Sun (G), M. Agudelo (U), K. Brundage (U), C. Manes (U)

No report received from faculty member.
RENE GARCIA
ASSOCIATE PROFESSOR (979) 845-2989
BIOL-Molecular Genetics and Neurogenetics rgarcia@bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Assistant Professor (J), Molecular and Cellular Medicine, [2008]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2003]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2003]

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: NIH PO1 (Guest Editor), NIH PO1 (Review: Proposals), PLoS Genetics, PloS One, Science, J. Neuroscience, JoVE (Referee: Journals)
  University
  ▶ Committee/Panel: Committee for Academic Freedom, Responsibility and Tenure (Member)
  Department
  ▶ Committee/Panel: Executive Committee (Member), Graduate Programs Committee (Chair), Seminar Committee (Member)
  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Tenure Promotion Committee HSC (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 481. — Seminar in Biology (total enrollment: 9)
  ▶ BIOL 615. — Signaling Behavior & Development (total enrollment: 11)
  ▶ BIOL 691. — Research (total enrollment: 3)
  Summer
  ▶ BIOL 691. — Research (total enrollment: 2)
  Fall
  ▶ BIOL 481. — Seminar in Biology (total enrollment: 12)
  ▶ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013
  Private
  ▶ Environmental and Genetic Regulation of Motivated Behavior, Howard Hughes Medical Institute, coworkers: X. Chen (G), P. Correa (G), X. Gou (G), D. Gualberto (G), C. Jee (G), B. LeBoeuf (G), L. Zhang (G)

• PRESENTATIONS DURING 2013
“Acetylcholine and Dopamine Signaling Regulate Properties of a C. elegans Feed Forward Circuit that Controls Mating Discrimination and Intromission,” HHMI Meeting Chevy Chase Maryland, MD, April, 2013. (Individual)

“Molecular Regulation of Feed Forward and Feedback Circuits used in Motivated Behaviors of C. elegans Males,” Albert Einstein University, Bronx, NY, September, 2013. (Invited)

University of California, San Diego, CA, November, 2013. (Invited)

• PUBLICATIONS DURING 2013

On leave.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Genetics, [2012]

• SERVICE DURING 2013
  International
  ▶ Committee/Panel: Faculty of 1000 (Member), Global Fibrosis Foundation Medical Advisory Council (Member)

  National
  ▶ Advisory Board: Promedior (Co-Founder), Promedior (Member), Trellis Bioscience (Member)

  State
  ▶ Committee/Panel: Center for Environmental Translational Health Research (Member)

  University
  ▶ Committee/Panel: Center for Biological Clocks Research (Member), Faculty of Genetics (Member), TAMUS Intellectual Property Constituent Committee (Chair)

  Department
  ▶ Committee/Panel: Awards Committee (Member), Clocks Search Committee (Member), Executive Committee (Member), Graduate Programs Committee (Member), Seminar Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 681. — Seminar (total enrollment: 18)
  ▶ BIOL 691. — Research (total enrollment: 3)

  Fall
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 144)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
BIOL 691. — Research (total enrollment: 3)

- RESEARCH PROJECTS DURING 2013
  
  Federal
  
  - Elucidation of a Dictyostelium Chalone, National Institutes of Health, coworkers: T. Molinski (P), X. Wang (P), S. Herlihy (G), J. Phillips (G), R. Sterling (G)

- PRESENTATIONS DURING 2013
  
  - “Identification of Potential New Therapeutics for Fibrosing Diseases and Wound Healing,” Texas A&M University Health Science Center; Simulcast to Baylor Dentistry, Dallas, TX, January, 2013. (Invited)
  
  
  
  
  - “Microbiology and Potential New Therapeutics for Lung Diseases,” Texas A&M University Undergraduate Microbiology Club, Texas A&M University, College Station, TX, September, 2013. (Invited)
  
  - “Genetics and New Therapies for Lung Diseases,” GENE 481 Class, Texas A&M University, College Station, TX, October, 2013. (Invited)
  
  - “Research and Medical School,” Council of Health Organizations, Texas A&M University, College Station, TX, November, 2013. (Invited)

- PUBLICATIONS DURING 2013
  
  
  
  
  
  
  
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2013

  National
  ▶ Editorial/Board: Vertebrates: Comparative Anatomy, Function, Evolution (Book Reviewer), Journal of Mammalogy (Referee: Journals)

  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 01), Grievance Committee (Vice Chair)

  Department
  ▶ Committee/Panel: Awards Committee (Member), Lower Division Instruction (Director), Lower Division Instruction Advisory Committee (Chair), Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 466. — Principles of Evolution (total enrollment: 43)

  Fall
  ▶ BIOL 318. — Chordate Anatomy (total enrollment: 76)
  ▶ BIOL 697. — Methods in Teaching Biology Laboratory (total enrollment: 18)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

• SERVICE DURING 2013

  National
  ▶ Advisory Board: Planting Science, Botanical Society of America, Chlorofilms, American Society of Plant Biology, In Vitro - Biology (Member)

  University
  ▶ Committee/Panel: Explorations (Undergraduate Research Journal) Board and Steering Committee (Member)

  College
  ▶ Committee/Panel: Technology-Mediated Instruction Committee (Member)

  Department
  ▶ Committee/Panel: IT committee (Member), Safety Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 430. — Biological Imaging (total enrollment: 54)
  ▶ BIOL 491(H) — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 7)
  ▶ MEPS 691. — Research (total enrollment: 1)

  Summer
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 1)

  Fall
  ▶ BIOL 291. — Research (total enrollment: 2)
  ▶ BIOL 423. — Cell Biology Laboratory (total enrollment: 46)
  ▶ BIOL 491(H) — Research (total enrollment: 2)
  ▶ BIOL 491. — Research (total enrollment: 7)
  ▶ MEPS 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2013

“Myosin Involvement in ER Shape,” Oxford, United Kingdom, July, 2013. (Invited)

• SERVICE DURING 2013

International
  ▶ Editorial/Board: Chinese Univ.Hong Kong (Reviewer), Research Grant Council (RGC) of Hong Kong (Reviewer)
  ▶ Committee/Panel: Indian Virological Society (Fellow)

National
  ▶ Editorial/Board: *Plant Molecular Biology, Plant Biotechnology Journal, Journal of Agricultural and Food Chemistry* (Referee: Journals)
  ▶ Committee/Panel: Gene Regulation Minisymposia in Plant Biology Meeting (Chair)

University
  ▶ Committee/Panel: Council of Principal Investigators Committee (Member), Executive Committee of Distinguished Professors (Participant)

College
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member)

Department
  ▶ Committee/Panel: Gene Technology Laboratory (Director), Plant Care Committee (Chair)

Interdisciplinary/Intercollegiate
  ▶ Research Group: Genetics (Member), MEPS Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Fall
  ▶ BIOL 101. — Botany (total enrollment: 97)

• RESEARCH PROJECTS DURING 2013

Federal
  ▶ Gene Networks and Chromatin Regulation of Phaseolin Transcription, *National Science Foundation*, coworkers: K. Cone (Staff)

Unfunded Research
  ▶ Harvesting Colon Cancer-Suppressing Compounds from Beans, *UNFUNDED*, coworkers: S. Kertbundit (Research Scientist), E. Shakirov (P), S. Sundaram (P), S. Sullivan (U)

• PRESENTATIONS DURING 2013
  ▶ “High Throughput Sequencing - The Genome Revealed,” Institute of Experimental Botany, Academy of Sciences, Czech Republic, June, 2013.( Invited)
“Gene Networks and Chromatin Regulation of Phaseolin Transcription,” Post-transcriptional Gene Regulation in Plants, Providence, RI, July, 2013.(Poster Individual)

“Genetic and Epigenetic Control of the Phaseolin Promoter,” Plant Biology, Providence, RI, July, 2013.(Poster Individual)

“Role of Histone Modifications on Transcriptional Activation of the Phaseolin Promoter,” Plant Biology, Providence, RI, July, 2013.(Poster Individual)

• PUBLICATIONS DURING 2013
PAUL E. HARDIN

DISTINGUISHED PROFESSOR (979) 458-4478
BIOL-Molecular Genetics of Circadian Rhythms phardin@bio.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▷ John W. Lyons ’59 Endowed Chair in Biology [2005]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Neuroscience, [2013]
  ▷ Member, Interdisciplinary Faculty, Genetics, [2013]
  ▷ Director, Center for Biological Clocks Research, Biology, [2006]

• SERVICE DURING 2013

  International
  ▷ Committee/Panel: International Advisory Committee, Canadian Society for Chronobiology (Member), Nomination Committee, Society for Research on Biological Rhythms (Member), Society for Research on Biological Rhythms Executive Committee (Member)

  National
  ▷ Committee/Panel: Journal of Biological Rhythms Search Committee, Society for Research on Biological Rhythms (Member), Neurodifferentiation, Plasticity, and Regeneration Study Section (Member), Society for Research on Biological Rhythms (President Elect)

  University
  ▷ Committee/Panel: Council for the Built Environment (Member), Executive Committee of the Distinguished Professors (Member), Council of Principal Investigators (Member)

  Department
  ▷ Committee/Panel: Clocks Faculty Search Committee (Chair)

  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Membership Committee, TAMU Institute for Neuroscience (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 681. — Seminar (total enrollment: 9)
  ▷ BIOL 691. — Research (total enrollment: 4)

  Summer
Fall

- BIOL 111. — Introductory Biology I (total enrollment: 339)
- BIOL 681. — Seminar (total enrollment: 9)
- BIOL 691. — Research (total enrollment: 4)

- RESEARCH PROJECTS DURING 2013

Federal

- Developing Cell Lines from Clock Neurons in Drosophila, National Institutes of Health, coworkers: G. Mahesh (P), T. Liu (G)
- (REN) Regulation of Circadian Transcription, National Institutes of Health, coworkers: G. Mahesh (P), W. Yu (P), P. Agrawal (G), B. Chamseddin (U)

- PRESENTATIONS DURING 2013

  - “Phosphorylation Controls Multiple Processes to Keep Circadian Time,” Cincinnati Children’s Hospital Medical Center, Visual Systems Group, Cincinnati, OH, April, 2013. (Individual)
  - “Phosphorylation Controls Multiple Processes to Keep Circadian Time,” International Behavioral Neuroscience Society, June, 2013. (Individual)

- PUBLICATIONS DURING 2013

• ALLENGE LEARNING TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2013]

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: Society for Neuroscience Local Chapter (Councilor)

  University
  ▶ Service Position: Graduate Student GLBTQA (Advisor)
  ▶ Committee/Panel: Council on Climate and Diversity (Member), GLBT Professional Network (President), Texas A&M Institute of Neuroscience TAMIN GRAC (Member)

  Department
  ▶ Committee/Panel: Computer Committee (Member), Capstone Coursework Committee (Member), Graduate Recruiting and Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 434. — Regulatory and Behavioral Neuroscience (total enrollment: 41)
  ▶ BIOL 691. — Research (total enrollment: 1)

  Summer
  ▶ BIOL 691. — Research (total enrollment: 2)

  Fall
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2013
  ▶ “Alignment of Synaptic Vesicle Macromolecules with the Macromolecules in Active Zone Material that Direct Vesicle Docking,” Gordon Research Conference - Excitatory Synapses & Brain Function, June, 2013.(Poster Individual)

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2010]
  ▶ Professor (J), Texas A&M University System Health Science Center, [2005]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2002]
  ▶ Professor (J), Biochemistry and Biophysics, [2001]
  ▶ Director, Microscopy and Imaging Center, Health Services and Health Center, [2000]

• SERVICE DURING 2013

  International
  ▶ Advisory Board: Subcellular Biochemistry (Member)
  ▶ Editorial/Board: Israel Science Foundation (Review: Proposals), "Micron", International Research and Review Journal for Microscopy (Member), Micron (Referee: Journals)
  ▶ Committee/Panel: Berlin-Brandenburg Community of Humboldtians (Member)

  National
  ▶ Editorial/Board: Welch Foundation (Review: Proposals), Advanced Structural and Chemical Imaging (Editor-in-Chief), Crystal Research and Technology (Editor), Crystal Research and Technology, JBC, Protein Science, The Plant Journal, Journal of Visualized Experiments (Referee: Journals), The Journal of Biological Chemistry (Member)
  ▶ Committee/Panel: Education Committee of the Microscopy Society of America (Member), Microscopy & Microanalysis Organizing Committee (Member), Microscopy & Microanalysis Vendor Tutorials (Chair)

  State
  ▶ Professional Affiliation: Texas Chapter of the Alexander von Humboldt Association of America (Member)

  University
  ▶ Committee/Panel: Humboldtian on Campus Program (Member), SEMC Recycling Sub-Committee (Member), ILSB Users Coordination Committee (Member), SAXS User Committee (Member), Sustainability and Environmental Management Committee (Member), University Research Council (Ad hoc Member)

  Department
  ▶ Committee/Panel: MSEN Assessment Committee (Member), ORP Evaluation Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: MIC Executive Oversight Committee (Member), Materials Science and Engineering Admission Committee (Member), MIC Electron Microscopy Advisory Committee (Member), MIC Light Microscopy Advisory Committee (Member)
• **TEACHING ASSIGNMENTS DURING 2013**

**Spring**
- BIOL 604. — **Fundamental SEM/ESEM** (total enrollment: 26)
- BIOL 608. — **Light Microscopy** (total enrollment: 8)
- BIOL 691. — **Research** (total enrollment: 1)

**Summer**
- BIOL 602. — **Transmission Electron Microscopy** (total enrollment: 12)
- BIOL 603. — **Advanced TEM** (total enrollment: 12)
- BIOL 685. — **Directed Studies** (total enrollment: 1)
- BIOL 691. — **Research** (total enrollment: 1)

**Fall**
- BIOL 602. — **Transmission Electron Microscopy** (total enrollment: 26)
- BIOL 691. — **Research** (total enrollment: 2)

• **PRESENTATIONS DURING 2013**
- College of Science and Engineering, University of Limerick, Limerick, Ireland, February, 2013.( Invited)
- “Advances in Structural and Chemical Imaging,” CAMCOR, University of Oregon, Eugene, OR, May, 2013.( Invited)
- Microscopy & Imaging Center, Texas A&M University, College Station, TX, June, 2013.( Individual)
- Microscopy & Imaging Center, Texas A&M University, College Station, TX, August, 2013.( Individual)
- Microscopy & Microanalysis Conference 2013, Indianapolis, IN, August, 2013.( Invited)
- Department of Mathematics, Texas A&M University, College Station, TX, September, 2013.( Invited)
- Nanoscpnia Electronica, Cinvestav, Instituto Politecnico Nacional, Campus Zacatenco, Mexico, October, 2013.( Invited)
- ASM International Houston Chapter and Material Advantage Chapter at Texas A&M University, College Station, TX, November, 2013.(Poster Contributed)
- Emerging Technology Building, Texas A&M University, College Station, TX, November, 2013.(Poster Contributed)
- Microscopy & Imaging Center, Texas A&M University, College Station, TX, November, 2013.( Invited)
- Institute for Natural Product Research and Infection Biology (HKI) and Institute of Microbiology, Friedrich Schiller University Jena, Germany, December, 2013.( Invited)
- Institute of Measurement and Automatic Control, Leibniz University, Hannover, Germany, December, 2013.( Invited)

• **PUBLICATIONS DURING 2013**


• SERVICE DURING 2013
  College
   ▶ Committee/Panel: Executive Committee, Texas State Science Olympiad (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
   ▶ BIOL 112. — Introductory Biology II (total enrollment: 408)
   ▶ BIOL 285. — Directed Studies (total enrollment: 1)
  Fall
   ▶ BIOL 112. — Introductory Biology II (total enrollment: 494)
   ▶ BIOL 285. — Directed Studies (total enrollment: 1)

• PRESENTATIONS DURING 2013
   ▶ “Entomology B&C Coaches Clinic for Texas State Science Olympiad,” Texas A&M University, College Station, TX, November, 2013. (Individual)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  - Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• **SERVICE DURING 2013**
  **International**
  - Editorial/Board: *Proceedings of the Royal Society of London B* (Referee: Journals)

  **National**

  **Department**
  - Committee/Panel: Graduate Recruiting and Admissions Committee (Member), Awards Committee (Member), Website Committee (Member)

  **Interdisciplinary/Intercollegiate**
  - Committee/Panel: EEB Evolution Symposium Committee (Member), EEB IDP Curriculum Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
  - BIOL 214. — *Genes, Ecology and Evolution* (total enrollment: 152)
  - BIOL 681 — Seminar (total enrollment: 8)
  - BIOL 681. — Seminar (total enrollment: 8)
  - BIOL 691. — Research (total enrollment: 3)

  **Summer**
  - BIOL 691. — Research (total enrollment: 1)

  **Fall**
  - BIOL 491. — Research (total enrollment: 2)
  - BIOL 681. — Seminar (total enrollment: 7)
  - BIOL 691. — Research (total enrollment: 3)

• **RESEARCH PROJECTS DURING 2013**
  **Federal**
CAREER: The Molecular Evolution of Reproductive Genes in Male-Pregnant Seahorses and Pipefishes, National Science Foundation, coworkers: A. Anderson (G), L. Edelstein (G), S. Flanagan (G), E. Rose (G)

Disseration Research: Modeling Ornament-preference Co-evolution with Individual-based Simulations: An Exploration of Parameter Space, National Science Foundation, coworkers: N. Ratterman (G)

DISSERTATION RESEARCH: A Next-Generation Sequencing Approach to the Evolution of Male Pregnancy Transcriptomes in Seahorses and Pipefishes, National Science Foundation, coworkers: C. Small (G)

• PRESENTATIONS DURING 2013
  ▶ “The Use of Mating Systems, Overall Attractiveness and Population Genomics to Study Unknown Sexually Selected Traits,” NSF Biomatematics Program, Trinity University, San Antonio, TX, October, 2013. (Invited)
  ▶ “The Use of Mating Systems, Overall Attractiveness, and Population Genomics to Study Unknown Sexually Selected Traits,” EEB Evolution Symposium, College Station, TX, October, 2013. (Invited)
  ▶ “Genomic Approaches to the Study of Sexual Selection in Pipefish,” Texas A&M University, Marine Biology Seminar, Galveston, TX, November, 2013. (Invited)

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Dean for Strategic Initiatives, Dean’s Office, College of Science, [2009]

• SERVICE DURING 2013
  College
  ▶ Committee/Panel: Executive Committee (Member), International Programs Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 509)
  Summer
  ▶ BIOL 691. — Research (total enrollment: 1)
  Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 299)
  ▶ BIOL 285. — Directed Studies (total enrollment: 3)
  ▶ BIOL 291. — Research (total enrollment: 3)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Graduate Advisor, Biology Graduate Advising Office, Biology, [2011]

• SERVICE DURING 2013

  National
  ▷ Editorial/Board: Sam Houston State University ORSP (Review: Proposals), Communicative and Integrative Biology, Developmental Biology, Developmental Dynamics, Molecular Genetics and Genomics, PLoS Genetics, PLoS One (Referee: Journals)

  University
  ▷ Committee/Panel: Light Microscope Advisory Committee (Member)

  College
  ▷ Committee/Panel: Graduate Instruction Committee (Member)

  Department
  ▷ Committee/Panel: Biology Website Committee (Chair), Computer Committee (Chair), Executive Committee (Member), Graduate Programs Committee (Ex Officio Member), Graduate Recruiting and Admissions Committee (Ex Officio Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 615. — Signaling Behavior & Development (total enrollment: 7)
  ▷ BIOL 681. — Seminar (total enrollment: 5)
  ▷ BIOL 685. — Directed Studies (total enrollment: 4)
  ▷ BIOL 691. — Research (total enrollment: 2)
  ▷ NRSC 636. — Signaling in Behavior and Development (total enrollment: 4)

  Fall
  ▷ BIOL 291. — Research (total enrollment: 1)
  ▷ BIOL 414. — Developmental Biology (total enrollment: 35)
  ▷ BIOL 485. — Directed Studies (total enrollment: 1)
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 681 — Seminar (total enrollment: 22)
  ▷ BIOL 681. — Seminar (total enrollment: 14)
  ▷ BIOL 685. — Directed Studies (total enrollment: 14)
  ▷ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013
Private

▷ Regulation of Wnt Signaling and Mesoderm Development by MicroRNAs, American Heart Association, coworkers: A. Ehitener (G), J. Fleming (U)

▷ WNT 8 Cis-Regulatory Analysis to Study Vertebrate Mesoderm Progenitor Specification, American Heart Association - Texas, coworkers: J. Fleming (G), A. Narayanan (G), A. Whitener (G)

• PRESENTATIONS DURING 2013

▷ “Fish Head and Tails: Wnt Signaling and Vertebrate Axis Development,” Sam Houston State University, Huntsville, TX, February, 2013. (Invited)
• AWARDS DURING 2013
  National
  ▶ Investigator in the Pathogenesis of Infectious Disease, Burroughs Wellcome Fund

• SERVICE DURING 2013
  International
  ▶ Committee/Panel: Associated Faculty Member of Faculty 1000 (Member)

  National
  ▶ Ad Hoc Committee: NIH PTHE Study Section, NIH AOIC Study Section (Member)
  ▶ Committee/Panel: Eukaryotic Cell (Advisory Board)

  University
  ▶ Committee/Panel: Program for the Biology of Filamentous Fungi (Member)

  Department
  ▶ Event: Dr. Felix Yarovinsky from UT Southwestern Medical Center and Dr. Arturo Casadevall from Albert Einstein College of Medicine Biology Seminar Speakers (Host)
  ▶ Committee/Panel: Department Head Search Advisory Committee (Member), Graduate Program Committee (Member), Graduate Recruitment and Admission Committee (Member), Student/Postdoc Research Conference Committee (Member), Website Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 1)

  Fall
  ▶ BIOL 351. — Fund of Microbiol (total enrollment: 228)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013
  Federal
Genetic Regulation of Invasive Hyphal Growth of Aspergillus Fumigatus, Department of Health and Human Services, coworkers: S. Upadhyay (Research Associate), A. Hilton (U), G. Torres (U)

Investigate the Multifunctional Adhesins in Cryptococcus, National Institutes of Health

The Link Between Dimorphism and Virulence in Cryptococcus, National Institutes of Health, coworkers: N. Chacko (P), X. Tian (P), L. Wang (P), R. Gyawali (G)

State

Development of a Novel Antifungal Treatment, Texas Higher Education Coordinating Board, coworkers: L. Wang (P), B. Zhai (G), D. Foyle (U)

Private

Investigation of the Mechanism of a Novel Treatment against Fungal Infections, American Heart Association, coworkers: L. Wang (P), B. Zhai (G), D. Foyle (U)

Investigators in the Pathogenesis of Infectious Disease Award, Burroughs Wellcome Fund

Investigators in the Pathogenesis of Infectious Disease Award-Felix Yarovinsky Seminar, Burroughs Wellcome Fund

• PRESENTATIONS DURING 2013
  • “Extracellular Proteins in Fungal Development and Communication,” PBoFF Symposium, Texas A&M University, College Station, TX, April, 2013. (Individual)
  • “Matrix-initiated Signaling in Fungal Morphogenesis and Communication,” Center for Infectious Disease Research, Tsinghua University/China Agriculture University/Institute of Microbiology, Beijing, China, May, 2013. (Individual)
  • “Cryptococcal Adhesion Proteins,” BWF Meeting, Calgary, Canada, August, 2013. (Individual)
  • “Morphogenesis, Communication and Virulence in Cryptococcus Neoformans,” MBL Molecular Mycology, Woodshole, MA, August, 2013. (Individual)
  • “Morphogenesis, Communication and Virulence in Cryptococcus Neoformans,” University of Missouri, Kansas City, MO, October, 2013. (Individual)

• PUBLICATIONS DURING 2013
  • Upadhyay, S.; Torres, G.; Lin, X. (2013) Laccases Involved in DHN Melanin Biosynthesis in Aspergillus Fumigatus are Regulated by Developmental Factors and Copper Hemostasis


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2013]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2013]

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: *Journal of Neuroscience*, *Cellular and Molecular Life Sciences* (Referee: Journals)
  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: TAMIN Graduate Student Curriculum Committee (Representative)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 112. — *Introductory Biology II* (total enrollment: 267)
  ▶ BIOL 491. — *Research* (total enrollment: 1)
  ▶ BIOL 691. — *Research* (total enrollment: 1)
  ▶ NRSC 485. — *Directed Studies* (total enrollment: 1)

  Summer
  ▶ BIOL 691. — *Research* (total enrollment: 1)

  Fall
  ▶ BIOL 112. — *Introductory Biology II* (total enrollment: 166)
  ▶ BIOL 291. — *Research* (total enrollment: 1)
  ▶ BIOL 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Elucidating the Genetic and Neural Basis of a C. elegans Male Motor Behavior Using Stimulatory and Inhibitory Light-Activated Channels, *National Science Foundation*, coworkers: M. Boggess (P), A. Skerlekar (G), A. Janssen (U), M. Johnson (U), O. Philpot (U)

• PRESENTATIONS DURING 2013
• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Neuroscience, [2013]

• SERVICE DURING 2013

  National
  ▷ Editorial/Board: National Science Foundation (Review: Proposals), *Biology Letters* (Reviewer: Journals)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 628. — Principles of Neuroscience II (total enrollment: 3)
  ▷ BIOL 691. — Research (total enrollment: 5)
  ▷ NRSC 602. — Principles of Neuroscience II (total enrollment: 9)

  Summer
  ▷ BIOL 485. — Directed Studies (total enrollment: 1)
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 691. — Research (total enrollment: 2)

  Fall
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 691. — Research (total enrollment: 1)
  ▷ NRSC 485. — Directed Studies (total enrollment: 1)
  ▷ NRSC 601. — Principles of Neuroscience I (total enrollment: 10)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▷ Genetic Heritability and Spatiotemporal Transcriptional Mapping of the Vocal Learning Process Using a Minimal Song Training Paradigm, *National Science Foundation*, coworkers: F. Pirlepesov (P), M. Deshpande (G)

• PRESENTATIONS DURING 2013

  ▷ “Sexually Dimorphic Parcellation of Lateralized Experience-dependent Gene Expression in the Zebra Finch Auditory Forebrain,” University of Texas Austin Conference on Learning & Memory, Austin, TX, April, 2013. (Poster Individual)
  ▷ “In Search of the Song Template: An Attempt to Dissect how Internal Models for Imitative Learning are Encoded and Acted Upon,” Brisbane, Australia, June, 2013. (Invited)

“Statistical Parametric Mapping of Experience-dependent Immediate Early Gene Expression in the Initial Phase of Vocal Learning,” Winter Conference on Brain Research, Queenstown, New Zealand, August, 2013.(Individual)


- PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2013]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: German-Israeli Foundation for Scientific Research and Development (Review: Proposals)
  ▶ Committee/Panel: Faculty of 1000 (Associate Member)

  National
  ▶ Editorial/Board: Journal of General Physiology, Journal of Bacteriology (Referee: Journals)
  ▶ Committee/Panel: American Chemical Society Local Chapter (Treasurer)

  University
  ▶ Service Position: Undergraduate Research Ambassador (Faculty Advisor), University Scholars Interviewer (Participant)

  Department
  ▶ Committee/Panel: Capstone Development & Advisory Committee (Member), Computer Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Service Position: Finance Committee, Texas A&M Institute for Neuroscience (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 491.(H) — Research (total enrollment: 1)
  ▶ BIOL 681. — Seminar (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 2)

  Fall
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 144)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

  Private
  ▶ The Structural Basis for Ligand Recognition and Allostery in Signaling Proteins, The Robert A. Welch Foundation, coworkers: S. Beagle (G), S. Liu (G)
• PRESENTATIONS DURING 2013
  ▶ “Ion Selectivity in Tetrameric Cation Channels,” University of Pennsylvania Perelman School of Medicine; Department of Physiology, Philadelphia, PA, March, 2013. (Invited)
  ▶ “Protein Secondary and Tertiary Structure Prediction,” Weill Cornell Medical College (Cornell University); Department of Physiology and Biophysics, New York, NY, March, 2013. (Invited)
  ▶ “Ion Selectivity in Tetrameric Cation Channels,” TAMHSC-College of Medicine; Department of Medical Physiology, Temple, TX, April, 2013. (Invited)
  ▶ “The K⁺ Channel Architecture Ensures Robust K⁺ Ion Selectivity,” University of Texas Southwestern Medical Center, Green Center for Systems Biology, Dallas, TX, April, 2013. (Invited)
  ▶ “Creating Robust Selectivity During K⁺ Ion Transport,” Sandia National Labs; Biological and Materials Sciences Center, Albuquerque, NM, December, 2013. (Invited)

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Director, Office of the Associate Provost for Undergraduate Programs and Academic Services, [2011]
  ▶ Member, Interdisciplinary Faculty, Reproductive Biology, [2006]
  ▶ Director, BioAquatics Facility, Biology, [ ]

• SERVICE DURING 2013

  National
  ▶ Event: Meeting of the Society for the Advancement of Chicanos and Native Americans in Science (Poster Judge)
  ▶ Editorial/Board: Comparative Biochemistry and Physiology (Referee: Journals), General and Comparative Endocrinology (Referee: Journals)

  University
  ▶ Event: Ecological Integration Symposium (Poster Judge), LSAMP Poster Session (Poster Judge), Student Research Week (Presentation Judge)
  ▶ Committee/Panel: In Honors and Undergraduate Research (Member), Radiological Safety Committee (Member)

  Department
  ▶ Committee/Panel: Undergraduate Programs Committee (Chair)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Graduate Degree Program in Marine Biology (Co-Chair), Graduate Programs Committee, IFRB (Chair)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 491(H) — Research (total enrollment: 1)
  ▶ BIOL 491 — Research (total enrollment: 1)
  ▶ BIOL 691 — Research (total enrollment: 1)

  Summer
  ▶ BIOL 691 — Research (total enrollment: 2)

  Fall
  ▶ BIOL 405 — Comparative Endocrinology (total enrollment: 24)
  ▶ BIOL 491 — Research (total enrollment: 2)
  ▶ BIOL 681 — Seminar (total enrollment: 1)
  ▶ BIOL 691 — Research (total enrollment: 2)
• PUBLICATIONS DURING 2013
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• **SERVICE DURING 2013**
  **National**
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), *Cell Death & Disease, FEBS Journal, Genetics, Fly, Nature Methods, Public Library of Science ONE, Public Library of Science Genetics, Transgenerational Epigenetics* (Referee: Journals), *Transgenerational Epigenetics* (Editor)
  ▶ Committee/Panel: NIGMS/MBRS Panel (Member)

  **University**
  ▶ Committee/Panel: Academic Freedom, Responsibility, and Tenure Committee (Member)

  **College**
  ▶ Committee/Panel: Faculty Advisory Council (Representative-at-Large)

  **Department**
  ▶ Committee/Panel: Annual Review Committee (Member), Capstone Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
  ▶ BIOL 213. — *Molecular Cell Biology* (total enrollment: 90)
  ▶ BIOL 285. — *Directed Studies* (total enrollment: 17)
  ▶ BIOL 491. — *Research* (total enrollment: 2)
  ▶ BIOL 691. — *Research* (total enrollment: 2)

  **Summer**
  ▶ BIOL 691. — *Research* (total enrollment: 1)

  **Fall**
  ▶ BIOL 652. — *Epigenetic Mechanisms* (total enrollment: 8)
  ▶ BIOL 691. — *Research* (total enrollment: 2)

• **PRESENTATIONS DURING 2013**
  ▶ “Nutrition, ‘Epigenetics,’ and the rDNA.” Lecce, Italy, June, 2013. (Individual)
  ▶ “Diet-Induced Changes to the Genome: A Potential Epigenetic Mechanism,” Texas A&M University, Department of Entomology, College Station, TX, November, 2013. (Individual)
• SERVICE DURING 2013

National
▷ Editorial/Board: Journal of Biological Chemistry (Advisory Board), Journal of Bacteriology (Advisory Board), Molecular Microbiology (Advisory Board), Journal of Bacteriology, Molecular Microbiology, Journal of Biological Chemistry, Applied and Environmental Microbiology, Biophysical Journal, PNAS, PloS One (Referee: Journals)
▷ Committee/Panel: BLAST, Inc (Board of Directors)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BICH 491. — Research (total enrollment: 1)
▷ BIOL 112. — Introductory Biology II (total enrollment: 190)
▷ BIOL 291. — Research (total enrollment: 2)
▷ BIOL 438. — Bacterial Physiology (total enrollment: 32)
▷ BIOL 491. — Research (total enrollment: 6)
▷ BIOL 691. — Research (total enrollment: 4)

Summer
▷ BICH 491. — Research (total enrollment: 3)
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 691. — Research (total enrollment: 2)

Fall
▷ BICH 491. — Research (total enrollment: 2)
▷ BIOL 111. — Introductory Biology I (total enrollment: 190)
▷ BIOL 291. — Research (total enrollment: 2)
▷ BIOL 406. — Bacterial Genetics (total enrollment: 11)
▷ BIOL 491. — Research (total enrollment: 4)
▷ BIOL 681. — Seminar (total enrollment: 5)
▷ BIOL 685. — Directed Studies (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 4)
▷ GENE 406. — Bacterial Genetics (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013

Federal
▷ AI-2 Chemotaxis and Biofilm Formation, National Science Foundation, coworkers: S. Jani (G), A. Seely (G)
• PUBLICATIONS DURING 2013


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Interim Department Head, Biology, [2013]
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]
  ▶ Associate Department Head, Biology, [2003]

• SERVICE DURING 2013

  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), Plant Cell, Plant Physiology, Plant Journal (Referee: Journals)

  College
  ▶ Committee/Panel: Executive Committee (Member), Research Advisory Committee (Member)

  Department
  ▶ Committee/Panel: Executive Committee (Chair), Undergraduate Program Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: MEPS Annual Symposium Committee (Member), Executive Committee for Genetics Interdepartmental Program (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 112. — Introductory Biology II (total enrollment: 266)
  ▶ BIOL 491(H) — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 22)
  ▶ BIOL 691. — Research (total enrollment: 3)

  Summer
  ▶ BIOL 491. — Research (total enrollment: 7)
  ▶ BIOL 691. — Research (total enrollment: 2)

  Fall
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 13)
  ▶ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013
Federal
▷ Meeting: MEPS 2013: Plant Signaling Systems from Cells to Environment, National Science Foundation
▷ MEPS 2103: Plant Signaling Systems from Cells to Environment, National Science Foundation

State
▷ Solanum Pennellii, A Potential Feedstock for Bio-Gasoline Production, Virginia State University, coworkers: W. Ji (G), S. Mandal (G), C. Okonkwo (U)

• PRESENTATIONS DURING 2013
▷ “The BT2 Ubiquitin Ligase Complex Perceives and Integrates Diverse Signals in Arabidopsis Thaliana,” Texas A&M University, College Station, TX, October, 2013.( Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013

▷ Department Head, Biology, [2008]

• SERVICE DURING 2013

International

▷ Event: IBRO Course in Neuroscience at the University of Asuncion (Co-Organizer), IBRO Course in Neuroscience at the University of Latvia (Organizer)
▷ Editorial/Board: Princes Beatrix Spiefonds (Review: Proposals)
▷ Committee/Panel: Visiting Lecture Team Program for the International Brain Research Program (Director)

• TEACHING ASSIGNMENTS DURING 2013

Spring

▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 682. — Research Seminar (total enrollment: 36)

Fall

▷ BIOL 491. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2013

▷ “IBRO Course in Neuroscience,” University of Latvia, Riga, Latvia, September, 2013. (Individual)
▷ “Research Seminar,” Department of Anatomy and Cell Biology, University of Kansas, Kansas City, KS, September, 2013. (Invited)
▷ “IBRO Course in Neuroscience,” University of Asuncion, Asuncion, Paraguay, October, 2013. (Individual)
▷ “Neuroscience Workshop,” Tarbiat Modares University, Tehran, Iran, November, 2013. (Individual)
▷ “Research Lecturer,” University of Verona Graduate School of Science Engineering Medicine, Verona, Italy, December, 2013. (Invited)
▷ “Research Seminar,” Department of Pharmacology, University of Padua, Padua, Italy, December, 2013. (Invited)

• PUBLICATIONS DURING 2013
• **SERVICE DURING 2013**
  
  **International**
  ▶ Committee/Panel: Chronobiology Gordon Research Seminar (Chair), Chronobiology Gordon Research Seminar Abstract Selection Committee (Member)
  
  **Department**
  ▶ Event: Clocks Journal Club and the Center for Biological Clocks Research (Participant)
  
• **PRESENTATIONS DURING 2013**
  ▶ “CLOCK:BMAL1 is a Pioneer-like Transcription Factor,” Gordon Research Conferences on Chronobiology, Salve Regina University, Newport, RI, July, 2013. (Individual)
  ▶ “Molecular Basis of Circadian Rhythms,” Texas A&M Genetics Graduate Students Association, College Station, TX, October, 2013. (Invited)
  
• **PUBLICATIONS DURING 2013**
  
*Hired 09/01/2013.*
CHRISTINE MERLIN

ASSISTANT PROFESSOR
BIOL-Biological Clocks
cmerlin@bio.tamu.edu

• SERVICE DURING 2013

National
▷ Editorial/Board: Animal Behaviour (Referee: Journals), Frontiers in Ecology and Evolution, Chemical Ecology (Editor)

Department
▷ Event: Center for Biological Clock Research (Participant)

• TEACHING ASSIGNMENTS DURING 2013

Fall
▷ BIOL 491. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2013


▷ “Circadian Clocks and Monarch Butterfly Migration: From Genes to Behavior,” Texas A&M University Genetic Student Association, College Station, TX, November, 2013.(Invited)

• PUBLICATIONS DURING 2013


Hired 08/01/2013.
• SERVICE DURING 2013

National
▷ Advisory Board: Science Advisory Board (Member)
▷ Editorial/Board: *Journal of Microbiology Education* (Editorial Advisory Board)
▷ Committee/Panel: iTeach Microbiology Panel (Member)

University
▷ Service Position: Explorations Undergraduate Journal (Reviewer)
▷ Committee/Panel: Senate Subcommittee for Lecturers (Member), Student Rules and Regulations Committee (Member), TAMU Laboratory Safety Sub-Committee (Member), Women’s Faculty Network (Member)

College
▷ Event: Texas Science Olympiad (Judge)
▷ Committee/Panel: Teaching Lab Safety Committee (Member)

Department
▷ Committee/Panel: Biology Safety Committee (Chair), Head Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 454. — Immunology (total enrollment: 47)
▷ BIOL 491. — Research (total enrollment: 1)

Fall
▷ BIOL 206. — Introductory Microbiology (total enrollment: 182)
▷ BIOL 456. — Medical Microbiology (total enrollment: 46)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2013]
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2013
  International
  ▶ Committee/Panel: ICGI Subcommittee on Comparative Genomics and Evolution (Chair), Steering Committee, International Cotton Genome Initiative (Member)

  National
  ▶ Committee/Panel: Navasota Ladies’ Tresses (Spiranthes Parksii) Endangered Species Recovery Team, U.S. Fish and Wildlife Service (Member)

  State
  ▶ Committee/Panel: Working Group, Texas State Parks and Wildlife Department Strep-tanthus Bracteatus (Member)

  University
  ▶ Committee/Panel: Whole Systems Genomics Initiative, Faculty Computational Advisory Group (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Gene Technologies Laboratory Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 124)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 635. — Plant Molecular Biology (total enrollment: 10)
  ▶ BIOL 691. — Research (total enrollment: 2)

  Summer
  ▶ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 27)
  ▶ BIOL 691. — Research (total enrollment: 2)

  Fall
  ▶ BIOL 491. — Research (total enrollment: 2)
• RESEARCH PROJECTS DURING 2013

Federal

▷ De Novo SNP Discovery and GBS Based Cotton Genome Map Development, Department of Agriculture

▷ A Population-Genetic Inventory of the Invasive Weed, Imperative Cylindrica to Expedite the Development of Viable Biological Controls, U.S. Department of Agriculture

▷ Development of Genomic and Bioinformatics Resources for Cotton, U.S. Department of Agriculture, coworkers: C. Logan-Young (G), J. Yu (G)

• PRESENTATIONS DURING 2013

▷ “Climate Change, Evolution and Tobacco: a Journey to the Dark Heart of Manufactured Controversy,” Community Conversations Texas A&M UniversityDepartment of Multicultural Services, College Station, TX, September, 2013. (Individual)

• PUBLICATIONS DURING 2013

ADDITIONAL UNIVERSITY TITLES HELD DURING 2013

- Member, Interdisciplinary Faculty, Neuroscience, [2004]/
- Member, Interdisciplinary Faculty, Genetics, []

SERVICE DURING 2013

National
- Advisory Board: Molecular Vision (Member)
- Editorial/Board: Internal Grant - University of Adelaide (Review: Proposals), PNAS, PLoS Genetics, Organogenesis, Molecular Vision (Referee: Journals)

University
- Committee/Panel: Committee for Athletics Task Force Recommendation #59 (Member), Faculty Senate (Faculty Senator - 04), Faculty Senate: The Academic Affairs Committee (Member), Faculty Senate: The Legislative Affairs Committee (Member), Koldus Awards Committee (Member)

Department
- Committee/Panel: IEEF Committee (Member)

Interdisciplinary/Intercollegiate
- Committee/Panel: Faculty of Neuroscience Curriculum Committee (Member), Grant Proposal Committee (Member)

RESEARCH PROJECTS DURING 2013

Federal
- (REN) Cilia Assembly and Transport in the Vertebrate Retina, National Institutes of Health
- The Role of WRB in Vertebrate Ribbon Synapse Formation, National Institutes of Health

PUBLICATIONS DURING 2013

On leave.

Resigned 08/31/2013.

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ≫ Member, Interdisciplinary Faculty, Genetics, [2013]

• SERVICE DURING 2013

  National
  ≫ Advisory Board: World Journal of Biological Chemistry (Member)

  Department
  ≫ Committee/Panel: Graduate Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ≫ BIOL 491. — Research (total enrollment: 4)
  ≫ BIOL 613. — Cell Biology (total enrollment: 15)
  ≫ BIOL 691. — Research (total enrollment: 1)

  Summer
  ≫ BIOL 291. — Research (total enrollment: 1)
  ≫ BIOL 491. — Research (total enrollment: 1)

  Fall
  ≫ BIOL 213. — Molecular Cell Biology (total enrollment: 76)
  ≫ BIOL 491. — Research (total enrollment: 3)
  ≫ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

  Private
  ≫ Small G Protein Regulators of Intraflagellar Transport (IFT), American Heart Association, coworkers: X. Jiang (G), X. Chen (U), N. Chen (U), C. Hernandez (U), R. Manshouri (U), G. Mathis (U), A. Muzza (U)

• PRESENTATIONS DURING 2013

  ≫ “Building Cilia/Flagella, Lessons Learned from Chlamydomonas,” College of Life Science, Huainan Normal University, China, January, 2013. (Invited)
  ≫ “Building Cilia/Flagella, Lessons Learned from Chlamydomonas,” College of Life Science, Shandong University, China, January, 2013. (Invited)
“Building Cilia/Flagella, Lessons Learned from Chlamydomonas,” Shandong Medical Institute, China, January, 2013. (Invited)

“Assembly and localization of Intraflagellar transport (IFT) particles in Chlamydomonas,” FASEB meeting Ciliate Molecular Biology, Steamboat Spring, CO, July, (Individual)

• PUBLICATIONS DURING 2013
ASHA RAO
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• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 320. — Integrated Hum AN/PHY II (total enrollment: 72)

Fall
▷ BIOL 111. — Introductory Biology I (total enrollment: 581)

No report received from faculty member.

Hired 09/01/2013.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2013
  National
  ▶ Advisory Board: Developmental Dynamics, PLOS ONE (Member)
  State
  ▶ Event: Biophysics Outreach Program for K-12 girls (Participant)
  Department
  ▶ Committee/Panel: Awards Committee (Member), Graduate Recruiting & Admissions Committee (Chair), Seminar Committee (Member), Animal Care Committee (Chair), Annual Review Committee (Member), Head Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 344. — Embryology (total enrollment: 30)
  ▶ BIOL 681. — Seminar (total enrollment: 5)
  ▶ BIOL 691. — Research (total enrollment: 2)
  Summer
  ▶ BIOL 691. — Research (total enrollment: 2)
  Fall
  ▶ BIOL 681. — Seminar (total enrollment: 5)
  ▶ BIOL 685. — Directed Studies (total enrollment: 3)
  ▶ BIOL 691. — Research (total enrollment: 2)
  ▶ GENE 491. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Genetic Analysis of Inner Ear Development in Zebrafish, National Institute on Deafness and Other Communication Disorders, coworkers: J. Dong (Technician), H. Kantarci (G), Y. Guo (U)

• PRESENTATIONS DURING 2013


“Formation of Mechanosensory Cells and Neurons in the Zebrafish Inner Ear,” Biology Department, Texas A&M University, College Station, TX, October, 2013. (Individual)

PUBLICATIONS DURING 2013


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Genetics, [2008]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2008]
  ▶ Member, Interdisciplinary Faculty, Reproductive Biology, [2008]
  ▶ Chair, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2013

  National
  ▶ Editorial/Board: Behavioral Ecology (Associate Editor), Current Zoology (Guest Editor),

  University
  ▶ Committee/Panel: Study Abroad Programs Policy Committee (Member)

  Department
  ▶ Committee/Panel: Executive Committee (Member), Seminars Committee (Member),
  Webpage Advisory Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Service Position: ABS-IGERT (Participant), LSAMP (Mentor)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 5)
  ▶ BIOL 691. — Research (total enrollment: 7)

  Summer
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 5)

  Fall
  ▶ BIOL 467. — Integrative Animal Behavior (total enrollment: 36)
  ▶ BIOL 491. — Research (total enrollment: 5)
  ▶ BIOL 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013

  Federal
DISSERTATION RESEARCH: Olfactory Reproductive Isolating Mechanisms in Swordtail Fishes, National Science Foundation

Enabling Partnerships to Enable Science (TOOLS): Any Fish: A User-friendly Software Package for Creating Realistics Animations for Animal Behavior, National Science Foundation, coworkers: R. Cui (G), M. Asl (U), W. Li (U), A. Marshall (U), J. Simpson (U), J. Wilson (U), C. Wu (U), J. Zhang (U)

Mate Choice and Evolutionary Genetics in Xiphophorus Hybrid Zones, National Science Foundation, coworkers: P. Guevara (P), M. Tobler (P), M. Verzijden (P), C. Bautista (G), Z. Culumber (G), J. Johnson (G), H. Kindsvater (G), K. Paczolt (G), C. Small (G), V. Smith (G), D. Bommisetty (U), K. Buehrke (U), R. Easterling (U), D. Macedo (U), L. McMahon (U), O. Ochoa

PRESENTATIONS DURING 2013

“Evolutionary Genetics of Mate-choice Mechanisms,” CBBE Annual Symposium, University of Texas, Austin, TX, February, 2013. (Invited)


“Mate-choice Mechanisms and the Evolutionary Process,” Department of Biology, University of Texas, Arlington, TX, November, 2013. (Invited)

PUBLICATIONS DURING 2013


Veen, T; Ingle, SJ; Cui, RF; Simpson, J; Asl, MR; Zhang, J; Butkowski, T; Li, W; Hash,

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Member, Interdisciplinary Faculty, Genetics, [2007]

• **SERVICE DURING 2013**
  National
  ▶ Editorial/Board: *Molecular Cell Research, Traffic, MCBI* (Referee: Journals)
  Department
  ▶ Committee/Panel: Undergraduate Program Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**
  Spring
  ▶ BIOL 491. — **Research** (total enrollment: 2)
  ▶ BIOL 613. — **Cell Biology** (total enrollment: 15)
  ▶ BIOL 691. — **Research** (total enrollment: 1)
  Summer
  ▶ BIOL 491. — **Research** (total enrollment: 1)
  Fall
  ▶ BIOL 413. — **Cell Biology** (total enrollment: 49)
  ▶ BIOL 491. — **Research** (total enrollment: 2)
  ▶ BIOL 691. — **Research** (total enrollment: 1)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Genetics, [2011]

• AWARDS DURING 2013
  National
  ▶ Fellow, American Association for the Advancement of Science

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: Israeli Binational Foundation (Review: Proposals)
  ▶ Committee/Panel: Neurospora 2012 Conference Co-Scientific (Chair)

  National
  ▶ Advisory Board: Fungal Genetics Stock Center (Chair), Fungal Genome Initiative (Member)
  ▶ Committee/Panel: Neurospora Policy Committee (Member)

  University
  ▶ Advisory Board: AgriLife Genomics and Bioinformatic Services Core (TAGS) External (Member)
  ▶ Committee/Panel: Institute for Plant Genomics and Biotechnology Advisory Committee (Member), Rec Sports Participant Advisory Council (Member), Texas A&M UniversityNEST (Member)

  College
  ▶ Committee/Panel: Tenure and Promotion Advisory Committee (Member)

  Department
  ▶ Committee/Panel: Executive Committee (Member), Undergraduate Policy Committee (Member), Capstone Program Committee (Chair), Faculty Mentoring Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 351. — Fund of Microbiol (total enrollment: 118)
  ▶ BIOL 485(H) — Directed Studies (total enrollment: 2)
BIOL 485. — Directed Studies (total enrollment: 8)
BIOL 681. — Seminar (total enrollment: 7)
BIOL 691. — Research (total enrollment: 1)
GENE 491. — Research (total enrollment: 1)
MICR 691. — Research (total enrollment: 1)

Summer
BIOL 691. — Research (total enrollment: 2)
MICR 691. — Research (total enrollment: 1)

Fall
BIOL 452. — Fungal Functional Genomics (total enrollment: 9)
BIOL 491. — Research (total enrollment: 1)
BIOL 681. — Seminar (total enrollment: 5)
BIOL 691. — Research (total enrollment: 1)
GENE 491. — Research (total enrollment: 2)
MICR 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
Determining the Mechanism of Biological Compensation, National Institutes of Health
Functional Analysis and Systems Biology of Filamentous Fungi, National Institutes of Health, coworkers: C. Wu (P)
Functional Analysis and Systems Biology of Filamentous Fungi Project I, National Institutes of Health, coworkers: Y. Zhang (P), C. Edwards (U), B. Jones (U), S. Shea (U)

• PUBLICATIONS DURING 2013

No report received from faculty member.
DEBORAH A. SIEGELE

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• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2013

  National
  ▷ Advisory Board: *Journal of Bacteriology* (Member)
  ▷ Editorial/Board: Cottrell College Science Awards (Review: Proposals), *J. Bacteriology* (Referee: Journals)
  ▷ Committee/Panel: Board of Directors of the Genetics Society of America (Elected Member)

  University
  ▷ Committee/Panel: Protein Chemistry Lab User Committee (Member)

  Department
  ▷ Committee/Panel: IEEF Committee (Member)

  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Professional Program in Biotechnology (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ BIOL 351. — *Fund of Microbiol* (total enrollment: 120)
  ▷ BIOL 485. — *Directed Studies* (total enrollment: 6)
  ▷ BIOL 491. — *Research* (total enrollment: 1)
  ▷ BIOL 681. — *Seminar* (total enrollment: 6)

  Fall
  ▷ BIOL 351. — *Fund of Microbiol* (total enrollment: 228)
  ▷ BIOL 491. — *Research* (total enrollment: 1)
  ▷ BIOL 622. — *Microbial Physiology* (total enrollment: 13)
  ▷ BIOL 685. — *Directed Studies* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▷ An Ontology for Bacterial Phenotypes, *Department of Health and Human Services*, coworkers: J. Herrera (Research Associate), W. Meza (Research Associate), S. Eslamfam (G)
A Next Generation E. coli Model Organism Resource, National Institutes of Health, coworkers: S. Aleksander (Research Associate), B. McIntosh (P), N. Liles (Staff), A. Supak (Staff)

- **PRESENTATIONS DURING 2013**
  - “An Ontology for Microbial Phenotype Annotation,” Molecular Genetics of Bacteria, Archaea, and Phage Conference, Madison, WI, August, 2013. (Poster Individual)
  - “Bioinformatics Workshop,” Molecular Genetics of Bacteria, Archaea, and Phage Conference, Madison, WI, August, 2013. (Individual)

- **PUBLICATIONS DURING 2013**
• SERVICE DURING 2013

National
▷ Advisory Board: Applied and Environmental Microbiology, Microbial Cell (Member)
▷ Editorial/Board: Maryland Industrial Partnership (Review: Proposals), Merit Fellowship Review (Reviewer), Tetrahedron, Journal Annals of Microbiology (Referee: Journals)

College
▷ Committee/Panel: Faculty Advisory Council (Elected Member)

Department
▷ Committee/Panel: SPRC Organizing Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 285. — Directed Studies (total enrollment: 9)
▷ BIOL 489. — Special Topics in (total enrollment: 8)
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 689. — Special Topics in (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 3)

Summer
▷ BIOL 691. — Research (total enrollment: 2)

Fall
▷ BICH 491. — Research (total enrollment: 1)
▷ BIOL 351. — Fund of Microbiol (total enrollment: 258)
▷ BIOL 491. — Research (total enrollment: 3)
▷ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

Private
▷ Examination of the Pharmacological Properties of a Novel Antifungal Named Occidiofungin, Cancer Prevention and Research Institute of Texas, coworkers: W. Tang (P), A. Ravichandran (G), A. Geurrero (U)

• PRESENTATIONS DURING 2013
▷ “Occidiofungin, a Novel Antifungal,” Rice University, Houston, TX, February, 2013. (Individual)

• PUBLICATIONS DURING 2013

136 2013 Biology annual report


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2013]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2006]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: J. African Biotech (Referee: Journals)

  National

  Department
  ▶ Committee/Panel: Graduate Program Committee (Member), Animal Care Committee (Member), Graduate Recruiting and Admissions (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: TAMIN Graduate Program Committee (Chair), TAMIN Undergraduate Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BIOL 435. — Laboratory for Regulatory and Behavioral Neuroscience (total enrollment: 8)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 2)
  ▶ NRSC 491. — Research Credit (total enrollment: 1)
  ▶ NRSC 681. — Seminar Credit (total enrollment: 21)
  ▶ NRSC 685. — Directed Studies Credit (total enrollment: 2)
  ▶ ZOOL 691. — Research (total enrollment: 1)

  Summer
  ▶ BIOL 691. — Research (total enrollment: 2)

  Fall
  ▶ BIOL 434. — Regulatory and Behavioral Neuroscience (total enrollment: 24)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 681. — Seminar (total enrollment: 10)
- **RESEARCH PROJECTS DURING 2013**
  Private

- **PRESENTATIONS DURING 2013**

- **PUBLICATIONS DURING 2013**
• AWARDS DURING 2013
  University
  ▷ Montague-Center for Teaching Excellence Scholar, Center for Teaching Excellence

• SERVICE DURING 2013
  International
  ▷ Editorial/Board: French National Research Agency, UK Medical Research Council (Review: Proposals)
  National
  Department
  ▷ Committee/Panel: Graduate Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ BIOL 291. — Research (total enrollment: 1)
  ▷ BIOL 351. — Fund of Microbiology (total enrollment: 118)
  ▷ BIOL 406. — Bacterial Genetics (total enrollment: 18)
  ▷ BIOL 485. — Directed Studies (total enrollment: 6)
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 691. — Research (total enrollment: 1)
  ▷ GENE 406. — Bacterial Genetics (total enrollment: 9)
  Summer
  ▷ BIOL 691. — Research (total enrollment: 1)
  Fall
  ▷ BIOL 491. — Research (total enrollment: 4)
  ▷ BIOL 681. — Seminar (total enrollment: 5)
  ▷ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▷ Role of Bioacids in Human Susceptibility to Clostridium Difficile Infection, National Institutes of Health, coworkers: X. Ding (P)
Private
▷ Analysis of Clostridium Difficile Spore Germination, American Heart Association, coworkers: M. Francis (Staff)
▷ The Effect of CB-183 and Other Compounds on Germination of Clostridium Difficile Spores on Outgrowth of Vegetable Cells, Tufts University, coworkers: C. Allen (Technician)

• PRESENTATIONS DURING 2013
  ▷ “Bile Acid Recognition by the Clostridium Difficile Germinant Receptor, CspC, is Important for Establishing Infection,” International Conference on Gram-positive Microorganisms, Monte-Catini Terme, Italy, June, 2013.(Poster Individual)
  ▷ “Analyzing the Effects of Surotomycin on Clostridium Difficile Spore,” ICCAC, Denver, CO, September, 2013.(Poster Individual)
  ▷ “Defining the Interactions Between Bile Acids and the C. Difficile Germinant Receptor,” ClostPath Meeting, Cairns, Australia, October, 2013.( Individual)
  ▷ “Spore Germination and Bile Acid Resistance in Clostridium Difficile,” C. Difficile Gulf Coast Collaborative, Houston, TX, December, 2013.( Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

   Department
   ▶ Committee/Panel: Capstone Development Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

   Spring
   ▶ BIOL 285. — Directed Studies (total enrollment: 17)
   ▶ BIOL 485. — Directed Studies (total enrollment: 10)

   Summer
   ▶ BIOL 285. — Directed Studies (total enrollment: 3)
   ▶ BIOL 485. — Directed Studies (total enrollment: 3)

No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 320(H) — Integrated Hum AN/PHY II (total enrollment: 6)
▷ BIOL 320. — Integrated Hum AN/PHY II (total enrollment: 378)

Summer
▷ BIOL 320. — Integrated Hum AN/PHY II (total enrollment: 110)
▷ BIOL 485. — Directed Studies (total enrollment: 1)

Fall
▷ BIOL 320(H) — Integrated Hum AN/PHY II (total enrollment: 1)
▷ BIOL 320. — Integrated Hum AN/PHY II (total enrollment: 357)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Director, Shared Instrumentation Facility, Biology,
  ▶ Director, Laboratory for Functional Genomics, Biology,

• SERVICE DURING 2013
  University
  ▶ Committee/Panel: Council of Principal Investigators (Member), E-mail Selection Committee (Member), Maestro Steering Committee (Member), Maestro Working Group (Member), Research Data Stewardship Task Force (Member), SRS Principal Investigator Faculty Advisory Committee (Chair), Council of Principal Investigators, Executive Committee (Member), Texas A&M University Multi-disciplinary Accounting in Sponsored Research Committee (Member), Texas A&M University Research Administration Committee (Member)

  Department
  ▶ Committee/Panel: Clocks Search Committee (Member), Head Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 451. — Bioinformatics (total enrollment: 28)
  ▶ BIOL 651. — Bioinformatics (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 2)

  Summer
  ▶ BIOL 691. — Research (total enrollment: 2)

  Fall
  ▶ BIOL 451. — Bioinformatics (total enrollment: 29)
  ▶ BIOL 651. — Bioinformatics (total enrollment: 9)
  ▶ BIOL 691. — Research (total enrollment: 2)

• PUBLICATIONS DURING 2013
• TEACHING ASSIGNMENTS DURING 2013

Fall

▷ NRSC 491. — Research Credit (total enrollment: 1)

_Hired 01/01/2013._

_No report received from faculty member._
WAYNE K. VERSAW
ASSOCIATE PROFESSOR (979) 847-8587
BIOL-Plant Biology, Cell Biology wversaw@bio.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  - Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

- SERVICE DURING 2013
  
  International
  - Editorial/Board: Biochimica et Biophysica Acta (Referee: Journals)

  National
  - Advisory Board: Frontiers in Plant Science (Member), Plant Signaling and Behavior, Frontiers in Plant Science (Member)
  - Editorial/Board: National Science Foundation (Review: Proposals), Plant Journal, Plant Cell, Plant Physiology, Fungal Genetics and Biology (Referee: Journals)

  Department
  - Committee/Panel: Annual Review Committee (Member), Executive Committee (Member), Faculty Mentoring (Member), Head Search Committee (Member), Lower Division Instruction Advisory Committee (Member), Undergraduate Program Committee (Chair)

  Interdisciplinary/Intercollegiate
  - Research Group: MEPS Graduate Curriculum Committee (Chair), MEPS Symposium Organization Committee (Member), Molecular and Environmental Plant Sciences (Member)

- TEACHING ASSIGNMENTS DURING 2013

  Spring
  - BIOL 491. — Research (total enrollment: 1)
  - BIOL 635. — Plant Molecular Biology (total enrollment: 10)
  - BIOL 691. — Research (total enrollment: 1)

  Summer
  - BIOL 213. — Molecular Cell Biology (total enrollment: 25)

  Fall
  - BIOL 111. — Introductory Biology I (total enrollment: 409)
  - BIOL 491. — Research (total enrollment: 1)
  - BIOL 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2013

  Federal
  - Meeting: MEPS 2013: Plant Signaling Systems from Cells to Environment, National Science Foundation
MEPS 2103: Plant Signaling Systems from Cells to Environment, *National Science Foundation*

Plastidic Phosphate Transport and Plant Biomass Allocation, *National Science Foundation*, coworkers: S. Irigoyen (P), P. Mukherjee (G), D. Sagiroi (U), J. Thacker (U), A. Wheeler (U)
• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ BIOL 206. — Introductory Microbiology (total enrollment: 55)

  Fall
  ▷ BIOL 111. — Introductory Biology I (total enrollment: 746)

No report received from faculty member.
MARY K. WICKSTEN

PROFESSOR (979) 845-3388
BIOL-Marine Biology wicksten@bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2013]

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: Journal of Crustacean Biology, Zootaxa, Marine Biology (Referee: Journals)
  University
  ▶ Editorial/Board: Texas A&M UniversityScholars (Review: Proposals)
  Department
  ▶ Committee/Panel: Scientific Diving Program (Member), Sigma Xi Teacher of the Year Award Committee (Member)
  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: MARB Graduate Recruiting Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ BIOL 335. — Invertebrate Zoology (total enrollment: 36)
  ▶ BIOL 491. — Research (total enrollment: 5)
  ▶ BIOL 691. — Research (total enrollment: 1)
  ▶ ZOOL 691. — Research (total enrollment: 2)
  Summer
  ▶ BIOL 491. — Research (total enrollment: 1)
  Fall
  ▶ BIOL 440. — Marine Biology (total enrollment: 60)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2013

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National
▷ Editorial/Board: 1st Edition Biology for a Changing World (Reviewer)

Regional
▷ Event: College Station Library Summer Reading Program: Get a Clue! (Organizer), College Station Library Summer Reading Program: Get a Clue! (Presenter)

Department
▷ Event: TA Workshop (Presenter)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 107. — Zoology (total enrollment: 131)
▷ BIOL 113. — Introductory Biology (total enrollment: 157)

Fall
▷ BIOL 107. — Zoology (total enrollment: 304)
▷ BIOL 113. — Introductory Biology (total enrollment: 178)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Adjunct Associate Professor, Psychology, [2007]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2007]
  ▶ Associate Dean for Graduate Studies, Graduate Studies Office, College of Science, [2003]
  ▶ Director, Real Time Imaging Labs: Cell Physiology and Molecular Imaging, Biology, [2001]

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: Israel Binational Science Foundation (Review: Proposals)

  National

  State
  ▶ Research Group: Texas Brain and Spine Institute (Associate Member)

  University
  ▶ Research Group: Texas A&M UniversityCenter for Research on Biological Clocks (Member)
  ▶ Committee/Panel: Alliances for Graduate Education and the Professoriate (AGEP) Steering Committee (Member), CIRTL Steering Committee (Member), English Language Proficiency Exam Task Force (Chair), Graduate Council (Chair), Graduate Operations Committee (Member), HSC Curriculum Approval Transition Committee (Member), MSC Bookstore Advisory Committee (Member), NSF ADVANCE Scholar Program Advisory Committee (Member), NSF LSAMP Bridge to the Doctorate, Program Management Team (Member)

  College
  ▶ Service Position: Graduate Student Council (Advisor)
  ▶ Committee/Panel: Executive Committee (Member), Graduate Instruction Committee (Chair)

  Department
  ▶ Committee/Panel: Biology Executive Committee (Member), Biology Faculty Search Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Executive Committee, Texas A&M Institute for Neuroscience (Member), Finance Committee, Texas A&M Institute for Neuroscience (Chair), Graduate Re-
• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 388. — Principles of Animal Physiology (total enrollment: 76)
▷ BIOL 691. — Research (total enrollment: 2)
▷ NRSC 491. — Research Credit (total enrollment: 1)

Summer
▷ BIOL 691. — Research (total enrollment: 1)

Fall
▷ BIOL 644. — Neural Development (total enrollment: 1)
▷ NRSC 644. — Neural Development (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013

Federal
▷ The Control of Neural Transmission by Glycosylation, National Institutes of Health

• PRESENTATIONS DURING 2013

▷ “Circadian Regulation of ATP Signaling Between Mammalian Brain Cells,” Department of Biology, Texas A&M University, College Station, TX, September, 2013. (Individual)
▷ “Circadian Regulation of Intracellular and Intercellular Calcium Signaling in Suprachiasmatic Nucleus Astrocytes,” Society for Neuroscience, Annual Meeting, Nanosymposium on Cellular and Molecular Control of Circadian Rhythms, San Diego, CA, November, 2013. (Individual)

• PUBLICATIONS DURING 2013

7. Research Activity, 2013

This section contains information on all funded research activity for the calendar year 2013. Information was initially reported by faculty and verified whenever possible through the granting agency. Because of calculations and rounding there is a small margin of error.

Information reported by faculty:

▷ Title
▷ Granting Agency
▷ PIs, Co-PIs, and co-workers (internal/external)
▷ Total Funding
▷ Indirect Costs
▷ Start & End Dates

Calendar year calculations:

▷ Total - Indirect = Direct
▷ # Days Total Grant = End Date - Start Date
▷ Daily Grant Award = Total Funding Reported / # Days Total Grant
▷ Grant Award for 2013 = # Days 2013 × Daily Grant Award
### 7.1 Summary of Research Support, 2013

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<td><strong>Department of Agriculture</strong></td>
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<tr>
<td>Pepper, A.E. De Novo SNP Discovery and GBS Based Cotton Genome Map Development</td>
<td>9/1/2012</td>
<td>8/31/2017</td>
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<td><strong>Department of Health and Human Services</strong></td>
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<td><strong>National Institute on Deafness and Other Communication Disorders</strong></td>
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<td>Riley, B.B. (REN) Genetic Analysis of Inner Ear Development in Zebrafish</td>
<td>4/1/2008</td>
<td>3/31/2013</td>
<td>68,862</td>
<td>4,262</td>
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<td><strong>National Institutes of Health</strong></td>
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<td>Bell-Pedersen, D. 2012 Society for Research on Biological Rhythms Conference- SRBR</td>
<td>5/1/2012</td>
<td>4/30/2013</td>
<td>7,519</td>
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<td>Bell-Pedersen, D. Determining the Mechanism of Biological Compensation, (with: D. Bell-Pedersen, M. Sachs)</td>
<td>7/1/2013</td>
<td>4/30/2014</td>
<td>20,661</td>
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<td>Bell-Pedersen, D. (REN) Molecular Genetic Analysis of Fungal Circadian Rhythms</td>
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<td>7/31/2013</td>
<td>107,483</td>
<td>45,477</td>
<td>152,961</td>
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<td>Gomer, R.H. Elucidation of a Dictyostelium Chalone</td>
<td>9/1/2012</td>
<td>8/31/2016</td>
<td>264,720</td>
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<td>Hardin, P.E. Developing Cell Lines from Clock Neurons in Drosophila</td>
<td>7/1/2012</td>
<td>5/31/2014</td>
<td>205,458</td>
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<td>Hardin, P.E. (REN) Regulation of Circadian Transcription</td>
<td>8/16/2010</td>
<td>7/31/2015</td>
<td>299,647</td>
<td>19,179</td>
<td>318,725</td>
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154  2013 Biology annual report
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<th>Grantee</th>
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<th>Start</th>
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<td>Lin, X.</td>
<td>Investigate the Multifunctional Adhesins in Cryptococcus</td>
<td>6/1/2013</td>
<td>5/31/2015</td>
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<td>Lin, X.</td>
<td>The Link Between Dimorphism and Virulence in Cryptococcus</td>
<td>12/1/2011</td>
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<td>199,890</td>
<td>49,973</td>
<td>249,863</td>
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<td>Perkins, B.D.</td>
<td>(REN) Cilia Assembly and Transport in the Vertebrate Retina</td>
<td>9/1/2012</td>
<td>8/31/2017</td>
<td>357,228</td>
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<td>Perkins, B.D.</td>
<td>The Role of WRB in Vertebrate Ribbon Synapse Formation</td>
<td>7/1/2012</td>
<td>6/30/2014</td>
<td>200,828</td>
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<td>Sachs, M.S.</td>
<td>Determining the Mechanism of Biological Compensation, (with: D. Bell-Pedersen, M. Sachs)</td>
<td>7/1/2013</td>
<td>4/30/2014</td>
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<td>Sachs, M.S.</td>
<td>Functional Analysis and Systems Biology of Filamentous Fungi Project I</td>
<td>4/1/2009</td>
<td>3/31/2014</td>
<td>70,000</td>
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<td>Siegele, D.A.</td>
<td>A Next Generation E. coli Model Organism Resource</td>
<td>7/1/2009</td>
<td>6/30/2013</td>
<td>54,417</td>
<td>5,493</td>
<td>59,910</td>
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<td>Sorg, J.A.</td>
<td>Role of Bioacids in Human Susceptibility to Clostridium Difficile Infection</td>
<td>7/1/2013</td>
<td>6/30/2015</td>
<td>4,593</td>
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<td>Zoran, M.J.</td>
<td>The Control of Neural Transmission by Glycosylation</td>
<td>8/1/2011</td>
<td>7/31/2016</td>
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**Subtotal: National Institutes of Health**

2,456,291 120,122 2,576,413

**National Science Foundation**

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<tr>
<td>Carney, G.E.</td>
<td>His Fat Made Him Do It: Modulation of Drosophila Courtship Behavior by an Adipose-Expressed Gene Product</td>
<td>8/15/2011</td>
<td>7/31/2014</td>
<td>143,038</td>
<td>58,149</td>
<td>201,187</td>
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<td>Hall, T.C.</td>
<td>Gene Networks and Chromatin Regulation of Phaseolin Transcription</td>
<td>2/1/2009</td>
<td>12/31/2013</td>
<td>116,869</td>
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SEC. 7. RESEARCH ACTIVITY 155
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<tr>
<td>Jones, A.G.</td>
<td>CAREER: The Molecular Evolution of Reproductive Genes in Male-Pregnant Seahorses and Pipefishes</td>
<td>9/1/2011</td>
<td>8/31/2014</td>
<td>211,125</td>
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<td>Lints, R.</td>
<td>Elucidating the Genetic and Neural Basis of a C. elegans Male Motor Behavior Using Stimulatory and Inhibitory Light-Activated Channels</td>
<td>9/1/2008</td>
<td>8/31/2013</td>
<td>32,015</td>
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<td>Manson, M.D.</td>
<td>AI-2 Chemotaxis and Biofilm Formation</td>
<td>12/1/2011</td>
<td>8/31/2014</td>
<td>78,265</td>
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<td>McKnight, T.D.</td>
<td>Meeting: MEPS 2013: Plant Signaling Systems from Cells to Environment, (with: T. McKnight, W. Versaw)</td>
<td>8/15/2012</td>
<td>8/14/2013</td>
<td>1,607</td>
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<td>McKnight, T.D.</td>
<td>MEPS 2103: Plant Signaling Systems from Cells to Environment, (with: T. McKnight, W. Versaw)</td>
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<td>Rosenthal, G.G.</td>
<td>Mate Choice and Evolutionary Genetics in Xiphophorus Hybrid Zones</td>
<td>7/15/2009</td>
<td>7/14/2013</td>
<td>45,178</td>
<td>22,589</td>
<td>67,767</td>
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<td>Versaw, W.K.</td>
<td>MEPS 2013: Plant Signaling Systems from Cells to Environment, (with: T. McKnight, W. Versaw)</td>
<td>8/15/2012</td>
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<td>Versaw, W.K.</td>
<td>MEPS 2103: Plant Signaling Systems from Cells to Environment, (with: T. McKnight, W. Versaw)</td>
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**U.S. Department of Agriculture**

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<tr>
<td>Pepper, A.E.</td>
<td>A Population-Genetic Inventory of the Invasive Weed, Imperative Cylindrica to Expedite the Development of Viable Biological Controls</td>
<td>3/1/2012</td>
<td>2/29/2016</td>
<td>24,388</td>
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<td>Pepper, A.E.</td>
<td>Development of Genomic and Bioinformatics Resources for Cotton</td>
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**Subtotal: Federal Agencies**

3,724,025 396,697 4,120,722

### Private/Non-Profit Agencies

**American Heart Association**

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<tr>
<td>Lekven, A.C.</td>
<td>Regulation of Wnt Signaling and Mesoderm Development by MicroRNAs</td>
<td>7/1/2012</td>
<td>6/30/2014</td>
<td>70,096</td>
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<td>Lin, X.</td>
<td>Investigation of the Mechanism of a Novel Treatment against Fungal Infections</td>
<td>7/1/2010</td>
<td>6/30/2013</td>
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<td>Qin, H.</td>
<td>Small G Protein Regulators of Intraflagellar Transport (IFT)</td>
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<td>Sorg, J.A.</td>
<td>Analysis of Clostridium Difficile Spore Germination</td>
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<td>70,000</td>
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**American Heart Association - Texas**

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<tr>
<td>Lekven, A.C.</td>
<td>WNT 8 Cis-Regulatory Analysis to Study Vertebrate Mesoderm Progenitor Specification</td>
<td>7/1/2010</td>
<td>6/30/2013</td>
<td>21,968</td>
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**Bat Conservation International, Inc.**

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**Burroughs Wellcome Fund**

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SEC. 7. RESEARCH ACTIVITY 157
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**STATE AGENCIES**

|                  | **Texas A&M University**                                             |             |             |        |          |       |

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SEC. 7. RESEARCH ACTIVITY
### 7.2 Summary of Individual Support, 2013

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<td><em>Texas A&amp;M University</em>&lt;br&gt;The Aggie Undergraduate Genomics Corps (AUGC): A Catalytic Concept for Advancing Undergraduate Biological Education at Texas A&amp;M*</td>
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<td>8/31/2013</td>
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SEC. 7. RESEARCH ACTIVITY 161
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| **Hall, T.C.**             |                                                                      |           |           |        |          |       |
| National Science Foundation | Gene Networks and Chromatin Regulation of Phaseolin Transcription  | 2/1/2009  | 12/31/2013| 116,869| 0         | 116,869|
| **Subtotal Hall, T.C.**    |                                                                      | 116,869   | 0         | 116,869|
| **Hardin, P.E.**           |                                                                      |           |           |        |          |       |
| National Institutes of Health | Developing Cell Lines from Clock Neurons in Drosophila     | 7/1/2012  | 5/31/2014 | 205,458| 0         | 205,458|
| National Institutes of Health | (REN) Regulation of Circadian Transcription                    | 8/16/2010 | 7/31/2015 | 299,547| 19,179    | 318,725|
| **Subtotal Hardin, P.E.**  |                                                                      | 505,006   | 19,179    | 524,183|
| **Jones, A.G.**            |                                                                      |           |           |        |          |       |
| National Science Foundation | CAREER: The Molecular Evolution of Reproductive Genes in Male- Pregnant Seahorses and Pipefishes | 9/1/2011  | 8/31/2014 | 211,125| 0         | 211,125|
| National Science Foundation | Dissertation Research: Modeling Ornament-preference Co-evolution with Individual-based Simulations: An Exploration of Parameter Space | 6/1/2012  | 5/31/2013 | 1,618  | 754       | 2,372  |
| **Subtotal Jones, A.G.**   |                                                                      | 216,441   | 754       | 217,196|
| **Lekven, A.C.**           |                                                                      |           |           |        |          |       |
| American Heart Association | Regulation of Wnt Signaling and Mesoderm Development by MicroRNAs | 7/1/2012  | 6/30/2014 | 70,096 | 0         | 70,096|
| American Heart Association - Texas | WNT 8 Cis-Regulatory Analysis to Study Vertebrate Mesoderm Progenitor Specification | 7/1/2010  | 6/30/2013 | 21,968 | 1,046     | 23,014|
| **Subtotal Lekven, A.C.**  |                                                                      | 92,064    | 1,046     | 93,110 |
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| Link, T.  
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* Subtotal Links, T.  

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SEC. 7. RESEARCH ACTIVITY 165
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<td><strong>Siegle, D.A.</strong></td>
<td>An Ontology for Bacterial Phenotypes</td>
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<td>3/30/2013</td>
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<td>Analysis of Clostridium Difficile Spore Germination</td>
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<td>Tufts University</td>
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Any information reported or learned after 06/02/2014, may not be included due to report deadlines. Please forgive any errors, and continue to report them, so that we might make corrections to maintain the accuracy of our long-term reports.
1. Foreword from the Department Head

The Chemistry Department offers BA and BS undergraduate degrees and MS and PhD graduate degrees, and maintains highly-ranked nationally and internationally recognized research programs in the areas of analytical, biological, inorganic, organic, and physical chemistry. We have very large enrollments in our service courses, and we maintain several outreach and service activities, e.g., our annual Chemistry Open House and Chemistry Road Show program.

Our faculty continues to receive recognition and awards on a national level, as well as from Texas A&M University. James Batteas, received a Distinguished Achievement College-Level Award in Teaching; Tadhg Begley, Promotion of Science Fellowship, Japanese Society; Larry Brown, Presidential Professor for Teaching Excellence Award; Kevin Burgess 2013 Pedler Award from the Royal Society of Chemistry; Abraham Clearfield and Francois Gabbai were admitted as Fellows of the Royal Society of Chemistry; Marcetta Darensbourg, Fred Basolo Medal for Outstanding Research in Inorganic Chemistry, Northwestern University; Holly Gaede, President’s Award for Academic Advising; John Gladysz, The Association of Former Students Distinguished Achievement Award in Research and also the Bachmann Memorial Lecturer, University of Michigan; Oleg Ozerov was appointed Associate Editor of Inorganic Chemistry Frontiers; Frank Raushel was elected Fellow, American Chemical Society; David Russell, was appointed “Critical Insights” Editor of the Journal of the American Society for Mass Spectrometry; Sherry Yennello was on the list of the Top 25 Women Professors in Texas; Joe Zhou was selected as Associate Editor of Inorganic Chemistry; and Pat Forman received a College of Science Outstanding Staff Achievement Award. Congratulations to all! Our external funding for both education and research remains strong. Our National Science Foundation-funded Research Experiences for Undergraduates continued to provide opportunities for undergraduates to carry out research projects in the department during the summer of 2013, and the Advanced Placement Teachers Workshops provide excellent opportunities for high school teachers to interact with faculty, improve their teaching skills, and network with peers.

The department maintains a high level of funding for research through state and federal agencies, industrial companies, and private foundations. These funding sources allow us to support a large number of undergraduate and graduate students, and post-doctoral researchers. Our total number of undergraduate chemistry majors is 361, and our total number of graduate students is 256.

We face many new challenges in the recruitment of new students and faculty and as the enrollment in our courses continue to grow. As we look to the future, the continued support and confidence from my colleagues and staff in the Department of Chemistry is vital.
2. Departmental Statistics

This section contains information, clarified by each department and gathered from the following sources:

I. Personnel

Tenure-Track Faculty
- Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyList_FINAL.

Non-Tenure-Track Faculty
- Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyListNonTTF_FINAL.

Postdoctoral Fellows
- Provided by the Department

Graduate Student/Undergraduate Majors
- Office of Institutional Studies and Planning (OISP). (Fall 2012, Fall 2013) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff
- Provided by the Department

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours
- SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2013) SCH Summaries by College for [Semester] [Year].

PhD Degrees/Masters Degrees
- Queried from COGNOS and the College of Science Dean Database Degrees_Grad.

Undergraduate Degrees
- Queried from COGNOS and the College of Science Dean Database Degrees_Undergrad.

III. Research Activities

Research Publications
- Queried from Web of Science© and compiled from the College of Science Dean Database Publications_COUNT.

Research Presentations
- As reported by faculty and compiled from the College of Science Dean Database Presentations_COUNT.

Federal/State/University/Private/Industrial/International/Other Government
- Gathered from research proposals, research award notices, as reported by faculty, compiled from the College of Science Dean Database, Sec. 7.1 of following department annual report.
2.1 Statistical Abstract

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3. Honors & Awards, 2013

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2013.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2013.
### 3.1 Honors & Awards Received by Faculty, 2013

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<td>Promotion of Science Fellowship, Japanese Society</td>
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<td>L. Brown</td>
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<td>K. Burgess</td>
<td>2013 Pedler Award, Royal Society of Chemistry</td>
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<td>A. Clearfield</td>
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<td>M. Daresnbourg</td>
<td>Fred Basolo Medal for Outstanding Research in Inorganic Chemistry, Northwestern University</td>
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<tr>
<td>F. Gabbai</td>
<td>Fellow, Royal Society of Chemistry</td>
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<td>H. Gaede</td>
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<td>J. Gladysz</td>
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<td>Distinguished Achievement Award in Research, The Association of Former Students</td>
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<tr>
<td>F. Raushel</td>
<td>Fellow, American Chemical Society</td>
</tr>
<tr>
<td>S. Wheeler</td>
<td>COMP OpenEye Outstanding Junior Faculty Award, American Chemical Society</td>
</tr>
<tr>
<td></td>
<td>Faculty Early Career Development Award, National Science Foundation</td>
</tr>
<tr>
<td>S. Yennello</td>
<td>Top 25 Women Professors in Texas, Online Schools Texas</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2013

Graduate

- Ashworth Tsutsui Memorial Award for Research
  Tiffany Pinder

- Bruno J. Zwolinski Endowed Graduate Fellowship in Physical Chemistry
  Hsueh-Ying Chen

- Dow Chemical Graduate Fellowships
  Ivonne Andujar-De Sanctis
  Jonathan Bailey
  Bradley Ewers

- Dow Chemical Scholar Award
  Hsueh-Ying Chen
  Swapnil Ghodge
  Anyanee Kamkaew
  Zhanyong Li
  Angad Metha
  Muwei Zhang

- Dr. Minoru Tsutsui Memorial Endowed Graduate Scholarship in Chemistry
  Zhangwen Wei

- Eastman Chemical Teaching Award
  Ashley Cardenal
  Rachel Chupik
  Stephen Fordham
  Randara Pulukkody
  Kevin Scott

- Gerry Meisner ’78 and Robbie Peascoe ’90 Endowed Graduate Travel Scholarship
  Haifeng Yang

- Jack H. Lunsford ’57 Endowed Fellowship in Chemistry
  Yerok Park

- Marie and Jim Galloway Endowed Graduate Scholarship
  Julian Sculley

- Marie and Jim H. ’29 Galloway Graduate Scholarship
  Andrew Yeung

- National Science Foundation Graduate Research Fellowship
  Anna Marie DeLaRosa
  Simcha Felder

- Richard W. Schmude, Jr. Endowed Graduate Scholarship
  Stephanie Wilson
▷ Richard W. Schmude, Jr. Endowed Graduate Scholarship in Chemistry
   Mikail Abbasov

▷ Sharon Dabney Memorial Scholarship
   Casie Hilliard
   Jeremy Reyes

▷ The Dow Chemical Company Charlene Black Miller ’79 Endowed Memorial Fellowship in Chemistry
   Sangho Cho

▷ Thomas J. Hairston Memorial Graduate Scholarship
   Bradley Ewers
   Dawei Feng
4. Students, 2013

This section contains all degrees awarded, as reported by the department, during the calendar year 2013.
4.1 Graduate Degrees Awarded, 2013

Fall

▶ M.S.

Sourav Maiti  
Effect of Surface Environment on Energy Relaxation Dynamics in Photo-excited Nanocrystals  
Advisor(s): D. Son

▶ Ph.D.

Zhuo Chen  
Advisor(s): D. Singleton

Casie Renee Hilliard  
Diphosphine Cages and Their Oxide Derivatives: Applications in Surface Science  
Advisor(s): J. Bluemel

Da Huang  
Small Molecule Sensing by Local pH Modulation

Jinhua Huang  
Synthetic Studies of Iriomoteolide-1A Total Synthesis of Alotaketal A and an Antifungal O-Hydroxy-P-Quinone Methide Diterpenoid  
Advisor(s): P. Cremer

Junho Jeon  
Development and Application of an Electrospray Ionization Ion Mobility-Mass Spectrometer Using an RF Ion Funnel and Periodic-Focusing Ion Guide  
Advisor(s): D. Russell

Thomas Maxwell Kaiser  
The Transannular bis-Michael Reaction in the Synthetic Studies of Celastrol and the Development of Novel Palladium-Catalyzed Reactions  
Advisor(s): J. Yang

Sakunchai Khumsubdee  
Synthesis and Application of New Ligands Derived from N-Heterocyclic Carbenes, Phosphines, and Phosphites for Asymmetric Hydrogenations  
Advisor(s): J. Yang

Kyle Gene Lewis  
The Development of Werner-Type Cobalt Complexes in Enantioselective Hydrogen Bond Mediated Catalysis  
Advisor(s): J. Gladysz

Zhen Liu  
Understanding and Targeting Lipid Metabolism of Myco-bacterium Tuberculosis  
Advisor(s): J. Sacchettini

Jinkyu Park  
Exploring Iron Metabolism and Regulation in Saccharomyces Cerevisiae Using an Integrative Biophysical and Bioanalytical Approach  
Advisor(s): P. Lindahl

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2013 CHEMISTRY ANNUAL REPORT
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Advisor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiffany Anne Pinder</td>
<td>Development of Metallodithiolates as a New Class of Versatile Ligands to Transition Metals</td>
<td>D. Darensbourg</td>
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<tr>
<td>Amanda Lauren Pitts</td>
<td>Computational Studies of the Electronic Structures and Mechanisms of Late Transition Metal Systems</td>
<td>M. Hall</td>
</tr>
<tr>
<td>Arika Pravitasari</td>
<td>Tuning the Optical Properties of Nanoscale Materials on Surfaces Through Controlled Exchange Reactions on Cadmium Selenide Quantum Dots and Patterning of Gold and QD Nanoparticle Arrays</td>
<td>J. Batteas</td>
</tr>
<tr>
<td>Jeremy Chris Punzalan Reyes</td>
<td>‘Bioinspired’ Total Synthesis of Agelastatin A and Derivatives for Cellular Target Identification; Syntheses of $^{15}$N-labeled Oroidin and Keramadine Analog for ‘Metabiosynthetic’ Studies</td>
<td>D. Romo</td>
</tr>
<tr>
<td>Joshua Adam Silveira</td>
<td>Development of Ion Mobility-Mass Spectrometry Instrumentation to Probe the Conformations and Capture the Solution to Gas Phase Transition of Electrosprayed Biomolecules</td>
<td>D. Russell</td>
</tr>
<tr>
<td>Lauren Anne Leamer</td>
<td>Cationic Main Group Compounds as Water Compatible Small Anion Receptors</td>
<td>F. Gabbai</td>
</tr>
<tr>
<td>Rae Lynn Mcfarlin</td>
<td>Chemoselective Functionalization of Carboxylic Acid and Phenol Containing Natural Products And The Development And Use Of A Nucleophile Catalyzed Michael Aldol Lactonization Process</td>
<td>D. Romo</td>
</tr>
<tr>
<td>Mavreen Rose Sta Ana Tuvilla</td>
<td>Enzymatic Digestion in Aqueous-organic Solvents: A Mass Spectrometry-Based Approach in Monitoring Protein Conformational Changes</td>
<td>D. Russell</td>
</tr>
<tr>
<td>Alissa Marie Goble</td>
<td>Discovery of Deaminase Activities in COG1816</td>
<td>F. Raushel</td>
</tr>
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<td>Youngbok Lee</td>
<td>Application of Dissolution Dynamic Nuclear Polarization to the Characterization of Reactions Involving Large Molecules</td>
<td>D. Russell</td>
</tr>
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Spring

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<th>Name</th>
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Ph.D.

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<td>Youngbok Lee</td>
<td>Application of Dissolution Dynamic Nuclear Polarization to the Characterization of Reactions Involving Large Molecules</td>
<td>D. Russell</td>
</tr>
</tbody>
</table>
Trevor Arnold Makal
Advisor(s): C. Hilty

Jinhee Park
Advisor(s): H. Zhou

Chong Qiu
Atmospheric Aerosol Aging Involving Organic Compounds and Impacts on Particle Properties
Advisor(s): R. Zhang

Sandani Samarajeewa
Poly(lactide)-Containing Multifunctional Nanoparticles: Synthesis, Domain Selective Degradation and Therapeutic Applicability
Advisor(s): K. Wooley

Julian Patrick Sculley
Synthesis and Characterization of Rationally Designed Porous Materials for Energy Storage and Carbon Capture
Advisor(s): H. Zhou

Haoran Xue
Toward the Total Synthesis of Norzoanthamine: The Development of a Transannular Michael Reaction Cascade
Advisor(s): J. Yang

Andrey Andreevich Yakovenko
Generation and Applications of Structure Envelopes for Metal-Organic Frameworks
Advisor(s): H. Zhou

Summer

Tyler Hood
Synthesis of 1± I²-Unsaturated N-Aryl Ketone-trones and Use as Precursors for Synthesis of C3-Quaternary Indolenines
Advisor(s): J. Yang

Melissa Thorstad
Functional Characterization And Surface Mapping Of Frataxin (fxn) Interactions With The Fe-s Cluster Assembly Complex
Advisor(s): D. Barondeau

Ph.D.

Nilusha Priyadarshani Borahugodagend
Functionalization of Polyisobutylene and Their Applications in Dyeing Polyolefins and in Homogeneous Catalysis
Advisor(s): D. Bergbreiter

Kevin J Gagnon
Crystalline Metal-Organic Frameworks Based on Conformationally Flexible Phosphonic Acids
Advisor(s): A. Clearfield

Alnald Caintic Javier
Integrating Experiment and Theory in Electrochemical Surface Science: Studies on the Molecular Adsorption on Noble-Metal Electrode Surfaces by Density Functional Theory, Electron Spectroscopy, and Electrochemistry

Advisor(s): M. Soriaga, Perla Balbuena

Iou-Sheng Ke
Organoantimony Lewis Acid as Fluoride Receptors and Ligands towards Transition Metals

Advisor(s): F. Gabbi

Tiffany L Kinnibrough
Synthesis and Characterization of Porous Metal Phosphonates

Advisor(s): A. Clearfield

Robert Erik Plata
Experimental Observations in the Morita Baylis-Hillman Reaction in Methanol

Advisor(s): D. Singleton

Mohamed Rashad Mohamed Saber
Enhancing Magnetic Properties of Molecular Magnetic Materials: The Role of Single-Ion Anisotropy

Advisor(s): K. Dunbar

Heather Irene Southerland
Investigation of Molecular Magnetic Compounds Incorporating 4d and 5d Transition Metal Cyanometallates

Advisor(s): K. Dunbar

Han-Chun Tsai
Structural Study of Lipid-Binding Proteins

Advisor(s): J. Sacchettini

Sheng-Hsuan Wei
The Copolymerization of CO₂ and Cyclic Ethers and Their Degradation Pathways

Advisor(s): D. Darensbourg

Stephanie Jo Wilson
Coupling of CO₂ and CS₂ with Novel Oxiranes: Polycarbonate vs. Cyclic Carbonate Production

Advisor(s): D. Darensbourg

Zhongyue Zhang
New Conducting and Electrically Switching Molecular Materials Based on Main Group and Transition Metal Ions Bridged by TCNQ Derivatives

Advisor(s): K. Dunbar

Zhi Zhao
Fabrication of Nano-Pattern Libraries and Their Applications in Mode-Selective SERS
## 4.2 Undergraduate Degrees Awarded, 2013

### Fall

- **B.A.**
  - Tahra Jo Agha
  - Shara Lynn Friese
  - Timothy Carson Rockwell
  - Christina Marie Romero
  - Calandra Michelle Sanderson
  - Kylee Lauren Stouder

- **B.S.**
  - Alexis Adrian Blanco
  - Bianca A. Coria
  - Rachael Michelle Cox
  - Katherine Amelia Cude
  - Michael Martin Frey
  - Cole Tyler Jones
  - Joshua Taylor O’Neal
  - Morgan Grace Brack Plummer
  - David Santana
  - Brandon Taylor Skinner
  - Stephanie L. White
  - Michael Morris Williams
  - Briana Zamora

### Spring

- **B.A.**
  - Kristen Ariel Ackerman
  - Adriana Nicolle Amagliani
  - Alaina Nicole Anderson
  - Dakota James Brock
  - Eliazar Candanoza
  - Ricardo Castro
  - Paul Sole Kim
  - Lauren Paige Montagnino
  - Samantha J. Nash
  - Ethan J. Pulliam
  - James Edward Sciandra
  - Loran Jude Termine
  - Shana Leigh Timmermann

- **B.S.**
  - Stephen Christopher Adams
  - Benjamin Richard Cassidy
  - Travyyss Francis Chitolie
  - Daniel John Dobbins
  - Megan L. Esteb
  - Devon Michelle Kebodeaux
Eric James Kleihege
Deren Emre Koseoglu
Kristin E. Light
Yen-nan Lin
Stacey Lauren Moller
Herbert Manuel Nunes Morais
David Guillermo Munoz
Madhav Neupane
Mark Andrew Porterfield
Ulises Rangel
Brennon James Sessions
Laura Kathryn Sudderth
Parth Pradip Upadhyaya
Joseph Scott Villalpando
Caitlen Beth Walker
Christopher Theodore Wilson
Miranda Elizabeth Wysocki
Han Xiao
Esneider Zamora
Ryan Patrick Zentay

Summer

▷ B.A.

Karla Matilde Lumbi
Kaitlin Rose Wasko

▷ B.S.

Christopher Ryan Berger
Joshua William Levin
John H. Vu
Andrew Michael Winn
5. Colloquium and Seminar Speakers, 2013

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Title</th>
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<tbody>
<tr>
<td>2/25/2013</td>
<td>Robert Hamers</td>
<td>University of Wisconsin</td>
<td>Why Diamonds are a Guy’s Best Friend</td>
</tr>
<tr>
<td>2/26/2013</td>
<td>Robert Hamers</td>
<td>University of Wisconsin</td>
<td>Nanoparticles and Sustainability: Protecting the Environment</td>
</tr>
<tr>
<td>2/27/2013</td>
<td>Robert Hamers</td>
<td>University of Wisconsin</td>
<td>Toward Safer Lithium-Ion Batteries: Adventures in a Start-Up Company</td>
</tr>
<tr>
<td>3/19/2013</td>
<td>Ken Houk</td>
<td>University of California, Los Angeles</td>
<td>Theory and Modeling of Organic Stereoselectivity</td>
</tr>
<tr>
<td>3/20/2013</td>
<td>Ken Houk</td>
<td>University of California, Los Angeles</td>
<td>Computational Design of New Enzymes</td>
</tr>
<tr>
<td>3/25/2013</td>
<td>John Lipscomb</td>
<td>University of Minnesota</td>
<td>Oxygen Activation in Real Time: Trapping Oxygenase Intermediates in Crystals</td>
</tr>
<tr>
<td>3/26/2013</td>
<td>John Lipscomb</td>
<td>University of Minnesota</td>
<td>Oxygen Activation in Real Time: Trapping Oxygenase Intermediates in Solution</td>
</tr>
<tr>
<td>3/27/2013</td>
<td>John Lipscomb</td>
<td>University of Minnesota</td>
<td>Oxygen Activation in Real Time: Novel Oxygenases in Assembly Line Biosynthesis of Antibiotics</td>
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<tr>
<td>10/14/2013</td>
<td>Naomi Halas</td>
<td>Rice University</td>
<td>Plasmonic Nanostructures: Artificial Molecules</td>
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<td>10/15/2013</td>
<td>Naomi Halas</td>
<td>Rice University</td>
<td>Coherent Phenomena and Plasmon-Enhanced Spectroscopies</td>
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<td>10/16/2013</td>
<td>Naomi Halas</td>
<td>Rice University</td>
<td>Plasmonics For the People: Useful Applications</td>
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<td>11/11/2013</td>
<td>Martin Head-Gordon</td>
<td>University of California, Berkeley</td>
<td></td>
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<tr>
<td>Date</td>
<td>Speaker</td>
<td>Institution</td>
<td>Topic</td>
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<tr>
<td>1/7/2013</td>
<td>Chengxiang Xiang</td>
<td>California Institute of Technology</td>
<td>Towards a Solar-Driven Water-Splitting Cell</td>
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<tr>
<td>1/10/2013</td>
<td>Luis Velarde</td>
<td>Pacific Northwest National Laboratory</td>
<td>Structural Heterogeneity and Molecular Interactions in Soft Materials and Interfaces: Insights from Ultrafast Nonlinear Optical Spectroscopy</td>
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<td>1/14/2013</td>
<td>Renee Frontiera</td>
<td>Northwestern University</td>
<td>Obtaining Structural Snapshots of Reacting Molecules in Real Time with Ultrafast Vibrational and Surface-enhanced Spectroscopies</td>
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<td>1/23/2013</td>
<td>Eric Schelter</td>
<td>University of Pennsylvania</td>
<td>The Sustainability of the Rare Earth Elements: Exciting Opportunities for Inorganic Chemistry</td>
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<td>1/31/2013</td>
<td>Eric Ferreira</td>
<td>Colorado State University</td>
<td>Accessing and Harnessing Metalated Intermediates Toward Synthetic Utility</td>
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<td>2/4/2013</td>
<td>Corey Stephenson</td>
<td>Boston University</td>
<td>Visible Light Enabled Catalysis</td>
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<td>2/6/2013</td>
<td>Josh Figueroa</td>
<td>University of California, San Diego</td>
<td>Unsaturated Metal Isocyanides</td>
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<td>2/7/2013</td>
<td>Gong Chen</td>
<td>Pennsylvania State University</td>
<td>New Palladium-Catalyzed C-H Functionalization Strategies for Organic Synthesis</td>
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<td>2/12/2013</td>
<td>Michael Chandross</td>
<td>Sandia National Laboratories</td>
<td>Atomic Origins of Friction Reduction in Metal Alloys</td>
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<td>2/12/2013</td>
<td>Angel Marti</td>
<td>Rice University</td>
<td>Photoluminescent Light-Switching Complexes as Probes for the Aggregation of Amyloid Proteins</td>
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<tr>
<td>2/14/2013</td>
<td>Scott Snyder</td>
<td>Columbia University</td>
<td>Exploring Chemoselectivity Through Natural Product Total Synthesis</td>
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<tr>
<td>2/20/2013</td>
<td>Laura Gagliardi</td>
<td>University of Minnesota</td>
<td>Bridging the Gap Between Quantum Chemistry and Classical Simulations for CO2 Capture</td>
</tr>
</tbody>
</table>
3/5/2013  Ryan Julian  
*University of California, Riverside*  
Taming Radicals for Novel Peptide and Protein Fragmentation

3/6/2013  Wenbin Lin  
*University of North Carolina, Chapel Hill*  
Molecular Materials for Sustainability and Human Health

3/7/2013  Stephen Buchwald  
*Massachusetts Institute of Technology*  
Palladium-Catalyzed Carbon-Nitrogen and Carbon-Carbon Bond-Forming Reactions: Progress, Applications and Mechanistic Studies

3/21/2013  Ivan Aprahamian  
*Dartmouth College*  
Hydrazone-Based Switches, Fluorophores and Sensors

3/28/2013  Brandon Ashfeld  
*University of Notre Dame*  
Exploiting Unconventional Carbonyl Reactivity in Natural Products and Designed Materials Synthesis

4/2/2013  Orlando Acevedo  
*Auburn University*  
Elucidating Solvent Effects on Chemical Reactions at Aqueous Surfaces, in Ionic Liquids, and within Catalytic Antibodies from QM/MM Simulations

4/3/2013  Mohamed Eddaoudi  
*University of South Florida*  
Metal-Organic Frameworks From Design Strategies to Applications

4/4/2013  Frank Caruso  
*University of Melbourne, Australia*  
Nanoengineering Particles for Therapeutic Delivery: Prospects and Challenges, Part One

4/5/2013  Frank Caruso  
*University of Melbourne, Australia*  
Nanoengineering Particles for Therapeutic Delivery: Prospects and Challenges, Part Two

4/11/2013  Roald Hoffmann  
*Cornell University*  
All the Ways to Have a Bond

4/17/2013  David Milstein  
*Weizmann Institute of Science, Israel*  
Bond Activation by Metal-Ligand Cooperation

4/19/2013  David Milstein  
*Weizmann Institute of Science, Israel*  
Discovery of Sustainable Catalytic Reactions for Organic Synthesis

4/23/2013  Mei Hong  
*Iowa State University*
Structure and Mechanism of Influenza M2 Proton Channels Studied by Solid-State NMR

4/24/2013 **Elizabeth Papish**  
Drexel University  
Biomimetic Denitrification, Hydrogenation, and Water Oxidation with New Hydrogen Bonding Ligands

4/25/2013 **Jin-Quan Yu**  
Scripps Research Institute  
Ligand-Accelerated C-H Activation Reactions: New Synthetic Disconnections

4/30/2013 **Charles Schmuttenmaer**  
Yale University  
Studying Carrier Dynamics and Solar Energy Conversion in Nanostructured Materials and Progress Toward THz Vibrational Circular Dichroism

5/1/2013 **Melanie Sanford**  
University of Michigan  
New Developments in Transition Metal Catalyzed C-H Bond Functionalization

5/2/2013 **Paul Hergenrother**  
University of Illinois, Urbana-Champaign  
Anticancer Discovery from Simple and Complex Molecules

5/9/2013 **Robert Bergman**  
University of California, Berkeley  
Selective Stoichiometric and Catalytic Reactions in Water-Soluble Host-Guest Supramolecular Systems

8/6/2013 **Igor Savukov**  
Los Alamos National Laboratory  
Atomic Magnetometers and Their Applications

8/27/2013 **David Gracias**  
Johns Hopkins  
Self-Assembly and Chemo-Mechanical Actuation at Small Size Scales

9/3/2013 **Steven Wheeler**  
Texas A&M University  
Understanding -Stacking Interactions and Quantifying Their Role in Organocatalysis

9/4/2013 **Wolfgang Weigand**  
Friedrich-Schiller-Universitat Jena  
From Primordial to Bio-inspired Hydrogen Production

9/5/2013 **Dean Tantillo**  
University of California, Davis  
Walking in the Woods with Quantum Chemistry - Dynamics of Terpene-Forming Carbocation Cascades

9/17/2013 **Delia Milliron**  
Lawrence Berkeley National Laboratory  
Assembling Mesostructured Electrochemical Materials from Colloidal Nanocrystals
9/18/2013  Wesley Bernskoetter  
*Brown University*  
Carbon Dioxide-Ethylene Coupling Toward Acrylates at Low-Valent Transition Metals  

9/19/2013  David Britt  
*University of California, Davis*  
A Radical Mechanism for the Assembly of the Catalytic H-Cluster of [FeFe]-Hydrogenase  

9/24/2013  Ryan Mehl  
*Oregon State University*  
Expanding Chemical Biology with Broadly Permissive Synthetases  

9/26/2013  Neil Garg  
*University of California, Los Angeles*  
Complex Molecule Synthesis as a Fuel for Discovery  

10/1/2013  Michael Duncan  
*University of Georgia*  
Infrared Spectroscopy of Cold Ions and their Clusters: Inorganic and Organic Chemistry in the Gas Phase  

10/9/2013  Wei Zhang  
*University of Colorado, Boulder*  
Development and Applications of Dynamic Covalent Chemistry: From 2-D and 3-D Molecular Architectures to Organic Functional Materials  

10/22/2013  Arthur Suits  
*Wayne State University*  
Roaming Radical Reactions: New Probes and New Insights  

10/23/2013  Jeff White  
*Oklahoma State University*  
Soft Matter Poses Hard Problems: Magnetic Resonance as a Route to Untangling Amorphous Macromolecular Systems  

10/31/2013  Nancy Mills  
*Trinity University*  
Antiaromaticity: Does it Exist and if so, Why do We Care?  

11/5/2013  Karl Freed  
*University of Chicago*  
Rapid de Novo Simultaneous Prediction of Protein Structure and Folding Pathway  

11/7/2013  Jeremy May  
*University of Houston*  
Synthetic Discoveries from Polycyclic Natural Products  

11/15/2013  Louis Bouchard  
*University of California, Los Angeles*  
Operando Spectroscopy of Chemically Reacting Flows in Heterogeneous Catalysis  

11/15/2013  Craig Townsend  
*Johns Hopkins University*  
Biosynthesis of β-Lactam Antibiotics and the Force of Convergent Evolution  

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2013 CHEMISTRY ANNUAL REPORT
11/20/2013  **Amos Smith III**  
*University of Pennsylvania*  
Evolution of Anion Relay Chemistry (ARC): Design, Synthesis and Validation of Recoverable Siloxane-Based Transfer Agents for Palladium-Catalyzed Cross-Coupling Reactions

11/21/2013  **Karen Allen**  
*Boston University*  
An Evolutionary Tale: Phosphatase Dynamics Dictate Specificity and Regulation

11/22/2013  **Joel Bowman**  
*Emory University*  
Roaming and Tunneling on High Dimensional Reactive Potential Energy Surfaces

12/2/2013  **Robert Baker**  
*University of California, Berkeley*  
Charge Transfer and Chemistry at Catalytic Interfaces

12/5/2013  **Bill Morandi**  
*California Institute of Technology*  
New Solutions to Old Challenges: Safe Catalytic Diazo Chemistry and Selective Wacker-Type Oxidations of Alkenes

12/10/2013  **Dorthe Eisele**  
*Massachusetts Institute of Technology*  
Robust Excitons Inhabit Soft Supra-Molecular Nanotubes

12/12/2013  **Nozomi Ando**  
*Massachusetts Institute of Technology*  
Radical Allostery in a Radical Enzyme

12/19/2013  **Bryan Dickinson**  
*Harvard University*  
Molecular Imaging and Evolution Approaches to Probing the Chemistry of Living Systems
6. Faculty, 2013

David P. Barondeau ................................................. Associate Professor
James D. Batteas .................................................. Professor
Tadhg P. Begley .......................................................... Distinguished Professor
David E. Bergbreiter .................................................. Professor
John W. Bevan .......................................................... Professor
Janet F. Bluemel .......................................................... Professor
Lawrence S. Brown ..................................................... Instructional Assistant Professor
Kevin Burgess ......................................................... Professor
Mrinnoy Chakrabarti .................................................. Lecturer
Abraham Clearfield .................................................. Distinguished Professor
Paul S. Cremer .......................................................... Distinguished Professor
Donald J. Daresbourg .................................................. Distinguished Professor
Marcetta Y. Daresbourg .................................................. Distinguished Professor
Kim R. Dunbar .......................................................... Distinguished Professor
Lei Fang ................................................................. Assistant Professor
Francois P. Gabbai ..................................................... Professor
Holly C. Gaede ......................................................... Instructional Assistant Professor
John A. Gladysz .......................................................... Distinguished Professor
Ganesa Gopalakrishnan .............................................. Senior Lecturer
Jaime Grunlan .......................................................... Associate Professor (J)
Michael B. Hall .......................................................... Professor
Kenn E. Harding ....................................................... Professor
Dudley Herschbach ..................................................... Professor (J)
Robert A. Hildreth ..................................................... Lecturer
Christian B. Hilty ...................................................... Associate Professor
Timothy R. Hughbanks ............................................... Professor
Arthur E. Johnson ..................................................... Distinguished Professor (J)
Wendy Keeney-Kennicutt ......................................... Instructional Assistant Professor
Jaan Laane ............................................................. Professor
Soon-Mi Lim ............................................................. Lecturer
Paul A. Lindahl ......................................................... Professor
Wenshe Liu ............................................................. Associate Professor
Robert R. Lucchese .................................................... Professor
Ronald D. Macfarlane .................................................. Distinguished Professor
Elmo J. Mawk ............................................................ Senior Lecturer
Christine A. Mullen .................................................... Senior Lecturer
Joseph B. Natowitz .................................................. Distinguished Professor
Simon W. North ........................................................ Professor
Oleg V. Ozerov .......................................................... Professor
Jean-Philippe Pellois .................................................. Associate Professor (J)
Joanna G. Pellois ...................................................... Senior Lecturer
James D. Pennington ................................................ Instructional Assistant Professor
Krishan Ponnamperuma ............................................. Senior Lecturer
Frank M. Raushel ..................................................... Distinguished Professor
Daniel Romo .......................................................... Professor
Michael P. Rosynek ................................................... Professor
David H. Russell ....................................................... Professor
James C. Sacchettini .............................................. Professor (J)
Patricio Santander .............................................. Senior Lecturer
Emile A. Schweikert ............................................. Professor
Marlan O. Scully .................................................. Professor (J)
Daniel A. Singleton ............................................. Professor
Dong Hee Son ..................................................... Associate Professor
Elizabeth Soriaga ................................................ Senior Lecturer
Manuel P. Soriaga ............................................... Professor
Michael Stollenz .................................................. Lecturer
Guorong Sun ...................................................... Lecturer
Tammy H. Tiner ................................................... Senior Lecturer
Eszter Trufan ....................................................... Lecturer
Dennis Utley ........................................................ Lecturer
Gyula Vigh ........................................................ Professor
Coran M.H Watanabe ........................................... Associate Professor
Steven E. Wheeler ............................................... Assistant Professor
Vickie M. Williamson ........................................... Instructional Assistant Professor
Karen L. Wooley ................................................ Distinguished Professor
Jiong Yang ........................................................ Assistant Professor
Danny L. Yeager ................................................ Professor
Sherry J. Yennello ............................................... Professor
Renyi Zhang ....................................................... Professor (J)
Hong-cai Zhou ................................................... Professor

* For the Annual Report, faculty are defined as tenured, tenure-track and non-tenure track employees who were employed at any time during 2013 (01/01/2013-12/31/2013).
6.1 Professional Activities, 2013

This section contains information, as reported by individual faculty members, encompassing each faculty member's professional activities for the calendar year 2013.

Subsections of professional activities are defined as follows:

Honors and Awards
▷ All professional honors and awards, both internal and external.

Service Activities
▷ All professional service and leadership roles, including: departmental, college, university, state, national and international.

Teaching
▷ Classes taught during the Spring, Summer and Fall sessions of 2013.
▷ Any missing enrollment numbers were gathered from the Student Information Management System (SIMS) at Texas A&M University.

Research Projects
▷ All research projects, funded and unfunded.
▷ Whenever possible, all research-related employees of that faculty member are listed along with the citation. Key for employees: (P)=Postdoc, (G)=Graduate Student, (U)=Undergraduate Student.
▷ Renewals are marked by “(REN)” at the beginning of their title.
▷ Unfunded grants are marked by “(UNFUNDED)” at the end of the citation.
▷ Additional information (including PIs, CoPIs, and funding) on all funded grants are listed in Section 6.

Presentations
▷ All posters, invited and contributed lectures (plenary, conferences, colloquia, seminars, etc.).
▷ Whenever reported, posters, invited and contributed lectures are noted in parentheses following the citation.
▷ Citations are in chronological order.

Publications
▷ All printed materials published during 2013.
▷ Pre-press, in-press and submitted publications were not included.
▷ Citations were formatted in APA Style and are in alphabetical order by lead author.
• SERVICE DURING 2013

National
▷ Professional Affiliation: American Chemical Society (Treasurer)

University
▷ Service Position: Molecular Biophysics Training Program; Chemistry-Biology Interface Training Program (Mentor)

Department
▷ Committee/Panel: Information and Communications Technology; Graduate Curriculum (Representative)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BICH 691. — Research (total enrollment: 1)
▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 315)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 5)

Summer
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 4)

Fall
▷ BICH 491. — Research (total enrollment: 2)
▷ BICH 691. — Research (total enrollment: 1)
▷ CHEM 491. — Research (total enrollment: 4)
▷ CHEM 681. — Seminar (total enrollment: 16)
▷ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Structure and Mechanism of the Human Fe-S Cluster Assembly Complex, *National Institutes of Health*, coworkers: N. Fox (G), M. Thorstad (G), L. Yu (U)

Private
Fluorescent Probes for Interrogating Fe-S Cluster Transfer Chemistry, *The Robert A. Welch Foundation*

Structure and Chemistry of DNA Repair Enzyme Spore Photoproduct Lyase, *The Robert A. Welch Foundation*, coworkers: J. Vranish (G), P. Clayton (U)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Director, Materials Characterization Facility, Materials Science and Engineering, [2013]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• AWARDS DURING 2013
  College
  ▶ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: ISRN Nanotechnology (Member), RSC Advances (Associate Editor)
  ▶ Committee/Panel: RSC Advances (Member)

  University
  ▶ Committee/Panel: Advisory Committee - Materials Characterization Facility (Member), Executive Committee - Materials Science and Engineering (Member)

  Department
  ▶ Service Position: Texas A&M UniversityNOBCCChE Chapter (Advisor)
  ▶ Ad Hoc Committee: Head Search Committee (Member)
  ▶ Committee/Panel: Academic Operations Committee (Member), Analytical Chemistry Division (Chair), Executive Committee (Member), Graduate Curriculum Committee (Member), Shops Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Ad Hoc Committee: MSEN Departmental Faculty Search Committee (Member), MSEN Departmental Formation Study Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ CHEM 491. — Research (total enrollment: 2)
  ▶ CHEM 623. — Surface Chemistry (total enrollment: 11)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 6)
  ▶ MSEN 691. — Research (total enrollment: 1)

  Summer
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 3)
• RESEARCH PROJECTS DURING 2013

Federal

▷ ARRA Solvation Studies of Responsive Polymers in Solution and at Surfaces, *National Science Foundation*

▷ Collaborative Research: Charge Transport in Confined Molecular Assemblies, *National Science Foundation*

▷ Collaborative Research: Conduction in Confined Molecular Assemblies, *National Science Foundation*

▷ (REN) Probing the Role of Surface Defects and Disorder on the Tribiology of Nanoscopic Contacts, *National Science Foundation*

▷ REU: Biological, Environmental, and Materials Chemistry Research Experiences for Undergraduates at Texas A&M University, *National Science Foundation*

• PRESENTATIONS DURING 2013

▷ “Giving Molecules the Squeeze: The Effects of Organic Lubricants on the Interactions Between Surfaces with Nanoscopic Curvature,” Texas A&M Student Research Week, College Station, TX, March, 2013. (Graduate, B. Ewers)

▷ “Modifying the Friction of Graphitic Materials by Bias Lithography,” Student Research Week Texas A&M University, College Station, TX, March, 2013. (Poster Graduate, C. Carpenter)

▷ “Studies of Charge Transport in Confined Molecular Assemblies,” ETH Zurich, Zurich, Switzerland, March, 2013. (Individual)

▷ “Tuning the Surface Mechanics of PNIPAM/SiO2 Composite Films,” Student Research Week Texas A&M University, College Station, TX, March, 2013. (Poster Graduate, S. Skiles)

▷ “When Surfaces get Rough: Tribochemistry of Nanoscale Asperity-Asperity Contacts,” Texas Tech University, Lubbock, TX, March, 2013. (Individual)

▷ “Giving Molecules the Squeeze: The Effects of Organic Lubricants on the Interactions Between Surfaces with Nanoscopic Curvature Studied by Molecular Dynamics,” 245th ACS National Meeting, April, 2013. (Poster Graduate, B. Ewers)

▷ “Studies of Charge Transport in Tunable Molecular Assemblies on Surfaces,” 245th National American Chemical Society Meeting, April, 2013. (Individual)

• “Tuning Transport in Porphyrin Assemblies on Au Surfaces,” Materials Research Society Spring Meeting and Exhibit, April, 2013.(Poster Graduate, A. Pawlicki)

• “Giving Molecules the Squeeze: Molecules as Springs for Controlling Friction in Nano-Asperity Contacts,” BASF-Texas A&M University Graduate Student Symposium, August, 2013.(Graduate, B. Ewers)

• “The Conductance of Single and Few Molecule Assemblies of Porphyrinoids on Au Surfaces,” BASF Graduate Student Symposium, August, 2013.(Poster Graduate, A. Pawlicki)

• “Tunable Properties of Stimulus Responsive PNIPAM/SiO2 Composite Films,” Texas Soft Matter Meeting, College Station, TX, August, 2013.(Graduate, S. Skiles)

• “Examining the Role of Load Dependent Bond Strain on Atomic Scale Defect Nucleation in Nanoscopic Contacts,” 5th World Tribology Congress, Turino, Italy, September, 2013.(Individual)

• “Giving Molecules the Squeeze: Molecular Dynamics Studies of the Contact Mechanics of Lubricated Asperity Contacts,” World Tribology Congress, September, 2013.(Graduate, B. Ewers)

• “Friction and Adhesion in Nanoscaled Asperity-Asperity Contacts Behavior of Molecular Adlayers and Graphene as Friction Modifiers on Rough Surfaces,” University of Pennsylvania, Philadelphia, PA, October, 2013.(Individual)

• “Tribological Studies of Friction and Adhesion in Nanoscaled Asperity-Asperity Contacts,” BP-RSC Conference on Tribology, Shanghai, China, November, 2013.(Individual)

• PUBLICATIONS DURING 2013


2013 CHEMISTRY ANNUAL REPORT
• **CHAIRS/PROFESSORSHIPS**
  ▶ Robert A. Welch Foundation Chair and Derek Barton Professor in Chemistry \[2009\]

• **AWARDS DURING 2013**
  **International**
  ▶ Promotion of Science Fellowship, Japanese Society

• **SERVICE DURING 2013**
  **National**
  ▶ Editorial/Board: Biochimica et Biophysica Acta - Proteins and Proteomics (Member), Bioorganic Chemistry (Member), Chemical Biology and Drug Design (Member), NIH Director's New Innovator Award Program (Reviewer), Special Issue of Current Opinion in Chemical Biology (Biosynthesis and Enzyme Mechanism) (Co-Editor), *Journal of the American Chemical Society, Biochemistry, Organic Letters, Nature, Nature Chemical Biology, Science, Angewandte Chemie* (Referee: Journals)
  ▶ Committee/Panel: 2014 International Conference on Cofactors Organizing Committee (Member), 2015 Enzymes Mechanisms Conference Organizing Committee (Member), ACS National Awards Selection Committee (Member), NIH Biological Chemistry and Macromolecular Biophysics Integrated Review Group (Member), NIH Special Emphasis Panel - Natural Products and Enzymology (Chair), NSF Review Panel - Chemistry of Life Processes (Member)

  **College**
  ▶ Committee/Panel: Tenure and Promotion Advisory Committee (Member)

  **Department**
  ▶ Event: BASF Conference (Poster Judge), Scott Symposium (Organizer)
  ▶ Committee/Panel: Academic Operations Council (Member), Advisory Committee (Member), Biological Division (Chair), Faculty Search Committee (Member), Faculty Search Committee Biological Chemistry (Member), Faculty/Graduate Student Working Group (Member), Graduate Admissions and Review Committee (Member), Head Search (Member), Nuclear Chemistry (Member), Research Infrastructure Committee (Member), Undergraduate Curriculum Committee (Member), Vacant Chair Committee (Member)

  **Interdisciplinary/Intercollegiate**
  ▶ Service Position: Administrative Council of the Texas A&M University Institute for Advanced Study (Member), Life Sciences Building Executive Committee (Member), Life Sciences Building Seminar Program (Participant)

• **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
CHEM 690. — Theory of Chemical Research (total enrollment: 5)
CHEM 691. — Research (total enrollment: 11)

Summer
CHEM 691. — Research (total enrollment: 11)

Fall
CHEM 456. — Biosynthesis of Natural Products (total enrollment: 36)
CHEM 690. — Theory of Chemical Research (total enrollment: 5)
CHEM 691. — Research (total enrollment: 11)

RESEARCH PROJECTS DURING 2013

Federal
Mentoring for the Future in Academic Chemistry, National Institutes of Health
(REN) The Mechanistic Enzymology of Thiamin Biosynthesis, National Institutes of Health
The Mechanistic Enzymology of Thiamin Biosynthesis, National Institutes of Health

PRESENTATIONS DURING 2013
“Mentoring Workshop for New Faculty in Organic and Biological Chemistry,” National Institute of General Medical Sciences, January, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” University College, Cork, Ireland, January, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Michigan Technological University, Houghton, MI, April, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Hokkaido University, Japan, May, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Kyoto University, Kyoto, Japan, May, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Riken Plant Science Center, May, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Ritsumeikan University, Kyoto, Japan, May, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” School of Pharmaceutical Sciences, University of Tokyo, Tokyo, Japan, May, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Tokyo Institute of Technology, Tokyo, Japan, May, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” University of Tokyo, Biotechnology Research Center, Tokyo, Japan, May, 2013. (Individual)
“Thiamin Biosynthesis in Saccharomyces Cerevisiae,” NARA Institute of Science and Technology, May, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Nagoya University, Aichi, Japan, June, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Riken Advanced Science Institute, Department of Chemical Biology, June, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Shizuoka University, Shizuoka, Japan, June, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Tokyo Institute of Technology, Tokyo, Japan, June, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” University of Pittsburgh, Pittsburgh, PA, September, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Georgia State University, Atlanta, GA, October, 2013. (Individual)
“Radical SAM Enzyme Mediated Rearrangements in Cofactor Biosynthesis,” Zing Conference, November, 2013. (Individual)

• PUBLICATIONS DURING 2013


• CHAIRS/PROFESSORSHIPS
  ▷ Presidential Professor for Teaching Excellence [2006]

• SERVICE DURING 2013

National
  ▷ Committee/Panel: American Chemical Society’s Joint Board/Council Committee (Member)

University
  ▷ Professional Affiliation: Texas A&M University ACS Section (Councilor)

Department
  ▷ Committee/Panel: Department Advisory Council (Member), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▷ CHEM 228.(H) — Organic Chemistry II (total enrollment: 37)
  ▷ CHEM 491. — Research (total enrollment: 3)
  ▷ CHEM 691. — Research (total enrollment: 6)

Summer
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 6)

Fall
  ▷ CHEM 227.(H) — Organic Chemistry I (total enrollment: 55)
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2013

Federal
  ▷ ARRA Solvation Studies of Responsive Polymers in Solution and at Surfaces, National Science Foundation, coworkers: K. Tan (P), M. Harrell (U), K. Light (U), A. Mijilis (U)
  ▷ Biphasic Catalysis using Soluble Polymer Supports, National Science Foundation, coworkers: C. Chao (G), T. Khamatnurova (G), Y. Liang (G), U. Priyadarshani (G), P. Samunual (G), B. Cassidy (U)

Private
Phase Facilitated Catalysis and Synthesis, *The Robert A. Welch Foundation*, coworkers: Y. Yang (P), C. Chao (G), M. Harrell (G), C. Hobbs (G), Y. Liang (G), U. Priyadarshani (G), P. Samunual (G), J. Suriboot (G)

International

- Phase Separable Polymerization Catalysts, *Qatar National Research Fund*

**PRESENTATIONS DURING 2013**

- “Polyolefin Oligomers as Additives, Catalysts and Solvents,” Society of Plastic Engineers Conference, Houston, TX, February, 2013. (Individual)
- “Polyolefin Solvents and Ligands for Homogeneous Catalysts,” Department of Chemistry, Liverpool University, Liverpool, United Kingdom, March, 2013. (Individual)
- “Polyolefin Solvents and Ligands for Homogeneous Catalysts,” Department of Chemistry, University of Regensburg, Regensburg, Germany, March, 2013. (Individual)
- “Polyolefins as Supports and Solvents in Ru-Catalyzed Metathesis Chemistry,” Southwest Catalysis Society Meeting Rice University, Houston, TX, April, 2013. (Individual)
- “Soluble Polystyrene Supports for Recyclable Palladium and Organo Catalysts,” Southwest Catalysis Society Meeting Rice University, Houston, TX, April, 2013. (Individual)
- “Green Chemistry Using Responsively Soluble Polymers in Catalysis,” University of the Philippines, Philippines, July, 2013. (Invited)
- “Green Chemistry Using Responsively Soluble Polymers in Catalysis,” University of Tokyo Agriculture and Technology, Tokyo, Japan, July, 2013. (Invited)
- “Metathesis Reactions Using Polyolefin Ligands and Solvents,” ISOM XX, Nara, Japan, July, 2013. (Individual)
- “Polyolefin Oligomers as Additives, Catalysts and Solvents,” Advances in Polyolefins Conference, Santa Rosa, CA, October, 2013. (Invited)
- “Responsively Soluble Polymers in Green Chemistry and Catalysis,” Doha, Qatar, October, 2013. (Individual)
- “Teaching Science and Chemistry with Real-World Examples,” Texas A&M University-Qatar, Doha, Qatar, October, 2013. (Individual)
“Using Polymer Solubility as a Tool for Separations,” QEERI, Doha, Qatar, October, 2013.( Individual)
“Greener Approaches to Homogeneous Catalysts with Functional Polymers,” Southwest ACS Meeting, Waco, TX, November, 2013.( Invited)

- **PUBLICATIONS DURING 2013**
• **CHAIRS/PROFESSORSHIPS**
  ❯ Davidson Chair in Science /2005/

• **SERVICE DURING 2013**

  **University**
  ❯ Service Position: Laboratory for Submillimeter/THz Science and Technology (Director)

  **Department**
  ❯ Research Group: Physical and Nuclear Chemistry Division (Alternate Chair)
  ❯ Committee/Panel: Departmental Advisory Council Tenure and Promotion Committee (Alternate Member)

• **TEACHING ASSIGNMENTS DURING 2013**

  **Spring**
  ❯ CHEM 112. — *Fundamentals of Chemistry Laboratory II* (total enrollment: 46)
  ❯ CHEM 117. — *General Chemistry for Engineering Students Laboratory* (total enrollment: 72)
  ❯ CHEM 322. — *Physical Chemistry for Engineers* (total enrollment: 16)
  ❯ CHEM 691. — *Research* (total enrollment: 2)

  **Summer**
  ❯ CHEM 491. — *Research* (total enrollment: 3)
  ❯ CHEM 691. — *Research* (total enrollment: 2)

  **Fall**
  ❯ CHEM 111. — *Fundamentals of Chemistry Laboratory I* (total enrollment: 168)
  ❯ CHEM 116. — *Molecular Science for Citizens Laboratory* (total enrollment: 23)
  ❯ CHEM 117. — *General Chemistry for Engineering Students Laboratory* (total enrollment: 44)
  ❯ CHEM 322. — *Physical Chemistry for Engineers* (total enrollment: 8)
  ❯ CHEM 491. — *Research* (total enrollment: 1)
  ❯ CHEM 691. — *Research* (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2013**

  **Private**
  ❯ Spectroscopic Studies for Characterization of Prototypical Hydrogen Bonded, Halogen Bonded and Related Interactions, *The Robert A. Welch Foundation*
(REN) The Structure and Dynamics of Prototypical Hydrogen-Bonded Interactions, *The Robert A. Welch Foundation*, coworkers: B. McElmurry (P), L. Rivera-Rivera (P), K. Scott (G), S. Springer (G)

*No report received from faculty member.*
JANET F. BLUEMEL

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CHEM-Inorganic Chemistry bluemel@tamu.edu

• SERVICE DURING 2013

National
▷ Editorial/Board: National Science Foundation (Review: Proposals)

College
▷ Committee/Panel: Faculty Advisory Council (Chair), Faculty Advisory Council (Elected Member)

Department
▷ Event: Research Experience for Undergraduates (Participant)
▷ Committee/Panel: Chemistry Seminars’ Committee and Inorganic Division Seminars Coordinator (Chair), College of Science Faculty Advisory Council (Representative), Inorganic Division, Texas A&M University (Chair), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 647. — Spectra of Organic Compounds (total enrollment: 15)
▷ CHEM 691. — Research (total enrollment: 5)

Summer
▷ CHEM 691. — Research (total enrollment: 6)

Fall
▷ CHEM 362. — Descriptive Inorganic Chemistry (total enrollment: 62)
▷ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Acquisition of a Cryoprobe for a NMR Spectrometer, National Science Foundation
▷ Rigid and Flexible Linker Systems for Superior Immobilized Catalysts, National Science Foundation
▷ Rigid Biphenyl and Tetraphenylelement Linker Scaffolds for Superior Immobilized Catalysts, National Science Foundation

Private
▷ The Sonogashira Catalyst System for C-C Coupling Reactions: New Mechanistic Insights and Improved Recyclability, The Robert A. Welch Foundation

Industrial
▷ Structure, Dynamics, and Reactivity of PAEK (Polyaryletherketone) Polymers: New Insights by Solid-State NMR Spectroscopy, APPEAL Consortium
PRESENTATIONS DURING 2013

- “High-Temperature Steam-Treatment of PEEK, PEKK, PBI, and Their Blends,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), Texas A&M University, College Station, TX, March, 2013. (Poster Individual)
- “High-Temperature Steam-Treatment of PEEK, PEKK, PBI, and Their Blends: A Solid-State NMR and IR Spectroscopic Study,” Industrial Consortium for Advancing Performance Polymers in Energy Applications (APPEAL), College Station, TX, March, 2013. (Invited)
- “Adsorption of Phosphines and Phosphine Oxides on Silica Supports,” Cotton Medal Symposium, Texas A&M University, College Station, TX, April, 2013. (Poster Individual)
- “Dibridgehead Diphosphine Oxide Cages: Synthesis and Characterization,” Cotton Medal Symposium, Texas A&M University, College Station, TX, April, 2013. (Poster Individual)
- “High-Temperature Steam-Treatment of PEEK, PEKK, PBI, and Their Blends: A Solid-State NMR and IR Spectroscopic Study,” Smithers Conference on High Performance Thermoplastics and Composites for Oil and Gas Applications, Houston, TX, April, 2013. (Invited)
- “New Syntheses of Diphosphine Cages for Adsorption on Silica Surfaces,” 245th ACS National Meeting, New Orleans, LA, April, 2013. (Poster Individual)
- “New Syntheses of Diphosphine Cages for Adsorption on Silica Surfaces,” 245th ACS National Meeting, New Orleans, LA, April, 2013. (Poster Individual)
- “Superior Immobilized Sonogashira Catalyst Systems: Synthesis and Solid-State NMR Studies,” Cotton Medal Symposium, Texas A&M University, College Station, TX, April, 2013. (Poster Individual)
- “Characterization of PEEK (Polyetheretherketone) Polymers by Solid-State NMR Spectroscopy,” BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, College Station, TX, August, 2013. (Poster Individual)
- “Dibridgehead Diphosphine Dioxide Cages,” BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, College Station, TX, August, 2013. (Poster Individual)
“High-Temperature Steam-Treatment of PEEK, PEKK, PBI, and Their Blends: A Solid-State NMR Spectroscopic Study,” BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, College Station, TX, August, 2013. (Individual)

“Homogeneous Catalysts Immobilized on Silica by Optimized Linker Systems for Superior Lifetimes and Activities,” BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, College Station, TX, August, 2013. (Poster Individual)

“Nickel Tripod Complexes: Synthesis, Characterization, and Catalysis,” BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, College Station, TX, August, 2013. (Poster Individual)

“Phosphine Oxide Adsorption on Silica Surfaces,” BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, College Station, TX, August, 2013. (Poster Individual)

“Immobilized Sonogashira Catalyst Systems for C-C Coupling Reactions,” Department of Chemistry, St. Edward’s University, Austin, TX, September, 2013. (Individual)

“Dibridgehead Diphosphine Dioxide Cages,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), College Station, TX, October, 2013. (Poster Individual)

“High-Temperature Steam-Treatment of PEEK, PEKK, PBI, and Their Blends,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), College Station, TX, October, 2013. (Poster Individual)

“Homogeneous Catalysts Immobilized on Silica by Optimized Linker Systems for Superior Lifetimes and Activities,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), College Station, TX, October, 2013. (Poster Individual)

“Nickel Tripod Complexes: Synthesis, Characterization, and Catalysis,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), College Station, TX, October, 2013. (Poster Individual)


“HRMAS Solid-State NMR: A Powerful Method for Investigating Immobilized Linkers and Catalysts,” 69th Southwest Regional Meeting of the ACS, Baylor University, Waco, TX, November, 2013. (Invited)

“New Linkers for Superior Immobilized Pd/Cu and Rh Catalyst Systems,” Oklahoma State University, Stillwater, OK, November, 2013. (Invited)

**PUBLICATIONS DURING 2013**


• AWARDS DURING 2013
  University
  ▷ Presidential Professor for Teaching Excellence Award, Texas A&M University

• SERVICE DURING 2013
  University
  ▷ Service Position: Chemistry Coordinator TAMU-Qatar (Coordinator)
  College
  ▷ Committee/Panel: Qatar Advisory Committee (Member)
  Department
  ▷ Committee/Panel: Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 315)
  ▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 46)
  ▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 103)
  ▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 125)
  ▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 58)
  Fall
  ▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 499)
  ▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 168)
  ▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 40)
  ▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 36)
  ▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 42)
KEVIN BURGESS

PROFESSOR  
CHEM-Organic Chemistry Division  
burgess@tamu.edu

- CHAIRS/PROFESSORSHIPS
  - Rachal Chair in Chemistry [2004]

- AWARDS DURING 2013
  - International
    - 2013 Pedler Award, Royal Society of Chemistry

- SERVICE DURING 2013
  - National
    - Event: Protein Chemistry and Proteomics (Session Chair)
  - University
    - Committee/Panel: Sterling C. Evans Library Council (Representative)

- TEACHING ASSIGNMENTS DURING 2013
  - Spring
    - CHEM 228. — Organic Chemistry II (total enrollment: 66)
    - CHEM 690. — Theory of Chemical Research (total enrollment: 5)
    - CHEM 691. — Research (total enrollment: 7)
  - Summer
    - CHEM 691. — Research (total enrollment: 7)
  - Fall
    - CHEM 231. — Techniques of Organic Chemistry (total enrollment: 87)
    - CHEM 691. — Research (total enrollment: 7)

- RESEARCH PROJECTS DURING 2013
  - Federal
    - Development of an Optimized System for Non-Covalent Delivery of Proteins into Cells, National Institute of General Medical Sciences, coworkers: A. Kamkaew (G), S. Khumsubdee (G), R. Maji (G), J. Taechalertpaisarn (G), D. Xin (G)
    - (REN) The Texas Two-Step Approach to Privileged Chirons, National Science Foundation, coworkers: X. Li (Visiting Scientist), J. Li (G), R. Maji (G), Z. Zhang (G)
  - Private
    - Acidic Intermediates in Asymmetric Hydrogenations, The Robert A. Welch Foundation, coworkers: S. Khumsubdee (G), J. Zhengyang (G), H. Zhou (G)
    - Hydrogenations of Stereochemical Complex Substrates: The End of a Messy Divorce and the Beginning of a New Romance, The Robert A. Welch Foundation

SEC. 6.1  PROFESSIONAL ACTIVITIES  217
PRESENTATIONS DURING 2013

- “Fluorescent Probes in Targeting and In Imaging,” University of Texas, El Paso, TX, January, 2013. (Individual)
- “Designing Small Molecules to Target Cancer Cells,” University of Malaya, Kuala Lumpur, Malaysia, May, 2013. (Individual)
- “Peptidomimetics for Mimicking or Disrupting Protein-protein Interactions,” University of Malaya, Kuala Lumpur, Malaysia, May, 2013. (Individual)
- “Protein-protein Interactions Involving RAS,” University of Malaya, Kuala Lumpur, Malaysia, May, 2013. (Individual)
- “EKO: A Method to Discover Small Molecules to Perturb Protein-protein Interactions,” The 13th International Congress on Amino Acids, Peptides and Proteins, Galveston, TX, October, 2013. (Individual)

PUBLICATIONS DURING 2013

• TEACHING ASSIGNMENTS DURING 2013

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 563)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 310)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 46)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2007]

• SERVICE DURING 2013
  International
  ▶ Committee/Panel: International Board to Establish the University of Oviedo, Spain as a
    University of Excellence (Member)

  National
  ▶ Editorial/Board: Solvent Extraction and Ion Exchange (Associate Editor)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ CHEM 433. — Advanced Inorganic Chemistry Laboratory (total enrollment: 20)
  ▶ CHEM 491. — Research (total enrollment: 2)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 5)

  Summer
  ▶ CHEM 491. — Research (total enrollment: 3)
  ▶ CHEM 691. — Research (total enrollment: 5)

  Fall
  ▶ CHEM 491. — Research (total enrollment: 4)
  ▶ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Separation of Americium from Curium by Ion Exchange, Department of Energy
  ▶ (REN) The Synthesis, Structures and Chemical Properties of Macrocyclic Ligands Cova-
    lently Bonded into Layered Arrays, Department of Energy

  Private
  ▶ (REN) Metal Phosphonates as Crystal Engineered Solids, The Robert A. Welch Founda-
    tion
  ▶ Metal Phosphonates as Crystal Engineered Solids and Platforms for Drug Delivery, The
    Robert A. Welch Foundation

• PRESENTATIONS DURING 2013
“Mixed Metal Phosphonate-Phosphate Hybrid Exchangers for the Separation of Lanthanides from Actinides,” DOE BES Heavy Element Chemistry and Separation Science Principal Investigators’ Meeting, Gaithersburg, MD, April, 2013.(Poster Individual)


“Unconventional Metal-Organic Frameworks (UMOFs) for Separation of Lanthanides from Actinides and Americium from Curium,” 37th Actinide Separations Conference, Spokane, WA, June, 2013.(Poster Individual)


“Surface Modification of Layered Zirconium Phosphates: A Novel Pathway to Multifunctional Nanoparticles,” NOBCChE 40th Annual Conference, Indianapolis, IN, October, 2013.(Individual)

PUBLICATIONS DURING 2013


• SERVICE DURING 2013

National
▷ Service Position: Institutes for Defense Analysis (Consultant)
▷ Advisory Board: NESAC/Bio (Member)

College
▷ Event: Junior Faculty Success Program (Participant)

Department
▷ Committee/Panel: Advanced Research Institute for Renewable Energy (Member), Tenure and Promotion Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 691. — Research (total enrollment: 3)

Summer
▷ CHEM 691. — Research (total enrollment: 3)

Fall
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Creating Platforms for the Proteomics of Membrane Proteins, National Institute of General Medical Sciences

State
▷ Making Dye Molecules for Phluorescent Technology Inc., Phluorescent Technology, Inc.

Private
▷ (REN) Probing Cation-Amide Interactions, The Robert A. Welch Foundation

• PUBLICATIONS DURING 2013


*On leave.*

*No report received from faculty member.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Director, X-Ray Diffraction Laboratory, Chemistry, [1985]

• SERVICE DURING 2013
  International
  ▷ Editorial/Board: Scientific Advisory Board of ICCDU (Member)
  ▷ Committee/Panel: International Scientific Committee Carbon Dioxide Utilization (Member)

  National
  ▷ Editorial/Board: Various Research Proposals and Manuscripts (Review: Proposals), Journal of Coordination Chemistry, Advances in Inorganic Chemistry (Member)
  ▷ Committee/Panel: Awards Committee - American Chemical Society (Member), National Science Foundation Graduate Fellowship Selection Committee, National Science Foundation Chemical Catalysis Program, National Science Foundation Centers for Chemical Innovation Program (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ CHEM 104. — Chemistry of the Elements (total enrollment: 22)
  ▷ CHEM 114. — Quantitative Analysis (total enrollment: 23)
  ▷ CHEM 491. — Research (total enrollment: 2)
  ▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▷ CHEM 691. — Research (total enrollment: 6)

  Summer
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 6)

  Fall
  ▷ CHEM 103. — Structure and Bonding (total enrollment: 34)
  ▷ CHEM 113. — Physical and Chemical Principles (total enrollment: 34)
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▷ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013
  Federal

SEC. 6.1 PROFESSIONAL ACTIVITIES 225
Catalytic Syntheses of Biodegradable Polymeric Biomerials, *National Science Foundation*, coworkers: G. Wu (P), W. Chung (G), S. Kyran (G), Y. Wang (G), S. Wei (G), S. Wilson (G), A. Yeung (G), J. Cedeno (U), N. Rush (U), B. Skinner (U)

Private

- Design and Reactivity Studies of Metal Catalysts for the Production of Polycarbonates from Novel Oxiranes and Carbon Dioxide, *The Robert A. Welch Foundation*, coworkers: W. Chung (G), S. Kyran (G), Y. Wang (G), S. Wei (G), S. Wilson (G), A. Yeung (G), A. Cedeno (U), N. Rush (U), B. Skinner (U)

International

- Detection and Reaction Dynamics of Intermediates in Ruthenium Catalyzed Process, *Qatar National Research Fund*, coworkers: B. Li (P), S. Kyran (G), S. Wei (G), A. Young (G), J. Cedeno (U), B. Skinner (U)

• PRESENTATIONS DURING 2013

- “Making Chemicals from Carbon Dioxide,” University of Illinois, Urbana, IL, March, 2013. (Individual)
- “Making Polymers from Cyclic Ethers and Carbon Dioxide,” Texas State University, San Marcos, TX, March, 2013. (Invited)
- “Making Polymers from Cyclic Ethers,” GDCh Chemistry Forum, German Chemical Society, Darmstadt, Germany, September, 2013. (Invited)
- “Making Polymers from Cyclic Ethers,” University of Missouri, Columbia, MO, October, 2013. (Invited)

• PUBLICATIONS DURING 2013

- Darensbourg, D.J.; Wilson, S.J. (2013) Synthesis of CO2-Derived Poly(indene carbonate) from Indene Oxide Utilizing Bifunctional Cobalt(III) Catalysts *Macromolecules*, vol. 46,


• AWARDS DURING 2013

National
▷ Fred Basolo Medal for Outstanding Research in Inorganic Chemistry, Northwestern University

• SERVICE DURING 2013

International
▷ Advisory Board: Berlin-Potsdam Cluster of Excellence Unifying Concepts in Catalysis (Member)
▷ Editorial/Board: Chemical Communications Editorial Advisory Board (Member), European Journal of Inorganic Chemistry (Guest Editor), Various Manuscripts (Reviewed)

National
▷ Professional Affiliation: Encyclopedia of Inorganic and Bioinorganic Chemistry Editorial Advisory Board (Member), Inorganic Chemistry Editorial/Board (Member)
▷ Editorial/Board: Various Journals (Referee: Journals)
▷ Committee/Panel: American Academy of Arts and Sciences Chemistry Panel (Member), American Chemical Society’s Petroleum Research Fund (Advisory Board), National Science Foundation Center for Chemical Innovation Science Advisory Board (Member), NIH Panel for F31 and F32 Fellowship Applications (Member)

University
▷ Committee/Panel: Texas A&M University Association of Former Students’ Distinguished Achievement Awards Committee (Member), Texas A&M University Institute for Advanced Study Advisory Board (Member)

College
▷ Service Position: Junior Faculty Success Program (Participant)

Department
▷ Research Group: ESR User Group (Member), NMR User Group (Member), X-ray Diffraction User Group (Member)
▷ Event: ADVANCE Seminar Series (Host)
▷ Committee/Panel: Advisory Council (Member), Diversity Committee (Member), Energy Institute Director Search Committee (Member), Executive Committee (Member), Faculty Awards (Member), Head Search Committee (Member), LEAD Program (Member), Library Committee (Member), Organic Division Faculty Search Committee (Chair), P&T Committee (Member), Self-Study Committee (Member), Space Committee (Member), Undergraduate Curriculum Committee (Member), Vacant Chair Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
• RESEARCH PROJECTS DURING 2013

Federal
▷ Biomimetics of the [FeFe]-H2ase Enzyme Active Site (EAS), National Science Foundation, coworkers: C. Hsieh (P), R. Bethel (G), R. Chupik (G), D. Crouthers (G), S. Deng (G), J. Denny (G), P. Ghosh (G), S. Harman (G), A. Lunsford (G), T. Pinder (G), R. Pulukkody (G), C. Beto (U), E. Campbell (U), S. Cochran (U), M. Drummond (U), S. Montalvo (U)
▷ (REN) Bioorganometallic Chemistry of Enzyme Active Sites with Focus on Hydrogenase, National Science Foundation, coworkers: C. Hsieh (P), R. Bethel (G), D. Crouthers (G), S. Deng (G), J. Denny (G), P. Ghosh (G), T. Pinder (G), R. Pulukkody (G), C. Beto (U), E. Campbell (U), R. Chupik (U), S. Cochran (U), M. Drummond (U), S. Harman (U), A. Lunsford (U), S. Montalvo (U)

Private
▷ (REN) Bioinspired Coordination Chemistry Directed Towards Nickel Ion Sensing, Trafficking, and Templated Reactions, The Robert A. Welch Foundation, coworkers: C. Hsieh (P), R. Bethel (G), D. Crouthers (G), S. Deng (G), J. Denny (G), P. Ghosh (G), T. Pinder (G), R. Pulukkody (G), C. Beto (U), E. Campbell (U), R. Chupik (U), S. Cochran (U), M. Drummond (U), S. Harman (U), A. Lunsford (U), S. Montalvo (U)
▷ Synthetic Analogues and Reactivity Studies of Iron, Nickel, and Zinc Biomimetic Complexes Containing Histidine, Cysteine, and Nitric Oxide as Ligands, The Robert A. Welch Foundation

International
▷ Earth Abundant (Iron and Nickel) Catalysts for Hydrogen Production and Small Molecule Activation, Qatar National Research Fund, coworkers: D. Crouthers (G), S. Harmon (G), A. Lunsford (G)

• PRESENTATIONS DURING 2013
▷ “[FeFe]-H2ase Enzyme Active Site Biomimetics for Proton Reduction,” Gordon Research Conference on Solar Fuels, Ventura, CA, January, 2013. (Invited)
“Molecular Constructs as [FeFe]-H₂ase Enzyme Active Site Biomimetics for Proton Reduction,” University of Michigan, Ann Arbor, MI, February, 2013. (Invited)


“Molecular Constructs as [FeFe]-H₂ase Enzyme Active Site Biomimetics for Proton Reduction,” University of Illinois, Urbana, IL, March, 2013. (Individual)

“Molecular Constructs as [FeFe]-H₂ase Enzyme Active Site Biomimetics for Proton Reduction,” William H. Nichols Medal Award Symposium in Honor of Dr. Richard Eisenberg, White Plains, NY, March, 2013. (Invited)


“Resolving the Roles of Dissimilar Irons in a Proton Reduction Electrocatalyst: [\((NO)Fe(N₂S₂)Fe(NO)₂\)]²⁺ and Its Reduced Analogue,” 10th Hydrogenase Conference, Szeged, Hungary, July, 2013. (Invited)

“Resolving the Roles of Dissimilar Irons in a Proton Reduction Electrocatalyst: [\((NO)Fe(N₂S₂)Fe(NO)₂\)]²⁺ and Its Reduced Analogue,” ICBIC 16, Grenoble, France, July, 2013. (Invited)

“Resolving the Roles of Dissimilar Irons in a Proton Reduction Electrocatalyst: [\((NO)Fe(N₂S₂)Fe(NO)₂\)]²⁺ and Its Reduced Analogue,” Max Planck institute, Mulheim, Germany, July, 2013. (Invited)

“Metallo-N₂S₂ Complexes as S-donor and M-tunable Ligands in the Design of Heteropolymetallic Coordination Complexes,” 246th ACS National Meeting, Indianapolis, IN, September, 2013. (Invited)


“Iron Nitrosyl Paradigm for Base Metal Proton Reduction Electrocatalysis,” Bioinorganic Chemistry, ACS Southwest Regional Meeting, Waco, TX, November, 2013. (Invited)

“Metallo-N₂S₂ Complexes as S-donor and M-tunable Ligands in the Design of Heteropolymetallic Coordination Complexes,” Symposium Honoring Prof. Judith Walmsley, ACS Southwest Regional Meeting, Waco, TX, November, 2013. (Invited)

• PUBLICATIONS DURING 2013


• CHAIRS/PROFESSORSHIPS
  ▶ Davidson Chair in Science [2004]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2013
  International
  ▶ Advisory Board: International Conference on Molecule-Based Magnets (Member)

  National
  ▶ Professional Affiliation: American Chemical Society Expert (Member)
  ▶ Editorial/Board: Comptes Rendus Chimie, Reviews in Inorganic Chemistry, Polyhedron (Referee: Journals), Inorganic Chemistry (Associate Editor), ACS Experts - Published on Opinion Editorial in Austin American Statesman Newspaper, 2013 Nobel Prize in Chemistry (Reviewed)
  ▶ Committee/Panel: National Research Council Research Associateship Program Panel (Member)

  University
  ▶ Service Position: ACS Minority Scholars Program, Local Texas A&M University(Mentor), Texas A&M UniversityChapter of the National Organization for Black Chemists and Chemical Engineers (Co-Advisor)

  College
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member)

  Department
  ▶ Event: Chemistry Open House, National Chemistry Week (Organizer), Open House Day Chemistry Demonstration Faculty, National Chemistry Week (Coordinator)
  ▶ Committee/Panel: Helium Useage Committee (Member), NMR Users Committee (Member), SQUID Instrumentation Committee (Chair), X-ray Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ CHEM 634. — Physical Methods in Inorganic Chemistry (total enrollment: 13)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 12)
• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Molecular Magnets Based on Modular Approach: Investigation of Coupling Anisotropy and Electronic Factors on Bistability, Department of Energy, coworkers: A. Prosvirin (P), H. Zhao (P), A. Brown (G), M. Saber (G), C. Sanders (G), H. Southerland (G), T. Woods (G)
▷ Photocatalysts for H2 Evolution: Combination of the Light Absorbing Unit and Catalytic Center in a Single Molecule, Department of Energy
▷ Chemical, Electrochemical and Physical Properties of Metallosupramolecular Architectures with Tetrazine Based Ligands Including Investigations of Anion-pi Interactions, National Science Foundation
▷ (REN) Magnetism, Conductivity and the Interplay between these Properties in d, p and f Block Materials with Organocyanide Ligands, National Science Foundation, coworkers: H. Zhao (P), Z. Zhang (G), X. Zhang (G)

Private
▷ Magnetic and Electronic Molecule Materials Investigation of Factors that Effect Bistability, The Robert A. Welch Foundation, coworkers: H. Zhao (P), M. Saber (G), X. Zhang (G)
▷ (REN) Magnetism, Conductivity and the Interplay between these Properties, The Robert A. Welch Foundation, coworkers: H. Zhao (P), M. Saber (G), Z. Zhang (G), X. Zhang (G)

Other
▷ (REN) Tuning the Excited States of New Ru(II) Complexes for Potential Photodynamic Therapy Applications, Ohio State University

• PRESENTATIONS DURING 2013
▷ Celebration of Science, Texas Woman’s University, Denton, TX, March, 2013.(Individual)
▷ “F. Albert Cotton Award in Synthetic Inorganic Chemistry in honor of Gregory H. Robinson,” 245th American Chemical Society, New Orleans, LA, April, 2013.( Invited)
▷ University of Florida, Gainesville, FL, April, 2013.( Individual)


“Exploration of Dicyanoquinodiimine Anions as Bridging Ligands in Mixed Valence Dinuclear Metal Complexes,” Graduate Student Symposium on Excellence in Chemical Research, Sponsored by BASF - The Chemical Company, August, 2013. (Individual)


“Multifunctional Molecular Materials Based on Transition Metals and Organocyanide Aions,” Graduate Student Symposium on Excellence in Chemical Research, Sponsored by BASF - The Chemical Company, August, 2013. (Individual)


“Magnetic Molecules With Strong Anisotropy,” 246th ACS National Meeting, Indianapolis, IN, September, 2013. (Individual)

“48 Congreso Mexicano de Qumica and 32 Congres,” Nacional de Educaci´on Qu ´imica, Guanajuato, Mexico, September, 2013. (Individual)


University of Pennsylvania, Philadelphia, PA, September, 2013. (Individual)

“Binding Motifs and Interactions of Anticancer Metal-Metal Bonded Complexes with DNA,” Southwest Regional ACS Meeting, November, 2013. (Individual)


PUBLICATIONS DURING 2013


SEC. 6.1 PROFESSIONAL ACTIVITIES 235


LEI FANG
ASSISTANT PROFESSOR
CHEM
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TEACHING ASSIGNMENTS DURING 2013
Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 102)
▷ CHEM 681. — Seminar (total enrollment: 23)

Hired 08/01/2013.

No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ➢ Davidson Chair in Science [2008]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ➢ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2013

  National
  ➢ Event: Heterobimetallic Compounds and their Chemistry Meeting, 245th ACS National Meeting (Organizer)
  ➢ Advisory Board: Heteroatom Chemistry (Member)
  ➢ Editorial/Board: Inorganic Syntheses (Member), Main Group Chemistry (Member), Organometallics (Associate Editor)
  ➢ Committee/Panel: NIH Study Section, Research for Countermeasures Against Chemical Threats (Vice Chair)

  Department
  ➢ Committee/Panel: Colloquium and Seminar Committee (Member), Executive Committee (Member), Graduate Awards Committee (Chair), Graduate Curriculum Committee (Chair), Inorganic Chemistry Division (Member), Space Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ➢ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ➢ CHEM 691. — Research (total enrollment: 8)

  Summer
  ➢ CHEM 691. — Research (total enrollment: 8)

  Fall
  ➢ CHEM 633. — Principles of Inorganic Chemistry (total enrollment: 22)
  ➢ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013

  Federal
  ➢ (REN) Cationic Lewis Acids as Anion Receptors, National Science Foundation, coworkers: B. Pan (P), A. Ali (G), A. DeLaRosa (G), M. Harai (G), M. Hirai (G), J. Jones (G), I. Ke (G), T. Lin (G), S. Sen (G)
  ➢ Lewis Acidity of Organo-Antimony Compounds, National Science Foundation, coworkers: B. Pan (P), A. DeLaRosa (G), M. Harai (G), J. Jones (G), I. Ke (G), T. Lin (G), S. Sen
Private

▷ Associate Editorial Office for Organometallics, American Chemical Society
▷ Cationic Gold-Antimony Complexes-Lewis Acidic and Catalytic Properties, The Robert A. Welch Foundation, coworkers: K. Chansaenpak (G), M. Harai (G), J. Jones (G), I. Ke (G), T. Lin (G), H. Yang (G)

• PRESENTATIONS DURING 2013
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Saarbruecken, Saarbrucken, Germany, April, 2013. (Individual)
  ▷ “Redox Active Main Group/Transition Metal Complexes,” 245th ACS National Meeting, New Orleans, LA, April, 2013. (Individual)
  ▷ “Boron-based Strategies for F\textsuperscript{18} capture in Water: Applications in Sensing and Positron Emission Tomography,” 96th Canadian Chemistry Conference, Quebec, May, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Frankfurt, Frankfurt am Main, Germany, June, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Freiburg, Freiburg im Breisgau, Germany, June, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Karlsruhe, Karlsruhe, Germany, June, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Stuttgart, Stuttgart, Germany, June, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Tuebingen, Tuebingen, Germany, June, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Wuerzburg, Wurzburg, Germany, June, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Southern California, Los Angeles, CA, September, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” Northwestern University, Evanston, IL, October, 2013. (Individual)
  ▷ “Lewis Acidic Properties of Heavy Main Group Compounds,” University of Houston, Houston, TX, November, 2013. (Individual)

• PUBLICATIONS DURING 2013

Ke, I.S.; Gabbai, F.P. (2013) $\text{Cu}_3(\mu_2-\text{Cl})_3$ and $\text{Ag}_3(\mu_2-\text{Cl})_3$ Complexes Supported by Tetridentate Trisphosphino-stibine and -bismuthine Ligands: Structural Evidence for Triply Bridging Heavy Pnictines Australian Journal of Chemistry.


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Undergraduate Advisor, Chemistry Undergraduate Advising Office, Chemistry

• AWARDS DURING 2013

  University
  ▷ President’s Award for Academic Advising, Texas A&M University

• SERVICE DURING 2013

  National
  ▷ Professional Affiliation: American Chemical Society, Chemical Education Division (Member), Biophysical Society (Member)
  ▷ Committee/Panel: American Chemical Society Diagnostic Undergraduate Chemical Knowledge Exams Committee (Member), National Science Foundation Research Experience for Undergraduates Leadership Group (Chair), National Science Foundation Research Experience for Undergraduates Leadership Group (Member)

  University
  ▷ Committee/Panel: Academic Affairs Faculty Senate Committee (Member), AGEP Steering Committee (Member), Faculty Senate (Faculty Senator - 10), Personnel and Welfare Committee (Member), Selection Committee, SEC Professor (Member)

  College
  ▷ Committee/Panel: Undergraduate Program Committee (Member)

  Department
  ▷ Event: Summer Research Experience for Undergraduates (Director)
  ▷ Committee/Panel: Academic Operations Council (Member), Council on Undergraduate Research (Member), Self Study Committee for External Review (Member), Teaching Awards Committee (Member), Undergraduate Awards Committee (Chair), Undergraduate Curriculum Committee (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ CHEM 106. — Molecular Science for Citizens (total enrollment: 49)
  ▷ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 32)

  Summer
  ▷ CHEM 491. — Research (total enrollment: 18)

  Fall
• CHEM 100. — Horizons in Chemistry (total enrollment: 163)
• CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 24)
• CHEM 481. — Seminar (total enrollment: 26)
• CHEM 491. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ REU: Biological, Environmental, and Materials Chemistry Research Experiences for Undergraduates at Texas A&M University, National Science Foundation

• PRESENTATIONS DURING 2013
  ▶ “Selecting and Preparing REU Mentors,” 245th ACS National Meeting and Exposition, April, 2013. (Individual)

• PUBLICATIONS DURING 2013
JOHN A. GLADYSZ

DISTINGUISHED PROFESSOR (979) 845-1399
CHEM-Organic/Organometallic Chemistry gladysz@chem.tamu.edu

- **CHAIRS/PROFESSORSHIPS**
  - Dow Chair in Chemical Invention [2007]

- **AWARDS DURING 2013**
  **International**
  - Organometallic Chemistry Award, Royal Society of Chemistry
  **University**
  - Distinguished Achievement Award in Research, The Association of Former Students
  - Bachmann Memorial Lecturer, University of Michigan

- **SERVICE DURING 2013**
  **International**
  - Advisory Board: Berlin-Potsdam Cluster of Excellence ”Unifying Concepts in Catalysis” (Member), International Conference on Organometallic Chemistry (ICOMC) (Member), International Symposium on Fluorous Technologies (Member)
  **National**
  - Editorial/Board: Organometallics (Editor-in-Chief)
  - Committee/Panel: ACS Committee on Data Accessibility, Integrity, and Stewardship (Member)
  **University**
  - Committee/Panel: Presidential Search Advisory Committee (Member), Executive Committee, Distinguished Professors (Chair)
  **Department**
  - Committee/Panel: Research Infrastructure Committee (Member), Awards Committee (Chair)

- **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
  - CHEM 491. — **Research** (total enrollment: 2)
  - CHEM 690. — **Theory of Chemical Research** (total enrollment: 5)
  - CHEM 691. — **Research** (total enrollment: 8)

  **Summer**
  - CHEM 691. — **Research** (total enrollment: 8)

  **Fall**
  - CHEM 491. — **Research** (total enrollment: 2)
CHEM 646. — **Organic Chemistry** (total enrollment: 16)
CHEM 690. — **Theory of Chemical Research** (total enrollment: 5)
CHEM 691. — **Research** (total enrollment: 8)

- **RESEARCH PROJECTS DURING 2013**

**Federal**
- Wire-Like and Gyroscope-Like Organometallic Complexes, *National Science Foundation*, coworkers: T. Fiedler (P), M. Stollenz (P), Z. Baranova (G), A. Cardenal (G), M. Clough (G), A. Estrada (G), C. Hilliard (G), S. Kharel (G), G. Lang (G), T. Zhang (G), A. Kalin (U), M. Neupane (U), J. Villalpando (U)

**Private**
- Selective Methane Oxidations in Fluorous Media, *The Robert A. Welch Foundation*, coworkers: C. Zhang (P), S. Ghosh (G), T. Mukherjee (G)
- Werner Complexes as “Organocatalysts”, *The Robert A. Welch Foundation*, coworkers: C. Thomas (P), S. Ghosh (G), K. Lewis (G), T. Mukherjee (G), J. Wiederkehr (U)

**International**
- New Approaches to the Selective Oxidation of Methane, *Qatar National Research Fund*, coworkers: H. Su (P), C. Zhang (P), T. Mukherjee (G), Y. Zhu (G), C. Cude (U), E. Kleihege (U)
- Phase Transfer Activation of Catalysts for Olefin Metathesis and Polymerization, *Qatar National Research Fund*, coworkers: J. Balogh (P), Z. Xi (P), Y. Zhu (G)

- **PRESENTATIONS DURING 2013**
  - “From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” North Dakota State University, Fargo, ND, March, 2013. (Invited)
  - “From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” University of North Dakota, Grand Forks, ND, March, 2013. (Invited)
  - “Application of Olefin Metathesis in a Metal Coordination Sphere: Synthesis of Molecular Gyroscopes and Related Complexes,” 246th American Chemical Society National Meeting, New Orleans, LA, April, 2013. (Contributed)
  - “Insulation of Metal-Capped Polyyne Chains via the Formation of Rotaxanes,” 246th American Chemical Society National Meeting, New Orleans, LA, April, 2013. (Contributed)
  - “Metal-Driven Preorganization in Organocatalysis,” 246th American Chemical Society National Meet, New Orleans, LA, April, 2013. (Contributed)
“New Macrocyclic Components for Rotaxanes,” 246th American Chemical Society National Meeting, New Orleans, LA, April, 2013. (Contributed)

“A New Class of Catalysts for Enantioselective Organic Reactions: Metal-Containing Chiral Hydrogen Bond Donors,” University of Michigan, Ann Arbor, MI, May, 2013. (Invited)

“From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” University of Michigan, Ann Arbor, MI, May, 2013. (Invited)


“Phase Transfer Activation of Fluorous Grubbs’ ROMP Catalyst Systems,” Fifth International Symposium on Fluorous Technologies, Budapest, Hungary, June, 2013. (Contributed)

“Polar Polycations and Polyanions in Fluorous Media,” Fifth International Symposium on Fluorous Technologies, Budapest, Hungary, June, 2013. (Invited)


“Bridgehead Diphosphine Dioxide Cages,” First BASF-Texas A&M University Graduate Student Symposium on Excellence in Chemical Research, August, 2013. (Contributed)

“Molecular Gyroscopes and Cage-Like Diphosphines via Multifold Ring Closing Metathesis in the Metal Coordination Sphere,” First BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, August, 2013. (Contributed)

“Organocatalysis by Werner Complexes!!!,” First BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, August, 2013. (Contributed)

“Spectator Metal-Driven Preorganization in Organocatalysis,” First BASF-TAMU Graduate Student Symposium on Excellence in Chemical Research, August, 2013. (Contributed)


“From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” Tarleton State University, Stephenville, TX, November, 2013. (Invited)

**PUBLICATIONS DURING 2013**


• SERVICE DURING 2013

University
  ▷ Service Position: Chi Psi Beta (Faculty Advisor), Sigma Alpha Lambda (Faculty Advisor)

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▷ CHEM 228. — Organic Chemistry II (total enrollment: 318)
  ▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 574)

Fall
  ▷ CHEM 228. — Organic Chemistry II (total enrollment: 242)
  ▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 379)

No report received from faculty member.
• **CHAIRS/PROFESSORSHIPS**
  ▶ Davidson Chair in Science [2004]

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Executive Associate Dean, Dean’s Office, College of Science, [2002]
  ▶ Director, Laboratory for Molecular Simulation, Chemistry, [1997]

• **SERVICE DURING 2013**
  **University**
  ▶ Committee/Panel: High Performance Computing Steering Committee (Member), University Research Council (Member)

  **College**
  ▶ Committee/Panel: Executive Committee (Member), Information Technology Committee (Chair), Qatar Advisory Committee (Chair), Research Advisory Committee (Chair)

  **Department**
  ▶ Committee/Panel: Committee on Chairs and Professorships (Member), Computer User Group (Chair), IT Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
  ▶ CHEM 641. — Structural Inorganic Chemistry (total enrollment: 14)
  ▶ CHEM 691. — Research (total enrollment: 3)

  **Summer**
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 3)

  **Fall**
  ▶ CHEM 691. — Research (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2013**
  **Federal**
  ▶ (REN) Theoretical Studies of Inorganic, Organometallic, and Bioinorganic Systems, *National Science Foundation*
  ▶ (REN) Theoretical Studies of Inorganic, Organometallic, and Bioinorganic Systems, *National Science Foundation*, coworkers: S. Aguado-Ullate (P), Q. Peng (P), L. Szatkowski (P)

  **Private**
(REN) Computational Chemistry of Transition Metal Systems, *The Robert A. Welch Foundation*, coworkers: E. Trufan (P), S. Kritikov (G), I. Milovanovic (G), A. Renz (G), Z. Xu (G)

**International**

- A Theoretical Investigation of Olefin Purification via Bidentate Metal Complexes, *Qatar National Research Fund*, coworkers: E. Brothers (P), H. Li (P)
- Computational Investigation of the Reactions of Olefins with Nickel Dithiolenes, *Qatar National Research Fund*, coworkers: E. Brothers (P), H. Li (P)

**PRESENTATIONS DURING 2013**

- “Mechanism of the Reaction of Nickel Bis(dithiolenes) with Alkenes,” Challenges in Computational Homogeneous Catalysis, Stockholm, June, 2013. (Invited)
- “Biohydrogen,” Trinity University, San Antonio, TX, October, 2013. (Invited)
- “Biohydrogen,” University of Texas, San Antonio, TX, October, 2013. (Invited)
- “Mechanism of the Reaction of Metal Bis(dithiolenes) with Alkenes,” 224th ACS South-West Regional Meeting, Waco, TX, November, 2013. (Invited)

**PUBLICATIONS DURING 2013**


• SERVICE DURING 2013

College
▷ Committee/Panel: Teaching Lab Safety Committee (Chair)

Department
▷ Service Position: Organic Teaching Laboratories (Coordinator)
▷ Committee/Panel: AOC (Member), Cume Preparation and Grading (Participant)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 20)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 384)
▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 34)

Summer
▷ CHEM 227. — Organic Chemistry I (total enrollment: 64)

Fall
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 10)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 191)
▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 28)

• PRESENTATIONS DURING 2013

  Texas Tech University, Lubbock, TX, March, 2013. (Individual)
  Houston Community College, Houston, TX, May, 2013. (Individual)
• SERVICE DURING 2013
  
  Department
  ▷ Event: Annual Chemistry Open House and Science Exploration Gallery (Contributor)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ CHEM 228. — Organic Chemistry II (total enrollment: 103)
  ▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 330)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Biotechnology, [2013]

• SERVICE DURING 2013

  International

  National
  ▷ Editorial/Board: *Journal of the American Chemical Society, Journal of Physical Chemistry* (Referee: Journals)
  ▷ Committee/Panel: National Institutes of Health (Member)

  Department
  ▷ Committee/Panel: Admissions & Review Committee (Member), Faculty Awards Committee (Member), Graduate Awards Committee (Chair), Graduate Awards Committee (Member), Helium Committee (Member), Information Technology Committee (Member), Seminar Committee (Member), Texas A&M University Local Section of the American Chemical Society (Secretary)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ BICH 691. — Research (total enrollment: 2)
  ▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 64)
  ▷ CHEM 491. — Research (total enrollment: 2)
  ▷ CHEM 691. — Research (total enrollment: 5)

  Summer
  ▷ BICH 691. — Research (total enrollment: 3)
  ▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 47)
  ▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 22)
  ▷ CHEM 491. — Research (total enrollment: 2)
  ▷ CHEM 691. — Research (total enrollment: 5)

  Fall
  ▷ BICH 691. — Research (total enrollment: 2)
  ▷ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 56)
  ▷ CHEM 491. — Research (total enrollment: 4)
  ▷ CHEM 691. — Research (total enrollment: 5)
• RESEARCH PROJECTS DURING 2013

Federal
▷ Development of Platform for Ligand Screening using Hyperpolarized NMR, *National Institutes of Health*, coworkers: Y. Kim (G), Y. Wang (G)
▷ Acquisition of a Cryoprobe for a NMR Spectrometer, *National Science Foundation*
▷ CAREER: Biochemical Reaction Mechanisms by Real-Time Hyperpolarization Enhanced Nuclear Magnetic Resonance, *National Science Foundation*, coworkers: H. Chen (G), C. Chen (G), Y. Kim (G), J. Kim (G), M. Liu (G), H. Min (G), M. Ragavan (G), G. Sekar (G), Y. Wang (G), G. Zhang (G)

State
▷ Ultrafast Multidimensional NMR on Hyperpolarized Peptides and Proteins, *Texas A&M University*, coworkers: H. Chen (G), Y. Kim (G), G. Zhang (G)

Private
▷ Metallocene Catalyzed Polymerization Investigated by Hyperpolarized NMR, *American Chemical Society*, coworkers: C. Chen (G), H. Chen (G), Y. Lee (G)
▷ Molecular Basis for Autotransporter Function, *The Robert A. Welch Foundation*, coworkers: M. Ragavan (G), G. Sekar (G)
▷ Structure and Folding of Membrane Targeted Peptides, *The Robert A. Welch Foundation*, coworkers: H. Min (G), M. Ragavan (G), G. Sekar (G)

Other
▷ Development of a Portable NMR Relaxometry Console, *University of California - Los Alamos Nat’l Labs*, coworkers: H. Chen (G)

• PRESENTATIONS DURING 2013

▷ “Dissolution Dynamic Nuclear Polarization of Large Molecules,” Baylor University, Waco, TX, January, 2013.( Individual)
▷ “Dissolution Dynamic Nuclear Polarization of Large Molecules,” Washington University, St Louis, MO, January, 2013.( Individual)
▷ “Dissolution DNP with Large Molecules: Techniques and Applications,” Weizmann Institute of Science, Rehovot, Israel, February, 2013.( Individual)
▷ “Dissolution Dynamic Nuclear Polarization of Large Molecules,” University of Southern, Carbondale, IL, February, 2013.( Individual)
▷ “Real-Time NMR using Dissolution Dynamic Nuclear Polarization,” Wichita State University, Wichita, KS, September, 2013.( Individual)
▷ “Dissolution Dynamic Nuclear Polarization of Large Molecules,” 69th Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013.( Individual)
• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Director, First Year Chemistry Program, Chemistry, [2010]

• SERVICE DURING 2013
  Department
  ▷ Research Group: X-Ray Diffraction User Group (Member)
  ▷ Committee/Panel: Academic Operations Council (Member), Computer User Group (Member), Executive Committee (Member), First-Year Program (Director), Inorganic Division (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 314)
  ▷ CHEM 681. — Seminar (total enrollment: 23)
  ▷ CHEM 691. — Research (total enrollment: 4)
  ▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 20)
  Summer
  ▷ CHEM 691. — Research (total enrollment: 2)
  Fall
  ▷ CHEM 673. — Symmetry and Group Theory in Chemistry (total enrollment: 14)
  ▷ CHEM 691. — Research (total enrollment: 3)
  ▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 44)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Director, First Year Chemistry Program, Chemistry, //

• SERVICE DURING 2013
  
  Regional
  ▶ Service Position: American Chemical Society Local Chapter (Alternate Councilor)

  University
  ▶ Service Position: Aggie School Volunteers (Faculty Advisor), Ags of Oak (Faculty Advisor), Calibrated Peer Review for Texas A&M University (Master Administrator), Dean of Faculties (Mediator)
  ▶ Committee/Panel: CTE Portal Committee (Member), Faculty Senate Sub-committee on the Status of Non-Tenure Track Faculty (Co-Chair), Organization for Professional Academic Lecturers Plus NTTF (Co-Chair)

  College
  ▶ Event: All Chemistry Events and Pentathalon, Texas Science Olympiad and Coaches Clinic (Coordinator), Texas A&M Regional Junior Science Bowl (Judge), Texas A&M Regional Science Bowl (Judge), Texas Science Olympiad Coaches Clinic (Presenter)

  Department
  ▶ Service Position: Chemistry 116 (Coordinator), Chemistry Open House and Exploration Gallery (Coordinator), New Faculty Orientation (Speaker)
  ▶ Event: Hands-On Science Exhibition, Mitchell Institute for Fundamental Physics (Coordinator)

• TEACHING ASSIGNMENTS DURING 2013
  
  Spring
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 268)
  ▶ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 71)
  ▶ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 284)
  ▶ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 144)

  Fall
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 281)
  ▶ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 336)
  ▶ CHEM 116. — Molecular Science for Citizens Laboratory (total enrollment: 22)
  ▶ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 76)
• RESEARCH PROJECTS DURING 2013
  Federal
  ▷ Evaluating Students’ Learning and Attitudes in a Virtual Chemistry Laboratory, *National Science Foundation*

• PRESENTATIONS DURING 2013
  ▷ “Blending Online Resources and Activities in the Classroom,” Wakonse South Conference, Canyon of the Eagles, TX, April, 2013. (Individual)
  ▷ “Understanding the New Calibrated Peer Review Program,” Texas A&M University, College Station, TX, April, 2013. (Individual)
  ▷ “What Can Students Learn from Virtual Labs?,” ACS Committee on Computers in Chemical Education Forum, November, 2013. (Individual)

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Professor (J), Physics and Astronomy, [2007]

• SERVICE DURING 2013

  International
  ▷ Editorial/Board: European Congress on Molecular Spectroscopy & International Congress on Molecular Spectroscopy (Elected Member), International Congress on Molecular Spectroscopy (Elected Member), Journal of Spectroscopy & Dynamics (Board Member), Turkish Congress on Molecular Spectroscopy (Elected Member), International Journal of Spectroscopy (Board Member), Journal of Molecular Structure (Editor), Laser Chemistry (Board Member)

  National
  ▷ Professional Affiliation: Alumni Council, Alexander von Humboldt Foundation (Co-Chair), American Friends of the Alexander von Humboldt Foundation (Board of Directors)

  University
  ▷ Committee/Panel: Council of Faculty Senate Speakers (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ CHEM 327. — Physical Chemistry (total enrollment: 81)
  ▷ CHEM 691. — Research (total enrollment: 2)

  Summer
  ▷ CHEM 491. — Research (total enrollment: 3)

  Fall
  ▷ CHEM 327. — Physical Chemistry (total enrollment: 66)
  ▷ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

  Private
  ▷ (REN) Molecular Structures and Vibrational Potential Energy Surfaces in Ground and Excited Electronic States, The Robert A. Welch Foundation, coworkers: E. Ocola (P), H. Chun (G), H. Sheu (G), A. Alabdulmohsin (U), A. Bauer (U), M. Bukhamseen (U), N. Glaser (U)

• PRESENTATIONS DURING 2013
“Applications of Raman Spectroscopy for Biological and Agricultural Systems,” IQSE, Texas A&M University, College Station, TX, February, 2013. (Invited)

“Ab Initio Computations of Molecular Structures and Molecular Spectra for Cyclic Organic Molecules,” Texas A&M University Student Research Week, College Station, TX, March, 2013. (Poster Individual)

“Spectroscopic Determination of Vibrational Potential Energy Surfaces in Ground and Excited Electronic States,” Southern Methodist University, Dallas, TX, March, 2013. (Invited)

“Applications of Symmetry and Group Theory,” IQSE, Texas A&M University, College Station, TX, May, 2013. (Invited)


“Experimental and Theoretical Determination of the Structures and Molecular Vibrations of Benzocyclobutane in its Ground and Excited Electronic States,” Regional Fall Meeting of the Texas Section of the American Physical Society, Brownsville, TX, October, 2013. (Individual)

“Spectroscopic and Theoretical Determination of the Structure of 2,6-Difluoropyridine in its Ground and Excited Electronic States,” Regional Fall Meeting of the Texas Section of the American Physical Society, Brownsville, TX, October, 2013. (Individual)

**PUBLICATIONS DURING 2013**


• SERVICE DURING 2013
  
  Department
  ▶ Service Position: Quant Lab Coordinator for CHEM318 (Supervisor)
  ▶ Event: Chemistry Open House (Organizer), Physics/Engineering Open House (Demonstration Coordinator)
  ▶ Committee/Panel: Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  
  Fall
  ▶ CHEM 316. — Quantitative Analysis (total enrollment: 82)
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 110)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Director, Biology Interface Training Program, Chemistry, //

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: Various Journals (Referee: Journals)

  National
  ▶ Editorial/Board: Various Journals (Referee: Journals)

  University
  ▶ Event: Metals in Biochemistry Journal Club (Organizer)

  Department
  ▶ Committee/Panel: Awards Committee (Member), Electron Paramagnetic Resonance Facility (Director), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ BICH 285. — Directed Studies (total enrollment: 1)
  ▶ BICH 685. — Lab Rotation (total enrollment: 3)
  ▶ BICH 691. — Research (total enrollment: 2)
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 266)
  ▶ CHEM 691. — Research (total enrollment: 3)

  Summer
  ▶ BICH 691. — Research (total enrollment: 2)
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 45)
  ▶ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 18)
  ▶ CHEM 691. — Research (total enrollment: 3)

  Fall
  ▶ BICH 491. — Research (total enrollment: 1)
  ▶ BICH 691. — Research (total enrollment: 2)
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 260)
  ▶ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

  Federal
Training at the Chemistry-Biology Interface, *National Institute of General Medical Sciences*

(REN) Bioinorganic Chemistry of Carbon Monoxide Dehydrogenase, *National Institutes of Health*


Private

Characterization of Low-Molecular-Mass Fe and Mn Complexes in Eukaryotic Cells, *The Robert A. Welch Foundation*

**PRESENTATIONS DURING 2013**

- Interdisciplinary Life Science Seminar Series, Texas A&M University, College Station, TX, 2013. (Invited)
- 7th International Conference on Fe-S Cluster Biogenesis and Regulation, Columbia, SC, June, 2013. (Invited)
- ACS Southwest Regional Conference, Waco, TX, November, 2013. (Invited)

**PUBLICATIONS DURING 2013**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Toxicology, [2013]
  ▷ Member, Interdisciplinary Faculty, Biotechnology, [2013]

• SERVICE DURING 2013

  National
  ▷ Professional Affiliation: American Chemical Society (Member), Chinese-American Chemistry Professor Association (Member)

  University
  ▷ Committee/Panel: Faculty Senate (Faculty Senator - 03), Professional Program in Biotechnology Executive Committee (Member)

  Department
  ▷ Committee/Panel: Graduate Admissions and Review Committee (Member), Self Study Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ CHEM 630. — Biorganic Chemistry (total enrollment: 14)
  ▷ CHEM 681. — Seminar (total enrollment: 17)
  ▷ CHEM 691. — Research (total enrollment: 5)

  Summer
  ▷ CHEM 691. — Research (total enrollment: 10)

  Fall
  ▷ CHEM 228. — Organic Chemistry II (total enrollment: 58)
  ▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▷ CHEM 691. — Research (total enrollment: 10)

• RESEARCH PROJECTS DURING 2013

  Federal
▷ Chemical/Biochemical Tools for Studying Novel Protein Acyl Lysine Modifications, National Institutes of Health
▷ Phage Display with Two Genetically Incorporated Noncanonical Amino Acids, National Institutes of Health, coworkers: Y. Kurra (P), C. Reed (P), Y. Zeng (P), K. Odoi (G), Tuley (G)
▷ CAREER: Site-Specific Dual Labeling of Proteins through Two Genetically Incorporated Unnatural Amino Acids, National Science Foundation
▷ CAREER: Site-Specific Fluorescent Labeling of Proteins Using Genetically Encoded Noncanonical Amino Acids, National Science Foundation, coworkers: Y. Kurra (P), Y. Lee (G), B. Wu (G)

Private
▷ Synthesis and Evaluation of Methltransferase-Mediated Alkylating Agents of Biopolymers, The Robert A. Welch Foundation, coworkers: Y. Lee (G), B. Wu (G)

• PRESENTATIONS DURING 2013
  ▷ Department of Chemistry, Duke University, Durham, NC, January, 2013.( Invited)
  ▷ Department of Chemistry, North Carolina State University, Raleigh, NC, January, 2013.( Invited)
  ▷ Department of Biochemistry, Michigan State University, East Lansing, MI, February, 2013.( Invited)
  ▷ “A Fascinating Chemistry of a Genetic Encoded Acrylamide,” Gordon Research Conference, Proctor Academy, NH, June, 2013.( Individual)
  ▷ Department of Chemistry and Biochemistry, University of Georgia, Athens, GA, October, 2013.( Invited)
  ▷ Department of Chemistry, Mercer University, Macon, GA, October, 2013.( Invited)
• SERVICE DURING 2013

College
▷ Committee/Panel: Information Technology Committee (Member)

Department
▷ Committee/Panel: Physical/Nuclear Chemistry Division (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 631. — Statistical Thermodynamics (total enrollment: 8)
▷ CHEM 691. — Research (total enrollment: 1)

Fall
▷ CHEM 648. — Principles of Quantum Mechanics (total enrollment: 8)
▷ CHEM 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Molecular Photoionization Studies of Nucleobases and Correlated Systems, Department of Energy, coworkers: R. Carey (G), J. Dominguez (G)

Private
▷ Reaction Dynamics Probed by Molecular-Frame Photoionization, The Robert A. Welch Foundation, coworkers: R. Carey (P), J. Jose (P)

Other
▷ Collaboration with the Atomic, Molecular, and Optical Theory, University of California, coworkers: J. Jose (P)

• PRESENTATIONS DURING 2013


• PUBLICATIONS DURING 2013

Scattering by Formaldehyde and Pyrimidine in the Low- and Intermediate-Energy Ranges


Jose, J.; Lucchese, R.R. (2013) Study of Resonances in the Photoionization of Ar\textsuperscript{@}\textsubscript{C\textsubscript{60}} and C\textsubscript{60} Journal of Atomic Molecular and Optical Physics, vol. 46, 1-7.


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• SERVICE DURING 2013

National
▷ Editorial/Board: NIH Review Panel (Member)
▷ Committee/Panel: American Heart Association, Proposal Review Panel (Member)

State
▷ Professional Affiliation: Texas Health and Biotechnology Institute (Member)
▷ Committee/Panel: Central Texas Science and Engineering Fair (Judge)

University
▷ Professional Affiliation: Cardiovascular Research Institute (Member)
▷ Committee/Panel: Texas A&M Institute of Food Science & Nutrition (Member)

Department
▷ Committee/Panel: Review Committee for Lichter Report on First Year Program (Chairman)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 315. — Quantitative Analysis (total enrollment: 74)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 10)
▷ CHEM 491. — Research (total enrollment: 4)

Summer
▷ CHEM 491. — Research (total enrollment: 1)

Fall
▷ CHEM 315. — Quantitative Analysis (total enrollment: 104)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 20)
▷ CHEM 491. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Lipoprotein Density Profiling for Clinical Studies, National Institutes of Health

• PUBLICATIONS DURING 2013


*No report received from faculty member.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Undergraduate Advisor, Chemistry Undergraduate Advising Office, Chemistry, [2012]

• SERVICE DURING 2013
  National
  ▶ Professional Affiliation: American Chemical Society, Chemical Education Division (Member)
  Department
  ▶ Service Position: Chem 320 Instrumental Analysis Laboratory (Coordinator), Chem 434 Instrumental Analysis Laboratory (Coordinator)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ CHEM 320. — Instrumental Analysis Laboratory (total enrollment: 27)
  ▶ CHEM 434. — Analytical Instrumentation Laboratory (total enrollment: 33)
  Fall
  ▶ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 243)
  ▶ CHEM 434. — Analytical Instrumentation Laboratory (total enrollment: 16)
• SERVICE DURING 2013

National
▷ Professional Affiliation: American Chemical Society - Chemical Education and Biological Chemistry Divisions (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 242)
▷ CHEM 242. — Elementary Organic Chemistry Laboratory (total enrollment: 166)

Summer
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 51)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 310)
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 111)

No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ▶ Cyclotron Institute Bright Chair in Nuclear Science [2002]

• SERVICE DURING 2013
  
  International
  ▶ Editorial/Board: NSERC(Canada) and Agence Nationale de la Recherche (Review: Proposals)
  ▶ Committee/Panel: International Advisory Committee, International Symposium on Nuclear Physics, Mumbai, India (Member), International Advisory Committee, Nucleus-Nucleus Collisions 2009, Beijing, China (Member), Oaxtepec, Mexico Nuclear Physics Symposium International Advisory Committee (Member)

  National

  State
  ▶ Committee/Panel: Organizing Committee NN2012, San Antonio, Texas (Co-Chair)

  University
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member)

  College
  ▶ Event: Expanding Your Horizons Program (Presenter)

• TEACHING ASSIGNMENTS DURING 2013
  
  Spring
  ▶ CHEM 102.(H) — Fundamentals of Chemistry II (total enrollment: 12)

• RESEARCH PROJECTS DURING 2013
  
  Federal
  ▶ (REN) Cyclotron-Based Nuclear Science, Department of Energy

  Private
  ▶ (REN) Nuclear Reaction Studies- Alternative Pathways to Heavy Elements, The Robert A. Welch Foundation

• PUBLICATIONS DURING 2013


No report received from faculty member.
SIMON W. NORTH

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CHEM-Physical Chemistry

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• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Department Head, Chemistry, [2013]
  ▶ Graduate Advisor, Chemistry Graduate Advising Office, Chemistry, [2009]
  ▶ Associate Director, Center for Atmospheric Chemistry and the Environment, Chemistry

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: Various International Journals (Referee: Journals)

  National
  ▶ Editorial/Board: National Science Foundation, Research Corporation, NASA, ACS, AIP (Review: Proposals), Science, and Nature (Referee: Journals)

  University
  ▶ Committee/Panel: Center for Teaching Excellence (Board Member), National Aerothermochemistry Laboratory (Co-Director)

  College
  ▶ Committee/Panel: Graduate Instruction Committee (Member)

  Department
  ▶ Committee/Panel: Academic Operations Committee (Member), Graduate Admission and Review Committee (Member), Graduate Curriculum Committee (Chair), Promotion and Tenure Committee (Member), Shop User Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 621. — Chemical Kinetics (total enrollment: 14)
  ▶ CHEM 681. — Seminar (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 7)

  Summer
  ▶ CHEM 691. — Research (total enrollment: 13)

  Fall
  ▶ CHEM 491. — Research (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 46)
  ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 1)
• RESEARCH PROJECTS DURING 2013

Private
▷ (REN) Photofragment Imaging of Atmospheric Free Radicals, *The Robert A. Welch Foundation*, coworkers: M. Grubb (G), M. Warter (G)

• PUBLICATIONS DURING 2013


*No report received from faculty member.*
• SERVICE DURING 2013

International
▷ Editorial/Board: *Inorganic Chemistry Frontiers* (Associate Editor), *Organometallics* (Member)

National
▷ Advisory Board: *Chemical Science* (Member)

University
▷ Committee/Panel: Advanced Research Institute for Sustainable Energy (ARISE) Team (Member)

Department
▷ Committee/Panel: Faculty, Graduate Student Work Group (Member), Graduate Admissions and Review Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 642. — Organometallic Chemistry and Homogeneous Catalysis (total enrollment: 17)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 11)

Summer
▷ CHEM 691. — Research (total enrollment: 11)

Fall
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 681. — Seminar (total enrollment: 31)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 11)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) New Horizons in c-F Activation by Main Group Electrophiles, *Department of Energy*, coworkers: M. MacInnis (P), B. McCulloch (G), L. Press (G), R. Ramirez (G), S. Yruegas (U)

Private

(REN) Pincer-like Ligands for Reaction Discovery and Catalytic Applications, *National Science Foundation*, coworkers: C. Lee (G), C. Pell (G), S. Timpa (G), C. Park (U)
New Discoveries of Main Group Hypercoordinate Compounds and Beyond, *The Robert A. Welch Foundation*, coworkers: W. Gu (G)

**Other**
- Modification of Polymer Surfaces Using Electrophilic Main-Group Catalysts, *Entegris, Inc.*, coworkers: J. Davidson (G), C. Lee (G)

**PRESENTATIONS DURING 2013**
- “Reaction Discovery with Pincer Complexes,” Trinity University, San Antonio, TX, February, 2013. (Invited)
- “Reaction Discovery with Pincer Complexes,” University of Cincinnati, Cincinnati, OH, March, 2013. (Invited)
- “Iridium-Catalyzed Dehydrogenative Borylation of Terminal Alkynes,” Student Research Week, Texas A&M University, College Station, TX, March, 2013. (Poster Individual)
- “Dehydrogenative Borylation of Alkynes by Pincer Iridium Complexes,” 96th Canadian Chemistry Conference and Exhibition, Ville de Quebec, Quebec, Canada, May, 2013. (Invited)
- “Electrophilic C-F Activation and How it Leads to Things such as a Terminal Fluorocarbonyl of Rhodium,” 96th Canadian Chemistry Conference and Exhibition, Ville de Quebec, Quebec, Canada, May, 2013. (Invited)
- “Reaction Discovery with Pincer Complexes,” Dalhousie University, Halifax, Nova Scotia, Canada, May, 2013. (Invited)
- “Stable Monomeric Complexes of Pd(I) and Pt(I),” 96th Canadian Chemistry Conference and Exhibition, Quebec City, Quebec, Canada, May, 2013. (Individual)
- “Carbon-Hydrogen Bond Activation with Cationic Platinum Pincer Complexes and Some Palladium Surprises,” INEOS Symposium honoring Mark Vol’pi, Moscow, Russia, June, 2013. (Invited)
- “Selectivity in Catalytic Borylation of Terminal Alkynes by Iridium Pincer Complexes,” BASF Graduate Student Research Symposium, College Station, TX, August, 2013. (Poster Individual)
- “Synthesis, Characterization, and Reactivity of Monomeric Cations of Pd(I) and Pt(I),” BASF-Texas A&M University Graduate Student Research Symposium, College Station,
Towards Organometallic Scaffolds for Improved Methane Binding,” BASF-Texas A&M University Graduate Student Research Symposium, College Station, TX, August, 2013. (Individual)

“Bis(pincer) Ligands and Their Late Metal Complexes,” 246th ACS National Meeting, Indianapolis, IN, September, 2013. (Invited)

“Reaction Discovery with Pincer Complexes,” Cornell University, Ithaca, NY, September, 2013. (Invited)

“Carborane Oxidants,” 246th American Chemical Society Meeting, Indianapolis, IN, September, 2013. (Individual)


“Reaction Discovery with Pincer Complexes,” University of Minnesota, St. Paul, MN, October, 2013. (Invited)

“Reaction Discovery with Pincer Complexes,” University of Rochester, Rochester, NY, October, 2013. (Invited)

“Reaction Discovery with Pincer Complexes,” University of St. Thomas, St. Paul, MN, October, 2013. (Invited)

“Alkyne Borylation Reactions Catalyzed by Iridium Pincer Complexes,” 69th Southwest Regional ACS Meeting, Waco, TX, November, 2013. (Invited)

“Synthesis of New Rhodium Pincer Complexes and Their Capacity as Alkyne Dimerization Catalysts,” ACS Southwest Regional Meeting, Waco, TX, November, 2013. (Individual)

**PUBLICATIONS DURING 2013**


• SERVICE DURING 2013
  
  Department
  ▶ Event: Chemistry Open House and Science Exploration Gallery (Co-Coordinator)
  ▶ Committee/Panel: Academic Operations Committee (Member), Graduate Admissions and Review Committee (Member), Graduate Awards Committee (Member), Head Search Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  
  Spring
  ▶ CHEM 481. — Seminar (total enrollment: 31)
  ▶ CHEM 686. — Ethics in Chemical Research and Scholarship (total enrollment: 50)

  Fall
  ▶ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 474)
• SERVICE DURING 2013

Regional
▷ Event: Science and Musical Storytelling Hour at the George Bush Presidential Library (Presenter)

University
▷ Event: Youth Adventure Program (Coordinator), Youth Adventure Program (Instructor)

College
▷ Event: Science Olympiad (Coordinator), Summer REU Students (Coordinator)

Department
▷ Event: Chemistry Road Show (Coordinator)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 227. — Organic Chemistry I (total enrollment: 311)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 150)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 376)

Summer
▷ CHEM 485. — Directed Studies (total enrollment: 2)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 305)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 189)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 148)

• PRESENTATIONS DURING 2013

▷ College of Science Ed. Outreach and Womens Programs, College Station, TX, January, 2013.( Individual)
▷ Dumas, TX, January, 2013.( Individual)
▷ Gause ISD, Gause, TX, January, 2013.( Individual)
▷ Moulton ISD, Moulton, TX, January, 2013.( Individual)
▷ Thrall Elementary, Thrall, TX, January, 2013.( Individual)
▷ Aggieland Saturday, College Station, TX, February, 2013.( Individual)
▷ Livingston Jr. High, Livingston, TX, February, 2013.( Individual)
▷ Rockdale Intermediate, Rockdale, TX, February, 2013.( Individual)
▷ Saturday Morning Physics, College Station, TX, February, 2013.( Individual)
▷ South Knoll Elementary, College Station, TX, February, 2013.( Individual)
Double File Trail Elementary, Round Rock, TX, March, 2013. (Individual)
St. Paul Lutheran, Thorndale, TX, March, 2013. (Individual)
ACS-SA, April, 2013. (Individual)
Centerville ISD, Centerville, TX, April, 2013. (Individual)
Hermes Elementary GT & La Grange Intermediate, La Grange, TX, April, 2013. (Individual)
Bryan/College Station area Homeschool Coop, Bryan, TX, May, 2013. (Individual)
ISWEEEP, May, 2013. (Individual)
Millsap Elementary, Houston, TX, May, 2013. (Individual)
Round Rock Home School Group, Round Rock, TX, May, 2013. (Individual)
Sweeny Elementary, Sweeny, TX, May, 2013. (Individual)
Alvin Library, Alvin, TX, June, 2013. (Individual)
Bay City Public Library, Bay City, TX, June, 2013. (Individual)
Bridge City Public Library, Bridge City, TX, June, 2013. (Individual)
City of Bryan Summer Parks Program, Bryan, TX, June, 2013. (Individual)
City of Bryan Summer Parks Program, Bryan, TX, June, 2013. (Individual)
ExpLORE Camp, College Station, TX, June, 2013. (Individual)
Grapeland Library Summer Reading Program, Grapeland, TX, June, 2013. (Individual)
Kurth Memorial Library Summer Reading Program, Lufkin, TX, June, 2013. (Individual)
Larry J. Ringer Library Summer Reading Program, College Station, TX, June, 2013. (Individual)
Liberty Municipal Library Summer Reading Program, Liberty, TX, June, 2013. (Individual)
National Scholar Invitational, June, 2013. (Individual)
North Zulch ISD’s Summer at Risk Student Day Camp "Camp ROCK 4", North Zulch, TX, June, 2013. (Individual)
Summer Reading Program, West Columbia, TX, June, 2013. (Individual)
SWE Summer Camp, College Station, TX, June, 2013. (Individual)
Brazoria Library, Brazoria, TX, July, 2013. (Individual)
Camp HERO Summer Camp with the City of Bryan, Bryan, TX, July, 2013. (Individual)
Center for Higher Education and Languages (CHEL), July, 2013. (Individual)
Clara Mounce Library Summer Reading Program, Bryan, TX, July, 2013. (Individual)
Cuero Public Library, Cuero, TX, July, 2013. (Individual)
Friendswood Library Summer Reading Program, Friendswood, TX, July, 2013. (Individual)
Helen Hall Library, League City, TX, July, 2013. (Individual)
Hillsboro City Library Summer Reading Program, Hillsboro, TX, July, 2013. (Individual)
Llano County Library, Llano, TX, July, 2013. (Individual)
Neal Recreation Center Summer Program, Bryan, TX, July, 2013. (Individual)
Our Lady Queen of Peace Regional Catholic School, Richwood, TX, July, 2013. (Individual)
> Sweeny Community Library, Sweeny, TX, July, 2013. (Individual)
> Wintermann Library Summer Reading Program, Eagle Lake, TX, July, 2013. (Individual)
> Rosenberg Library Summer Reading Program, Galveston, TX, August, 2013. (Individual)
> Oak Ridge Baptist Church, Childrens Ministry, San Antonio, TX, September, 2013. (Individual)
> Saturday Morning Biophysics: Image Life!, September, 2013. (Individual)
> The Brook Hill School, Bullard, TX, September, 2013. (Individual)
> Westchester Academy, Houston, TX, September, 2013. (Individual)
> Bush Library, College Station, TX, October, 2013. (Individual)
> Chemistry Open House, College Station, TX, October, 2013. (Individual)
> Pebble Creek Elementary, College Station, TX, October, 2013. (Individual)
> Wallace Middle School, Kyle, TX, October, 2013. (Individual)
> Cypress Homeschool Assn, Houston, TX, November, 2013. (Individual)
> Greens Prairie Elementary, College Station, TX, November, 2013. (Individual)
> Red Rock Elementary, Red Rock, TX, December, 2013. (Individual)
> Westwood High School, Austin, TX, December, 2013. (Individual)
• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 295)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 384)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 192)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 406)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 360)

No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ➢ Davidson Chair in Science /2004/

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ➢ Member, Interdisciplinary Faculty, Toxicology, /2006/
  ➢ Director, Center for Biological Nuclear Magnetic Resonance, Chemistry, //

• AWARDS DURING 2013
  National
  ➢ Fellow, American Chemical Society

• SERVICE DURING 2013
  International
  ➢ Committee/Panel: 6th Beilstein Symposium on Experimental Standard Conditions of Enzyme Characterization (Member), STRENDA (Member)
  National
  ➢ Editorial/Board: Archives of Biochemistry & Biophysics (Member), Biochemistry (Member), BioOrganic Chemistry (Member)
  ➢ Committee/Panel: Division of Biological Chemistry - American Chemical Society (Member)
  College
  ➢ Committee/Panel: Research Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ➢ BICH 691. — Research (total enrollment: 4)
  ➢ CHEM 491. — Research (total enrollment: 1)
  ➢ CHEM 672. — Bioorganic Reaction Mechanisms (total enrollment: 13)
  ➢ CHEM 681. — Seminar (total enrollment: 5)
  ➢ CHEM 691. — Research (total enrollment: 3)
  Summer
  ➢ BICH 691. — Research (total enrollment: 4)
  ➢ CHEM 691. — Research (total enrollment: 2)
  Fall
  ➢ BICH 691. — Research (total enrollment: 4)
  ➢ CHEM 681. — Seminar (total enrollment: 6)
• RESEARCH PROJECTS DURING 2013

Federal

▷ Detoxification of Organophosphate Nerve Agents by Variants of Organophosphate Hydro-lase, Department of Defense
▷ Adaptation of Phosphotriesterase for Degradation of Tributyl Phosphate, Lawrence Livermore National Laboratory
▷ Enzymatic Hydrolysis of Tributyl Phosphate, Lawrence Livermore National Laboratory
▷ (REN) Enzymatic Detoxification of Organophosphate Nerve Agents, National Institutes of Health
▷ (REN) Enzymatic Detoxification of Organophosphate Nerve Agents, National Institutes of Health
▷ (REN) Mechanism and Control of Urea Biosynthesis, National Institutes of Health
▷ The Enzymology of Phosphonate Metabolism, National Institutes of Health

Private

▷ (REN) Enzyme Reaction Mechanisms, The Robert A. Welch Foundation

Other

▷ Collaborative Center for an Enzyme Function Initiative, University of Illinois
▷ (REN) Deciphering Enzyme Specificity: Amidohydrolase Superfamily, University of Illinois
▷ (REN) Deciphering Enzyme Specificity: Amidohydrolase Superfamily, University of Illinois

• PRESENTATIONS DURING 2013

▷ “Mechanism of the C-P Lyase Reaction,” Beilstein Conference, Ruedesheim, Germany, September, 2013. (Invited)
▷ “Mechanism of the C-P Lyase Reaction,” Scott Symposium, College Station, TX, November, 2013. (Invited)

• PUBLICATIONS DURING 2013


Dimensional Structure of an Incorrectly Annotated Dihydroorotase from cog3964 in the Amidohydrolase Superfamily Biochemistry, vol. 52, 228-238.

• SERVICE DURING 2013

National
▷ Advisory Board: Natural Product Reports, Royal Society of Chemistry (Editor)
▷ Editorial/Board: NSF CAREER Proposals (Review: Proposals), Translation, Landes Biosciences Journal (Referee: Journals)
▷ Committee/Panel: NCI Board of Scientific Counselors - Basic Sciences (Member), TEVA USA Scholars Review Panel (Chair), UTSA External Scientific Advisory Committee (Member)

State
▷ Editorial/Board: Science Textbooks for the State Board of Education (Reviewer)

Department
▷ Committee/Panel: Organic Assistant Professor Candidate Review Committee (Member), Self Study Committee For External Review (Member), Executive Committee (Member), External Awards Committee (Member), NMR, MS, Graduate Curriculum (Member), Organic Division (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 681. — Seminar (total enrollment: 23)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 5)

Summer
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 691. — Research (total enrollment: 5)

Fall
▷ CHEM 491. — Research (total enrollment: 7)
▷ CHEM 610. — Organic Reactions (total enrollment: 10)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 5)
▷ GENE 491. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Bioactive Natural Product Total Synthesis via B-lactones, Department of Health and Human Services, coworkers: R. McFarlin (G), M. Shirley (G), K. Van (G)
▸ (REN) Synthetic/Mechanistic Studies of Bioactive Marine Agents, *Department of Health and Human Services*, coworkers: M. Abbasov (G), J. Reyes (G)

▸ β-Lactones: Bioactive Targets and Vehicles for Synthesis, *National Institute of General Medical Sciences*, coworkers: R. McFarlin (G), O. Robles (G), M. Shirley (G)

▸ (REN) Novel Asymmetric Routes to 2-Oxetanones and Their Application, *National Science Foundation*, coworkers: N. Harvey (G), R. McFarlin (G), K. Van (G), S. Vellalath (G)

**Private**

▸ Novel Strategies for Bioactive Natural Product Synthesis via B-Lactone Intermediates and New Methodology for Asymmetric Alkylations, *The Robert A. Welch Foundation*

> **PRESENTATIONS DURING 2013**

▸ University of California, Department of Chemistry, Davis, CA, February, 2013. (Invited)


▸ Scripps Research Institute, Department of Chemistry & Chemical Biology, La Jolla, CA, March, 2013. (Invited)

▸ “Native Natural Product Derivatization and a New Intermediate for Organocatalytic Cascade Processes,” MaNaPro, 8th European Conference on Marine Natural Products, Galicia, Spain, September, 2013. (Invited)

▸ Evaluating Bioactive Food Components in Obesity and Cancer Prevention Conference, Fort Walton Beach, FL, September, 2013. (Invited)

▸ “Natural Products Fueling Efficient Synthetic Methodology to Impact Biology,” Purdue University, Department of Chemistry, West Lafayette, IN, October, 2013. (Invited)

▸ “Innovations in Synthetic Efficiency Through Organocascade Catalysis,” SWRM ACS, Waco, TX, November, 2013. (Invited)

> **PUBLICATIONS DURING 2013**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ⊳ Associate Department Head, Chemistry, /1981/

• SERVICE DURING 2013
  University
  ⊳ Committee/Panel: Laboratory Safety Sub-Committee (Member)
  College
  ⊳ Committee/Panel: Technology-Mediated Instruction Committee (Member)
  Department
  ⊳ Service Position: First-Year Chemistry Honors/Majors Laboratory Program (Coordinator)
  ⊳ Committee/Panel: Internal Awards Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ⊳ CHEM 102.(H) — Fundamentals of Chemistry II (total enrollment: 31)
  ⊳ CHEM 112.(H) — Fundamentals of Chemistry Laboratory II (total enrollment: 17)
  Fall
  ⊳ CHEM 101.(H) — Fundamentals of Chemistry I (total enrollment: 44)
  ⊳ CHEM 111.(H) — Fundamentals of Chemistry Laboratory I (total enrollment: 33)

• RESEARCH PROJECTS DURING 2013
  Federal
  ⊳ Computational Catalysis and Atomic-level Synthesis of Materials: Building Effective Catalysts from First Principles, Department of Energy, coworkers: K. Katsiev (P), L. Liu (G), S. Skiles (G), Z. Zhou (G)
  ⊳ (REN) The Physical and Chemical Properties of Nanostructured Mixed-Metal Catalysts, Department of Energy, coworkers: L. Liu (P), F. Yang (G)
• CHAIRS/PROFESSORSHIPS

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Department Head, Chemistry, [2006]

• SERVICE DURING 2013
  National
  ▶ Committee/Panel: American Society for Mass Spectrometry Program Committee (Member)
  ▶ Editorial/Board: Journal of the American Society for Mass Spectrometry “Critical Insights” (Editor)
  ▶ Event: NIH EBIT (Enabling Bioanalytical & Biophysical Technologies) (Reviewer)

  College
  ▶ Committee/Panel: Executive Committee (Member)

  Department
  ▶ Committee/Panel: Executive Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Life Sciences Building Executive Committee (Member), One Health Grand Challenge Campus Council (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 13)

  Summer
  ▶ CHEM 691. — Research (total enrollment: 12)

  Fall
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 11)

• RESEARCH PROJECTS DURING 2013

Federal
(REN) Developing Ion Mobility-Mass Spectrometry for Structural Characterization of Complex Molecular Systems, Department of Energy

(REN) Nanoparticle Laser Desorption Ionization and IM-MS Applied Structural Mass Spectrometry, Department of Energy

Acquisition of a Cryoprobe for a NMR Spectrometer, National Science Foundation

Private

(REN) Studies of the Structure of Gas-Phase Peptide Ions, The Robert A. Welch Foundation

PUBLICATIONS DURING 2013


Chemical Society, vol. 135, 3186-3192.


• SERVICE DURING 2013

Department
▷ Committee/Panel: CHEM227 and CHEM 228 Content Review (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 206)
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 24)

Summer
▷ CHEM 228. — Organic Chemistry II (total enrollment: 84)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 408)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 286)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 93)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ⊳ Director, Elemental Analysis Laboratory, Chemistry, / /
  ⊳ Director, Center for Chemical Characterization and Analysis (CCCA), Chemistry, / /

• **SERVICE DURING 2013**

  **University**
  ⊳ Committee/Panel: Reactor Safety Board, Nuclear Science Center (Chair)

  **Department**
  ⊳ Committee/Panel: Faculty Awards Committee (Chair), Graduate Student Awards Committee (Member), Head Search Committee (Member), Promotion & Tenure Committee (Member), Vacant Chair Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2013**

  **Spring**
  ⊳ CHEM 317. — **Quantitative Analysis** (total enrollment: 26)
  ⊳ CHEM 681. — **Seminar** (total enrollment: 8)
  ⊳ CHEM 691. — **Research** (total enrollment: 3)

  **Summer**
  ⊳ CHEM 691. — **Research** (total enrollment: 4)

  **Fall**
  ⊳ CHEM 601. — **Analytical Chemistry I** (total enrollment: 10)
  ⊳ CHEM 681. — **Seminar** (total enrollment: 8)
  ⊳ CHEM 691. — **Research** (total enrollment: 4)

• **RESEARCH PROJECTS DURING 2013**

  **Federal**
  ⊳ Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities: Enhancing Amphiphilic Heterogeneities and Dynamic Performance while Improving Longevity, *Department of Defense*, coworkers: S. Verkhoturov (Research Scientist), A. Clubb (G), S. Geng (G), C. Liang (G), F. Yang (G), S. Margaretich (U)
  ⊳ Detection, Characterization and Mitigation of Endocrine Disrupting Chemicals, *National Institutes of Health*, coworkers: S. Verkhoturov (Research Scientist), A. Clubb (G), S. Geng (G), C. Liang (G), F. Yang (G), S. Margaretich (U)
  ⊳ Secondary Ion Mass Spectrometry Methodology for Nanoparticles, *National Science Foundation*, coworkers: S. Verkhoturov (Research Scientist), A. Clubb (G), S. Geng (G), C. Liang (G), F. Yang (G), S. Margaretich (U)
• PRESENTATIONS DURING 2013
  ▶ “SIMS Methodology for Probing the Fate and Dispersion of Catalytically Active Molecules,” 25th Annual Workshop on Secondary Ion Mass Spectrometry, Annapolis, MD, May, 2013. (Individual)

• PUBLICATIONS DURING 2013

SEC. 6.1 PROFESSIONAL ACTIVITIES 297
- CHAIRS/PROFESSORSHIPS
  - Davidson Chair in Science [2005]

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  - Director, Nuclear Magnetic Resonance Laboratory (NMR), Chemistry, [/]

- SERVICE DURING 2013
  National
  - Editorial/Board: The Open Organic Chemistry Journal (Member)
  College
  - Committee/Panel: Tenure and Promotion Advisory Committee (Member)
  Department
  - Committee/Panel: Graduate Awards Committee (Member), Promotion and Tenure Committee (Member), Undergraduate Curriculum Committee (Member), NMR User (Chair), Department Head Search Committee (Member), Admissions and Review Committee (Member), Executive Committee (Member)

- TEACHING ASSIGNMENTS DURING 2013
  Spring
  - CHEM 228. — Organic Chemistry II (total enrollment: 51)
  - CHEM 491. — Research (total enrollment: 1)
  - CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  - CHEM 691. — Research (total enrollment: 7)
  Summer
  - CHEM 491. — Research (total enrollment: 1)
  - CHEM 691. — Research (total enrollment: 4)
  Fall
  - CHEM 227. — Organic Chemistry I (total enrollment: 80)
  - CHEM 491. — Research (total enrollment: 3)
  - CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  - CHEM 691. — Research (total enrollment: 5)

- PRESENTATIONS DURING 2013


“Dynamic Effects in Ordinary Organic Reactions in Solution,” University of Texas, San Antonio, TX, April, 2013. (Invited)


• RESEARCH PROJECTS DURING 2013

Federal

(REN) New Concepts in Organic Selectivity and Mechanisms, National Institutes of Health

Acquisition of a Cryoprobe for a NMR Spectrometer, National Science Foundation

Other

Metal-Catalyzed C-H Borylation: Mechanism, Scope, and Applications, Michigan State University

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013

National
▷ Editorial/Board: NSF, DOE, NRC, CINT at Los Alamos National Laboratory, MJ Murdock Trust (Review: Proposals), Various Journals (Referee: Journals)

University
▷ Committee/Panel: Advisory Committee of Microscopy and Imaging Center (Member), Advisory Committee of Microscopy and Imaging Center (Member), Texas A&M University Section of ACS (Treasurer)

Department
▷ Committee/Panel: Admission and Retention Committee (Member), Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 602. — Analytical Chemistry II (total enrollment: 6)
▷ CHEM 681. — Seminar (total enrollment: 8)
▷ CHEM 691. — Research (total enrollment: 3)

Summer
▷ CHEM 685. — Directed Studies (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 4)

Fall
▷ CHEM 327. — Physical Chemistry (total enrollment: 33)
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

Federal
▷ CAREER: Ultrafast Electronic Magnetic and Coherent Lattice Dynamics and the Dynamic Structure-Property Relationship in Nanocrystalline Transition Metal Oxides, National Science Foundation, coworkers: S. Maiti (G)
▷ Doped-Nanocrystal/Graphene Hybrid Structure for Noble Metal-Free Photocatalytic Hydrogen Production, National Science Foundation, coworkers: Y. Dong (G)

Private
▷ Dark Exciton in the Energy Transfer Process of Semiconductor, The Robert A. Welch Foundation
• PRESENTATIONS DURING 2013
  ▶ Calvin College, Department of Chemistry, Grand Rapids, MI, February, 2013. (Individual)
  ▶ Hope College, Department of Chemistry, Holland, MI, February, 2013. (Individual)
  ▶ “Energy Transfer in Doped Quantum Dots and Electron/Lattice Dynamics in 2-D Layered Transition Metal Dichalcogenide Nanocrystals,” Gordon Research Conference, South Hadley, MA, August, 2013. (Individual)
  ▶ National University of Singapore, Department of Chemistry, Singapore, December, 2013. (Individual)
  ▶ Yonsei University, Department of Chemistry, Korea, December, 2013. (Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

Department
▷ Event: Quantitative Analysis Laboratory Chemistry 318 (Coordinator)
▷ Committee/Panel: Analytical Chemistry Laboratory Development Committee (Member),
  Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 316. — Quantitative Analysis (total enrollment: 43)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 69)

No report received from faculty member.
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  > Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2013**

  **International**
  > Advisory Board: Continuing International Conferences on Electrified Interfaces (Member)

  **National**
  > Professional Affiliation: Phi Lambda Upsilon (President)
  > Editorial/Board: *The Physics and Chemistry of Surfaces and Interfaces* (Referee: Journals)

  **Department**
  > Committee/Panel: Faculty Awards Committee (Chair), First-Year Chemistry Program Director Search Committee (Member), Research Awards Committee (Chair), Service Courses Curriculum Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**

  **Spring**
  > CHEM 691. — Research (total enrollment: 1)

  **Summer**
  > CHEM 691. — Research (total enrollment: 1)

• **PUBLICATIONS DURING 2013**


  *On leave.*

  No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 381)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 188)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 425)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 214)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 549)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 503)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 124)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 206)
• TEACHING ASSIGNMENTS DURING 2013

Spring
- CHEM 227. — Organic Chemistry I (total enrollment: 95)
- CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 24)
- CHEM 237. — Organic Chemistry Laboratory (total enrollment: 128)
- CHEM 238. — Organic Chemistry Laboratory (total enrollment: 192)

• PRESENTATIONS DURING 2013

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

University
▷ Service Position: Student Affiliate Chapter of the American Chemical Society (Faculty Advisor)
▷ Committee/Panel: Scholarship Committee (Representative)

Department
▷ Service Position: CHEM 234 Laboratories (Coordinator)
▷ Committee/Panel: Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 46)

Fall
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 17)
ESZTER TRUFAN

LECTURER
CHEM

ESZTER TRUFAN

LECTURER (979)
CHEM
eszter.trufan@chem.tamu.edu

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 593)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 64)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 570)
▷ CHEM 116. — Molecular Science for Citizens Laboratory (total enrollment: 42)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 214)

No report received from faculty member.
DENNIS UTLEY

LECTURER

CHEM

• TEACHING ASSIGNMENTS DURING 2013

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 613)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 671)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 156)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 241)

Hired 09/01/2013.

No report received from faculty member.
• **CHAIRS/PROFESSORSHIPS**
  ▶ Gradiopore Chair in Separation Science in Chemistry [2001]

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2013**
  
  **International**
  ▶ Committee/Panel: Permanent Scientific Committee of International Symposia on Isotachophoresis (Member)

  **National**
  ▶ Editorial/Board: *Electrophoresis* (Member)

  **Department**
  ▶ Committee/Panel: Executive Committee (Member), Graduate Awards Committee (Member), Library Committee (Member), Scientific Committee (Member), Undergraduate Awards Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**
  
  **Spring**
  ▶ CHEM 603. — *Modern Chromatographic Separation Methods* (total enrollment: 14)

• **PUBLICATIONS DURING 2013**


*No report received from faculty member.*
CORAN M.H. WATANABE
ASSOCIATE PROFESSOR (979) 458-8094
CHEM-Biological Chemistry watanabe@chem.tamu.edu

• SERVICE DURING 2013

National
▷ Event: American Cancer Society Study Section (Participant)
▷ Editorial/Board: Chemistry and High Throughput Screening (Member), Biochemistry, Org. Lett., J. Amer. Chem. Soc., Chem. Biol (Referee: Journals)
▷ Committee/Panel: American Chemical Society Biological Division (Officer)

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 02)

College
▷ Committee/Panel: Diversity Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 104)
▷ CHEM 491. — Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 3)

Summer
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 2)

Fall
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Unveiling the Enigmatic Biosynthetic Machinery of the Azinomycins, National Science Foundation

Private
▷ Streptomyces Sahachiroi: A Rich Treasure Trove of Unique Biosynthetic Reactions, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2013
▷ “Unraveling the Biosynthesis of the DNA Crosslinking Agent Azinomycin B,” 23rd Enzyme Mechanisms Conference, Coronado Bay, CA, January, 2013.( Individual)
“Natural Product Biosynthesis: Friend or Foe? From the Activation of 'Silent' Pathways to Disease Causation,” Texas A&M University, Kingsville, TX, September, 2013. (Individual)

“Got Milk Blindness? Biosynthesis of Cycloterpenals,” Zing Conference, Enzymes Coenzymes and Metabolic Pathways, Cancun, Mexico, November, 2013. (Individual)

“Unraveling the Biosynthesis of the DNA Crosslinking Agent Azinomycin B,” Texas A&M University, College Station, TX, November, 2013. (Individual)

University of Puerto Rico, Puerto Rico, November, 2013. (Individual)

**PUBLICATIONS DURING 2013**

• AWARDS DURING 2013

National
▷ COMP OpenEye Outstanding Junior Faculty Award, American Chemical Society
▷ Faculty Early Career Development Award, National Science Foundation

• SERVICE DURING 2013

National
▷ Event: CECAM Workshop Structure-Property Relationships of Molecular Precursors to Organic Electronics (Co-Organizer), Scudderfest: A Conference Honoring Paul H. Scudder (Co-Organizer)
▷ Committee/Panel: NSF Xsede Resource Allocation Committee (Member)

Department
▷ Committee/Panel: Information and Communications Technology Committee (Member), Seminar Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 32)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 4)

Summer
▷ CHEM 691. — Research (total enrollment: 4)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 102)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 681. — Seminar (total enrollment: 12)
▷ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013

Federal
▷ CAREER: Controlling Supramolecular Self-Assembly of Planar and Curved Polycyclic Aromatic Systems, National Science Foundation, coworkers: E. Munsamy (P), J. Bloom (G)
▷ Rational Design of Chiral Bipyridine N-Oxides for the Catalytic Propargylation of Aromatic Aldehydes, National Science Foundation, coworkers: P. Prakash (U)

Private
• PRESENTATIONS DURING 2013
  ▶ “Computational Organic Chemistry: From Substituent Effects in π-Stacking Interactions to Organocatalysis,” Southern Methodist University, Dallas, TX, February, 2013. (Invited)
  ▶ “1,3-Dipolar Cycloadditions of Azomethine Ylides: Prospects for Covalent Functionalization of Carbon Nanotubes,” 245th National Spring Meeting of the American-Chemical-Society, New Orleans, LA, April, 2013. (Contributed)
  ▶ “Understanding the Impact of Substituents and Heteroatoms on Non-covalent Interactions Involving Aromatic Rings,” 245th National Spring Meeting of the American-Chemical-Society, New Orleans, LA, April, 2013. (Contributed)
  ▶ “Explaining the Disparate Stereoselectivity of N-Oxide Catalyzed Allylation and Propargylation Reactions,” Southeast Theoretical Chemistry Association Annual Meeting, Auburn, AL, May, 2013. (Contributed)
  ▶ “Benchmark Torsional Potentials for Bifuran, Bithiophene, and Biselenophene,” CECAM Workshop: Structure-Property Relationships of Molecular Precursors to Organic Electronics, Lausanne, Switzerland, October, 2013. (Poster Individual)
  ▶ “Computational Organic Chemistry: Unraveling the Origin of Stereoselectivity in Organocatalysis,” Texas State University, San Marcos, TX, October, 2013. (Invited)
“The Importance of Local Dipole Moments in Non-Covalent Interactions among Arenes,” CECAM Workshop: Structure-Property Relationships of Molecular Precursors to Organic Electronics, Lausanne, Switzerland, October, 2013. (Invited)

“Broad Transferability of Substituent Effects in π-Stacking Interactions Provides New Insights into Their Origin,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013. (Poster Individual)

“Catalysis with Anion/π Interactions? Not so Fast,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013. (Poster Individual)

“Is Aromatic Recognition Responsible for the Selectivity in a π-Pocket-Containing Lewis Acid Catalyst for a Hetero-Diels-Alder Reaction?,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013. (Poster Individual)

“Organocatalytic Allylations of Aromatic Aldehydes: Performance of DFT and Origin of Enantioselectivity,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013. (Poster Individual)

“Origin of DNA Base Selectivity in the anti-ssDNA Autoantibody ED-10,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013. (Poster Individual)

“Origin of Enantioselectivity in a Bronsted Acid-Catalyzed Sulfoxidation Reaction,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013. (Poster Individual)

“Substituent Effects in π-Stacking Interactions,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013. (Invited)

• PUBLICATIONS DURING 2013


• SERVICE DURING 2013

National
▷ Editorial/Board: Chemical Educator (Reviewer), Journal for Science Education and Technology (Board Member), Journal of Chemical Education (Reviewer)
▷ Committee/Panel: ACS Chemical Education Research Committee (Chair), ACS Division of Chemical Education Biennial Conference Committee (Member), American Chemical Society (Ambassador)
▷ Event: ACS Meeting, Peer-Reviewed Symposium in Chemical Education Research (Organizer)

State
▷ Committee/Panel: Region V, Associated Chemistry Teachers of Texas (Director)

Regional
▷ Event: Visit of Society of Women Engineers (SWE) High School Conference (Host)

University
▷ Service Position: Aggie KCAM (Advisor), On-Line Web Learning Homework (Administrator)
▷ Event: Aggie Recruitment Committee (Host)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 824)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 48)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 143)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 72)
▷ CHEM 485. — Directed Studies (total enrollment: 3)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 621)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 503)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 144)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 204)
▷ CHEM 485. — Directed Studies (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
• PRESENTATIONS DURING 2013
   • “The Role of Spatial Abilities in the Use of Macroscopic and Particulate Representations,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013. (Individual)

• PUBLICATIONS DURING 2013
• CHAIRS/PROFESSORSHIPS
  ▶ W.T. Doherty-Welch Foundation Chair in Chemistry [2009]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Professor (J), Chemical Engineering, [2009]

• SERVICE DURING 2013

  International
  ▶ Advisory Board: International Scientific Advisory Board, Max Planck Institute for Polymer Research (Editor), Dutch BioMedical Materials Program (Member), International Journal of Nanomedicine (Member)
  ▶ Committee/Panel: International Scientific Committee for the 6th Biennial Heart Valve Biology & Tissue Engineering Meeting, Royal Society (Member), International Selection Committee for the Chair on Polymer Chemistry in the Department of Chemical Engineering & Chemistry at Eindhoven University of Technology (Member), International Conference on Materials Chemistry, MC11, Royal Society of Chemistry (Member)

  National
  ▶ Advisory Board: Bioconjugate Chemistry, Editorial (Member), University of California, Santa Barbara, Materials Research Laboratory (Member), University of Minnesota Center for Sustainable Polymers, an NSF Center for Chemical Innovation (Member), University of Nebraska NIH COBRE Center (Member), Chemistry of Materials (Member), Journal of Biotechnology and Biomaterials - Open Access (Member), Journal of the American Chemical Society, Editorial (Member)
  ▶ Editorial/Board: Journal of Polymer Science, Part A: Polymer Chemistry (Editor)
  ▶ Committee/Panel: NIH NANO Study Section Panel (Chair)

  University
  ▶ Advisory Board: University of Delaware, Materials Science and Engineering Department (Member)
  ▶ Committee/Panel: Bayer Lectureship Committee (Chair), Faculty Search Committee, Department of Nuclear Engineering, Life Sciences Radiochemistry (Member), Institute for Advanced Study Administrative Council (Member), Vice President of Research Search Committee (Member)

  Department
  ▶ Committee/Panel: ADVANCE-IT Project, Departmental Mini-Grants Subcommittee (Member), Chairs Search Advisory Committee (Member), F. A. Cotton Medal Jury (Member), Head Search Advisory Committee (Member), Internal Committee to prepare for Provost’s External Review of Chemistry Department (Member), Joint Appointments Committee (Chair)
• TEACHING ASSIGNMENTS DURING 2013

Spring

▷ CHEM 466. — Polymer Chemistry (total enrollment: 97)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 16)

Summer

▷ CHEM 691. — Research (total enrollment: 17)

Fall

▷ CHEM 689. — Special Topics in (total enrollment: 8)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 17)

• RESEARCH PROJECTS DURING 2013

Federal

▷ (REN) The Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities, Department of Defense
▷ (REN) The Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities, Department of Defense, coworkers: J. Raymond (P), K. Pollack (G), K. Seetho (G), J. Summerhill (G), M. Svach (U)
▷ Adhesion-Based Nanotherapeutics in Urinary Tract Infection, National Institutes of Health, coworkers: G. Heo (G), Y. Lim (G)
▷ Integrated Nanosystems for Diagnosis and Therapy, National Institutes of Health, coworkers: S. Pollack (Technician), H. Samarajeewa (Technician), Y. Borguet (P), T. Gustafson (P), A. Noel (P), J. Raymond (P), J. Zou (P), J. Fan (G), S. Felder (G), J. Flores (G), X. He (G), G. Heo (G), R. Li (G), Y. Lim (G), D. Policarpio (G), S. Samarajeewa (G),
▷ Charged Block Copolymer Assembly of Unique Nanoscale Objects, National Science Foundation, coworkers: J. Fan (G), S. Zhang (G)
▷ Collaborative Research: Exotic Block Copolymer Nanoparticles Through Hierarchical Solution Construction, National Science Foundation, coworkers: J. Zou (P), J. Fan (G), X. He (G), R. Li (G), A. Pavia (G), H. Wang (G), F. Zhang (G), S. Zhang (G)
▷ Complex Functional Materials Accessed Uniquely through Selective Covalent and Non-Covalent Macromolecular Interactions, National Science Foundation, coworkers: Y. Borguet (P), J. Zou (P), J. Fan (G), J. Flores (G), A. Pavia-Sanders (G), D. Policarpio (G), J. Sanders (G), M. Svach (U)
▷ Degradable Polycarbonates from Polyhydroxy Natural Products, National Science Foundation, coworkers: T. Gustafson (P), A. Noel (P), S. Kristufek (G), L. Link (G), A. Lonnecker (G)

Industrial

▷ (REN) Advanced Photoresist Technologies by Intricate Molecular Brush Architectures, Dow Electronic Materials
• PRESENTATIONS DURING 2013
  ▶ “Wooley Laboratory Overview: Diverse Opportunities-from Materials to Medicine-for Well-defined Polymer Chemistry,” Texas A&M University, College Station, TX, June, 2013. (Individual)
  ▶ “The Importance of Chemical Control to Afford Functionally-sophisticated and Biologically-active Nanoscopic Macromolecules as Discrete Objects and Supramolecular Assemblies,” Texas Soft Matter Meeting, Texas A&M University, College Station, TX, August, 2013. (Individual)
  ▶ “Simple Strategies to Afford Functionally-Sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies,” Johns Hopkins University, Department of Materials Science & Engineering, Baltimore, MD, October, 2013. (Individual)
  ▶ “Simple Strategies to Afford Functionally-Sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies,” University of South Carolina, Department of Chemistry, Columbia, SC, November, 2013. (Individual)
  ▶ “Simple Strategies to Afford Functionally-Sophisticated Nanoscopic Macromolecules as Discrete Objects and Hierarchical Supramolecular Assemblies,” King Abdullah University of Science and Technology, Saudi Arabia, December, 2013. (Individual)

• PUBLICATIONS DURING 2013


Shah, P.N.; Lin, L.Y.; Smolen, J.A.; Tagaev, J.A.; Gunsten, S.P.; Han, D.S.; Heo, G.S.;


• SERVICE DURING 2013

International
▷ Editorial/Board: Research Grants Council of Hong Kong (Review: Proposals)

National

Department
▷ Committee/Panel: Graduate Admission Committee (Member), Seminar Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 446. — Organic Chemistry III (total enrollment: 31)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 6)

Summer
▷ CHEM 691. — Research (total enrollment: 3)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 93)
▷ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Synthesis of Zoanthamine Alkaloids by Cascade Reactions, National Science Foundation

Private
▷ (REN) Development of New Reagents for Selective Enolation of Carbonyl Compounds, The Robert A. Welch Foundation, coworkers: M. Hashim (G), T. Hood (G), J. Huang (G), C. Huehls (G), T. Kaiser (G), H. Xue (G), D. Jasinski (U)

• PRESENTATIONS DURING 2013

▷ “Synthetic Studies of Bioactive Natural Products,” Colorado State University, Fort Collins, CO, January, 2013.( Individual)
▷ “Synthetic Studies of Bioactive Natural Products,” University of Colorado, Boulder, CO, January, 2013.( Individual)
“Synthetic Studies of Bioactive Natural Products,” University of New Mexico, Albuquerque, NM, March, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” University of Utah, Salt Lake City, UT, March, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Duke University, Durham, NC, April, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Emory University, Atlanta, GA, April, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Georgia State University, Atlanta, GA, April, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Ohio State University, Columbus, OH, April, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Vanderbilt University, Nashville, TN, April, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Northwestern University, Evanston, IL, May, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Oregon State University, Corvallis, OR, May, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” University of Chicago, Chicago, IL, May, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” University of Texas Southwestern Medical Center, Dallas, TX, May, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” University of Texas, Austin, TX, May, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Pennsylvania State University, University Park, PA, September, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” University of Wisconsin, Madison, WI, September, 2013. (Individual)

“Synthetic Studies of Bioactive Natural Products,” Florida State University, Tallahassee, FL, October, 2013. (Individual)
DANNY L. YEAGER

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CHEM-Physical/Nuclear Chem. Division yeager@chem.tamu.edu

• SERVICE DURING 2013

National
▷ Editorial/Board: the Journal of Chemical Physics, the Journal of Physical Chemistry, Molecular Physics and Chemical Physics (Referee: Journals)

University
▷ Service Position: Aggie Democrats (Faculty Advisor), Pro-Choice Aggies (Faculty Advisor), Texas A&M University (ALLY)

Department
▷ Committee/Panel: Information and Communications Technology Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 68)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 141)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 72)
▷ CHEM 328. — Physical Chemistry II (total enrollment: 33)

Fall
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 168)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 48)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 72)
▷ CHEM 327. — Physical Chemistry (total enrollment: 30)

• RESEARCH PROJECTS DURING 2013

Private
▷ Developments and Studies Using Several Complex Scaled Multiconfigurational Methods for Electron Atom/Molecule Resonances, The Robert A. Welch Foundation, coworkers: L. Liang (P), S. Zhang (P), Y. Zhou (P)

• PRESENTATIONS DURING 2013

▷ “Aspects of Complex Scaling for Electron-Atom/Molecule Resonances using MCSCF, MC-STEP and MCTDHF,” Southwest Regional Meeting of the American Chemical Society, Waco, TX, November, 2013.( Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Associate Dean for Faculty Affairs, Faculty Affairs Office, College of Science, [2008]

• SERVICE DURING 2013

  International
  ▷ Event: 5th International Conference on Women in Physics U.S. Team Leader (Delegator)
  ▷ Committee/Panel: Organizing Committee for the 2014 Low Energy Community Meeting (Member), Organizing Committee for the International Workshop on Multi facets of Eos and Clustering IWM-EC 2014 (Member), Pacifichem 2015 Symposium on Science with Beams of Radioactive Isotopes (Chair)

  National
  ▷ Committee/Panel: APS Division of Nuclear Physics Education Committee (Chair), APS Division of Nuclear Physics Executive Committee (Member)

  University
  ▷ Service Position: Texas A&M University (Mediator)
  ▷ Committee/Panel: Diversity Operations Committee (Member), Work-Life Committee (Member)

  College
  ▷ Committee/Panel: Diversity Committee (Chair), Executive Committee (Member)

  Department
  ▷ Committee/Panel: Faculty Awards Committee for Teaching/Service (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▷ CHEM 691. — Research (total enrollment: 9)

  Summer
  ▷ CHEM 491. — Research (total enrollment: 4)
  ▷ CHEM 691. — Research (total enrollment: 8)

  Fall
  ▷ CHEM 106. — Molecular Science for Citizens (total enrollment: 53)
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▷ CHEM 691. — Research (total enrollment: 8)
• RESEARCH PROJECTS DURING 2013

Federal

▷ (REN) Cyclotron-Based Nuclear Science, *Department of Energy*
▷ Determination of the Equation of State of Asymmetric Nuclear Matter, *Department of Energy*
▷ ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace, *National Science Foundation*
▷ Professional Skills Development Workshops for Women in Physics, *National Science Foundation*
▷ REU Site: Nuclear Science at Texas A&M University, *National Science Foundation*
▷ (REN) REU Site: Nuclear and Particle Science at Texas A&M University, *National Science Foundation*

Private

▷ (REN) The Equation of State for a Two-Component Nuclear System, *The Robert A. Welch Foundation*

• PRESENTATIONS DURING 2013

▷ “Asymmetry Dependence of the Nuclear Caloric Curve,” NUSYM13, East Lansing, MI, 2013.(Postdoc)
▷ “Critical Scaling of Excited Nuclear Systems from Quantum Fluctuations,” APS, 2013.(Postdoc)
▷ “Experimental Results on Critical Densities and Temperatures from Quantum Fluctuations,” IWNDT, College Station, TX, 2013.(Postdoc)
▷ “Improved Position Calibration for the FAUST Detector,” Bulletin of the American Physical Society, 2013.(Poster Graduate)
▷ “Studies of N/Z Equilibration via Heavy-residue Isoscaling,” IWNDT, College Station, TX, 2013.(Postdoc)
▷ “Symmetry Energy Effects on Reaction Break-up Mechanisms Near the Fermi Energy for $^{124}Sn +^{64}Ni$ @15A MeV: Using Multi-dimensional Analysis Techniques to Discriminate the Influence of the Symmetry Energy on Observables,” GRS in Nuclear Chemistry, New London, NH, 2013.(Poster Graduate)
**PUBLICATIONS DURING 2013**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, /2013/

• SERVICE DURING 2013
  National
  ▶ Event: ACS Symposium (Organizer)
  ▶ Editorial/Board: Inorganic Chemistry (Associate Editor), DOE Early Career Award and DOE EFRC (Review: Proposals), MOF Thematic Issue of Chemical Reviews (Guest Editor), National Science Foundation (Review: Proposals), Special Issue of Polymer (Guest Editor)

  University
  ▶ Research Group: ARISE (Organizer)
  ▶ Event: Materials Science and Engineering (MSEN) Program (Contributor), Texas A&M UniversityEnergy Institute Activities (Participant)

  College
  ▶ Committee/Panel: Grievance Committee (Elected Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ CHEM 433. — Advanced Inorganic Chemistry Laboratory (total enrollment: 24)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 15)
  ▶ CHEM 695. — Frontiers in Chemical Research (total enrollment: 34)

  Summer
  ▶ CHEM 691. — Research (total enrollment: 13)

  Fall
  ▶ CHEM 231. — Techniques of Organic Chemistry (total enrollment: 34)
  ▶ CHEM 433. — Advanced Inorganic Chemistry Laboratory (total enrollment: 50)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 12)
  ▶ CHEM 695. — Frontiers in Chemical Research (total enrollment: 47)
  ▶ MSEN 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
Polyamine-Tethered Porous Materials for Carbon Capture from Air, *Department of Defense*

A Biomimetic Approach to New Adsorption Hydrogen Storage Metal-Organic Frameworks, *Department of Energy*

System Development for Vehicular Natural Gas Storage Using Advanced Porous Materials, *Department of Energy*

Mash-Adjustable Molecular Sieve Membranes for Olefin/Paraffin in Separations, *National Science Foundation*

Other

The Center for Gas Separation Relevant to Clean Energy Technologies, *University of California - Berkeley*

**PRESENTATIONS DURING 2013**


“Building Highly Stable Mesoporous Metal-organic Frameworks,” 245th ACS Spring National Meeting, New Orleans, LA, April, 2013. (Graduate, Z. Wei)


“Multifunctional Porphyrin Zirconium MOFs,” 245th ACS Spring National Meeting, New Orleans, LA, April, 2013. (Graduate, D. Feng)

“Porous Polymer Networks for Gas Storage and Separation,” 245th ACS National Meeting, New Orleans, LA, April, 2013. (Individual)


“Metal-Organic Frameworks for the Regulation of Enzyme Activity,” 245th ACS Spring National Meeting, New Orleans, LA, April, 2013. (Graduate, Z. Gu)


“Functionalization of Metal-Organic Frameworks for Potential Applications,” Beijing University of Technology, Beijing, China, June, 2013. (Individual)

“Metal-Organic Frameworks and Porous Polymer Networks for Hydrogen Storage,” Beijing University of Technology, Beijing, China, June, 2013. (Individual)

“Metal-Organic Frameworks for Clean-Energy-Related Applications,” Beijing University of Technology, Beijing, China, June, 2013. (Individual)
“Metal-Organic Frameworks, One Cavity at a Time,” Beijing University of Chemical Technology, Beijing, China, June, 2013. (Individual)

“Metal-Organic Frameworks, One Cavity at a Time,” Huazhong University of Science and Technology, Wuhan, China, June, 2013. (Individual)

“Porous Polymer Networks for Gas Storage and Separation,” Beijing University of Technology, Beijing, China, June, 2013. (Individual)


“Metal-Organic Frameworks through Cavity Design,” Georgia Tech, Atlanta, GA, August, 2013. (Individual)


“ARPA-E MOVE Project Q3 Presentation,” RTI, NC, September, 2013. (Individual)

“Metal-Organic Frameworks for Hydrogen Storage,” 246th ACS Fall National Meeting, Indianapolis, IN, September, 2013. (Graduate, Z. Wei)


“Symmetry-Guided Synthesis of Highly Porous Metal-Organic Frameworks with Desired Topology,” American Chemical Society Fall Meeting, Indianapolis, IN, September, 2013. (Graduate, M. Zhang)

“ARPA-E MOVE Project Q4 Presentation,” University of California, Berkeley, CA, October, 2013. (Individual)

“Highly Stable MOFs with Ultrahigh Porosity for CO2 Capture,” Carbon Capture All Hands Meeting, Berkeley, CA, October, 2013. (Graduate, D. Feng)

“Affordable Porous Materials for High-Performance Carbon Dioxide Sequestration,” Carbon Capture All Hands Meeting, Berkeley, CA, October, 2013. (Graduate, M. Zhang)


“Metal-Organic Frameworks: One Cavity at a Time,” The University of Tennessee, Knoxville, TN, November, 2013.(Individual)

“Advanced Porous Materials for Carbon Capture,” Sun Yat-sen University, Guangdong, China, December, 2013.(Individual)


“Porous Polymer Networks for Carbon Capture from Air,” ONR Kickoff Meeting, December, 2013.(Individual)

• PUBLICATIONS DURING 2013


Porous Metal-Organic Framework Sustained with 12-Connected Nanoscopic Octahedra
*Dalton Transactions*, vol. 42, 1708-1714.

*Crystal Growth and Design*, vol. 24513, 4760-4768.

*Journal of Materials Chemistry A*, vol. 1, 13502-13509.

*Journal of Physical Chemistry*, vol. 117, 20037-20042.

*Advanced Materials*, vol. 25, 3925-4057.

*Inorganic Chemistry*, vol. 52, 1164-1166.

*Science China Chemistry*, vol. 56, 418-422.

*Journal of the American Chemical Society*, vol. 135, 4040-4050.

*Journal of Applied Crystallography*, vol. 46, 346-353.

▷ Zhang, M.; Chen, Y.P.; Zhou, H.C. (2013) Structural Design of Porous Coordination Networks from Tetrahedral Building Units
*Crystal Engineering*, vol. 15, 9544-9552.
7. Research Activity, 2013

This section contains information on all funded research activity for the calendar year 2013. Information was initially reported by faculty and verified whenever possible through the granting agency. Because of calculations and rounding there is a small margin of error.

Information reported by faculty:
- Title
- Granting Agency
- PIs, Co-PIs, and co-workers (internal/external)
- Total Funding
- Indirect Costs
- Start & End Dates

Calendar year calculations:
- Total - Indirect = Direct
- # Days Total Grant = End Date - Start Date
- Daily Grant Award = Total Funding Reported / # Days Total Grant
- Grant Award for 2013 = # Days 2013 × Daily Grant Award
### Summary of Research Support, 2013

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<td>Schweikert, E.A.</td>
<td>Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities: Enhancing Amphiphilic Heterogeneities and Dynamic Performance while Improving Longevity</td>
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<td>System Development for Vehicular Natural Gas Storage Using Advanced Porous Materials</td>
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**Subtotal:** Department of Energy

- **Department of Health and Human Services**
  - Romo, D. | Bioactive Natural Product Total Synthesis via B-lactones | 7/1/2010 | 6/30/2013 | 11,615 | 0 | 11,615 |
  - Romo, D. | (REN) Synthetic/Mechanistic Studies of Bioactive Marine 334,812 | 18,945 | 353,758 |

**Subtotal:** Department of Health and Human Services

- Lawrence Livermore National Laboratory
  - Raushel, F.M. | Adaptation of Phosphotriesterase for Degradation of Tributyl Phosphate | 9/1/2013 | 8/31/2014 | 148,644 | 0 | 148,644 |

SEC. 7. RESEARCH ACTIVITY 339
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<td>Cremer, P.S.</td>
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<td>Wooley, K.L.</td>
<td>Adhesion-Based Nanotherapeutics in Urinary Tract Infection</td>
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**National Science Foundation**

| Batteas, J.D.      | ARRA Solvation Studies of Responsive Polymers in Solution and at Surfaces, (with: J. Batteas, D. Bergbreiter) | 9/1/2009  | 8/31/2013 | 22,229  | 8,745    | 30,974  |
| Batteas, J.D.      | Collaborative Research: Charge Transport in Confined Molecular Assemblies | 9/1/2012  | 8/31/2015 | 80,706  | 29,394   | 110,101 |
| Batteas, J.D.      | Collaborative Research: Conduction in Confined Molecular Assemblies   | 7/1/2009  | 6/30/2013 | 32,332  | 10,880   | 43,212  |
| Batteas, J.D.      | (REN) Probing the Role of Surface Defects and Disorder on the Tribology of Nanoscopic Contacts | 9/1/2011  | 8/31/2014 | 75,824  | 27,349   | 103,172 |
| Bergbreiter, D.E.  | Biphasic Catalysis using Soluble Polymer Supports                      | 6/15/2010 | 8/31/2014 | 90,485  | 9,190    | 99,675  |

SEC. 7. RESEARCH ACTIVITY 341
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<td>Bluemel, J.F.</td>
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<td>Bluemel, J.F.</td>
<td>Rigid and Flexible Linker Systems for Superior Immobilized Catalysts</td>
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<td>Darenbourg, M.Y.</td>
<td>Biomimetics of the [FeFe]-H2ase Enzyme Active Site (EAS)</td>
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<td>Chemical, Electrochemical and Physical Properties of Metallosupramolecular Architectures with Tetrazine Based Ligands Including Investigations of Anion-pi Interactions</td>
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<td>ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace</td>
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* Subtotal: National Science Foundation

3,329,961 630,911 3,960,871

* Subtotal: Federal Agencies

9,378,243 1,276,612 10,654,855

Industrial/Corporate Agencies

* APPEAL Consortium

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<td>Darenbourg, D.J.</td>
<td>Detection and Reaction Dynamics of Intermediates in Ruthenium Catalyzed Process</td>
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<td>A Theoretical Investigation of Olefin Purification via Bidentate Metal Complexes</td>
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**Subtotal: Qatar National Research Fund**  
294,955  37,849  332,804

**Subtotal: International Agencies**  
294,955  37,849  332,804

**Other Government**

- Entegris, Inc.

**SEC. 7.** RESEARCH ACTIVITY 345
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Private/Non-Profit Agencies

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<td>Fluorescent Probes for Interrogating Fe-S Cluster Transfer Chemistry</td>
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<td>Barondeau, D.P.</td>
<td>Structure and Chemistry of DNA Repair Enzyme Spore Photoproduct Lyase</td>
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<td>Burgess, K.</td>
<td>Hydrogenations of Stereochemical Complex Substrates: The End of a Messy Divorce and the Beginning of a New Romance</td>
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<td>Metal Phosphonates as Crystal Engineered Solids and Platforms for Drug Delivery</td>
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SEC. 7. RESEARCH ACTIVITY 347
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<td>Darensbourg, D.J.</td>
<td>Design and Reactivity Studies of Metal Catalysts for the Production of Polycarbonates from Novel Oxiranes and Carbon Dioxide</td>
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<td>Darensbourg, M.Y.</td>
<td>Synthetic Analogues and Reactivity Studies of Iron, Nickel, and Zinc Biomimetic Complexes Containing Histidine, Cysteine, and Nitric Oxide as Ligands</td>
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<td>Laane, J.</td>
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<td>Lindahl, P.A.</td>
<td>Biophysical Probes of Iron Metabolism in Yeast Vacuoles</td>
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<td>Lucchese, R.R.</td>
<td>Reaction Dynamics Probed by Molecular-Frame Photoionization</td>
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348  2013 CHEMISTRY ANNUAL REPORT
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<td>Watanabe, C.M.</td>
<td>Streptomyces Sahachiroi: A Rich Treasure Trove of Unique Biosynthetic Reactions</td>
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* **Subtotal: The Robert A. Welch Foundation**  
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* **Subtotal: Private/Non-Profit Agencies**  
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**State Agencies**

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* **Subtotal: Phluorescent Technology, Inc.**  
  3,773  0  3,773

SEC. 7. RESEARCH ACTIVITY 349
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<td>Hilty, C.B. Ultrafast Multidimensional NMR on Hyperpolarized Peptides and Proteins</td>
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<td><strong>Barondeau, D.P.</strong></td>
<td>Structure and Mechanism of the Human Fe-S Cluster Assembly Complex</td>
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<td>Structure and Chemistry of DNA Repair Enzyme Spore Photoproduct Lyase</td>
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| National Science Foundation             | Lewis Acidity of Organo-Antimony Compounds                           | 6/1/2013    | 5/31/2016   | 85,524 | 0        | 85,524  |
| American Chemical Society               | Associate Editorial Office for Organometallics                       | 12/1/2010   | 12/31/2013  | 2,101  | 0        | 2,101   |
| The Robert A. Welch Foundation          | Cationic Gold-Antimony Complexes-Lewis Acidic and Catalytic Properties | 6/1/1999    | 5/31/2013   | 21,563 | 0        | 21,563  |

**Subtotal Gabbai, F.P.**  130,994  8,295  139,289

| Gaede, H.C.                            |                                                                       |             |             |        |          |        |

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**RESEARCH ACTIVITY**

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| National Institute of General Medical Sciences | β-Lactones: Bioactive Targets and Vehicles for Synthesis          | 9/30/2009   | 6/30/2013   | 56,037     | 21,012   | 77,050  |
| National Science Foundation (REN)     | Novel Asymmetric Routes to 2-Oxetanones and Their Application        | 10/1/2011   | 9/30/2014   | 113,227    | 28,439   | 141,667 |
| The Robert A. Welch Foundation        | Novel Strategies for Bioactive Natural Product Synthesis via B- Lactone Intermediates and New Methodology for Asymmetric Alkylations | 6/1/2012    | 5/31/2014   | 80,110     | 0         | 80,110  |
| * Subtotal Rome, D.                    |                                                                       |             |             | 595,802    | 68,397   | 664,199 |

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<td>Rational Design of Chiral Bipyridine N-Oxides for the Catalytic Propargylation of Aromatic Aldehydes</td>
<td>9/1/2013</td>
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<td>American Chemical Society</td>
<td>Intermolecular Non-Covalent Interactions in (\pi)-Conjugated Heterocyclic Oligomers</td>
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<td>The Robert A. Welch Foundation</td>
<td>Non-Covalent Pi-Stacking Interactions in Organocatalysis</td>
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<td>Students' Attempts at Understanding the Unobservable: A Multi-Method Approach to Visualization Analysis and Design</td>
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<td>8/31/2013</td>
<td>4,212</td>
<td>482</td>
<td>4,694</td>
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<td>* Subtotal Williamson, V.M.</td>
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<td>(REN) The Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities</td>
<td>2/1/2010</td>
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<td>1,296</td>
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<td>10/31/2014</td>
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<td>National Institutes of Health</td>
<td>Adhesion-Based Nanothersapeutics in Urinary Tract Infection</td>
<td>8/1/2010</td>
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<td>National Institutes of Health</td>
<td>Integrated Nanosystems for Diagnosis and Therapy, (with: J. Sacchettini, K. Wooley)</td>
<td>8/20/2013</td>
<td>8/19/2014</td>
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SEC. 7. RESEARCH ACTIVITY 363
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<th>Granting Agency</th>
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<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<td>8/19/2013</td>
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<td>tiutes of Health</td>
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<td>6/30/2014</td>
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<td>National Science</td>
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<td>8/15/2011</td>
<td>7/31/2015</td>
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<td>7/31/2014</td>
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<td>Dow Electronic</td>
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<td>6/21/2013</td>
<td>6/20/2014</td>
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<td>Materials</td>
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<tr>
<td>National Science</td>
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<td>9/1/2012</td>
<td>8/31/2017</td>
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<td>Welch Foundation</td>
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<tr>
<td>Department of</td>
<td>(REN) Cyclotron-Based Nuclear</td>
<td>1/1/2011</td>
<td>12/31/2013</td>
<td>363,243</td>
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<td>Energy</td>
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* Subtotal Wooley, K.L. 940,335 112,964 1,053,299

* Yang, J.  
National Science Foundation  Synthesis of Zoanthamine Alkaloids by Cascade Reactions  9/1/2012 8/31/2017 95,000 0 95,000

* Subtotal Yang, J. 148,425 0 148,425

* Yeager, D.L.  
The Robert A. Welch Foundation  Developments and Studies Using Several Complex Scaled Multiconfigurational Methods for Electron Atom/Molecule Resonances  6/1/2012 5/31/2014 60,082 0 60,082

* Subtotal Yeager, D.L. 60,082 0 60,082

* Yennello, S.J.  

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<table>
<thead>
<tr>
<th>Granting Agency</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>National Science Foundation</td>
<td>ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace</td>
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<td>9/30/2015</td>
<td>489,602</td>
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<td>National Science Foundation</td>
<td>Professional Skills Development Workshops for Women in Physics</td>
<td>1/24/2011</td>
<td>1/23/2014</td>
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<td>99,000</td>
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<td>National Science Foundation</td>
<td>(REN) REU Site: Nuclear and Particle Science at Texas A&amp;M University</td>
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<td>REU Site: Nuclear Science at Texas A&amp;M University</td>
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<td>2/28/2017</td>
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- **Subtotal Yennello, S.J.**
  | 1,278,004 | 246,056 | 1,524,060 |

- **Zhang, R.**
  | 45,003    | 0        | 45,003    |

- **Subtotal Zhang, R.**
  | 45,003    | 0        | 45,003    |

- **Zhou, H.**
  | 64,437    | 0        | 64,437    |

- **Subtotal Zhou, H.**
  | 1,629,161 | 15,600  | 1,644,960 |

- **Total: All Faculty**
  | 13,187,142 | 1,359,969 | 14,547,111 |

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**SEC. 7.** RESEARCH ACTIVITY

365
Any information reported or learned after 05/19/2014, may not be included due to report deadlines. Please forgive any errors, and continue to report them, so that we might make corrections to maintain the accuracy of our long-term reports.
1. Foreword from the Department Head

The faculty as a whole continues to be exceptionally successful in attracting outside funding. About 70% of our tenure/tenure track faculty have external support, mostly from federal agencies. Several Academic Professional Track faculty also have substantial external support. All in all, external support totaled about eight million dollars. Faculty awards and distinctions include a Distinguished University Teaching Award from the Texas Section of the Mathematical Association of America for Harold Boas, an NSF CAREER award for Andrea Bonito, the Marin Drinov Medal of the Bulgarian Academy of Sciences for Raytcho Lazarov, a CBMS Leturership for Alex Poltoratski, and an ISACC Distinguished Paper Award for Maurice Rojas. Local awards include an AFS Distinguished Achievement Award in Teaching, college level, for Oksana Shatalov, a Women’s Faculty Network Outstanding Mentoring Award for Sue Geller and the John E. Trott Jr. Award in Student Recruiting from the College of Education and Human Resources Development for Jenn Whitfield.

In fall 2013 the department welcomed Associate Professor Gregory Pearlstein, Assistant Professor Zhizhang Xie, Senior Lecturer Marcia Drost, and Lecturers Rashi Aurora and Rosanna Pearlstein, as well as nine Visiting Assistant Professors (post-docs). Faculty totals were 77 tenure/tenure track and 68 either Academic Professional Track or Visiting.

During 2013, the Department has taught over 80,000 credit hours. As always, the bulk of these come from our service teaching responsibilities. Dialogue with client disciplines continues, in particular in light of Engineering’s 25x25 initiative. Sufficient resources for accommodating the resulting growth in our Engineering Mathematics classes will continue to be a crucial issue. As for our own majors, in 2013 we graduated 12 Ph.D.s, 28 MS, and 101 BS/BAs. Many among our undergraduate students take advantage of research opportunities and summer programs either here or at other universities. Our graduate students saw the inauguration of a Texas A&M student chapter of the American Mathematical Society.

As has become the norm now, the Department ran NSF funded outreach programs: Research Experiences for Undergraduates (REU) and Undergraduate Research Experiences in Biological and Mathematical Sciences (UBM). Our annual High School Math Contest continues to bring to campus more and more contestants, teachers, and parents from across the state. The Department also ran AP Calculus and Pre-AP High School Mathematics Institutes for teachers.

Perhaps the most exciting development for our Academic Professional Track faculty is the use of instructional titles which the department began in fall 2013. For those with a Ph.D in mathematics or a closely related subject, the full instructional track, up to Instructional Professor, will be available. An initial cadre of seven Instructional Assistant Professors was installed starting with the fall semester.

Our Department is a vibrant and stimulating place to work in. I thank everybody, faculty, staff, and students, who make it so.
2. Departmental Statistics

This section contains information, clarified by each department and gathered from the following sources:

I. Personnel

Tenure-Track Faculty
- Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyList_FINAL.

Non-Tenure-Track Faculty
- Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyListNonTTF_FINAL.

Postdoctoral Fellows
- Provided by the Department

Graduate Student/Undergraduate Majors
- Office of Institutional Studies and Planning (OISP). (Fall 2012, Fall 2013) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff
- Provided by the Department

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours
- SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2012, Fall 2013) SCH Summaries by College for [Semester] [Year].

PhD Degrees/Masters Degrees
- Queried from COGNOS and the College of Science Dean Database Degrees_Grad.

Undergraduate Degrees
- Queried from COGNOS and the College of Science Dean Database Degrees_Undergrad.

III. Research Activities

Research Publications
- Queried from Web of Science® and compiled from the College of Science Dean Database Publications_COUNT.

Research Presentations
- As reported by faculty and compiled from the College of Science Dean Database Presentations_COUNT.

Federal/State/University/Private/Industrial/International/Other Government
- Gathered from research proposals, research award notices, as reported by faculty, compiled from the College of Science Dean Database, Sec. 7.1 of following department annual report.
### 2.1 Statistical Abstract

#### I. Personnel

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<thead>
<tr>
<th>Category</th>
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<td>Professor</td>
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<td>Assistant Professor</td>
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<td>Associate Professor</td>
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<td>Distinguished Professor</td>
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<td>b. Non-Tenure-Track Faculty</td>
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<td>Visiting Professor</td>
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<td>Visiting Assistant Professor</td>
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<td>Instructional Assistant Professor</td>
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<td>d. Graduate Majors</td>
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#### II. Instructional Activities

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<td>e. Undergraduate Degrees</td>
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#### III. Research Activities

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<tr>
<td>b. Research Presentations</td>
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<td>c. Federal</td>
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<td>e. Private/Non-Profit</td>
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<td>h. Other Govt</td>
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3. Honors & Awards, 2013

By Faculty

▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2013.

By Students

▷ This section contains all honors and awards, as reported by the department, during the calendar year 2013.
### 3.1 Honors & Awards Received by Faculty, 2013

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<th>Name</th>
<th>Award</th>
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<td>H. Boas</td>
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<td>A. Bonito</td>
<td>Faculty Early Career Development Award, National Science Foundation</td>
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<td>G. Chen</td>
<td>Research Team Excellence Award, Texas A&amp;M University-Qatar</td>
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<td>R. Douglas</td>
<td>Fellow, American Mathematical Society</td>
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<td>Y. Efendiev</td>
<td>InterPore Award, InterPore Rosette</td>
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<td>S. Fulling</td>
<td>Outstanding Teaching Award, Department of Mathematics</td>
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<td>J. Kahlig</td>
<td>Outstanding Teaching Award, Department of Mathematics</td>
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<td>R. Lazarov</td>
<td>Marin Drinov Medal, Bulgarian Academy of Sciences</td>
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<td>J. Linhart</td>
<td>Named to Top 25 Women Faculty/Educators in Texas, Online Schools Texas</td>
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<td>H. Ramsey</td>
<td>Outstanding Service Award, Department of Mathematics</td>
</tr>
<tr>
<td>J. Rojas</td>
<td>Distinguished Paper Award, International Symposium on Symbolic and Algebraic Computation</td>
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<tr>
<td>V. Schielack</td>
<td>Member, Chancellor’s Academy of Teacher Educators</td>
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<tr>
<td>O. Shatalov</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
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<tr>
<td>Z. Sunik</td>
<td>Outstanding Service Award, Department of Mathematics</td>
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<tr>
<td>J. Whitfield</td>
<td>John E. Trott, Jr. Award in Student Recruiting, College of Education and Human Development</td>
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</tbody>
</table>
3.2 Honors & Awards Received by Students, 2013

Graduate

▷ Dean’s Scholar Awards

David Amos
Nathan Bush
Justin Cantu
Austin Clark
Daniel Creamer
Mahmood Ettehad
Joseph Gibson
Nathan Green
Paul Gustafson
Philip Hoskins
Kolton Keith
Andrew Kimball
Harold King
Lexander Lapanowski
Chak Shing Lee
Wenyu Lei
Yuchen Lei
Wang Tat Leung
Bowen Li
Sangin Mah
Wonhee Na
Ata Pir
Sean Plummer
Michael Rugh
Yun Shi
Krzysztof Swiecicki
Geng Tian
Xuemin Wang
Yating Wang
Robert Williams
Shuai Ye
Li Ying
Guchao Zeng
Zhidong Zhang

▷ Ethel Ashworth-Tsutsui Memorial Award for Research

Van Nguyen

▷ Graduate Diversity Fellowship

Lauren Grimley

▷ Graduate Merit Fellowship

Jennifer Anderson
Alexandra Gendreau
Andrew Swift

- **Houston A&M Mother’s Club Outstanding TA Award**
  - Joseph Noles
  - Spencer Patty
  - Andrew Penland

- **Koss Endowed Fellowship in Mathematics**
  - Hao Nguyen

- **L.F. Guseman Prize in Mathematics**
  - Van Nguyen
  - Detchat Samart

- **Lechner Fellowship**
  - Laura Booton
  - Amanda Hoisington
  - Katie Switzer
  - Rebecca Whitehead

- **LSAMP Fellowship**
  - Lauren Grimley

- **NSF Fellowship**
  - Jennifer Bryson

- **Pearcy Endowed Fellowship**
  - March Boedihardjo

**Undergraduate**

- **Best in Class Award for Math 409**
  - Matthew Barry
  - Kristi Board

- **Best in Class Award for Math 409H**
  - Katherine Davis
  - Marc Lewenthal

- **Best in Class Award for Math 411**
  - Michael Donohue
  - Brian Knapp
  - Jhoseline Vasquez
  - Colin Whisler
  - Bruce Zheng

- **Best in Class Award for Math 415/146**
  - Ernesto Calleros

- **Best in Class Award for Math 425**
  - Ryan Thompson
Best in Class Award for Math 446/447
Paul Gustafson
Alex Waldrop

Best in Class Award for Math 446/447H
Calvin Smith

Best in Class Award for Math 467
Mackenzie Baker
Max Easton
Sarah Kusak

Bruce Treybig Scholarship
Hannah Frailey
Kevin Kolker
Jules Meinscher
Aaron Moore
Danielle Shick

Elizabeth A. Lepley Scholarship
William Arnold

G. Alan Cannon Scholarship
Shannon Banner
Amber Forness
Barbara Smith

Jack and Nancy Matz Scholarship
Robert Bordovsky
Matthew Hohertz
Katherine Quigley
Kyle Williams

Koss/McGee/Hillman Scholarship
Kyle Eaton
Sarah Ivester
Zhentao Tong
Katherine Turner

Margaret Mount Moore Endowed Scholarship
Sarah Ivester

Mary and Robert Walker Scholarship
William Linz

New Phi Beta Kappa Members
Tracy Aguilar

New Pi Mu Epsilon Member
Taylor Arnold
Kelsey Bass
Kristi Board
Amy Brackney
Rachael Bragg
Robert Carpenter
Kenyon Cavender
Kamaryn Cavenee
Iris Chang
Fernando Chavarria
Shi Jun Dai
Lalit Datta
Katherine Davis
James DeVinney
Sami Farooki
Connor Fields
Luis Flores
Hannah Frailey
Elizabeth Grant
Erin Harper
Chelsea Hawryluk
Bridget Hendricks
Adrian Heredia
Charles Hills
Stephen Keehan
Sarah Kusak
Eleanor LaVigne
Fengyi Li
Brett Light
William Linz
Jose Martinez
Robert Morgan, Jr.
Lindsey Redman
Rebekah Rose
Brooke Sattler
Danielle Shick
Barbara Smith
Allyson Souris
Kyle Stanley
Jhoseline Vasquez
Chad Watson
Gou Xin Yi
Bruce Zheng

▷ Towers Watson Actuarial Scholarship

William Byk
Margaret Carlile
Dingkun Chen
Philip Dart
Michael Donohue
Sami Farooki
Justin Fletcher
Adam Frese
Matt Hohertz
Kori Jackson
Michelle Jacobs
Baron James
Timothy Killalea
Logan Lantrip
Matt Lassiter
David LeBeuf
Gyuhyung Lee
Deanna McKercher
Tianyi Miao
Courtney Morris
Alicia Nelson
Timothy Opheim
Eric Pudlowski
Kenneth Reed
Andrew Ryan
Keith Sutton
Eric Trandai
Christina Wright

▷ Walter E. Koss Endowed Scholarship
  Kenneth Reed

▷ Walter E. Koss/E.C. Klipple Endowed Scholarship
  Ernesto Calleros
  Katherine Davis
4. Students, 2013

This section contains all degrees awarded, as reported by the department, during the calendar year 2013.
4.1 Graduate Degrees Awarded, 2013

Fall

▷ M.S.

Wafa S M Z Alotaibi

Katherine Diane Bowe

Suzanne Marie Fluke

Kristan Rae Hemingway

Neil Edward Kalinowski

Gaurav Sharma

Yu Shi

Eric G Thompson

Advisor(s): M. Papanikolas
Advisor(s): S. Geller
Advisor(s): S. Geller
Advisor(s): M. Pilant
Advisor(s): G. Allen
Advisor(s): P. Howard
Advisor(s): M. Pilant
Advisor(s): M. Pilant

▷ Ph.D.

Aditi Ghosh

Sungwihan Moon

Fast Algorithms for Biharmonic Problems and Applications to Fluid Dynamics

Properties of Some Integral Transforms Arising in Tomography

Advisor(s): P. Daripa
Advisor(s): P. Kuchment

Spring

▷ M.S.

William L. Bolton

Grant Thomas Clayton

Scott Copperman

Stephen Michael Dauphin

Eduardo Drucker

Advisor(s): J. Pitts
Advisor(s): P. Howard
Advisor(s): S. Geller
Advisor(s): J. Pitts
Advisor(s): J. Pitts
Eric William Kylberg  Advisor(s): S. Geller
Mayank Manjrekar  Advisor(s): D. Panchenko
Janell Christine Martin  Advisor(s): G. Allen
Mark Thomas Mckinnon  Advisor(s): M. Rahe
Shriram Srinivasan  Study of Shear-Driven Unsteady Flows of a Fluid with a Pressure Dependent Viscosity  Advisor(s): N. Sivakumar
Habiballah Talavatifard  Application of L1 Minimization Technique to Image Super-Resolution and Surface Reconstruction  Advisor(s): J. Guermond
Gail Faith Thorne  Advisor(s): S. Geller
Shuang Yin  Advisor(s): T. Schlumprecht

Summer

▷ M.S.
David Lee Fleeger  Advisor(s): J. Pitts
Ryan L. Hotovy  Advisor(s): M. Anshelevich
Saitulaa Na Ranong  Advisor(s): P. Lima-Filho
Julie Marie Sarzynski  Advisor(s): J. Pitts
Anita Marie Schneider  Advisor(s): G. Allen
Deborah Susanna Smith  Advisor(s): J. Pitts
Hyun Ho Song  Advisor(s): J. Pasciak

▷ Ph.D.
Mustafa Gokhan Benli  Presentations and Structural Properties of Self-Similar Groups and Groups Without Free Sub-Semigroups  Advisor(s): R. Grigorchuk

SEC. 4.1 GRADUATE DEGREES 383
Paul Joseph Bruillard  
On the Classification of Low-Rank Braided Fusion Categories  
Advisor(s): E. Rowell

Nickolas Jason Hein  
Reality and Computation in Schubert Calculus  
Advisor(s): D. Bell-Pedersen

Hao Thanh Nguyen  
Greedy Strategies for Convex Minimization  
Advisor(s): G. Petrova

Yang Qi  
Geometry of Feasible Spaces of Tensors  
Advisor(s): J. Landsberg

Korben Allen Rusek  
A-Discriminant Varieties and Amoebae  
Advisor(s): J. Rojas

Travis Brandon Thompson  
Results Towards a Scalable Multiphase Navier-Stokes Solver for High Reynolds Number Flows  
Advisor(s): J. Guermond

Jennifer Blair Webster  
Cost-Sensitive Classification Methods for the Detection of Smuggled Nuclear Material in Cargo Containers  
Advisor(s): W. Bangerth, Jean C. Ragusa

Yuping Yang  
Central Limit Theorems for Empirical Processes Based on Stochastic Processes  
Advisor(s): J. Zinn

Lihua Zuo  
Inverse Problems for Fractional Diffusion Equations  
Advisor(s): W. Rundell
4.2 Undergraduate Degrees Awarded, 2013

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<thead>
<tr>
<th>Fall</th>
<th>B.A.</th>
<th>B.S.</th>
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<tr>
<td>Elisabeth Caitlin Armstrong</td>
<td>Garreth Charles Casper</td>
<td>Joseph Frederick Fagyas</td>
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<td>Adam Paul Frese</td>
<td>Ryan David Hocke</td>
<td>Alexandra A. Landis</td>
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<td>Shamah Muralidharan</td>
<td>Perla Rocio Perez</td>
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<td>Matthew Stephen Beggs</td>
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<td>Jordan Ross Byrd</td>
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<td>Margaret Ruth Carlile</td>
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<td>Meghan Elizabeth Lindinger</td>
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<td>Courtney Lauren Morris</td>
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<td>Ruben Manuel Amaya</td>
<td>Austin Aleksandar Bell</td>
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<td>William Andrew Casey</td>
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<td>Joshua Wade Crawford</td>
<td>Alyssa Marie Davis</td>
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<td>Nolan Joel Abram Dement</td>
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<td>Jacinda Jeniece Eason</td>
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<td>Joshua D. Hunter</td>
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<td>Emily Mae Keller</td>
<td>Robyn Ashley Lake</td>
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<td>Eleanor Darby Lavigne</td>
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</table>

SEC. 4.2 UNDERGRADUATE DEGREES 385
Laura Michelle Patterson  
Brittanie Michelle Polasek  
Sergio Eduardo Preciado  
Sarah M. Reid  
Aylor E. Rix  
Rachel Elizabeth Robeson  
Amanda Leigh Roehling  
Elizabeth Kienzle Stewart  
Jennifer Vy Than  
Taylor McCall Walling  
Lacey Allyn Welch  
Emily Olsen Young  

B.S.  

Zachary Ian Bartholomew  
Deepak Bastola  
Elizabeth Marie Bernard  
Nicholas Scott Berry  
Christopher Ryan Bloomberg  
Jason Thomas Blunk  
Jennifer Anne Bryson  
Laura Jin Caffisch  
Justin Colt Cantu  
Robert Aaron Carpenter  
Jason Rainer Coffman  
Devin D. Ferner  
Landon Louis Forshage  
Purvaja Ganesan  
Paul Prem Gustafson  
Bridget Kathleen Hendricks  
Michelle Catherine Jacobs  
Katharine Elizabeth Jones  
Jennifer Kay Kauffman  
Joshua Tyler Keneda  
Adam Christopher Kley  
Kyle Joseph Krakoski  
Bryan Le  
Nicholas Q. Mai  
Tianyi Miao  
Luke Anthony Mulcahey  
Leslie Kathryn Nickel  
Tara A. Obeid  
Ian Marcus Darrigrand Paige  
Sameer Bhupal Patwardhan  
Prachi Rajesh Pendse  
Kelly Elizabeth Robinson  
Michael Sze-Hon Rugh  
Rebecca Jean Rund  
Todd Walker Schrader
Samuel Alexander Shidler
Tyler Anthony Smith
Justin Bharat Thakkar
Alexander Anthony Waldrop
Feng Wang
Katherine Elizabeth Willis
Ivan Hwa Wu

Summer

▷ B.S.

Jesse Albert Garcia
Michael William Gioffredi
Scott Tyler Henderson
Abbey Elizabeth Janssen
Alex Michael Jonischkies
Ashley Hannah Majzun
Kelly Ann Stoutz

SEC. 4.2 UNDERGRADUATE DEGREES
5. Colloquium and Seminar Speakers, 2013

**Algebra and Combinatorics**

- **2/1/2013** Christian Ikenmeyer  
  *Texas A&M University*  
  Small Littlewood-Richardson Coefficients

- **2/8/2013** Ada Boralevi  
  *Scuola Internazionale Superiore di Studi Avanzati*  
  Spaces of Matrices of Constant Rank and Instanton Bundles

- **2/15/2013** Catherine Yan  
  *Texas A&M University*  
  Positive and Negative Chains in Charged Moon Polyominoes

- **2/22/2013** Paul Bruillard  
  *Texas A&M University*  
  Arithmetic Properties of Modular Categories

- **3/22/2013** Svetlana Poznanovik  
  *Clemson University*  
  Cycles and Sorting Index for Permutations and Matchings

- **4/15/2013** Brendon McKay  
  *Australia National University*  
  The Practice of Graph Isomorphism

- **4/19/2013** Cesar Galindo  
  *Universidad de los Andes*  
  De-equivariantization of Hopf Algebras

- **4/26/2013** Luis Garcia-Puente  
  *Sam Houston State University*  
  Algebraic and Combinatorial Structure of Sandpile Monoids on Directed Graphs

- **9/13/2013** Jacob White  
  *Texas A&M University*  
  Rings in Combinatorial Species, and Characteristic Polynomials

- **9/27/2013** Liang Chang  
  *Texas A&M University*  
  Kitaev’s Quantum Double Models

- **10/4/2013** Sarah Witherspoon  
  *Texas A&M University*  
  Poincare-Birkhoff-Witt Theorems

- **10/18/2013** Van Nguyen  
  *Texas A&M University*  
  The Negative Side of Cohomology for Symmetric Hopf Algebras

- **10/25/2013** Cris Negron  
  *University of Washington*  
  Hochschild Cohomology of Filtered Koszul Algebras
11/1/2013  Laura Matusevich  
Texas A&M University  
Transformations of A-hypergeometric Functions

11/8/2013  Justin Keller  
University of Colorado, Boulder  
Group Actions and Supercharacter Theories

11/15/2013  Franklin Kenter  
Rice University  
Spectral Conditions for Coloring Hypergraphs
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
<th>Topic</th>
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<tr>
<td>9/2/2013</td>
<td><strong>Frank Sottile</strong></td>
<td><em>Texas A&amp;M University</em></td>
<td>Galois Groups of Schubert Problems</td>
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<td>9/9/2013</td>
<td><strong>J. Maurice Rojas</strong></td>
<td><em>Texas A&amp;M University</em></td>
<td>Separating Complexity Classes by Counting Roots and Norms</td>
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<td>9/16/2013</td>
<td><strong>Eric Hanson</strong></td>
<td><em>Colorado State University</em></td>
<td>Numerical Fiber Products for Analyzing Parameter Spaces of Polynomial Systems</td>
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<td>9/23/2013</td>
<td><strong>Zekiye Sahin</strong></td>
<td><em>Texas A&amp;M University</em></td>
<td>Primary Components of Codimension Two Lattice Basis Ideals</td>
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<tr>
<td>9/30/2013</td>
<td><strong>Laura Matusevich</strong></td>
<td><em>Texas A&amp;M University</em></td>
<td>Invariants for Differential Equations</td>
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<td>10/14/2013</td>
<td><strong>Greg Blekherman</strong></td>
<td><em>Georgia Tech</em></td>
<td>Real Symmetric Tensor Decompositions</td>
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<td>10/21/2013</td>
<td><strong>Omar Ortiz</strong></td>
<td><em>University of Western Ontario</em></td>
<td>GKM Theory for p-Compact Flag Varieties</td>
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<tr>
<td>11/4/2013</td>
<td><strong>Gregory Pearlstein</strong></td>
<td><em>Texas A&amp;M University</em></td>
<td>Boundary Components of Mumford-Tate Domains</td>
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<td>11/11/2013</td>
<td><strong>Travis Schedler</strong></td>
<td><em>University of Texas</em></td>
<td>The Springer Correspondence and Parabolic Versions</td>
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<td>11/18/2013</td>
<td><strong>Joseph Landsberg</strong></td>
<td><em>Texas A&amp;M University</em></td>
<td>Geometry and Matrix Multiplication</td>
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<td><strong>J. Maurice Rojas</strong></td>
<td><em>Texas A&amp;M University</em></td>
<td>Descartes Rule, and Faster Root Detection, over Finite Fields</td>
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<td>12/2/2013</td>
<td><strong>Patrick Brosnan</strong></td>
<td><em>University of Maryland</em></td>
<td>Asymptotics of Archimedean Height Functions</td>
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<tr>
<td>Date</td>
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<td>3/21/2013</td>
<td>Mishko Mitkovski</td>
<td>Clemson University</td>
<td>Boundedness and Compactness of Operators on Bergman-type Spaces</td>
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<td>4/4/2013</td>
<td>Alim Sukhtayev</td>
<td>Texas A&amp;M University</td>
<td>On Instability of Excited States</td>
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<td>11/7/2013</td>
<td>Ruomeng Lan</td>
<td>Texas A&amp;M University</td>
<td>The Maximum Principle</td>
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<td>11/12/2013</td>
<td>Ruomeng Lan</td>
<td>Texas A&amp;M University</td>
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<td>11/21/2013</td>
<td>Andrew Comech</td>
<td>Texas A&amp;M University</td>
<td>The Paper “On the Possible Rate of Decay at Infinity”</td>
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<td>1/30/2013</td>
<td>Jean Linhart</td>
<td>Texas A&amp;M University</td>
<td>How to Find a Job in Private Industry with a Math Degree</td>
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<td>2/13/2013</td>
<td>Daniel Roelke</td>
<td>Texas A&amp;M University</td>
<td>Phytoplankton Overyielding in Fluctuating Environments and the Paradox of Complementarity</td>
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<td>2/13/2013</td>
<td>Frances Withrow</td>
<td>Texas A&amp;M University</td>
<td>Potential Changes in Spectral Quality of Light in the Red Sea with Shifts in Phytoplankton Biomass and Composition</td>
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<td>Rodrigo Velez</td>
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<td>The Price of Imperfect Competition for a Spanning Network</td>
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<td>Josef Sifuentes</td>
<td>Texas A&amp;M University</td>
<td>Why I Became a Mathematician - a Tale of Art, Heavy Metal, Eigenvalues and Bad Ass Muscle Cars</td>
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<td>Anna Zemlyanova</td>
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<td>The Brachistochrone, the Shortest Distance, the Largest area and other Extremum Problems</td>
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<td>Ergin Sezgin</td>
<td>Texas A&amp;M University</td>
<td>Strings, Branes and Extra Dimensions</td>
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<td>4/10/2013</td>
<td>Sue Geller</td>
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<td>Paulo Lima-Filho</td>
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<td>4/17/2013</td>
<td>Jonathan Rogers</td>
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<td>Closing the Loop on Uncertainty Propagation and Autonomous Systems Control</td>
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<td>4/25/2013</td>
<td>William Rundell</td>
<td>Texas A&amp;M University</td>
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Texas A&M University
Can You Hear the Density of a Vibrating String?

9/4/2013 Jean Linhart
Texas A&M University
The Mathematical Contest in Modeling

9/4/2013 Jay Walton
Texas A&M University
Introduction to Mathematical Biology and the APMS Biology Degree

9/19/2013 Nicole Gardner
Texas A&M University
Predictive Control Methods for Solar Water Heater Optimization; Climate Change in the Florida Everglades

9/19/2013 Daniel Miller
Texas A&M University
Predictive Control Methods for Solar Water Heater Optimization; Climate Change in the Florida Everglades

10/2/2013 Nicole Sharp
Texas A&M University
The Beauty of the Flow

10/9/2013 J. Maurice Rojas
Texas A&M University
Post-Quantum Cryptography

10/16/2013 Nancy Amato
Texas A&M University
Sampling-Based Motion Planning: From Intelligent CAD to Crowd Simulation to Protein Folding

10/30/2013 Zonera Javed
Texas A&M University
Spent Fuel Pool Configuration Software

10/30/2013 Nathan Laferney
Texas A&M University
Spent Fuel Pool Configuration Software

10/30/2013 Chad O’Hagan
Texas A&M University
Spent Fuel Pool Configuration Software

11/6/2013 Glenn Lahodny
Texas A&M University
Predicting Major Outbreaks of Environmentally-Transmitted Infectious Diseases

11/13/2013 Thomas Olszewski
Texas A&M University
The Permian Reef of West Texas: How Do Complex Ecological Communities Respond to Environmental Change?

11/20/2013 Ernesto Calleros
SEC. 5. COLLOQUIUM AND SEMINAR SPEAKERS
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<tr>
<td>2/1/2013</td>
<td>Przemyslaw Wojtaszczyk</td>
<td>Warsaw University</td>
<td>Conditional Quasi-greedy Bases</td>
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<td>2/8/2013</td>
<td>Gideon Schechtman</td>
<td>Weizmann Institute, Rehovot</td>
<td>Narrow and $l_2$-Strictly Singular Operators on $L_p$</td>
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<td>3/8/2013</td>
<td>Bunyamin Sari</td>
<td>University of North Texas</td>
<td>Spreading Sequences in Banach Spaces</td>
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<td>3/22/2013</td>
<td>Connie Liaw</td>
<td>Baylor University</td>
<td>Cyclic Vectors in Dirichlet-type Spaces</td>
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<td>4/5/2013</td>
<td>Florent Baudier</td>
<td>Texas A&amp;M University</td>
<td>On a Topological Obstruction to Small Distortion Embeddings into Spaces of Continuous Functions</td>
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<td>4/19/2013</td>
<td>Petros Balettas</td>
<td>Texas A&amp;M University</td>
<td>Distribution of the $\psi_2$-norm of Linear Functionals on Isotropic Convex Bodies</td>
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<td>Ryan Causey</td>
<td>Texas A&amp;M University</td>
<td>Applications of Szlenk Index</td>
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<td>9/13/2013</td>
<td>Florent Baudier</td>
<td>Texas A&amp;M University</td>
<td>Geometry of Layers of Cubes: Applications in Geometric Group Theory and Non-linear Geometry of Banach Spaces</td>
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<td>9/27/2013</td>
<td>Sofia Ortega-Castillo</td>
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<td>10/11/2013</td>
<td>Christos Saroglou</td>
<td>Texas A&amp;M University</td>
<td>Projection Bodies of Convex Bodies</td>
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<td>10/25/2013</td>
<td>Nikolaos Saroglou</td>
<td>Texas A&amp;M University</td>
<td>Improved Hölder and Reversed Hölder Inequalities for Correlated Gaussian Random Vectors</td>
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<td>March Boedihardjo</td>
<td>Texas A&amp;M University</td>
<td>Mean Ergodic Convergence</td>
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<td>11/22/2013</td>
<td>Keaton Hamm</td>
<td>Texas A&amp;M University</td>
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Approximation Rates in Scattered Interpolation
Center for Approximation Theory

4/5/2013 Christian Rieger
Institute for Numerical Simulation, University of Bonn
Series Kernels for Uncertainty Quantification

4/5/2013 Barbara Zwicknagl
Institute of Applied Mathematics, University of Bonn
Improved Exponential Convergence Rates by Oversampling near the Boundary
### First Year Graduate Student Seminar

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<tr>
<td>1/16/2013</td>
<td>Peter Howard</td>
<td>Texas A&amp;M University</td>
<td>Goals and Schedule for the FYGSS; Overview of Department Research in Algebraic Geometry</td>
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<td>3/20/2013</td>
<td>Peter Howard</td>
<td>Texas A&amp;M University</td>
<td>What Students Should be Doing Now to Prepare for the Job Market</td>
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<td>4/24/2013</td>
<td>Peter Howard</td>
<td>Texas A&amp;M University</td>
<td>Summer 2013 and the Years Ahead</td>
</tr>
<tr>
<td>8/28/2013</td>
<td>Peter Howard</td>
<td>Texas A&amp;M University</td>
<td>Goals of the FYGSS; Information on Applying for Fellowships; Calendar for the Semester</td>
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<td>9/11/2013</td>
<td>Tracy Weyand</td>
<td>Texas A&amp;M University</td>
<td>Grading and Help Session Assignments</td>
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<td>10/9/2013</td>
<td>Gregory Berkolaiko</td>
<td>Texas A&amp;M University</td>
<td>Department Research Groups: Mathematical Physics and PDE; Algebra and Combinatorics</td>
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<td>10/9/2013</td>
<td>Frank Sottile</td>
<td>Texas A&amp;M University</td>
<td>Department Research Groups: Mathematical Physics and PDE; Algebra and Combinatorics</td>
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<td>10/23/2013</td>
<td>David Kerr</td>
<td>Texas A&amp;M University</td>
<td>Department Research Groups: Groups and Dynamics</td>
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</tbody>
</table>

**SEC. 5.**   COLLOQUIUM AND SEMINAR SPEAKERS 399
Preparing for Spring 2014
Free Probability

2/4/2013  Ryan Hotovy
          Texas A&M University
          Stochastic Integration Against a Free Brownian Motion

2/11/2013 Ryan Hotovy
          Texas A&M University
          Stochastic Integration Against a Free Brownian Motion (continued)

2/18/2013 Ryan Hotovy
          Texas A&M University
          Stochastic Integration Against a Free Brownian Motion (continued)

2/25/2013 Michael Anshelevich
          Texas A&M University
          A Simple Proof of the Nualart-Peccati Criterion

3/18/2013 Minh Kha
          Texas A&M University
          Haagerup Inequality and Reduced Amalgamated Free Product of C*-Algebras

3/25/2013 Minh Kha
          Texas A&M University
          Haagerup Inequality and Reduced Amalgamated Free Product of C*-Algebras (continued)
<table>
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<tr>
<th>Date</th>
<th>Speaker</th>
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<tr>
<td>3/5/2013</td>
<td>John Boyd</td>
<td>University of Michigan</td>
<td>Extending Chebyshev Polynomial Technology to Bivariate Algebraic Geometry: Division, Resultants, Contours and Roots</td>
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<td>3/7/2013</td>
<td>John Boyd</td>
<td>University of Michigan</td>
<td>Hermite Function Interpolation on a Finite Interval and the Interrelationships of Polynomial and Radial Basis Functions</td>
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<td>4/16/2013</td>
<td>David Colton</td>
<td>University of Delaware</td>
<td>Scattering Theory for Beginners</td>
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<td>4/17/2013</td>
<td>David Colton</td>
<td>University of Delaware</td>
<td>Non-iterative Methods in Inverse Scattering Theory</td>
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<td>4/18/2013</td>
<td>David Colton</td>
<td>University of Delaware</td>
<td>Transmission Eigenvalues in Inverse Scattering</td>
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<td>4/22/2013</td>
<td>Shmuel Weinberger</td>
<td>University of Chicago</td>
<td>Logic and the Solution to Variational Problems</td>
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<tr>
<td>4/23/2013</td>
<td>Shmuel Weinberger</td>
<td>University of Chicago</td>
<td>Topological Rigidity</td>
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<td>4/24/2013</td>
<td>Shmuel Weinberger</td>
<td>University of Chicago</td>
<td>Cracks in Rigidity</td>
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<tr>
<td>5/1/2013</td>
<td>Assaf Naor</td>
<td>New York University</td>
<td>Metric Ramsey Problems and Approximate Distance Oracles</td>
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<tr>
<td>5/2/2013</td>
<td>Assaf Naor</td>
<td>New York University</td>
<td>Ultrametric Skeletons</td>
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<tr>
<td>9/2/2013</td>
<td>Persi Diaconis</td>
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Stanford University
The Simplest Math: An Introduction to Additive Combinatorics

9/3/2013  Persi Diaconis
Stanford University
Understanding “Things”

9/4/2013  Persi Diaconis
Stanford University
Bose in Boxes

10/8/2013  Mark Green
University of California, Los Angeles
Harmonic Representatives

10/9/2013  Mark Green
University of California, Los Angeles
Algebraic Cycles, Hodge Classes and some Commutative Algebra

10/10/2013  Mark Green
University of California, Los Angeles
Hodge Structures and Mumford-Tate Domains

10/14/2013  Andrei Agrachev
SISSA-ISAS, Italy
Back to Riemann: A Variational Approach to the Curvature, Part I

10/16/2013  Andrei Agrachev
SISSA-ISAS, Italy
Back to Riemann: A Variational Approach to the Curvature, Part II

10/17/2013  Andrei Agrachev
SISSA-ISAS, Italy
Back to Riemann: A Variational Approach to the Curvature, Part III
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<th>Date</th>
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<tr>
<td>1/18/2013</td>
<td>Federico Galetto</td>
<td>Northeastern University</td>
<td>Representations with Finitely many Orbits and Free Resolutions</td>
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<td>1/25/2013</td>
<td>Christian Ikenmeyer</td>
<td>Texas A&amp;M University</td>
<td>Explicit Lower Bounds via Geometric Complexity Theory</td>
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<td>2/8/2013</td>
<td>Ada Boralevi</td>
<td>SISSA International School for Advanced Studies</td>
<td>Spaces of Matrices of Constant Rank and Instanton Bundles</td>
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<td>2/14/2013</td>
<td>Joshua Grochow</td>
<td>University of Toronto</td>
<td>New Examples of Orbit Closures via Computational Complexity</td>
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<td>2/19/2013</td>
<td>Klim Efremenko</td>
<td>Institute for Advanced Study</td>
<td>From Irreducible Representations to Locally Decodable Codes</td>
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<td>3/1/2013</td>
<td>Shrawan Kumar</td>
<td>University of North Carolina</td>
<td>Positivity in T-equivariant K-theory of Flag Varieties Associated to Kac-Moody Groups</td>
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<td>3/8/2013</td>
<td>Kristian Ranestad</td>
<td>University of Oslo</td>
<td>Symmetric Tensors, Rank Versus Cactus Rank</td>
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<td>3/22/2013</td>
<td>Man-Wai Cheung</td>
<td>University of California, San Diego</td>
<td>Ricci Flow on Wallach Flag Varieties</td>
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<tr>
<td>3/26/2013</td>
<td>Ilya Kossovskiy</td>
<td>University of Western Ontario</td>
<td>Envelopes of Holomorphy and Holomorphic Rigidity for CR-Cubics</td>
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<td>4/12/2013</td>
<td>Ruben Mkrtchyan</td>
<td>Yerevan Physics Institute</td>
<td>On a Universality in Chern-Simons Theory and Lie Algebras</td>
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<td>4/26/2013</td>
<td>Jon Pitts</td>
<td>Texas A&amp;M University</td>
<td>Explicit Determination of Area Minimizing Surfaces with Arbitrary Boundaries</td>
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<td>8/14/2013</td>
<td>Joseph Landsberg</td>
<td>Texas A&amp;M University</td>
<td>New Open Questions in Geometric Complexity Theory</td>
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9/6/2013  Gregory Pearlstein  
*Texas A&M University*  
What is Hodge Theory and Why do I Love It?  

10/15/2013  Antonio Lerario  
*Purdue University*  
The Topology of Loop Spaces in Carnot Groups  

10/25/2013  Jenia Tevlev  
*University of Massachusetts Amherst*  
Flipping Surfaces  

11/1/2013  James Pascaleff  
*University of Austin*  
Symplectic Cohomology and Equivariant Lagrangian Submanifolds  

11/22/2013  Jon Pitts  
*Texas A&M University*  
Approximation of Two Dimensional, Absolutely Area Minimizing Hypersurfaces  

12/6/2013  Zhizhang Xie  
*Texas A&M University*  
Moduli Space of Positive Scalar Curvature Metrics
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<td>1/24/2013</td>
<td><strong>Graduate Student Organization</strong></td>
<td>Jacob White</td>
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<td><strong>Introduction to Hopf Algebras</strong></td>
<td>Texas A&amp;M University</td>
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<td>1/31/2013</td>
<td><strong>The Cluster Value Problem in Spaces of Continuous Functions</strong></td>
<td>Sofia Ortega-Castillo</td>
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<td><strong>Unitary Yang-Baxter Operators</strong></td>
<td>Texas A&amp;M University</td>
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<td>2/7/2013</td>
<td><strong>Can You Hear the Density of a Taut String</strong></td>
<td>Eric Rowell</td>
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<td><strong>Unitary Yang-Baxter Operators</strong></td>
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<td>2/7/2013</td>
<td><strong>Self-Similar Groups</strong></td>
<td>William Rundell</td>
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<td><strong>Can You Hear the Density of a Taut String</strong></td>
<td>Texas A&amp;M University</td>
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<td><strong>Introduction of Some Application Driven Problems and Fast Algorithms</strong></td>
<td>Prabir Daripa</td>
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<td>2/14/2013</td>
<td><strong>Self-Similar Groups</strong></td>
<td>Volodymyr Nekrashevych</td>
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<td><strong>Self-Similar Groups</strong></td>
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<td>2/21/2013</td>
<td><strong>Meromorphic Inner Functions on the Upper Half Plane</strong></td>
<td>Rishika Rupam</td>
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<td><strong>Ranking with Big Data - An Application to Bracketology</strong></td>
<td>Paul Bruillard</td>
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<td><strong>Algorithms for Primary Decomposition of Binomial Ideals</strong></td>
<td>Zekiye Sahin</td>
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<td><strong>Multiscale ((L_2, BV)) Decompositions and K-functional</strong></td>
<td>Xiaohui Wang</td>
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<td><strong>Multiscale ((L_2, BV)) Decompositions and K-functional</strong></td>
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<td>3/28/2013</td>
<td><strong>Non-negative Polynomials and Sums of Squares</strong></td>
<td>Kaitlyn Phillipson</td>
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<td>4/4/2013</td>
<td><strong>Introduction to Noncommutative Geometry and the Baum-Connes Conjecture</strong></td>
<td>Jianchao Wu</td>
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<td>4/11/2013</td>
<td><strong>Modeling Wedge Problem: Linearized Theory v/s Strain-Limiting</strong></td>
<td>Mallikarjunaiah Muddamallappa</td>
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<td><strong>Modeling Wedge Problem: Linearized Theory v/s Strain-Limiting</strong></td>
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<td><strong>Craig Gin</strong></td>
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Texas A&M University
An Introduction to Hydrodynamic Stability

4/25/2013 Aaron Goldsmith
Texas A&M University
Numbers Juggling

9/12/2013 Josef Sifuentes
Texas A&M University
Why I Became a Mathematician - A Tale of Art, Heavy Metal, Eigenvalues and Bad Ass Muscle Cars

9/19/2013 Andrea Bonito
Texas A&M University
The Critical Role Played by the Geometry in Numerical Simulations

9/19/2013 Frank Sottile
Texas A&M University
Numerical Analysis is the Future of Computation in Algebraic Geometry

9/26/2013 Michael Anshelevich
Texas A&M University
Polynomials and Random Matrices

9/26/2013 Andrew Comech
Texas A&M University
Stability of Solitary Waves, Spectra of Operators, and Complex Analysis

10/3/2013 Michael Causey
Texas A&M University
Frontiers of Banach Space Geometry

10/10/2013 Ngoc Do
Texas A&M University
“E” vs. “Y” or Quantum Graph Model of Graphyne Structures

10/24/2013 Joseph Gibson
Texas A&M University
Factorization Properties of Congruence Monoids

10/31/2013 Dilber Kocak
Texas A&M University
The Notion of Growth in Algebraic Structures

11/7/2013 Timothy Rainone
Texas A&M University
Paradoxical Decompositions and Infiniteness in $C^*$-algebras

11/14/2013 Adrián Barquero-Sanchez
Texas A&M University
Buzz Lightyear’s Galois Theory

11/21/2013 Adam Larios
Texas A&M University
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<tr>
<td>1/16/2013</td>
<td>Xin Li</td>
<td>Muenster University</td>
<td>Semigroup C*-Algebras Nuclearity and Amenability</td>
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<td>1/23/2013</td>
<td>Yurii Leonov</td>
<td>Ukrainian State Telecommunications Academy</td>
<td>Triangular Representations of Self-similar Groups</td>
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<td>2/6/2013</td>
<td>Yuri Bahturin</td>
<td>Memorial University of Newfoundland</td>
<td>Actions of Groups, with some Applications</td>
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<td>2/13/2013</td>
<td>Rostislav Grigorchuk</td>
<td>Texas A&amp;M University</td>
<td>On Random Groups of Intermediate Growth</td>
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<td>Yi-Jun Yao</td>
<td>Fudan University</td>
<td>Hopf Cyclic Cohomology, Hodge Theory, Proper Actions</td>
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<td>Tim Austin</td>
<td>Courant Institute</td>
<td>Partial Difference Equations over Compact Abelian Groups</td>
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<td>Zoran Sunic</td>
<td>Texas A&amp;M University</td>
<td>Free Subgroups and Translations</td>
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<td>Volodymyr Nekrashevych</td>
<td>Texas A&amp;M University</td>
<td>An Uncountable Family of 3-Generated Groups with Isomorphic Profinite Completions</td>
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<td>5/1/2013</td>
<td>Nikolay Romanovskiy</td>
<td>Sobolev Institute of Mathematics</td>
<td>Presentations for Rigid Solvable Groups</td>
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<td>7/17/2013</td>
<td>Alexey Teplinsky</td>
<td>Institute of Mathematics of the National Academy of Sciences of Ukraine</td>
<td>Time-reverse Symmetry in Renormalization of Linear-fractional Rotational Multiple Interval Exchange Transformations</td>
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<td>Volodymyr Nekrashevych</td>
<td>Texas A&amp;M University</td>
<td>Extensions of Amenable Groups by Recurrent Groupoids</td>
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<td>Sang Rae Lee</td>
<td>Texas A&amp;M University</td>
<td>Some Subgroups of Houghton’s Groups (I)</td>
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<td>Texas A&amp;M University</td>
<td>Finitely Presented Groups Associated with Expanding Maps</td>
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<td>Finite Embeddable Groups and Strongly Finitely Embeddable Groups</td>
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<td>Gilles Pisier</td>
<td>Texas A&amp;M University</td>
<td>Quantum Expanders and Growth of Operator Spaces</td>
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<td>Han Li</td>
<td>Yale University</td>
<td>Effective Discreteness of the 3 Dimensional Markov Spectrum</td>
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<td>David Kerr</td>
<td>Texas A&amp;M University</td>
<td>Borel Complexity and Automorphisms of Operator Algebras</td>
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<td>11/20/2013</td>
<td>Max Forester</td>
<td>University of Oklahoma</td>
<td>A Gap Theorem for Stable Commutator Length</td>
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<td>11/27/2013</td>
<td>Robin Tucker-Drob</td>
<td>Rutgers University</td>
<td>Shift-Minimal Groups, Fixed Price 1, and the Unique Trace Property</td>
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<td>Anton Malyshev</td>
<td>University of California, Los Angeles</td>
<td>Growth and Nonamenability in Product Replacement Graphs</td>
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<td>Artem Dudko</td>
<td>Stony Brook University</td>
<td>On Characters of Approximately Finite Groups and Higman-Thompson Groups</td>
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Inverse Problems Seminar

10/23/2013  Leonid Kunyansky

University of Arizona

Magneto-Acousto-Electric Tomography: A Mathematical Model and Inversion Procedure
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<tr>
<td>1/18/2013</td>
<td>Xin Li</td>
<td>University of Muenster</td>
<td>K-theory for Semigroup C*-Algebras</td>
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<td>Ron Douglas</td>
<td>Texas A&amp;M University</td>
<td>Connections of the Corona Problem with Operator Theory and Complex Geometry</td>
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<td>Roger Smith</td>
<td>Texas A&amp;M University</td>
<td>Bimodules in Crossed Products</td>
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<td>Jörg Eschmeier</td>
<td>Saarland University</td>
<td>Toeplitz Projections and Essential Commutants</td>
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<td>Victor Kaftal</td>
<td>University of Cincinnati</td>
<td>Linear Combinations of Projections in C* and W* Algebras</td>
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<td>3/22/2013</td>
<td>Qiang Zeng</td>
<td>University of Illinois, Urbana-Champaign</td>
<td>Improved Noncommutative Rosenthal/Burkholder Type Inequalities and Applications</td>
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<td>Alexei Poltoratski</td>
<td>Texas A&amp;M University</td>
<td>Krein - de Branges Theory in Spectral Analysis</td>
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<td>Stephen Avsec</td>
<td>University of Ottawa</td>
<td>New Examples of Exchangeable Noncommutative Brownian Motions</td>
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<td>Zhizhang Xie</td>
<td>Vanderbilt University</td>
<td>A Relative Higher Index Theorem, Diffeomorphisms and Positive Scalar Curvature</td>
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<td>Benoit Collins</td>
<td>University of Ottawa &amp; AIMR</td>
<td>Liberation of Projections</td>
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<td>David Blecher</td>
<td>University of Houston</td>
<td>Operator Algebras with a Contractive Approximate Identity</td>
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<td>David Kerr</td>
<td>Texas A&amp;M University</td>
<td>Bernoulli Actions and Sofic Entropy</td>
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<td>Timothy Rainone</td>
<td>Texas A&amp;M University</td>
<td>K-Theoretical Dynamics of MF C*-Dynamical Systems</td>
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SEC. 5.  

**COLOQUIUM AND SEMINAR SPEAKERS**
11/1/2013  Bill Johnson  
*Texas A&M University*  
Approximation Properties of a Banach Space and its Subspaces

11/8/2013  Han Li  
*Yale University*  
Invariant States of Discrete Group Actions on von Neumann Algebras

11/15/2013  Branimir Ćaćić  
*Texas A&M University*  
Strict Deformation Quantisation via Fell Bundles

11/22/2013  John Williams  
*Texas A&M University*  
Infinite Divisibility for Operator Valued Free Probability
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<td>Ngoc Do</td>
<td>Texas A&amp;M University</td>
<td>Quantum Graph Models of Graphyne Structures</td>
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<td>2/22/2013</td>
<td>Alim Sukhtayev</td>
<td>Texas A&amp;M University</td>
<td>The Algebraic Multiplicity of Eigenvalues, the Evans Function and the Birman-Schwinger Operators</td>
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<td>Gregory Berkolaiko</td>
<td>Texas A&amp;M University</td>
<td>Universality of the Spectral Band to Gap Ratio on Quantum Graphs</td>
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<tr>
<td>3/22/2013</td>
<td>Victor Kaftal</td>
<td>University of Cincinnati</td>
<td>Linear Combinations of Projections in C* and W* Algebras</td>
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<td>Andrew Comech</td>
<td>Texas A&amp;M University</td>
<td>Numerical Computations of the Linear Stability in Nonlinear Dirac Equation in (1+1)D</td>
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<td>Ram Band</td>
<td>University of Bristol</td>
<td>The Nodal Count 0, 1, 2, 3, . . . Implies the Graph is a Tree</td>
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<td>5/3/2013</td>
<td>Jon Harrison</td>
<td>Baylor University</td>
<td>n-particle Quantum Statistics on Graphs</td>
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<td>9/6/2013</td>
<td>Atanas Stefanov</td>
<td>University of Kansas</td>
<td>Scattering for Small Solutions of Cubic NLS</td>
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<td>Stephen Fulling</td>
<td>Texas A&amp;M University</td>
<td>Two Kinds of Anomaly in the Stress Tensors of Quantum Fields with Boundaries</td>
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<td>Alim Sukhtayev</td>
<td>Texas A&amp;M University</td>
<td>Instability of Solitary Waves of the Dirac-type equations</td>
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<td>Malcolm Brown</td>
<td>Cardiff University</td>
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<td>Texas A&amp;M University</td>
<td>Distributions in Spaces with Thick Points</td>
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Maxson Lecture Series

4/8/2013 Richard Karp
University of California, Berkeley
Algorithms in Molecular Biology

4/9/2013 Richard Karp
University of California, Berkeley
Theory of Computation as a Lens on the Sciences
Noncommutative Geometry Seminar

1/16/2013  Xin Li  
*Münster University, Germany*  
Semigroup C*-algebras - Nuclearity and Amenability

1/18/2013  Xin Li  
*Münster University, Germany*  
K-theory for Semigroup C*-algebras

2/20/2013  Yjun Yao  
*Fudan University, Shanghai, China*  
Hopf Cyclic Cohomology, Hodge Theory, Proper Actions

2/27/2013  Tim Austin  
*Courant Institute*  
Partial Difference Equations over Compact Abelian Groups

4/17/2013  Xiang Tang  
*Washington University, St. Louis*  
Index Theory for Invariant Elliptic Operators

9/4/2013  Guoliang Yu  
*Texas A&M University*  
Operator K-theory for Finitely Embeddable Groups and Non-rigidity of Manifolds

9/18/2013  Branimir Ćaćić  
*Texas A&M University*  
Introduction to Spectral Triples I: Commutative Spectral Triples

9/25/2013  Branimir Ćaćić  
*Texas A&M University*  
Introduction to Spectral Triples II: Noncommutative Spectral Triples

10/2/2013  Zhizhang Xie  
*Texas A&M University*  
Higher Rho Invariants and the Moduli Space of Positive Scalar Curvature Metrics

10/9/2013  Xiang Tang  
*Washington University, St. Louis*  
An Index Theorem for Strongly Pseudoconvex Domains with Isolated Singularities

10/16/2013  Ronald Douglas  
*Texas A&M University*  
On the Arveson/Douglas and the Odd GRR Theorem

10/23/2013  Zhizhang Xie  
*Texas A&M University*  
Finitely Embeddable Groups and Strongly Finitely Embeddable Groups

11/6/2013  Sherry Gong  
*Massachusetts Institute of Technology*  
Finite Part of Operator K-theory for Groups with Rapid Decay

11/13/2013  Paulo Lima-Filho  

SEC. 5.  COLLOQUIUM AND SEMINAR SPEAKERS
Texas A&M University
A Brief Overview of Homotopy Theory for C*-algebras

11/20/2013  Clarence Wilkerson
Texas A&M University
Classifying Spaces and Equivariant Cohomology

11/27/2013  Dennis Dreesen
University of Southampton
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<td>The City College of New York</td>
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<td>Yingkun Li</td>
<td>University of California, Los Angeles</td>
<td>Mock-modular forms of Weight One</td>
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<td>5/1/2013</td>
<td>Paul Garrett</td>
<td>University of Minnesota</td>
<td>Self-adjoint Operators on Spaces of Automorphic forms</td>
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<td>Anderson-Thakur Polynomials and Polynomial Power Sums</td>
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<td>10/2/2013</td>
<td>J. Maurice Rojas</td>
<td>Texas A&amp;M University</td>
<td>How (and why) to Count Norms Tropically</td>
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<td>Alina Chetock</td>
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<td>Calculus of Variation for Compressible Aerodynamics</td>
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<td>Simon Labrunie</td>
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<td>4/10/2013</td>
<td>Sara Pollock</td>
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<td>Convergence of Goal-Oriented Adaptive Finite Element Methods for Nonlinear Problems</td>
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<td>Alexandre Ern</td>
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<td>Compatible Discrete Operator Schemes for Elliptic Equations on Polyhedral Meshes</td>
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Université catholique de Louvain  
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11/4/2013  Bernardo Cockburn  
University of Minnesota  
Hybridizable Discontinuous Galerkin Methods: An Overview

11/6/2013  Victor Nistor  
Penn State University  
Boundary Value Problems on Polyhedral Domains and Applications to Numerical Methods

11/13/2013  Tim Sheng  
Baylor University  
Applications of Modern ADI, LOD and Adaptive Decomposition Methods for Solving Singular and Nonlinear Problems

11/20/2013  Peter Minev  
University of Alberta  
A Fast Parallel Algorithm for Direct Simulation of Particulate Flows Using Conforming Grids

12/4/2013  Ludmil Zikatanov  
Penn State University  
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<td>Mustafa Ayyuru</td>
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<td>Yonghui Guan</td>
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<td>Ada Boralevi</td>
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<td>What is the Bounded Derived Category on Projective Space and Why Should We Care?</td>
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<td>Dimensionality and the Stability of Brunn-Minkowski Inequality due to R. Eldan and B. Klartag</td>
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Gaussian Kernels have only Gaussian Maximizers, by Elliott Lieb (Part 2)

11/15/2013

Sheng Zhang

Texas A&M University

Rolewicz’s Property (β) and Uniform Quotient Mappings
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6. Faculty, 2013

Marcelo Aguiar ................................................. Professor
G. Donald Allen ................................................. Professor
Angela Allen .................................................... Senior Lecturer
Michael Anshelevich .......................................... Associate Professor
Rashi Arora ..................................................... Lecturer
Ben Aurispa ..................................................... Senior Lecturer
Amy L. Austin .................................................. Instructional Assistant Professor
Wolfgang Bangerth .............................................. Professor
Guy A. Battle ................................................... Professor
Arthur P. Belmonte ........................................... Instructional Assistant Professor
Gregory Berkolaiko .......................................... Associate Professor
Harold P. Boas ................................................. Professor
Kathryn L. Bollinger .......................................... Senior Lecturer
Andrea Bonito ................................................... Associate Professor
Itshak Borosh ................................................... Senior Professor
Goong Chen ..................................................... Professor
Andrew Comech ............................................... Associate Professor
Lisa Cox ........................................................... Lecturer
Prabir Daripa ................................................... Associate Professor
Ronald A. DeVore ............................................. Distinguished Professor
Fanny Dos Reis .................................................. Lecturer
Ronald G. Douglas ............................................. Distinguished Professor
Marcia L. Drost .................................................. Senior Lecturer
Kenneth J. Dykema ............................................ Professor
Yalchin R. Efendiev .......................................... Professor
Janice L. Epstein .............................................. Instructional Assistant Professor
Tamas Erdelyi ................................................... Professor
Ciprian I. Foias ................................................... Distinguished Professor
Erin Fry ............................................................ Lecturer
Stephen A. Fulling .......................................... Professor
Susan C. Geller ................................................. Professor
Rostislav I. Grigorchuk ....................................... Distinguished Professor
Jean-Luc Guermond .......................................... Professor
Robert A. Gustafson ......................................... Associate Professor
Yvette C. Hester ............................................... Instructional Assistant Professor
Peter B. Howard ............................................... Professor
William B. Johnson ........................................... Distinguished Professor
Joseph E. Kahlig ................................................ Senior Lecturer
Guido Kanschat ............................................... Professor
David Kerr ........................................................ Professor
Jaclyn Kessler .................................................. Lecturer
Thomas R. Kiffe .............................................. Associate Professor
Kendra Kilmer ................................................... Senior Lecturer
Gregory S. Klein ............................................... Senior Lecturer
Peter Kuchment ............................................... Distinguished Professor
Soumendra N. Lahiri ......................................... Professor (J)
Joseph M. Landsberg ........................................ Professor
Zoran Sunik ................................. Associate Professor
Steven D. Taliaferro.......................... Associate Professor
Paula Tretkoff.................................... Professor
Thomas I. Vogel................................. Associate Professor
Mariya Vorobets ............................... Senior Lecturer
Yaroslav Vorobets ............................ Associate Professor
Jay R. Walton ................................. Professor
Joseph D. Ward .................................. Professor
Jennifer G. Whitfield ......................... Instructional Assistant Professor
Sarah Witherspoon .......................... Professor
Zhizhang Xie ................................... Assistant Professor
Catherine Huafei Yan ......................... Professor
Philip B. Yasskin .............................. Associate Professor
Matthew P. Young .............................. Associate Professor
Guoliang Yu ..................................... Professor
Jill L. Zarestky ............................... Senior Lecturer
Igor Zelenko ..................................... Assistant Professor
Jianxin Zhou ..................................... Professor
Joel Zinn ........................................... Professor

* For the Annual Report, faculty are defined as tenured, tenure-track and non-tenure track employees who were employed at any time during 2013 (01/01/2013-12/31/2013).
6.1 Professional Activities, 2013

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2013.

*Subsections of professional activities are defined as follows:*

**Honors and Awards**
- All professional honors and awards, both internal and external.

**Service Activities**
- All professional service and leadership roles, including: departmental, college, university, state, national and international.

**Teaching**
- Classes taught during the Spring, Summer and Fall sessions of 2013.
- Any missing enrollment numbers were gathered from the Student Information Management System (SIMS) at Texas A&M University.

**Research Projects**
- All research projects, funded and unfunded.
- Whenever possible, all research-related employees of that faculty member are listed along with the citation. *Key for employees: (P)=Postdoc, (G)=Graduate Student, (U)=Undergraduate Student.*
- Renewals are marked by “(REN)” at the beginning of their title.
- Unfunded grants are marked by “(UNFUNDED)” at the end of the citation.
- Additional information (including PIs, CoPIs, and funding) on all funded grants are listed in Section 6.

**Presentations**
- All posters, invited and contributed lectures (plenary, conferences, colloquia, seminars, etc.).
- Whenever reported, posters, invited and contributed lectures are noted in parentheses following the citation.
- Citations are in chronological order.

**Publications**
- All printed materials published during 2013.
- Pre-press, in-press and submitted publications were not included.
- Citations were formatted in APA Style and are in alphabetical order by lead author.
• SERVICE DURING 2013

International
▷ Editorial/Board: Proceedings of the FPSAC, Canadian Journal of Mathematics, Royal Society of Canada (Referee: Journals)

National

Department
▷ Event: Persi Diaconis (Speaker)
▷ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 630. — Graduate Combinatorics (total enrollment: 12)
▷ MATH 662. — Seminar in Algebra (total enrollment: 7)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Combinational Hopf Algebras and Algebraic Combinatorics, National Science Foundation

• PRESENTATIONS DURING 2013

▷ “AMS Meeting #1089,” University of Colorado Boulder, Boulder, CO, April, 2013. (Individual)
▷ “Atlantic Algebra Centre Workshop,” Halifax, Canada, June, 2013. (Individual)
▷ “Workshop on Applications of Category Theory,” Macquarie University, Sydney, Australia, July, 2013. (Individual)
▷ “Mathematical Congress of the Americas, Session on Algebraic and Enumerative Combinatorics,” Guanajuato, Mexico, August, 2013. (Individual)
“What is?,” Cornell University, Ithaca, NY, December, 2013. (Individual)

“Workshop Categorical and Homological Methods in Hopf Algebra,” Wales-Swansea, United Kingdom, December, 2013. (Individual)

- **PUBLICATIONS DURING 2013**

  
  
  
  

*On leave.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Director, Center for Technology-Mediated Learning in Mathematics, Mathematics, [2008]

• SERVICE DURING 2013

  National

  University
  ▷ Advisory Board: Global STEMx Education Conference (Member)
  ▷ Committee/Panel: Assessment and Effective Teaching Essay Conference (Chair), STEP Consortium, Strand Moderator on Bridging Programs (Member)

  College
  ▷ Committee/Panel: Institutional Effectiveness Working Group (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▷ MATH 609. — Numerical Analysis (total enrollment: 16)
  ▷ MATH 629. — History of Mathematics (total enrollment: 15)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▷ Preservice Teachers Knowledge for Teaching Algebra, National Science Foundation
  ▷ Retention Through Remediation in Pre-Calculus Savings in the Thousands, National Science Foundation

  State
Connecting Algebraic Thinking and Measurement, *Texas Higher Education Coordinating Board*

**PRESENTATIONS DURING 2013**

▷ “Assessment and Teaching,” SAVI Meeting, Tallahassee, FL, March, 2013. (Invited)
▷ “Triadic Surveys on Teacher Preparation,” International Conference on Teaching Collegiate Mathematics, March, 2013. (Invited)
▷ “Misconceptions in Mathematics,” Teacher Quality Annual Technical Meeting, Lost Pines Resort, Bastrop, TX, April, 2013. (Invited)
▷ “Understanding MOOCs,” Helsinki, Finland, October, 2013. (Invited)
▷ “Advancing an Online Project in the Assessment and Effective Teaching of Calculus,” The Meeting Adobe ConnectPro, CA, November, 2013. (Invited)
▷ “Understanding the Predictive Results of Testing,” University of Sao Paulo, Brazil, November, 2013. (Invited)
• SERVICE DURING 2013

International
  ▶ Editorial/Board: Dyson-Schwinger Equations and Faa di Bruno Hopf Algebras in Physics and Combinatorics (Referee: Journals)

National

University
  ▶ Event: Free Probability, at the Mathematical Congress of the Americas (Organizer)

Department
  ▶ Event: Linear Analysis Seminar (Organizer)
  ▶ Committee/Panel: Honors Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▶ MATH 304. — Linear Algebra (total enrollment: 40)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 1)

Fall
  ▶ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 20)

• RESEARCH PROJECTS DURING 2013

Federal
  ▶ Applications of Polynomial Families and Free Probability, National Science Foundation
  ▶ Free Probability, Polynomial Families, and Applications, National Science Foundation

• PRESENTATIONS DURING 2013

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: Swiss Science Foundation (Review: Proposals)

  National

  University
  ▶ Ad Hoc Committee: Open Source Licensing (Member)
  ▶ Committee/Panel: Council of Principal Investigators (Elected Member), Executive Committee, Center for Computational Infrastructure in Geodynamics (Elected Member), Intellectual Property Constituent Committee (Member), Supercomputing Advisory Council (Member)

  Department
  ▶ Committee/Panel: Graduate Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ MATH 676. — Finite Element Methods in Scientific Computing (total enrollment: 18)
  ▶ MATH 691. — Research (total enrollment: 4)

  Summer
  ▶ MATH 684. — Professional Internship (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 3)

  Fall
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

SEC. 6.1

PROFESSIONAL ACTIVITIES
Federal
▷ Collaborative Research: SI2-SSI: Open Source Support for Massively Parallel, Generic Finite Element Methods, National Science Foundation
▷ Geoinformatics Facility Support Computational Infrastructure in Geodynamics, National Science Foundation

International
▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2013
▷ “Computational Science & Engineering,” Massachusetts Institute of Technology, Boston, MA, 2013.( Individual)
▷ “Large-Scale Inverse Problems and Quantification of Uncertainty: Big Data Meets Big Models,” Santa Fe, NM, May, 2013.( Invited)
▷ Aachen Institute for Advanced Study in Computational Engineering Science, Aachen, Germany, May, 2013.( Individual)
▷ SIAM Geosciences Conference, Padova, Italy, June, 2013.( Invited)

• PUBLICATIONS DURING 2013
GUY A. BATTLE

PROFESSOR
MATH-Mathematical Physics

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: Applied and Computational Harmonic Analysis (Member)
  University
  ▶ Committee/Panel: Academic Affairs Committee (Member), Academic Freedom, Responsibility, and Tenure (Member), Faculty Senate (Faculty Senator - 13)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ MATH 411. — Mathematical Probability (total enrollment: 100)
  ▶ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 33)
  Summer
  ▶ MATH 308. — Differential Equations (total enrollment: 51)
  ▶ MATH 409. — Advanced Calculus I (total enrollment: 16)
  Fall
  ▶ MATH 411. — Mathematical Probability (total enrollment: 43)
  ▶ MATH 603. — Methods of Applied Mathematics II (total enrollment: 6)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International
▷ Editorial/Board: Agence Nationale de Recherche, France, Germany-Israel Minerva Stiftung (Review: Proposals), Philosophical Transactions of the Royal Society, London (Referee: Journals)

National

College
▷ Committee/Panel: Faculty Advisory Council (Elected Member)

Department
▷ Event: Mathematical Physics Seminar (Organizer)
▷ Committee/Panel: Awards Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 691. — Research (total enrollment: 2)

Summer
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 308 — Differential Equations (total enrollment: 49)
▷ MATH 308.(H) — Differential Equations (total enrollment: 23)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Graphs in Spectral Analysis of Complex Systems, National Science Foundation

• PRESENTATIONS DURING 2013

▷ Mathematical Physics Seminar, Texas A&M University, College Station, TX, 2013.( Individual)
▷ Mathematics Colloquium, Baylor University, Waco, TX, April, 2013.( Individual)
▷ “Nodal Count and Dirac Points in the Spectrum of Graphene Graphs,” Banff International Research Station, Canada, July, 2013.( Individual)

- PUBLICATIONS DURING 2013
• **AWARDS DURING 2013**

  National
  ▶ Distinguished College or Texas Section Distinguished Achievement Award, Mathematical Association of America

• **SERVICE DURING 2013**

  International
  ▶ Editorial/Board: *Archiv der Mathematik, Monatshefte für Mathematik* (Referee: Journals)

  National

  ▶ Committee/Panel: Chauvenet Prize Committee (Chair), Joseph L. Doob Prize Committee, American Mathematical Society (Chair), Stefan Bergman Trust Fund Committee, American Mathematical Society (AMS) (Chair)

University
  ▶ Committee/Panel: Astronaut Scholarship Foundation Committee (Member)

Department
  ▶ Committee/Panel: Awards Committee (Chair), Lecturer Committee (Member), Teaching Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2013**

  Spring
  ▶ MATH 221. — **Several Variable Calculus** (total enrollment: 78)
  ▶ MATH 396. — **Communications in Mathematics** (total enrollment: 14)
  ▶ MATH 618. — **Theory of Functions of a Complex Variable II** (total enrollment: 14)
  ▶ MATH 685. — **Directed Studies** (total enrollment: 1)

  Summer
  ▶ MATH 685. — **Directed Studies** (total enrollment: 1)

  Fall
  ▶ MATH 650. — **Several Complex Variables** (total enrollment: 8)
  ▶ MATH 685. — **Directed Studies** (total enrollment: 1)
• PRESENTATIONS DURING 2013
  ▶ “From Plato’s Academy to the Khan Academy,” Faculty Teaching Academy, Texas A&M University, College Station, TX, January, 2013. (Individual)
  ▶ “Drinking from a Firehose: The Past, Present, and Future of Mathematics Education,” Department of Mathematics, Texas A&M University, College Station, TX, February, 2013. (Individual)
ANDREA BONITO
ASSOCIATE PROFESSOR (979) 845-3261
MATH-Numerical Analysis bonito@math.tamu.edu

• AWARDS DURING 2013
  National
  ▶ Faculty Early Career Development Award, National Science Foundation

• SERVICE DURING 2013
  International
  ▶ Event: Geometric PDEs, Mini-symposium (Co-Organizer), Maxwell and Magneto-Hydrodynamics, Mini-symposium (Organizer), Numerical Approximation of PDEs: Adaptivity, Error Control and Convergence (Co-Organizer)
  ▶ Editorial/Board: Universite Pierre et Marie Curie, Paris, France (Reviewer)

  National
  ▶ Editorial/Board: SISC, M2AN, Math. Comp. (Referee: Journals)

  University
  ▶ Committee/Panel: Faculty Senate (Elected Member)

  Department
  ▶ Event: Numerical Methods in PDEs (Co-Organizer)
  ▶ Committee/Panel: Executive Committee (Elected Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ MATH 308. — Differential Equations (total enrollment: 112)
  ▶ MATH 612. — Partial Differential Equations (total enrollment: 15)
  ▶ MATH 691. — Research (total enrollment: 1)

  Summer
  ▶ MATH 691. — Research (total enrollment: 2)

  Fall
  ▶ MATH 308. — Differential Equations (total enrollment: 96)
  ▶ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ CAREER: Explicit Adaptive Methods for Coupled Problems, National Science Foundation
  ▶ Space and Time Adaptivity for Moving and Free Boundary Problems, National Science Foundation
  ▶ Numerical Methods for Solving Parametric PDEs, Office of Naval Research

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International
- Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2013
  - “Numerical Analysis Seminar,” Department of Mathematics, University of Maryland, College Park, MD, May, 2013. (Invited)

• PUBLICATIONS DURING 2013
TEACHING ASSIGNMENTS DURING 2013

Spring

- MATH 311. — Topics in Applied Mathematics I (total enrollment: 38)

*No report received from faculty member.*
• AWARDS DURING 2013
  University
  ▶ Research Team Excellence Award, Texas A&M University-Qatar

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: Canadian Research Council, Czech National Science Foundation (Review: Proposals), International Journal of Quantum Information (Member), Journal of Mathematical Analysis, Hakari Ltd. (Member)

  National
  ▶ Editorial/Board: Complex Analysis and its Synergies (Associate Editor), Electronic Journal of Differential Equations (Editor-in-Chief), Journal of Mathematical Analysis and Applications (Editor-in-Chief), Various Journals (Referee: Journals)

  University
  ▶ Committee/Panel: Promotion and Rotation, Texas A&M University-Qatar (Member)

  Department
  ▶ Research Group: Institute for Quantum Studies (Department Representative)
  ▶ Committee/Panel: Texas A&M University-Princeton Summer School on Quantum Science and Engineering, Casper College (Session Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 18)
  ▶ MATH 691. — Research (total enrollment: 1)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 3)

  Fall
  ▶ MATH 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013
  State
  ▶ Mathematical Study of Wind Power Generation, Texas Higher Education Coordinating Board
International

- Light Bullets, Fractional Vortices, Nonlocal Solitons and Surface Waves for all-Optical information Transmission in Photonic Crystals, Optical Lattices, Dispersion-managed Systems, and Distributed Fibers, Qatar Foundation
- Chaotic Dynamics of Distributed Parameter Systems Containing Nonlinearities, National Priority Research Program, Qatar National Research Fund

**PRESENTATIONS DURING 2013**

- “Progress in Mathematical and Computational Study of Wind Power Generation,” Texas PDE Conference, Department of Mathematics, University of Texas, El Paso, TX, March, 2013. (Individual)
- “Lie Groups and Lie Algebras in Physic,” Special Mathematical Physics Mini-Symposium, Institute for Quantum Science and Engineering, Texas A&M University, College Station, TX, May, 2013. (Invited)
- “Mathematical Analysis of the Dimensional Scaling Method for the Hydrogen Molecule,” School of Mathematics, Xiamen University, Xiamen, China, June, 2013. (Invited)
- “Progress in Mathematical and Computational Study of Wind Power Generation,” First National Conference on Computational Mechanics, Longyan College, Longyan, China, June, 2013. (Invited)

**PUBLICATIONS DURING 2013**

the Optical Society of America B: Optical Physics, vol. 30, 1036-1040.


• SERVICE DURING 2013
National
▷ Editorial/Board: *Journal of Mathematical Physics, Letters in Mathematical Physics, Mathematical Methods in the Applied Sciences* (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2013
Spring
▷ MATH 308. — *Differential Equations* (total enrollment: 224)

Summer
▷ MATH 412. — *Theory of Partial Differential Equations* (total enrollment: 24)

Fall
▷ MATH 601. — *Methods of Applied Mathematics I* (total enrollment: 78)

• PRESENTATIONS DURING 2013
▷ University of California, Berkeley, CA, January, 2013.( Individual)
▷ Los Alamos National Laboratory, Los Alamos, NM, February, 2013.( Individual)
▷ Northwestern University, Evanston, IL, April, 2013.( Individual)
▷ Texas A&M University, Condensed Matter Seminar, College Station, TX, April, 2013.( Individual)
▷ University of Illinois, Champaign, IL, April, 2013.( Individual)
▷ Institute for Information Transmission Problems, July, 2013.( Individual)
▷ Texas Analysis and Mathematical Physics Symposium, Houston, TX, October, 2013.( Individual)
▷ University of Tennessee, Knoxville, TN, November, 2013.( Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International

National
▷ Event: Fast Algorithms for Integral Equations Methods and Their Applications, SIAM-CSE bi-annual Conference (Organizer)
▷ Committee/Panel: Geosciences-I, SIAM Annual Meeting (Chair)

University
▷ Committee/Panel: Undergraduate Appeals Panel (Chair), Undergraduate Appeals Panel (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 672. — Hydrodynamic Stability (total enrollment: 10)
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 2)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 605. — Mathematical Fluid Dynamics (total enrollment: 14)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

International
Advanced Modeling of Enhanced Oil Recovery Methods, *Qatar National Research Fund*

**PRESENTATIONS DURING 2013**
- Graduate Seminar Series, Mathematics Department, Texas A&M University, College Station, TX, February, 2013. (Individual)

**PUBLICATIONS DURING 2013**
• CHAIRS/PROFESSORSHIPS
  ➢ Walter E. Koss Endowed Professorship [2008]

• SERVICE DURING 2013
  International
  ➢ Editorial/Board: Calcolo (Member), Int. J. Wavelets Multiresolut. Inf. Process (Associate Editor)
  National
  ➢ Advisory Board: Found. Comput. Math (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ➢ MATH 691. — Research (total enrollment: 1)
  Summer
  ➢ MATH 691. — Research (total enrollment: 1)
  Fall
  ➢ MATH 664. — Seminar in Applied Mathematics (total enrollment: 11)
  ➢ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ➢ (REN) Computation and Learning in High Dimensions, Department of Defense
  ➢ New Theory and Algorithms for Scalable Data Fusion, Department of Defense
  ➢ Collaborative Research: An ADT Proposal: Fast Point Cloud Surface Reconstruction Algorithms, National Science Foundation
  ➢ Numerical Methods for Solving Parametric PDEs, Office of Naval Research
  International
  ➢ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PUBLICATIONS DURING 2013


RONALD G. DOUGLAS
DISTINGUISHED PROFESSOR (979) 845-7241
MATH-Operator Theory, Operator Algebras rdouglas@math.tamu.edu

- AWARDS DURING 2013
  National
  > Fellow, American Mathematical Society

- SERVICE DURING 2013
  International
  > Editorial/Board: Bilateral Israeli/United States Foundation, Joint India-NSF (Review: Proposals)
  National
  > Editorial/Board: National Science Foundation (Review: Proposals), NSERC Research (Review: Proposals), CRC Research Notes in Mathematics (Editor), Integral Equations and Operator Theory (Member), Journal of Functional Analysis and Applications (Member), Journal of Operator Theory (Member), Various Research Journals (Referee: Journals)
  University
  > Event: NCG Seminar, Texas A&M University(Reviewer), Special Session, JMM (Co-Organizer)
  > Editorial/Board: Mathematics Department, Indiana University (Reviewer)
  > Committee/Panel: Executive Committee, Strategic Planning Committee, EAF (Member)
  College
  > Committee/Panel: Distinguished Professors Executive Committee (Chair)
  Department
  > Committee/Panel: Department Committee D (Chair), Distinguished Position Recruitment Committee (Member)

- TEACHING ASSIGNMENTS DURING 2013
  Spring
  > MATH 409.(H) — Advanced Calculus I (total enrollment: 12)
  Fall
  > MATH 446(H) — Principles of Analysis I (total enrollment: 5)
  > MATH 446. — Principles of Analysis I (total enrollment: 21)

- PRESENTATIONS DURING 2013
  > Mathematics Department, University of Alabama, Tuscaloosa, AL, March, 2013.( Individual)
Math Institute, Warsaw, Poland, June, 2013. (Individual)
Complex Geometry and Operator Theory Conference, Fudan University, China, July, 2013. (Invited)
Fudan University, China, July, 2013. (Invited)
“Invariant Subspaces,” Centre De Recherches Mathematiques, Montreal, Canada, August, 2013. (Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International
▷ Advisory Board: London Math. Soc. (Member)

National
▷ Event: AMS Special Session on Progress in Free Probability and Free Analysis (Co-Organizer)

Department
▷ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 410. — Advanced Calculus II (total enrollment: 19)
▷ MATH 608. — Real Variables II (total enrollment: 11)
▷ MATH 685. — Directed Studies (total enrollment: 3)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Research in Finite von Neumann Algebras, National Science Foundation
▷ Sums of Hermitian Operators and Connections to Connes’ Embedding Problem Hyperinvariant Subspaces, National Science Foundation
• PRESENTATIONS DURING 2013
  ▶ “Searching for a Badly Behaved Group Using Parallel Processing in Mathematica,” Texas A&M University Supercomputer Users Group Annual Meeting, College Station, TX, May, 2013. (Invited)
  ▶ “Brown Measure, Haagerup-Schultz Subspaces and Upper Triangularization in Finite von Neumann Algebras,” Mathematisches Forschungszentrum Oberwolfach, University of Muenster, Muenster, Germany, September, 2013. (Invited)
  ▶ “Free Group Factors,” University of Muenster, Muenster, Germany, September, 2013. (Invited)
  ▶ “Invariant Subspaces and Upper Triangular forms for some Classes of Infinite Dimensional Operator,” University of New South Wales, Sydney, Australia, November, 2013. (Invited)
  ▶ “Singular Values of Products in Finite von Neumann Algebras,” Copenhagen University, Kobenhavn, Denmark, December, 2013. (Invited)
  ▶ “Upper Triangular forms for Elements of Finite von Neumann Algebras,” Danish/Norwegian Operator Algebra Workshop, Copenhagen, Denmark, December, 2013. (Invited)

• PUBLICATIONS DURING 2013
• CHAIRS/PROFESSORSHIPS
  ▶ Richard E. Ewing-ExxonMobil Chair in Computational Science [2012]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Director, Institute for Scientific Computation, College of Science, [2011]
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• AWARDS DURING 2013
  International
  ▶ InterPore Award, InterPore Rosette

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: Georgian, Norwegian, UK Agencies (Review: Proposals), Norway Research Council, Swiss National Science Foundation (Reviewer)

  National
  ▶ Committee/Panel: Tera Grid Allocation Board (Member)

  University
  ▶ Event: Mini-workshop, Oberwolfach (Organizer), Numerical Methods for PDEs, Texas A&M University(Organizer), Wave Propogation Workshop at KAUST (Organizer)

  Department
  ▶ Committee/Panel: IUMRI Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 7)
Summer
▷ MATH 685. — Directed Studies (total enrollment: 4)
▷ MATH 691. — Research (total enrollment: 6)

Fall
▷ MATH 664. — Seminar in Applied Mathematics (total enrollment: 7)
▷ MATH 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Bayesian Uncertainty Quantification in Predictions of Flows in Highly Heterogeneous Media and its Applications to the CO2 Sequestration, Department of Energy
▷ Scalable Multilevel Uncertainty Quantification Concepts for Extreme-scale Multiscale Problems, Department of Energy
▷ Improving Research and Educational Activities in Multifunctional Nanomaterials, Fund for the Improvement of Postsecondary Education

International
▷ Center for Numerical Porous Media, King Abdullah University of Science and Technology
▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2013
▷ SIAM CSE, February, 2013. (Individual)
▷ Numerical Upscaling for Media with Deterministic and Stochastic Heterogeneity, Oberwolfach, Germany, February, 2013.( Individual)
▷ Shell Distinguished Lecture, Rice University, Houston, TX, February, 2013.( Individual)
▷ “Advanced Numerical Methods and Applications,” South Central Conference, April, 2013.( Invited)
▷ “Generalized Multiscale Finite Element Methods,” Multiscale Modeling Workshop, Austin, TX, April, 2013.( Invited)
▷ “Interplay of Theory and Numerics for Deterministic and Stochastic Homogenization,” Oberwolfach, Germany, April, 2013.( Individual)
▷ SIAM Geosciences, June, 2013.( Individual)
▷ DOE Applied Math PI Workshop, August, 2013.( Individual)
▷ Society of Petroleum Engineers Kuwait Exhibition and Show, October, 2013.( Individual)

• PUBLICATIONS DURING 2013

SEC. 6.1 PROFESSIONAL ACTIVITIES 461


• SERVICE DURING 2013

International
▷ Research Group: Center for Experimental and Constructive Mathematics at Simon Fraser University (Associate Member)
▷ Professional Affiliation: Mathematical Institute of the Hungarian Academy of Science (Associate Member)

National
▷ Professional Affiliation: Janos Bolyai Mathematical Society (Member)
▷ Editorial/Board: Section Problems and Solutions: Of the American Mathematical Monthly (Assisted), Journal of Approximation Theory (Editor), Mathematical Inequalities and Applications (Editor)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 152. — Engineering Mathematics II (total enrollment: 252)
▷ MATH 409. — Advanced Calculus I (total enrollment: 43)

Fall
▷ MATH 689. — Special Topics in (total enrollment: 6)

• PRESENTATIONS DURING 2013

▷ Number Theory Seminar, Texas A&M University, College Station, TX, February, 2013.( Individual)
▷ Erdős Centennial Conference, Budapest, Hungary, July, 2013.( Individual)

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013
  Department
  ▷ Committee/Panel: Subcommittee P (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ MATH 685. — Directed Studies (total enrollment: 4)

  Summer
  ▷ MATH 685. — Directed Studies (total enrollment: 3)

  Fall
  ▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▷ Collaborative Research: Study of Turbulence in Physical Systems through Complex Singularities and Determining Modes, National Science Foundation

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Professor (J), Physics and Astronomy, [2000]

• AWARDS DURING 2013
  Department
  ▶ Outstanding Teaching Award, Department of Mathematics

• SERVICE DURING 2013
  National
  University
  ▶ Event: Annual Meetings of Oklahoma-Texas-Louisiana Quantum Vacuum Research Group (Organizer)
  ▶ Committee/Panel: Academic Freedom, Responsibility, and Tenure (Member)
  Department
  ▶ Committee/Panel: Teaching Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ MATH 467. — Modern Geometry (total enrollment: 30)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ MATH 460. — Tensors and General Relativity (total enrollment: 12)
  ▶ MATH 467. — Modern Geometry (total enrollment: 17)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Collaborative Research: Quantum Vacuum Energy, National Science Foundation

• PRESENTATIONS DURING 2013
Meetings of Oklahoma-Texas-Louisiana Quantum Vacuum Research Group, College Station, TX, May, 2013. (Individual)

- PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Undergraduate Advisor, Mathematics Undergraduate Advising Office, Mathematics, [2004]
  ▷ Director, Mathematics Honors Program, Mathematics, [2003]
  ▷ Professor, Veterinary Integrative Biosciences, [1994]

• SERVICE DURING 2013
  National
  ▷ Event: Women In Mathematics (Speaker)
  ▷ Committee/Panel: AMS/MMA Joint Data Committee (Member), Employment Opportunities Joint Committee (Member)
  University
  ▷ Service Position: Dean of Faculties (Mediator), Junior Faculty (Mentor), Student Conflict Resolution Center (Mediator)
  ▷ Committee/Panel: Astronaut Scholarship Selection (Member), Goldwater Scholarship Selection Committee (Member), Graduate Appeals Panel (Chair), Honors Program Advisory Board (Member), Writing and Communications Committee (Member)
  Department
  ▷ Committee/Panel: Undergraduate Programs Committee (Member), Undergraduate Scholarship Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ MATH 491. — Research (total enrollment: 1)
  Summer
  ▷ MATH 485. — Directed Studies (total enrollment: 1)
  Fall
  ▷ MATH 323.(H) — Linear Algebra I (total enrollment: 15)
  ▷ MATH 396. — Communications in Mathematics (total enrollment: 8)
  ▷ MATH 485. — Directed Studies (total enrollment: 3)
  ▷ MATH 491.(H) — Research (total enrollment: 1)
  ▷ MATH 645. — A Survey of Mathematical Problems I (total enrollment: 16)

• RESEARCH PROJECTS DURING 2013
  Federal
MCTP: Transition Points for High School and Undergraduate Mathematics Students, *National Science Foundation*

**PRESENTATIONS DURING 2013**

- “How to Mentor Students in Undergraduate Research,” Nebraska Conference on Undergraduate Women in Mathematics, College Station, TX, January, 2013. (Individual)
- “Mentoring Women and Minorities in General Summer Programs,” San Diego, CA, January, 2013. (Individual)
- “Moderator of Two Break-out Session,” Nebraska Conference for Undergraduate Women in Math, College Station, TX, January, 2013. (Individual)
- “What to do with your Summer,” Nebraska Conference for Undergraduate Women, College Station, TX, January, 2013. (Individual)
- “Where we were; Where we are; and How we got here,” Texas A&M University, 9th Annual Women’s Leadership Forum, College Station, TX, March, 2013. (Individual)
• SERVICE DURING 2013

International
▷ Event: 9-th International Algebraic Conference, Lviv, Ukraine (Organizer), International Conference Algebra & Logic, Theory & Application” 80th Anniversary of Prof. V.P. Shunkov,Krasnoyars (Organizer), Mathematics Competition for Young Mathematicians in Ukraine (Organizer)
▷ Editorial/Board: Switzerland National Science Foundation, Israel Science Foundation, Canada Research Chair, Austrian Science Fund, Mobius Competition (Review: Proposals), Geometriae Dedicata (Editor), International Journal of Algebra and Computation (Editor), Mathematicni Studii (Editor), Ukrainian Mathematical Journal (Editor)

National
▷ Editorial/Board: Book Review for AMS Press (Reviewer), Book Review for Bulletin of AMS (Reviewer), Groups, Geometry and Dynamics (Editor-in-Chief), National Science Foundation, National Security Agency (Review: Proposals), Springer, Algebra and Discrete Mathematics (Editor), Algebra and its Applications (Editor), Journal of Modern Dynamics (Editor)

Department
▷ Event: Groups and Dynamics Seminar (Head)
▷ Committee/Panel: Comittee P. (Member), Distinguished Professor Committee (Member), Powell Chair Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 691. — Research (total enrollment: 2)

Summer
▷ MATH 691. — Research (total enrollment: 2)

Fall
▷ MATH 323. — Linear Algebra I (total enrollment: 30)
▷ MATH 415. — Modern Algebra I (total enrollment: 35)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Groups of Intermediate Growth, National Science Foundation

• PRESENTATIONS DURING 2013
“Rice Dynamics Meetings,” Rice University, Houston, TX, May, 2013. (Invited)
Joint International AMS-Romania Meeting, Alba Julia, Romania, June, 2013. (Invited)
The 9th International Algebraic Conference, Lviv, Ukraine, July, 2013. (Invited)
Group Theory, Measure, and Asymptotic Invariants, Oberwolfach, Germany, August, 2013. (Invited)
Geometric and Analytic Group Theory, Ventotene, Italy, September, 2013. (Invited)
Texas Geometry and Topology Conference, College Station, TX, October, 2013. (Invited)
“On Random Groups of Intermediate Growth,” University of Texas, Dallas, TX, November, 2013. (Individual)

• PUBLICATIONS DURING 2013
• **CHAIRS/PROFESSORSHIPS**
  ▶ Richard E. Ewing-ExxonMobil Chair in Computational Science /2012/

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, / /

• **SERVICE DURING 2013**
  
  **International**

  **National**

  **University**
  ▶ Committee/Panel: Tier One Program (TOP) Selection Committee (Member)

  **Department**
  ▶ Committee/Panel: USC Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**

  **Spring**
  ▶ MATH 685. — *Directed Studies* (total enrollment: 1)
  ▶ MATH 691. — *Research* (total enrollment: 4)

  **Summer**
  ▶ MATH 691. — *Research* (total enrollment: 4)

  **Fall**
  ▶ MATH 602. — *Methods and Applications of Partial Differential Equations* (total enrollment: 30)
  ▶ MATH 661. — *Mathematical Theory of Finite Element Methods* (total enrollment: 15)
  ▶ MATH 691. — *Research* (total enrollment: 4)

• **RESEARCH PROJECTS DURING 2013**
Federal
▷ Entropy Viscosity and L1-based Approximation of PDEs: Exploring Sparsity, Department of Defense
▷ Support of Stockpile Stewardship Program, Lawrence Livermore National Laboratory
▷ Approximation Techniques for MHD Flows in Highly Heterogeneous Domains, National Science Foundation
▷ High-Order Approximation Techniques for Nonlinear Hyperbolic PDEs, National Science Foundation
▷ IGERT: New Mathematical Tools for Next Generation Materials, National Science Foundation

International
▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

PRESENTATIONS DURING 2013
▷ FE Rodeo & Circus, Louisiana State University, Baton Rouge, LA, March, 2013. (Individual)
▷ “Inaugural Conference,” Ecole des Ponts et Chaussées, Paris, France, April, 2013. (Invited)
▷ “Spring Course (15h) in Computational Fluid Mechanics,” Paris East University, Paris, France, April, 2013. (Invited)
▷ AFOSR, Computational Mathematics Program Review Meeting, Washington, DC, August, 2013. (Invited)
▷ Department of Aeronautics and Astronautics, University of Texas, Austin, TX, September, 2013. (Individual)
▷ Institute for Computational Engineering and Science, University of Texas, Austin, TX, September, 2013. (Individual)

PUBLICATIONS DURING 2013


• SERVICE DURING 2013

  Department
  ▷ Event: SEE Math Camp (Instructor), Texas A&M UniversityMath Circle (Instructor)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ MATH 142. — Business Mathematics II (total enrollment: 275)
  ▷ MATH 152(H) — Engineering Mathematics II (total enrollment: 38)
  ▷ MATH 152. — Engineering Mathematics II (total enrollment: 76)

  Summer
  ▷ MATH 304. — Linear Algebra (total enrollment: 37)

  Fall
  ▷ MATH 302. — Discrete Mathematics (total enrollment: 41)
  ▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 92)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Graduate Advisor, Mathematics Graduate Advising Office, Mathematics, [2012]
  ▷ Associate Department Head, Graduate Studies Office, Mathematics, [2012]

• SERVICE DURING 2013
  National
  ▷ Editorial/Board: Journal of Differential Equations (Referee: Journals)
  College
  ▷ Committee/Panel: Faculty Advisory Council (Elected Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ MATH 642. — Analysis for Applications II (total enrollment: 7)
  ▷ MATH 685. — Directed Studies (total enrollment: 1)
  Summer
  ▷ MATH 663. — Seminar in Analysis (total enrollment: 17)
  Fall
  ▷ MATH 442. — Mathematical Modeling (total enrollment: 21)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▷ Spectral Analysis and Stability for Wave Patterns and Multidimensional Waves, National Science Foundation

• PRESENTATIONS DURING 2013
  ▷ University of Wyoming, Laramie, WY, September, 2013. (Individual)
• **CHAIRS/PROFESSORSHIPS**
  - Arthur George and Mary Emolene Owen Chair in Mathematics [1984]

• **SERVICE DURING 2013**
  
  **National**
  - Editorial/Board: Extracta Mathematicae, Houston Journal of Mathematics (Member), Positivity (Member), Various Journals (Referee: Journals)
  - Committee/Panel: BIRS Scientific Program Committee, (Member), Organizing Committee, AMS Special Session on Banach Spaces and Operators on Them (Member), Organizing Committee, SUMIRFAS (Chair), Organizing Committee, SUMIRFAS (Member), Scientific Committee, Analysis and Partial Differential Equations (Member), Scientific Committee, Banach Spaces: Geometry and Analysis (Chair), Scientific Committee, Interactions Between Logic, Topological Structures and Banach Spaces (Member)

  **Department**
  - Event: Workshop in Linear Analysis and Probability (Director)
  - Committee/Panel: Endowed Professorship Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2013**

  **Spring**
  - MATH 447(H) — Topics in Analysis (total enrollment: 1)
  - MATH 447. — Topics in Analysis (total enrollment: 7)
  - MATH 691. — Research (total enrollment: 1)

  **Summer**
  - MATH 663. — Seminar in Analysis (total enrollment: 5)
  - MATH 691. — Research (total enrollment: 2)

  **Fall**
  - MATH 655. — Functional Analysis I (total enrollment: 13)
  - MATH 685. — Directed Studies (total enrollment: 1)
  - MATH 691. — Research (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2013**

  **Federal**
  - Banach Spaces and Metric Geometry, National Science Foundation
  - Geometry of Banach Spaces and Metric Spaces, National Science Foundation
  - (REN) Special Meetings: Workshop in Analysis and Probability, National Science Foundation
(REN) Workshop in Analysis and Probability, *National Science Foundation*

**PRESENTATIONS DURING 2013**

- “Banach Spaces: Geometry and Analysis,” Jerusalem, Israel, May, 2013. (Invited)
- “Interactions Between Logic, Topological Structures and Banach Spaces,” Eilat, Israel, May, 2013. (Invited)
- “Non-linear Geometry of Banach Spaces,” Guanajuate, Mexico, August, 2013. (Invited)
- “Linear and Non-linear Geometry of Banach Spaces,” American Mathematical Society Special Session, St. Louis, MO, October, 2013. (Invited)
- Baylor University, Waco, TX, December, 2013. (Individual)

**PUBLICATIONS DURING 2013**

• SERVICE DURING 2013

International
▷ Editorial/Board: German Science Foundation (Review: Proposals)

National

University
▷ Committee/Panel: Council on Climate and Diversity (Member), Council on the Built Environment (Member)

Department
▷ Event: Math Table at the Physics and Engineering Festival (Participant)
▷ Committee/Panel: Subcommittee T (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Other
▷ Simulating our Complex World: Modeling, Computation and Analysis, University of Minnesota

• PUBLICATIONS DURING 2013


Resigned 08/31/2013.

No report received from faculty member.
• SERVICE DURING 2013

International

National
▷ Editorial/Board: Journal of Operator Theory (Referee: Journals)

University
▷ Committee/Panel: Academic Civil Rights Investigation Committee (Member), Workshop in Analysis and Probability (Director)

Department
▷ Event: Arbeitsgemeinschaft Sofic Entropy (Co-Organizer), Concentration Week Dynamics, Geometry, and Operator Algebras (Co-Organizer), Groups and Dynamics for First-year Graduate Students (Speaker), Weekly Linear Analysis Seminar (Organizer)
▷ Committee/Panel: Outreach Committee (Member), Website Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 70)
▷ MATH 409.(H) — Advanced Calculus I (total enrollment: 15)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Independence and Dichotomies in Dynamics and Operator Algebras, National Science Foundation
▷ (REN) Special Meetings: Workshop in Analysis and Probability, National Science Foundation
▷ Workshop in Analysis and Probability, National Science Foundation

• PRESENTATIONS DURING 2013
▷ “Topics in Operator Algebras and Applications,” 2013. (Invited)
“Operator Algebra Seminar,” University of Tokyo, Tokyo, Japan, February, 2013. (Individual)
“Operator Algebras Spring Program,” East China Normal University, Shanghai, China, April, 2013. (Invited)
“The Structure and Classification of Nuclear C*-Algebras,” ICMS, Edinburgh, United Kingdom, April, 2013. (Invited)
“Workshop on Operator Algebras - Takesaki 80,” University of Tokyo, Tokyo, Japan, May, 2013. (Invited)
“Focus Program on Noncommutative Geometry and Quantum Groups,” Fields Institute, Toronto, Canada, June, 2013. (Invited)
“C*-Algebren,” Mathematisches Forschungsinstitut, Oberwolfach, Germany, August, 2013. (Invited)
“Dynamics, Geometry, and Operator Algebras,” Texas A&M University, College Station, TX, August, 2013. (Individual)
“Group Theory, Measure, and Asymptotic Invariants,” Mathematisches Forschungsinstitut, Oberwolfach, Germany, August, 2013. (Invited)
“Linear Analysis Seminar,” Texas A&M University, College Station, TX, September, 2013. (Individual)
“West Coast Operator Algebras Symposium,” University of California, Davis, CA, October, 2013. (Invited)
“Groups and Dynamics Seminar,” Texas A&M University, College Station, TX, November, 2013. (Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National
▷ Editorial/Board: *Mathematical Biosciences* (Referee: Journals)

Department
▷ Service Position: Java Function Class (Developer), MacDviX, a TeX dvi Previewer for OS X (Developer), MacGhost View, Postscript Previewer for OS X (Developer), Main Programmer for the Java-based Finite Math and Applied Calculus Web Projects (Developer)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 171. — *Analytic Geometry and Calculus* (total enrollment: 66)
▷ MATH 660. — *Computational Linear Algebra* (total enrollment: 11)

Summer
▷ MATH 601. — *Methods of Applied Mathematics I* (total enrollment: 27)

Fall
▷ MATH 172. — *Calculus* (total enrollment: 92)
▷ MATH 221. — *Several Variable Calculus* (total enrollment: 152)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: *J. d’Analyse Math.*, *Phil Trans. ndf Royal Soc.* (Referee: Journals)

  National

  Department
  ▶ Event: Inverse Problems Seminar (Organizer), Math Physics and Harmonic Analysis Seminar (Co-Organizer)
  ▶ Committee/Panel: Endowed Professorship Hiring Committee (Member), Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 3)

  Summer
  ▶ MATH 691. — Research (total enrollment: 3)

  Fall
  ▶ MATH 611. — Ordinary Differential Equations (total enrollment: 13)
  ▶ MATH 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▶ Collaborative Research: Mathematics of Emerging Imaging Methods in Medicine and Homeland Security, *National Science Foundation*
  ▶ MCTP: Transition Points for High School and Undergraduate Mathematics Students, *National Science Foundation*

  International
Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

**PRESENTATIONS DURING 2013**

- “Detection of Small Low Emission Sources,” Nuclear Solutions Institute Colloquium, College Station, TX, October, 2013. (Individual)
- “Quantum Graph Models of Carbon Nano-structures,” Mathematiques pour le graphene, Grenoble, France, October, 2013. (Invited)

**PUBLICATIONS DURING 2013**

• SERVICE DURING 2013

International

National

Department
▷ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 44)
▷ MATH 666. — Seminar in Geometry (total enrollment: 7)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 3)

Fall
▷ MATH 662. — Seminar in Algebra (total enrollment: 6)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Analytic Geometry and Representation Theory, National Science Foundation
▷ Conference/Workshop New Directions in Exterior Differential Systems, National Science Foundation
▷ (REN) Texas Algebraic Geometry Symposium: TAGS 2012, National Science Foundation
▷ (REN) Texas Geometry and Topology Conference, National Science Foundation

• PRESENTATIONS DURING 2013
“Algebraic Geometry Seminar,” University of Chicago, Chicago, IL, February, 2013.(Invited)
“Algebraic Geometry Seminar,” Johns Hopkins University, Baltimore, MD, May, 2013.(Invited)
University Belfort, Belfort, France, June, 2013.(Invited)
“Differential Geometry and its Applications,” Brno, Czech Republic, August, 2013.(Invited)
“Quantum Marginals Conference,” Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom, October, 2013.(Invited)
“Geometry Seminar,” Rutgers University, New Brunswick, NJ, November, 2013.(Invited)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International
- Editorial/Board: Canadian NSERC Grants, National Research Council COBASE Grants Program, MITACS - Canadian Grant (Review: Proposals)
- Committee/Panel: Editorial Committee International Journal of Pure and Applied Mathematics (Member)

National
- Committee/Panel: Editorial Committee Operators and Matrices, Banach Journal of Mathematical Analysis, Journal of Function Spaces and Applications, Involve (Member)

University
- Committee/Panel: Selection Committee for the University Level FSA Teaching Awards (Member)

Department
- Committee/Panel: Executive Committee (Member), Honors Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
- MATH 323. — Linear Algebra I (total enrollment: 35)
- MATH 482(H) — Research Seminar (total enrollment: 8)
- MATH 482. — Research Seminar (total enrollment: 5)
- MATH 685. — Directed Studies (total enrollment: 1)

Summer
- MATH 685. — Directed Studies (total enrollment: 1)

Fall
- MATH 409. — Advanced Calculus I (total enrollment: 24)
- MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
- (REN) Workshop in Analysis and Probability, National Science Foundation
• PRESENTATIONS DURING 2013
  ▶ Nankai University, Tianjin, China, July, 2013. (Individual)
  ▶ American Mathematical Society Conference, St. Louis, MO, October, 2013. (Individual)
  ▶ University of Central Florida, Orlando, FL, November, 2013. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2013

  International
  ▷ Editorial/Board: International Journal on Finite Volumes (Associate Editor), Zentralblatt fur Mathematik (Referee: Journals)

  National

  University
  ▷ Committee/Panel: Center for Large-Scale Scientific Computing (Assistant Director)

  Department
  ▷ Committee/Panel: Postdoc Hiring Committee (Member), Undergraduate Curriculum Development Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ MATH 685. — Directed Studies (total enrollment: 1)
  ▷ MATH 691. — Research (total enrollment: 2)

  Summer
  ▷ MATH 691. — Research (total enrollment: 1)

  Fall
  ▷ MATH 251. — Engineering Mathematics III (total enrollment: 26)
  ▷ MATH 610. — Numerical Methods in Partial Differential Equations (total enrollment: 30)
  ▷ MATH 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

  Federal
Subgrid Discontinuous Galerkin Approximations of Brinkman Equation with Highly Heterogeneous Coefficients, *National Science Foundation*

**International**

Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), *King Abdullah University of Science and Technology*

**PRESENTATIONS DURING 2013**

- “Earth Sciences and Engineering,” King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, March, 2013. (Individual)
- Department of Mathematics, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia, March, 2013. (Individual)
- “Two-Scale Numerical Methods for Simulation in Highly Heterogeneous Media,” ECM2013: Second International Conference Engineering and Computational Mathematics, Hong Kong, China, December, 2013. (Individual)
- Department of Mathematics, Bogazici University, Istanbul, Turkey, December, 2013. (Individual)
- Department of Mathematics, Koc University, Istanbul, Turkey, December, 2013. (Individual)

**PUBLICATIONS DURING 2013**

• RESEARCH PROJECTS DURING 2013

Federal

▷ MCTP: Transition Points for High School and Undergraduate Mathematics Students,
National Science Foundation

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Dean for International Programs, International Programs Office, College of Science, [2013]
  ▶ Associate Department Head, Mathematics, [2012]

• SERVICE DURING 2013

  National

  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 09), Faculty Senate: International Programs Committee (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member), Graduate Instruction Committee (Member), Undergraduate Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ MATH 644. — Algebraic Topology II (total enrollment: 9)
  ▶ MATH 691. — Research (total enrollment: 1)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▶ MATH 467. — Modern Geometry (total enrollment: 18)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▶ (REN) Texas Algebraic Geometry Symposium: TAGS 2012, National Science Foundation

• PRESENTATIONS DURING 2013

  ▶ “Arithmetic, Cycles, Motives and Algebraic Geometry,” UNAM - Instituto de Matematicas, Mexico City, Mexico, February, 2013. (Individual)
  ▶ “Euler’s formula and the beauty of logarithms and zeta functions,” Tianjin University of Science and Technology Colloquium, Tianjin, China, June, 2013. (Individual)
  ▶ Beihang University, Beijing, China, June, 2013. (Individual)

“2013 Midwest Geometry Conference,” Oklahoma State University, Stillwater, OK, October, 2013. (Individual)
• SERVICE DURING 2013

  Regional
  ▷ Committee/Panel: Exam Committee High School Math Conference (Member)

  Department
  ▷ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ MATH 628. — Mathematics of Finance (total enrollment: 9)

  Summer
  ▷ MATH 664. — Seminar in Applied Mathematics (total enrollment: 18)

  Fall
  ▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 17)
  ▷ MATH 640. — Linear Algebra for Applications (total enrollment: 13)
• SERVICE DURING 2013
  
  International
  ▶ Editorial/Board: Canadian Journal of Mathematics, The Ramanujan Journal (Referee: Journals)
  
  National

• TEACHING ASSIGNMENTS DURING 2013
  
  Spring
  ▶ MATH 323.(H) — Linear Algebra I (total enrollment: 21)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▶ MATH 311. — Topics in Applied Mathematics I (total enrollment: 94)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  
  Federal
  ▶ Analytic Number Theory and Periods of Automorphic Forms, National Science Foundation

• PRESENTATIONS DURING 2013
  
  ▶ Brigham Young University, Provo, UT, September, 2013.( Invited)

• PUBLICATIONS DURING 2013
  
• SERVICE DURING 2013
  National
  Department
  ▷ Committee/Panel: Subcommittee L (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ MATH 691. — Research (total enrollment: 2)
  Summer
  ▷ MATH 691. — Research (total enrollment: 2)
  Fall
  ▷ MATH 662. — Seminar in Algebra (total enrollment: 10)
  ▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▷ Southwest Local Algebra Meeting 2014, *Department of Defense*
  ▷ New Development in Hypergeometric Equations, *National Science Foundation*
  ▷ (REN) Texas Algebraic Geometry Symposium: TAGS 2012, *National Science Foundation*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Director, Center for Approximation Theory (CAT), Mathematics, [ ]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: *SIAM Journal on Numerical Analysis* (Member)

  National
  ▶ Editorial/Board: *Proc. of 10th International Conf. on Sampling Theory and Applications, Neural Processing Letters* (Referee: Journals)

  Department
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ MATH 401. — *Advanced Engineering Mathematics* (total enrollment: 98)
  ▶ MATH 691. — *Research* (total enrollment: 1)

  Summer
  ▶ MATH 311. — *Topics in Applied Mathematics I* (total enrollment: 23)
  ▶ MATH 691. — *Research* (total enrollment: 1)

  Fall
  ▶ MATH 641. — *Analysis for Applications I* (total enrollment: 18)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▶ Localized Kernel Bases with Application to Meshless Methods, *National Science Foundation*
  ▶ Graduate Research Project for Stephen Rowe, *Sandia National Laboratories*

• PRESENTATIONS DURING 2013

  ▶ “Advances in Kernel Based Methods with Applications,” 14th International Conference on Approximation Theory, San Antonio, TX, April, 2013. (Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National

Regional
▷ Service Position: High School Mathematics Contest (Grader)

Department
▷ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 308. — Differential Equations (total enrollment: 112)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 411. — Mathematical Probability (total enrollment: 32)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 304. — Linear Algebra (total enrollment: 80)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Iterated Monodromy Groups, National Science Foundation

• PRESENTATIONS DURING 2013
▷ Geneva University, Geneva, Switzerland, March, 2013. (Individual)
▷ “Dynamics of Groups and Rational Maps,” A Workshop of the IPAM Program Interactions Between Analysis and Geometry, Los Angeles, CA, April, 2013. (Invited)
▷ “Non-Smooth Geometry,” A Workshop of the IPAM program Interactions Between Analysis and Geometry, Los Angeles, CA, April, 2013. (Invited)
“Advanced School and Workshop in Real and Complex Dynamics,” Trieste, Italy, May, 2013. (Invited)

“Geometric and Cohomological Group Theory,” Durham, United Kingdom, August, 2013. (Invited)

**PUBLICATIONS DURING 2013**


• SERVICE DURING 2013

International
▷ Editorial/Board: European Physical Journal B (Referee: Journals)

National

Department
▷ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 606. — Theory of Probability I (total enrollment: 11)
▷ MATH 685. — Directed Studies (total enrollment: 1)

Fall
▷ MATH 411. — Mathematical Probability (total enrollment: 36)
▷ MATH 619. — Applied Probability (total enrollment: 10)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Stability and Structure of Gibbs’ Measures in Mean-field Spin Glass Models, National Science Foundation

• PRESENTATIONS DURING 2013
▷ “35th Midwest Probability Colloquium,” Northwestern University, Evanston, IL, October, 2013. (Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013
  International
  ▶ Event: Interplay of Convex Geometry and Banach Space Theory (Organizer)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ MATH 689. — Special Topics in (total enrollment: 5)
  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ CAREER: Geometry of Measures in High Dimensions, National Science Foundation
  ▶ Measure-Theoretic Aspects of Convex Bodies, National Science Foundation
  ▶ Set Theory and the Geometry of Banach Spaces, National Science Foundation
  Private
  ▶ Alfred P. Sloan Fellowship, Alfred P. Sloan Foundation
  ▶ The Hierarchy of Mass Concentration on Convex Bodies, U.S. Israel Binational Science Foundation

• PRESENTATIONS DURING 2013

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International

National

University
▷ Event: Arizona Winter School on Modular Forms and Modular Curves (Co-Organizer), International Workshop on Transcendence and Number Theory (Co-Organizer)

Department
▷ Committee/Panel: FASC Science Program Committee (Member), Subcommittee T (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 416(H) — Modern Algebra II (total enrollment: 2)
▷ MATH 416. — Modern Algebra II (total enrollment: 9)
▷ MATH 654. — Algebra II (total enrollment: 16)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 3)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 19)
▷ MATH 323. — Linear Algebra I (total enrollment: 20)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Arithmetic and Transcendence of Values of Special Functions, *National Science Foundation*
▷ (REN) Southwest Center for Arithmetic Geometry, *National Science Foundation*

• PRESENTATIONS DURING 2013
“Anderson Generating Functions,” National Taiwan University, Taipei, Taiwan, January, 2013. (Invited)

“Log-algebraicity on Tensor Powers of the Carlitz Module when $n \neq q$,” National Center for Theoretical Sciences, Number Theory Seminar, Hsinchu, Taiwan, January, 2013. (Individual)

“Finite field hypergeometric Functions Related to Siegel Modular forms,” University of North Texas, Denton, TX, March, 2013. (Invited)

“Hypergeometric Functions and Mahler Measures of Polynomials,” University of Houston, Seminar on Complex Analysis and Complex Geometry, Houston, TX, March, 2013. (Individual)


“Power Sums of Polynomials and Their Hyperderivatives over Finite Fields,” Université de Versailles-Saint Quentin, Paris, France, May, 2013. (Individual)

“Log-algebraicity via Thakur’s Method and Special L-values in Positive Characteristic,” Université de Lyon, Séminaire Tournant de Théorie des Nombres, Lyon, France, June, 2013. (Individual)

“Power Sums and Special L-values in Positive Characteristic,” National Center for Theoretical Sciences, Hsinchu, Taiwan, June, 2013. (Invited)

“Special Points and L-values in Positive Characteristic,” Louisiana State University, Algebra and Number Theory Seminar, Baton Rouge, LA, October, 2013. (Individual)

“Special Values of L-series and Anderson-Thakur Polynomials,” University of Texas, Number Theory Seminar, Austin, TX, December, 2013. (Individual)

**PUBLICATIONS DURING 2013**


**JOSEPH E. PASCIAK**

**PROFESSOR**  
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- **SERVICE DURING 2013**
  
  **International**
  - Editorial/Board: *Sci. China Math.* (Referee: Journals)

  **National**

  **University**
  - Committee/Panel: Numerical Methods for PDE’s: In Occasion of Raytcho Lazarov’s 70th Birthday Organizing Committee (Member)

  **Department**
  - Committee/Panel: Subcommittee T (Member)

- **TEACHING ASSIGNMENTS DURING 2013**
  
  **Spring**
  - MATH 308.(H) — *Differential Equations* (total enrollment: 21)
  - MATH 610. — *Numerical Methods in Partial Differential Equations* (total enrollment: 28)

  **Summer**
  - MATH 685. — *Directed Studies* (total enrollment: 1)

  **Fall**
  - MATH 308. — *Differential Equations* (total enrollment: 46)

- **RESEARCH PROJECTS DURING 2013**
  
  **Federal**
  - The Development and Analysis of Sweeping Preconditioners for Scattering Problems, *National Science Foundation*, coworkers: H. Bagci (P)

  **International**
  - Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), *King Abdullah University of Science and Technology*

- **PRESENTATIONS DURING 2013**
  
  - “Variational Formulation of Problems Involving Fractional Order Differential Operators,” Numerical Methods for PDE’s: In Occasion of Raytcho Lazarov’s 70th Birthday, Texas A&M University, College Station, TX, January, 2013. (Invited)

SEC. 6.1  PROFESSIONAL ACTIVITIES  505
• PUBLICATIONS DURING 2013


• SERVICE DURING 2013
  National
  ▶ Editorial/Board: Conference Proceedings for Recent Advances in Hodge Theory (Editor), National Science Foundation (Review: Proposals), Journal of Algebraic Geometry, Proceedings of the Japanese Academy, American Journal of Mathematics (Referee: Journals)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Singularities of Normal Functions and Algebraic Cycles, National Science Foundation

• PRESENTATIONS DURING 2013
  ▶ Texas A&M University, College Station, TX, January, 2013.
  ▶ University of Kansas, Lawrence, KS, January, 2013. (Individual)
  ▶ University of Maryland, College Park, MD, January, 2013. (Individual)
  ▶ University of California, Irvine, CA, March, 2013. (Individual)
  ▶ Purdue University, West Lafayette, IN, April, 2013. (Individual)
  ▶ “Michigan Computational Algebraic Geometry Conference,” Western Michigan University, Kalamazoo, MI, May, 2013. (Invited)
  ▶ Rice University, Houston, TX, September, 2013. (Individual)
  ▶ Texas A&M University, College Station, TX, September, 2013. (Individual)
  ▶ University of Maryland, College Park, MD, September, 2013. (Individual)
  ▶ University of Miami, Coral Gables, FL, September, 2013. (Individual)
  ▶ University of Massachusetts, Amherst, MA, October, 2013. (Individual)
  ▶ Texas A&M University, College Station, TX, November, 2013. (Individual)
  ▶ University of Texas, Austin, TX, November, 2013. (Individual)

• PUBLICATIONS DURING 2013

Hired 08/16/2013.
• **SERVICE DURING 2013**

**International**

**National**

**University**
- Committee/Panel: Academic Civil Rights Investigation Committee (Member), Advance Fusit (Member), Advance Mini Grant Planning Committee (Member)

**Department**
- Committee/Panel: Awards Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**

**Spring**
- MATH 691. — Research (total enrollment: 1)

**Summer**
- MATH 691. — Research (total enrollment: 1)

**Fall**
- MATH 308. — Differential Equations (total enrollment: 139)

• **RESEARCH PROJECTS DURING 2013**

**Federal**
- ADT Collaborative Research: Theory and Algorithms for High Dimensional Learning, *National Science Foundation*
- Collaborative Research: An ADT Proposal: Fast Point Cloud Surface Reconstruction Algorithms, *National Science Foundation*
- Numerical Methods for Solving Parametric PDEs, *Office of Naval Research*

**International**
- Effective Methods and Algorithms for Geometric Modeling, *Bulgarian Science*
- Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), *King Abdullah University of Science and Technology*

**Other**
- Model Classes, Approximation, and Metrics for Dynamic Processing of Urban Terrain Data, *University of South Carolina*
• PRESENTATIONS DURING 2013
  ▶ First Year Graduate Student Seminar, Texas A&M University, College Station, TX, February, 2013. (Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National
  ▶ Editorial/Board: Ordinary Differential Equations (Book Reviewer)

College
  ▶ Committee/Panel: Diversity Committee (Member), Grievance Committee (Elected Member), Information Technology Committee (Member), Qatar Advisory Committee (Member), Technology-Mediated Instruction Committee (Member)

Department
  ▶ Committee/Panel: Engineering Mathematics Sequence (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▶ MATH 614. — Dynamical Systems and Chaos (total enrollment: 15)
  ▶ MATH 646. — A Survey of Mathematical Problems II (total enrollment: 10)
  ▶ MATH 691. — Research (total enrollment: 1)

Summer
  ▶ MATH 691. — Research (total enrollment: 1)
  ▶ MATH 696. — Mathematical Communication and Technology (total enrollment: 20)

Fall
  ▶ MATH 167. — For All Practical Purposes (total enrollment: 188)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
  ▶ Retention Through Remediation in Pre-Calculus Savings in the Thousands, National Science Foundation
• **CHAIRS/PROFESSORSHIPS**
  - Arthur George and Mary Emolene Owen Chair in Mathematics [1985]

• **SERVICE DURING 2013**
  **International**
  - Professional Affiliation: Academy of Science of Paris (Member)
  - Advisory Board: *Proceedings of Edinburgh Mathematical Society* (Member)
  - Editorial/Board: Bulletin of Polish Academy of Science (Member)
  - Committee/Panel: Sc. Committee for Conference on Banach Spaces (Member)

  **National**

• **RESEARCH PROJECTS DURING 2013**
  **Federal**
  - (REN) Special Meetings: Workshop in Analysis and Probability, *National Science Foundation*
  - (REN) Workshop in Analysis and Probability, *National Science Foundation*

• **PRESENTATIONS DURING 2013**
  - “Grothendieck’s Theorem Past and Present,” Bedlewo, Poland, April, 2013. (Individual)
  - “Quantum Expanders and Geometry of Operator Spaces and Random Matrices and Subexponential Operator Space,” Conference on Operator Spaces and Harmonic Analysis, Madrid, Spain, June, 2013. (Individual)
  - “Quantum Expanders,” Newton Institute, Cambridge, United Kingdom, September, 2013. (Individual)
  - “Grothendieck’s Inequality in the XXIst Century, The Importance of Being Exact and Quantum Expanders,” University of California, Los Angeles, CA, October, 2013. (Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013
  College
  ▷ Committee/Panel: Faculty Advisory Council (Representative-at-Large)

  Department
  ▷ Service Position: Departmental of Mathematics (Mentor)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ MATH 304. — Linear Algebra (total enrollment: 78)

  Summer
  ▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 19)
  ▷ MATH 666. — Seminar in Geometry (total enrollment: 9)

  Fall
  ▷ MATH 304. — Linear Algebra (total enrollment: 40)
  ▷ MATH 470. — Communications and Cryptography (total enrollment: 49)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▷ (REN) Texas Geometry and Topology Conference, National Science Foundation
SERVICE DURING 2013

National
▷ Editorial/Board: Various Journals (Referee: Journals)

Department
▷ Event: Analysis/PDE Working Seminar (Co-Organizer), Mathematical Physics and Harmonic Analysis Seminar (Co-Organizer)

TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 172. — Calculus (total enrollment: 72)
▷ MATH 407. — Complex Variables (total enrollment: 31)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 172. — Calculus (total enrollment: 88)
▷ MATH 617. — Theory of Functions of a Complex Variable I (total enrollment: 17)
▷ MATH 691. — Research (total enrollment: 1)

RESEARCH PROJECTS DURING 2013

Federal
▷ Completeness Problems in Harmonic Analysis and Spectral Theory, National Science Foundation, coworkers: M. Mitkovski (G), R. Rupam (G)

PRESENTATIONS DURING 2013
▷ 3rd Ohio River Analysis Meeting, University of Cincinatti, Cincinnati, OH, March, 2013.( Individual)
▷ “Hilbert Function Spaces,” Gargnano, Italy, May, 2013.( Individual)
▷ Workshop in Operator Theory, Harmonic and Complex Analysis, Lille, France, May, 2013.( Individual)
▷ 21th Annual Analysis Meeting, Euler Institute, St. Petersberg, Russia, June, 2013.( Individual)
▷ “Uncertainty Principle in Harmonic Analysis,” Clemson University, Clemson, SC, August, 2013.( Individual)
“Journées d’Analyse,” Bordeaux, France, October, 2013. (Individual)

**PUBLICATIONS DURING 2013**


• SERVICE DURING 2013

National

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 684. — Professional Internship (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 50)
▷ MATH 412(H) — Theory of Partial Differential Equations (total enrollment: 9)
▷ MATH 412. — Theory of Partial Differential Equations (total enrollment: 15)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Entropy Viscosity and L1-based Approximation of PDEs: Exploring Sparsity, Department of Defense
▷ Support of Stockpile Stewardship Program, Lawrence Livermore National Laboratory
▷ High-Order Approximation Techniques for Nonlinear Hyperbolic PDEs, National Science Foundation

International
▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2013
“Multiscale and High-Dimensional Problems,” Oberwolfach, Germany, July, 2013. (Invited)

**PUBLICATIONS DURING 2013**

• SERVICE DURING 2013

International
▷ Editorial/Board: Annales de l’Institut Fourier (Referee: Journals)

National

University
▷ Event: New Directions in Exterior Differential Systems, a Conference in Honor of Robert Bryant’s 60th Birthday (Co-Organizer), Texas Geometry and Topology Conference (Co-Organizer)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Analytic Geometry and Representation Theory, National Science Foundation
▷ Conference/Workshop New Directions in Exterior Differential Systems, National Science Foundation
▷ Hodge Theory and Representation Theory, National Science Foundation

• PRESENTATIONS DURING 2013

▷ State University of New York, Algebra Geometry and Physics Seminar, Stony Brook, NY, February, 2013. (Invited)
▷ University of Illinois, Algebraic Geometry Seminar, Chicago, IL, February, 2013. (Invited)
▷ “Workshop on Rigidity and Uniformization in Complex Geometry,” Korea Institute for Advanced Study, Seoul, Korea, April, 2013. (Invited)
▷ Washington University, Department Colloquium, St Louis, MO, May, 2013. (Invited)
▷ “Differential Geometry and its Applications,” Masaryk University, Czech Republic, August, 2013. (Invited)
▷ University of Maryland, Department Colloquium, College Park, MD, September, 2013. (Invited)
▷ Institut Fourier, Algèbre et Géométries, Saint-Martin-d’Hères, France, November, 2013. (Invited)

• PUBLICATIONS DURING 2013


*On leave.*
• SERVICE DURING 2013

International
▷ Editorial/Board: Methods in Algebraic Geometry, Frankfurt, Germany (Review: Proposals)

National
▷ Editorial/Board: *SIAM Journal, Foundations of Computational Mathematics* (Referee: Journals)

College
▷ Committee/Panel: International Programs Committee (Member)

Department
▷ Editorial/Board: Spanish Language (Examiner)
▷ Committee/Panel: Subcommittee P (Chair), Subcommittee P (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 470. — *Communications and Cryptography* (total enrollment: 55)
▷ MATH 685. — *Directed Studies* (total enrollment: 2)
▷ MATH 691. — *Research* (total enrollment: 2)

Summer
▷ MATH 691. — *Research* (total enrollment: 3)

Fall
▷ MATH 648. — *Computational Alg Geom* (total enrollment: 8)
▷ MATH 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ MCS: Randomization in Algorithmic Fewnomial Theory over Complete Fields, *National Science Foundation*, coworkers: K. Rusek (G)
▷ (REN) Texas Algebraic Geometry Symposium: TAGS 2012, *National Science Foundation*

• PRESENTATIONS DURING 2013

▷ “Algebra and Geometry,” Texas A&M University, College Station, TX, January, 2013. (Individual)
▷ “Caesar Ciphers, Math Circle Activity (for 7th-8th Graders),” Texas A&M University, College Station, TX, February, 2013. (Individual)
“Caesar Ciphers, Math Circle Activity (for 5th-6th Graders),” Texas A&M University, College Station, TX, April, 2013. (Individual)


“Bounds for Polyhedral Approximations of Complex Hypersurfaces,” University of Savoir, Chambery, France, May, 2013. (Invited)


“Algebra and Geometry,” Texas A&M University, College Station, TX, August, 2013. (Individual)

“How far are Archimedean Tropical Varieties from Amoebae?,” Conference on Applied Algebraic Geometry, Colorado State University, Fort Collins, CO, August, 2013. (Invited)

“Separating Complexity Classes by Counting Roots and Norms,” Algebraic Geometry Seminar, Texas A&M University, College Station, TX, September, 2013. (Individual)

“How (and Why) to Count Norms Tropically,” Number Theory Seminar, Texas A&M University, College Station, TX, October, 2013. (Individual)

“Some Notes on Post-Quantum Cryptography,” Applied Mathematics Undergraduate Seminar, Texas A&M University, College Station, TX, October, 2013. (Individual)

“Descartes Rule, and Faster Root Detection, over Finite Fields,” Algebraic Geometry Seminar, Texas A&M University, College Station, TX, November, 2013. (Individual)

“From Complexity to Geometry Over Local Fields,” Algebraic Geometry Seminar, University of Chicago, Chicago, IL, November, 2013. (Invited)

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013

National
  ▶ Editorial/Board: Various Journals (Referee: Journals)

University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 11)

Department
  ▶ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▶ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 26)
  ▶ MATH 662. — Seminar in Algebra (total enrollment: 10)
  ▶ MATH 691. — Research (total enrollment: 1)

Summer
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
  ▶ Braided Fusion Categories, Department of Defense
  ▶ Topological Phases of Matter and Their Application to Quantum Computing, National Science Foundation

• PRESENTATIONS DURING 2013

  ▶ Visitor Weekend and Graduate Student Seminar, Mathematics Department Texas A&M University, College Station, TX, 2013.( Invited)
  ▶ Universidad Nacional de Cordoba, Cordoba, Argentina, March, 2013.( Invited)
  ▶ Chern Institute, Nankai University, Tianjin, China, September, 2013.( Invited)
  ▶ Physics Department, Beijing Institute of Technology, Beijing, China, September, 2013.( Invited)
  ▶ Topological Quantum Computing Lab, Beijing International Center for Mathematical Research, Peking University, Beijing, China, September, 2013.( Invited)

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013

   National
   ▶ Committee/Panel: Imaging and Inverse Problems (Editoral Board), Inverse Problems (Editoral Board)

• TEACHING ASSIGNMENTS DURING 2013

   Spring
   ▶ MATH 471. — Numerical Analysis (total enrollment: 22)
   ▶ MATH 664. — Seminar in Applied Mathematics (total enrollment: 12)
   ▶ MATH 691. — Research (total enrollment: 1)

   Summer
   ▶ MATH 685. — Directed Studies (total enrollment: 2)
   ▶ MATH 691. — Research (total enrollment: 1)

   Fall
   ▶ MATH 470 — Communications and Cryptography (total enrollment: 67)
   ▶ MATH 470.(H) — Communications and Cryptography (total enrollment: 3)
   ▶ MATH 491. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

   Federal
   ▶ Uniqueness and Reconstructions Methods for Inverse Problems, National Science Foundation

   International
   ▶ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2013

   ▶ King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, February, 2013. (Individual)
   ▶ “Inverse Problems: Scattering, Tomography and Parameter Identification,” Baden- Wurtemberg, Germany, April, 2013. (Invited)
“Inverse Problems and Regularization Theory,” Fudan University, Shanghai, China, September, 2013. (Individual)

- **PUBLICATIONS DURING 2013**
JANE F. SCHIELACK

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• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Associate Dean for Assessment and PreK-12 Education, Assessment and PreK-12 Education Office, College of Science, [2006]
  ▷ Co-Director, Center for Mathematics and Science Education (CMSE), College of Science, [2006]

• SERVICE DURING 2013

  National
  ▷ Editorial/Board: Developing Essential Understanding of Geometry for Teaching Mathematics in Grades 3-5, National Council of Teachers of Mathematics (Reviewer), School Science and Mathematics Journal, National Council of Teachers of Mathematics Teaching Children Mathematics (Referee: Journals)

  State
  ▷ Committee/Panel: Conference for the Advancement of Mathematics Teaching Executive Board, MAA Representative (Member), Texas Algebra Ready (TXAR) Project Steering Committee (Member), Texas K-8 Mathematics Professional Development Advisory Committee (Chair)

  University
  ▷ Committee/Panel: ADVANCE Conference Planning Committee (Member), Faculty Development Leave Committee (Member), Institutional Assessment Advisory Committee (Member), LEAP (Liberal Education and America’s Promise) Texas Initiative, Association of American Colleges and Universities (AAC&U) (Representative), Quality Enhancement Plan Committee (Member)

  College
  ▷ Event: Emerging Leaders Grand Challenge (Representative), Science Ed Policy, Promotion, and Tenure Committee (Chair), STEM Council (Representative)
  ▷ Committee/Panel: Executive Committee (Member), Technology-Mediated Instruction Committee (Member)

  Department
  ▷ Committee/Panel: Women in Math Planning Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Fall
  ▷ MATH 365. — Structure of Mathematics I (total enrollment: 45)

• RESEARCH PROJECTS DURING 2013

  Federal

SEC. 6.1 PROFESSIONAL ACTIVITIES 525
Virtual Ecological Inquiry (VEI) - A Virtual Environment for Inquiry-Based Learning and Education Research, National Science Foundation

State

- TEKS Mathematics Professional Development & Texas Response to Curriculum Focal Points, Region XII

• PRESENTATIONS DURING 2013

  - “Development of Fractions in the Common Core State Standards,” Ohio Common Core Symposium, Columbus, OH, February, 2013. (Invited)
  - “Using Professional Learning Communities to Strengthen Math Content Knowledge,” Southern Methodist University, Dallas, TX, February, 2013. (Invited)
  - “Designing Questions to Encourage and Assess Mathematical Thinking,” Arabic Educational Research Center’s 5th Annual Conference, Dubai, April, 2013. (Individual)
VINCENT P. SCHIELACK

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• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Undergraduate Advisor, University Studies Undergraduate Advising, Math/Teaching, University Studies, [2011]

• AWARDS DURING 2013
  University
  ▶ Member, Chancellor’s Academy of Teacher Educators

• SERVICE DURING 2013
  National
  ▶ Event: South Florida Regional Science Bowl (Moderator and Official), We’ve Got Your Number, National Science Olympiad (Coordinator)
  ▶ Advisory Board: Advisory Committee, U.S. Department of Energy National Science Bowl (Member)
  ▶ Editorial/Board: U.S. Department of Energy National Science Bowl (Reviewer)
  ▶ Committee/Panel: Advisory Committee to the Committee on the American Mathematics Competitions (Representative), American Mathematics Competition (Panelist)

  State
  ▶ Advisory Board: Texas Academy of Science Board of Directors (Member)
  ▶ Committee/Panel: Conference for the Advancement of Mathematics Teaching Board of Directors (Member)

  University
  ▶ Committee/Panel: Council on Teacher Education (Member), STEM Teacher Education Council (Member)

  College
  ▶ Event: Texas A&M University Regional Junior Science Bowl (Regional Coordinator), Texas A&M University Regional Science Bowl (Regional Coordinator), Texas Junior Academy of Science (State Director and Judge), Texas Junior Science and Humanities Symposium (Committee Member and Judge), Texas Science Olympiad (Committee Member and Official), U.S. Department of Energy National Science Bowl (Moderator and Official)

  Department
  ▶ Service Position: Future Aggie Mathematics Educators (Faculty Advisor), Mathematics Teaching Field Advisor for Secondary Students (Advisor)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
EDCI 691. — Research (total enrollment: 2)
MATH 366. — Structure of Mathematics II (total enrollment: 84)
MATH 376. — Intermediate Abstract Algebra (total enrollment: 5)
MATH 403. — Mathematics and Technology (total enrollment: 31)

Summer
EDCI 691. — Research (total enrollment: 2)
MATH 367. — Basic Concepts of Geometry (total enrollment: 19)

Fall
EDCI 691. — Research (total enrollment: 2)
MATH 366. — Structure of Mathematics II (total enrollment: 51)
MATH 367. — Basic Concepts of Geometry (total enrollment: 45)
MATH 375. — Intermediate Real Analysis (total enrollment: 4)
MATH 403. — Mathematics and Technology (total enrollment: 18)

• PRESENTATIONS DURING 2013
  “CATE Academy Member Panel on Best Practices,” Chancellor’s Summit on Teacher Education, Austin, TX, September, 2013.( Invited)
  “Fermi Questions/ We’ve Got Your Number,” Texas Science Olympiad Coaches’ Clinic, November, 2013.( Individual)
• SERVICE DURING 2013

International

National

College
▷ Committee/Panel: Research Advisory Committee (Member), Tenure and Promotion Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 691. — Research (total enrollment: 2)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 2)

Fall
▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 148)
▷ MATH 607. — Real Variables I (total enrollment: 17)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Banach Spaces: Theory and Applications, National Science Foundation
▷ (REN) Banach Spaces: Theory and Applications, National Science Foundation

• PUBLICATIONS DURING 2013


No report received from faculty member.
• SERVICE DURING 2013

  Department
  ▷ Service Position: Undergraduate Students (Mentor)
  ▷ Committee/Panel: Awards Committee (Member), Library Committee (Member), Speakers Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ MATH 172(H) — Calculus (total enrollment: 12)
  ▷ MATH 172. — Calculus (total enrollment: 12)
  ▷ MATH 221. — Several Variable Calculus (total enrollment: 60)

  Fall
  ▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 72)
  ▷ MATH 615. — Introduction to Classical Analysis (total enrollment: 15)
• SERVICE DURING 2013

International

National

Department
▷ Committee/Panel: Space Committee (Chair), Speakers Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 172. — Calculus (total enrollment: 66)
▷ MATH 411. — Mathematical Probability (total enrollment: 50)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 154)
▷ MATH 411. — Mathematical Probability (total enrollment: 46)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Perturbations of Operator Algebras and Related Topics, National Science Foundation
▷ Studies in Operator Algebras, National Science Foundation

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013

International


National


▷ Committee/Panel: American Institute of Mathematics Open-Source Textbook Initiative (Editorial Board)

University

▷ Event: BIRS Conference on Algebraic Geometry and Geometric Modeling (Co-Organizer), SIAM Minisymposium on Approximation Theory, Geometric Modeling, and Algebraic Geometry (Co-Organizer), Tutorials on Applicable Algebraic Geometry (Co-Organizer)

▷ Committee/Panel: Nominating Committee, SIAM Activity Group on Algebraic Geometry (Member)

Department

▷ Committee/Panel: Executive Committee (Member), Outreach Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring

▷ MATH 691. — Research (total enrollment: 1)

Summer

▷ MATH 691. — Research (total enrollment: 2)

Fall

▷ MATH 221. — Several Variable Calculus (total enrollment: 72)

▷ MATH 653. — Algebra I (total enrollment: 24)

• RESEARCH PROJECTS DURING 2013
Federal
▷ Applications and Combinatorics in Algebraic Geometry, National Science Foundation
▷ Numerical Real Algebraic Geometry, National Science Foundation
▷ (REN) Texas Algebraic Geometry Symposium: TAGS 2012, National Science Foundation

• PRESENTATIONS DURING 2013
▷ “Combinatorial Algebra and Algebraic Combinatorics,” Fields Institute, Toronto, Canada, January, 2013. (Invited)
▷ “Computational Algebraic and Analytic Geometry for Low-Dimensional Varieties,” AMS Special Session, January, 2013. (Invited)
▷ MSRI Commutative Algebra Colloquium, January, 2013. (Individual)
▷ Representation Theory Seminar, University of California, Berkeley, CA, January, 2013. (Individual)
▷ Commutative Algebra and Algebraic Geometry, University of California, Berkeley, CA, February, 2013. (Individual)
▷ Computational Algebraic Geometry Afternoon, University of California, Berkeley, CA, February, 2013. (Individual)
▷ Santa Clara University, Santa Clara, CA, February, 2013. (Individual)
▷ University of California, Berkeley, CA, March, 2013. (Individual)
▷ “AlGeoCom,” Indiana University - Purdue University Indianapolis, Indianapolis, IN, April, 2013. (Invited)
▷ Algebra and Discrete Mathematics Seminar, University of California, Davis, CA, April, 2013. (Individual)
▷ Algebra-Geometry-Combinatorics Seminar, San Francisco State University, San Francisco, CA, April, 2013. (Individual)
▷ Algebraic Geometry Seminar, Stanford, CA, May, 2013. (Individual)
▷ Algebraic Geometry Seminar, Texas A&M University, College Station, TX, September, 2013. (Individual)
▷ Algebraic Geometry Seminar, University of Chicago, Chicago, IL, October, 2013. (Individual)
▷ Applied Mathematics Seminar, University of Wisconsin, Madison, WI, October, 2013. (Individual)
▷ University of Wisconsin, Madison, WI, October, 2013. (Individual)
• PUBLICATIONS DURING 2013
Michael J. Stecher

Associate Professor (979) 845-3269
MATH-Partial Differential Equations stecher@math.tamu.edu

- **Additional University Titles Held During 2013**
  - Undergraduate Advisor, University Studies Undergraduate Advising, Math/Pre-Professional, University Studies, [2011]
  - Undergraduate Advisor, University Studies Undergraduate Advising, Math/Business, University Studies, [2011]
  - Undergraduate Advisor, Mathematics Undergraduate Advising Office, Mathematics, [1990]

- **Service During 2013**
  - Regional
    - Event: Annual High School Mathematics Contest (Supervisor)
  - Department
    - Committee/Panel: Subcommittee L (Member), Undergraduate Programs Committee (Member)

- **Teaching Assignments During 2013**
  - **Spring**
    - MATH 170. — **Freshman Mathematics Laboratory** (total enrollment: 78)
    - MATH 172. — **Calculus** (total enrollment: 68)
    - MATH 419. — **Applications of Actuarial Science** (total enrollment: 3)
    - MATH 425. — **The Mathematics of Contingent Claims** (total enrollment: 35)
  - **Summer**
    - MATH 485. — **Directed Studies** (total enrollment: 1)
  - **Fall**
    - MATH 170. — **Freshman Mathematics Laboratory** (total enrollment: 197)
    - MATH 221. — **Several Variable Calculus** (total enrollment: 58)
    - MATH 285. — **Directed Studies** (total enrollment: 19)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Professor (J), Computer Science and Engineering, [1993]

• SERVICE DURING 2013
  National
  ▷ Editorial/Board: Air Force Office of Scientific Research (Reviewer), Various Journals (Referee: Journals), Pacific Journal of Mathematics (Referee: Journals)
  Department
  ▷ Committee/Panel: Teaching Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ MATH 433. — Applied Algebra (total enrollment: 35)
  Summer
  ▷ MATH 423. — Linear Algebra II (total enrollment: 15)
  Fall
  ▷ MATH 304. — Linear Algebra (total enrollment: 86)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▷ Algebro-Geometric Methods in Object Recognition and Shape Reconstruction Across Multiple Sensor Types, Department of Defense

• PRESENTATIONS DURING 2013
  ▷ “Object/Image Equations for Object Recognition, Shape Analysis, and Statistics,” SIAM Conference on Applied Algebraic Geometry (AG13), Session on Applications to Image Processing and Shape Analysis, Fort Collins, CO, August, 2013.( Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Department Head, Mathematics, [2011]

• SERVICE DURING 2013

  International

  National

  University
  ▶ Editorial/Board: Florida International University of Mathematics Program (Reviewer)
  ▶ Committee/Panel: Council of Principal Investigators (Member), Mathematical Sciences Research Institute (Sub)committee (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ MATH 691. — Research (total enrollment: 2)

  Summer
  ▶ MATH 691. — Research (total enrollment: 2)

  Fall
  ▶ MATH 691. — Research (total enrollment: 2)

• PRESENTATIONS DURING 2013
  ▶ “Several Complex Variables and Partial Differential Equations,” Serra Negra, Brazil, August, 2013. (Invited)
“Several Complex Variables and CR Geometry,” Temple University, Philadelphia, PA, October, 2013. (Invited)
ZORAN SUNIK
ASSOCIATE PROFESSOR (979) 845-7554
MATH-Group Theory & Generalizations sunik@math.tamu.edu

- SERVICE DURING 2013
  International
  
  National
  ▶ Editorial/Board: *Groups, Geometry and Dynamics* (Editor), *Physica D: Nonlinear Phenomena, Groups, Geometry, and Dynamics* (Referee: Journals)
  
  Department
  ▶ Event: Groups and Dynamics Seminar (Organizer)
  ▶ Committee/Panel: Honors Committee (Member), Outreach Committee (Member), Subcommittee T (Member)

- TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 28)
  ▶ MATH 685. — *Directed Studies* (total enrollment: 3)
  
  Summer
  ▶ MATH 685. — *Directed Studies* (total enrollment: 3)
  
  Fall
  ▶ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 23)
  ▶ MATH 490. — The Putnam Challenge (total enrollment: 4)
  ▶ MATH 636. — Topology I (total enrollment: 27)
  ▶ MATH 685. — *Directed Studies* (total enrollment: 3)

- RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Self-Similar Groups of Rooted Tree Automorphisms, *National Science Foundation*

- PRESENTATIONS DURING 2013
  ▶ “Arbeitsgemeinschaft: Sofic Entropy,” Oberwolfach, Germany, October, 2013.( Invited)

- PUBLICATIONS DURING 2013


• TEACHING ASSIGNMENTS DURING 2013

Fall
▷ MATH 308. — Differential Equations (total enrollment: 100)

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013
  
  International
  ▶ Editorial/Board: *International Journal of Number Theory* (Editor)

  National
  ▶ Editorial/Board: *Journal of Algebra, Conference Proceedings of Lahore Meeting, Algebra and Number Theory* (Referee: Journals)

  Department
  ▶ Committee/Panel: Steering Committee, Women in Mathematics (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ MATH 304. — *Linear Algebra* (total enrollment: 80)

  Fall
  ▶ MATH 304. — *Linear Algebra* (total enrollment: 44)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▶ Transcendence on Moduli Spaces, *Department of Defense*
THOMAS I. VOGEL
ASSOCIATE PROFESSOR
MATH-Geometric Analysis
tvogel@math.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Undergraduate Advisor, Mathematics Undergraduate Advising Office, Mathematics, [2012]

• SERVICE DURING 2013

  International
  ▷ Editorial/Board: European Journal of Applied Mathematics (Referee: Journals)

  National
  ▷ Editorial/Board: Journal of Geometry and Physics, Pacific Journal of Mathematics, Physics of Fluids (Referee: Journals)

  University
  ▷ Committee/Panel: University Honor Council (Member)

  Department
  ▷ Service Position: Department of Mathematics (Ombudsman)
  ▷ Event: MathCounts Contest (Volunteer)
  ▷ Committee/Panel: Teaching Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ MATH 309. — Linear Algebra for Differential Equations (total enrollment: 27)
  ▷ MATH 469. — Introduction to Mathematical Biology (total enrollment: 11)

  Fall
  ▷ MATH 309. — Linear Algebra for Differential Equations (total enrollment: 63)

• PRESENTATIONS DURING 2013

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013
  
  National
  ▷ Editorial/Board: *Journal of Modern Dynamics* (Referee: Journals)

  Department
  ▷ Committee/Panel: Award Committee of the Mathematics Competition for Young Mathematicians (Member), Postdoc Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  
  Spring
  ▷ MATH 323. — *Linear Algebra I* (total enrollment: 36)

  Fall
  ▷ MATH 409. — *Advanced Calculus I* (total enrollment: 47)

• PRESENTATIONS DURING 2013
  
  ▷ Rice Dynamics Meetings, Rice University, Houston, TX, May, 2013. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Professor (J), Aerospace Engineering, [2012]
  ▷ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2008]
  ▷ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2013

  International

  National
  ▷ Committee/Panel: Board of Directors, Society of Engineering Science (Member)

  University
  ▷ Committee/Panel: ABCS Steering Committee (Member), Institute for Applied Mathematics and Computational Science (Deputy Director)

  Department
  ▷ Event: Applied Mathematics Seminar (Organizer), IAMCS-KAUST Seminar (Organizer)
  ▷ Committee/Panel: Undergraduate Programs Committee (Member)

  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Ecological and Evolutionary Biology (Member)

• TEACHING ASSIGNMENTS DURING 2013
Spring

▷ BIOL 285. — Directed Studies (total enrollment: 11)
▷ MATH 285. — Directed Studies (total enrollment: 8)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 4)

Summer

▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 2)

Fall

▷ BIOL 285. — Directed Studies (total enrollment: 10)
▷ MATH 285. — Directed Studies (total enrollment: 3)
▷ MATH 604. — Mathematical Foundations of Continuum Mechanics (total enrollment: 6)
▷ MATH 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2013

Federal

▷ IGERT: New Mathematical Tools for Next Generation Materials, National Science Foundation
▷ (REN) REU Site: Undergraduate Research in Mathematical Sciences and Its Applications, National Science Foundation
▷ (REN) UBM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation

International

▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2013

▷ Scuola Internazionale Superiore di Studi Avanzati, Trieste, Italy, April, 2013.(Individual)
▷ 50th Annual Meeting of the Society of Engineering Science, SES Medal Symposium, Providence, RI, August, 2013.( Invited)
▷ “Chemotactic Modeling of Inflammatory Type Diseases,” Internation Conference on Mathematical Modeling and Analysis of Populations in Biological Systems IV, Lubbock, TX, October, 2013.( Invited)
▷ University of Houston, Houston, TX, November, 2013.( Individual)

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013

National

Department
▷ Committee/Panel: Committee P (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 414. — **Fourier Series and Wavelets** (total enrollment: 35)
▷ MATH 423(H) — **Linear Algebra II** (total enrollment: 2)
▷ MATH 423. — **Linear Algebra II** (total enrollment: 20)

Fall
▷ MATH 304. — **Linear Algebra** (total enrollment: 39)
▷ MATH 691. — **Research** (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Localized Kernel Bases with Application to Meshless Methods, *National Science Foundation*

• PRESENTATIONS DURING 2013

▷ “Computationally Efficient, Highly Localized Kernel Bases on Manifolds,” Approximation Theory and Applications, City University of Hong Kong, Hong Kong, 2013. (Individual)
▷ “Local Bases, Kernel Quadrature and Meshless Galerkin Methods of $S^2$,” Meshfree Methods for PDEs, Bonn University, Bonn, Germany, September, 2013. (Individual)

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013

International

National
▷ Editorial/Board: *Journal of Noncommutative Geometry, Symmetry, Integrability and Geometry: Methods and Applications, Transformation Groups, AMS Mathematical Reviews* (Referee: Journals), *Quaestiones Mathematicae* (Member)
▷ Committee/Panel: AMS Centennial Fellowship Committee (Member), AMS Graduate Student Travel Grants Panel (Member)

Department
▷ Event: Algebra and Combinatorics Seminar (Co-Organizer)
▷ Committee/Panel: Executive Committee (Member), Maxson Lectures Committee (Member), Subcommittee L (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 22)
▷ MATH 415 — Modern Algebra I (total enrollment: 1)
▷ MATH 415.(H) — Modern Algebra I (total enrollment: 15)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Southwest Local Algebra Meeting 2014, *Department of Defense*
▷ Collaborative Research: Cohomology, Deformations, and Representations of Algebras, *National Science Foundation*

• PRESENTATIONS DURING 2013

Noncommutative Algebraic Geometry and Representation Theory Seminar, Berkeley, CA, March, 2013. (Individual)

“Algebra and Discrete Mathematics Seminar,” University of California, Davis, CA, April, 2013. (Individual)

“Algebra Seminar,” University of Southern California, Los Angeles, CA, April, 2013. (Individual)

“Graduate Student Algebra and Discrete Mathematics Seminar,” University of California, Davis, CA, April, 2013. (Individual)

“Interactions Between Noncommutative Algebra, Representation Theory, and Algebraic Geometry,” MSRI Workshop, Berkeley, CA, April, 2013. (Invited)

San Jose State University, San Jose, CA, April, 2013. (Individual)

University of California, Berkeley, CA, April, 2013. (Individual)


“Group Theory Seminar,” University of Chicago, Chicago, IL, May, 2013. (Individual)


“Algebra and Combinatorics Seminar,” Texas A&M University, College Station, TX, October, 2013. (Individual)

“Recent Developments in Noncommutative Algebra,” AMS Special Session, Temple University, Philadelphia, PA, October, 2013. (Invited)

“Hopf Working Seminar,” University of Southern California, Los Angeles, CA, November, 2013. (Individual)

University of Texas, Arlington, TX, November, 2013. (Individual)
• SERVICE DURING 2013

National

University
▷ Event: 11th Annual Spring Institute on Noncommutative Geometry and Operator Algebras (Co-Organizer), Noncommutative Geometry Seminar (Co-Organizer), Noncommutative Geometry Seminar (Co-Organizer)

• TEACHING ASSIGNMENTS DURING 2013

Fall
▷ MATH 601. — *Methods of Applied Mathematics I* (total enrollment: 29)

• PRESENTATIONS DURING 2013

▷ “Discrete Geometry and Dynamical Systems Conference,” Kyoto University, Japan, January, 2013. (Invited)
▷ “Summer School on Noncommutative Geometry and Operator Algebras,” Fudan University, Shanghai, China, July, 2013. (Invited)
▷ “Concentration week in Dynamics, Geometry, and Operator Algebras,” Texas A&M University, College Station, TX, August, 2013. (Invited)
▷ Oberwolfach Workshop on Noncommutative Geometry, Oberwolfach, Germany, September, 2013. (Invited)
▷ ECOAS, University of Cincinnati, Cincinnati, OH, October, 2013. (Invited)
▷ Wabash Conference, Indiana University - Purdue University Indianapolis, Indianapolis, IN, October, 2013. (Invited)
▷ “Further Development of Atiyah-Singer Index Theorem and K-theory,” Kyoto University, Japan, December, 2013. (Invited)

• PUBLICATIONS DURING 2013


_Hired 08/16/2013._
Catherine Huafei Yan

Professor (979) 845-7554
cyan@math.tamu.edu

• SERVICE DURING 2013

National

Department
  ▶ Event: Algebra and Combinatorics Seminar (Co-Organizer)
  ▶ Committee/Panel: Algebra/Combinatorics/Number Theory Group (Chair), Space Committee (Member), Subcommittee T (Member)

• RESEARCH PROJECTS DURING 2013

Federal
  ▶ A Novel Approach in Enumerative Combinatorics, Department of Defense
  ▶ Problems in Enumerative Combinatorics and Applications, National Science Foundation

International
  ▶ Crossings and Nestings in Combinatorial Structures, Qatar National Research Fund

• PRESENTATIONS DURING 2013

  ▶ “Algebra and Combinatorial Seminar,” Texas A&M University, College Station, TX, February, 2013. (Individual)
  ▶ “Bijective and Algebraic Combinatorics,” Conference in Honor of Bruce Sagan’s 60th Birthday, March, 2013. (Invited)
  ▶ Combinatex Texas 2013, University of Houston-Downtown, Houston, TX, April, 2013. (Individual)
  ▶ “Combinatorics Seminar,” University of California, San Diego, CA, May, 2013. (Individual)

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013

National
▷ Committee/Panel: MAA Student Chapter (Faculty Advisor)

University
▷ Service Position: Pi Mu Epsilon (Faculty Advisor)

Department
▷ Event: Physics Festival (Participant)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 88)
▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 44)

Fall
▷ MATH 151(H) — Engineering Mathematics I (total enrollment: 45)
▷ MATH 151. — Engineering Mathematics I (total enrollment: 393)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Collaborative Proposal: Maplets for Calculus, National Science Foundation, coworkers: M. Barry (G), F. Doe (G)

• PRESENTATIONS DURING 2013

▷ “Collaborative Research: Maplets for Calculus (M4C) – Evaluation and Assessment,” MAA Poster Session on Projects Supported by the NSF Division of Undergraduate Education, San Diego, CA, January, 2013.(Poster Invited)

▷ “Collaborative Research: Maplets for Calculus (M4C) – New Developments,” MAA Poster Session on Projects Supported by the NSF Division of Undergraduate Education, San Diego, CA, January, 2013.(Poster Invited)


▷ “SIGMAA on Math Circles for Students and Teachers Poster and Activity Session,” AMS/MAA Joint Mathematics Meetings, San Diego, CA, January, 2013.(Poster Invited)

▷ “MathLex: A Tool for Developing Web Resources with Free-Response Mathematics,” 25th International Conference on Technology in Collegiate Mathematics, Boston, MA, March,
2013. (Invited)


▷ “Maplets for Calculus Expands Offerings in Precalculus, Calculus and Differential Equations,” General Contributed Paper Session: Teaching Calculus, Hartford, CT, August, 2013. (Contributed)
• SERVICE DURING 2013

International

National
▷ Editorial/Board: Compositio, American Journal of Math, Transactions of the AMS, American Mathematical Monthly, Advances in Mathematics (Referee: Journals)

Department
▷ Event: Number Theory Seminar (Participant), Working Seminar in Number Theory (Organizer)
▷ Committee/Panel: Executive Committee (Member), Graduate Committee (Member), Maxson Lecturer Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 76)
▷ MATH 627. — Theory of Numbers (total enrollment: 5)

Fall
▷ MATH 407. — Complex Variables (total enrollment: 25)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Families of L-Functions and Automorphic Forms, National Science Foundation

• PRESENTATIONS DURING 2013

▷ “AMS Southeastern Sectional Meeting,” Northwestern University, Evanston, IL, 2013.(Invited)
▷ Northwestern University, Evanston, IL, March, 2013.(Invited)

• PUBLICATIONS DURING 2013


• CHAIRS/PROFESSORSHIPS
  ▷ Thomas W. Powell ’62 Chair in Mathematics [2012]

• SERVICE DURING 2013

  International
  ▷ Editorial/Board: Kyoto Journal of Mathematics (Member), The Netherlands Organisation for Scientific Research, European Research Council, French National Research Agency (Review: Proposals)

  National
  ▷ Committee/Panel: Centennial Fellowship Committee (Member)

  University
  ▷ Event: China-Japan Conference on Noncommutative Geometry and K-theory (Organizer), Concentration Week on Dynamics, Geometry and Operator Algebras (Organizer), International Conference on Operator Theory and Operator Algebras in honor of Professor Ronald Douglas’ 75th Birthday (Organizer), The Eleventh Spring School on Noncommutative Geometry (Organizer), Workshop on Noncommutative Geometry (Organizer)
  ▷ Committee/Panel: Scientific Committee (Member)

  Department
  ▷ Committee/Panel: Endowed Professorship Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ MATH 622. — Differential Geometry I (total enrollment: 15)
  ▷ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▷ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▷ Operator K-theory and it’s Applications to Geometry and Topology, National Science Foundation
• PRESENTATIONS DURING 2013
  ▶ Purdue University, West Lafayette, IN, March, 2013. (Individual)
  ▶ Courant Institute, New York University, New York, NY, April, 2013. (Individual)
  ▶ “Noncommutative Geometry and Quantum Groups,” Fields Institute, Canada, June, 2013. (Invited)
  ▶ “Operator Algebras,” Eastern Normal China University, China, June, 2013. (Invited)
  ▶ Modern Analysis Conference in honor of Professor Chen Junkun, Shanghai, China, June, 2013. (Invited)
  ▶ “Summer School on Noncommutative Geometry,” Fudan University, China, July, 2013. (Individual)
  ▶ International Conference on Operator Theory and Operator Algebras in Honor of Professor Ronald Douglas’ 75th Birthday, Shanghai, China, July, 2013. (Invited)
  ▶ Middle Tennessee State University, Murfreesboro, TN, November, 2013. (Individual)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National
▷ Editorial/Board: Journal of Dynamical and Control Systems (Referee: Journals)

Regional
▷ Event: Mathematical Tournament, Summer Mathematics Research Training High School (Organizer)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ MATH 309. — Linear Algebra for Differential Equations (total enrollment: 37)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 433. — Applied Algebra (total enrollment: 26)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 46)
▷ MATH 491.(H) — Research (total enrollment: 1)
▷ MATH 666. — Seminar in Geometry (total enrollment: 7)

• PRESENTATIONS DURING 2013

▷ University of Texas, Dallas, TX, February, 2013. (Individual)
▷ Australian National University, Acton, Australia, May, 2013. (Individual)
▷ 12th Conference on Differential Geometry and its Application, Brno, Czech Republic, August, 2013. (Invited)
▷ “51st Annual Allerton Conference on Communication, Control, and Computing,” University of Illinois, Champaign, IL, October, 2013. (Invited)

• PUBLICATIONS DURING 2013

• SERVICE DURING 2013

National
▷ Editorial/Board: NSF CDS&E Program (Review: Proposals), Various Journals (Referee: Journals)

University
▷ Service Position: Texas A&M University Chinese Student and Scholar Association (Advisor)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ BIOL 111. — Introductory Biology I (total enrollment: 48)
▷ MATH 308. — Differential Equations (total enrollment: 168)
▷ MATH 685. — Directed Studies (total enrollment: 2)

Summer
▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 16)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 651. — Optimization I (total enrollment: 13)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Computational Theory and Methods for Solving Differential Multiple Solution Problems, National Science Foundation

• PRESENTATIONS DURING 2013


- **PUBLICATIONS DURING 2013**
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Professor (J), Statistics, [1988]

• **SERVICE DURING 2013**
  **International**
  ▶ Editorial/Board: *Bernoulli* (Referee: Journals)

  **National**

• **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
  ▶ MATH 220(H) — *Fundamentals of Discrete Mathematics* (total enrollment: 14)
  ▶ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 17)
  ▶ MATH 691. — *Research* (total enrollment: 2)

  **Summer**
  ▶ MATH 691. — *Research* (total enrollment: 2)

  **Fall**
  ▶ MATH 220(H) — *Fundamentals of Discrete Mathematics* (total enrollment: 10)
  ▶ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 20)
  ▶ MATH 691. — *Research* (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2013**
  **Federal**
  ▶ Functional Depth and Quantiles Limit Theory, Comparisons and Applications, *National Science Foundation*
  ▶ (REN) Workshop in Analysis and Probability, *National Science Foundation*

• **PUBLICATIONS DURING 2013**
7. Research Activity, 2013

This section contains information on all funded research activity for the calendar year 2013. Information was initially reported by faculty and verified whenever possible through the granting agency. Because of calculations and rounding there is a small margin of error.

*Information reported by faculty:*

- Title
- Granting Agency
- PIs, Co-PIs, and co-workers (internal/external)
- Total Funding
- Indirect Costs
- Start & End Dates

*Calendar year calculations:*

- Total - Indirect = Direct
- # Days Total Grant = End Date - Start Date
- Daily Grant Award = Total Funding Reported / # Days Total Grant
- Grant Award for 2013 = # Days 2013 × Daily Grant Award
7.1 Summary of Research Support, 2013

## Federal Agencies

### Battelle - Pacific Northwest National Laboratory

<table>
<thead>
<tr>
<th>Grantee Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
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- **Subtotal: Battelle - Pacific Northwest National Laboratory** 31,726 0 31,726

### Department of Defense

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<tr>
<th>Grantee Title</th>
<th>Start</th>
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<th>Direct</th>
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<th>Total</th>
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<tbody>
<tr>
<td>DeVore, R.A. (REN) Computation and Learning in High Dimensions</td>
<td>5/1/2012</td>
<td>5/31/2015</td>
<td>38,416</td>
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<td>Guermond, J. Entropy Viscosity and L1-based Approximation of PDEs: Exploring Sparsity, (with: J. Guermond, B. Popov)</td>
<td>7/1/2012</td>
<td>6/30/2013</td>
<td>85,299</td>
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<td>Matushevich, L.F. Southwest Local Algebra Meeting 2014, (with: L. Matushevich, S. Witherspoon)</td>
<td>2/1/2013</td>
<td>1/31/2014</td>
<td>6,797</td>
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<td>Popov, B. Entropy Viscosity and L1-based Approximation of PDEs: Exploring Sparsity, (with: J. Guermond, B. Popov)</td>
<td>7/1/2012</td>
<td>6/30/2013</td>
<td>85,299</td>
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<td>Rowell, E.C. Braided Fusion Categories</td>
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<td>1/31/2014</td>
<td>20,437</td>
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<td>Stiller, P.F. Algebro-Geometric Methods in Object Recognition and Shape Reconstruction Across Multiple Sensor Types</td>
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<td>33,809</td>
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<td>Witherspoon, S. Southwest Local Algebra Meeting 2014, (with: L. Matushevich, S. Witherspoon)</td>
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<td>Yan, C. A Novel Approach in Enumerative Combinatorics</td>
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- **Subtotal: Department of Defense** 314,747 40,360 355,107

### Department of Energy

566 2013 Mathematics Annual Report
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<td>Efendiev, Y.R.</td>
<td>Bayesian Uncertainty Quantification in Predictions of Flows in Highly Heterogeneous Media and its Applications to the CO2 Sequestration, (with: Y. Efendiev, B. Mallick)</td>
<td>9/1/2010</td>
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- **Subtotal: Department of Energy**
  93,739  8,926  102,665

- **Fund for the Improvement of Postsecondary Education**

  Efendiev, Y.R. Improving Research and Educational Activities in Multifunctional Nanomaterials, (with: A. Belyanin, Y. Efendiev, K. Rajagopal, A. Sokolov) | 10/1/2010     | 9/30/2013   | 11,150 | 0       | 11,150 |

  Rajagopal, K. Improving Research and Educational Activities in Multifunctional Nanomaterials, (with: A. Belyanin, Y. Efendiev, K. Rajagopal, A. Sokolov) | 10/1/2010     | 9/30/2013   | 11,150 | 0       | 11,150 |

  - **Subtotal: Fund for the Improvement of Postsecondary Education**
    22,301  0   22,301

- **Lawrence Livermore National Laboratory**


  Popov, B. Support of Stockpile Stewardship Program, (with: J. Guermond, B. Mallick, B. Popov) | 9/1/2008     | 6/30/2014   | 50,371 | 0       | 50,371 |

  - **Subtotal: Lawrence Livermore National Laboratory**
    100,741  0   100,741

- **National Science Foundation**

  Aguiar, M. Combinational Hopf Algebras and Algebraic Combinatorics | 8/1/2010     | 7/31/2014   | 30,944 | 13,647  | 44,591 |

  Allen, G. Preservice Teachers Knowledge for Teaching Algebra | 9/1/2010     | 8/31/2015   | 177,874| 0       | 177,874|


  Anshelevich, M. Applications of Polynomial Families and Free Probability | 9/1/2009     | 8/31/2013   | 12,557 | 4,847   | 17,404 |

  Anshelevich, M. Free Probability, Polynomial Families, and Applications | 9/1/2012     | 8/31/2015   | 28,026 | 0       | 28,026 |

SEC. 7. RESEARCH ACTIVITY 567
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<td>Space and Time Adaptivity for Moving and Free Boundary Problems</td>
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* Subtotal: National Science Foundation | 4,689,982 | 339,329 | 5,029,311 |

** Office of Naval Research **


* Subtotal: Office of Naval Research | 102,647 | 0 | 102,647 |

** Sandia National Laboratories **

| Narcowich, F.J. | Graduate Research Project for Stephen Rowe, (with: F. Narcowich, C. Ward) | 8/1/2012 | 7/31/2013  | 7,246  | 0        | 7,246 |

* Subtotal: Sandia National Laboratories | 7,246 | 0 | 7,246 |

* Subtotal: Federal Agencies | 5,383,129 | 388,615 | 5,751,744 |

** International Agencies **

** Bulgarian Science **

| Petrova, G.P. | Effective Methods and Algorithms for Geometric Modeling | 11/22/2012 | 11/22/2014  | 40,000 | 0        | 40,000 |

* Subtotal: Bulgarian Science | 40,000 | 0 | 40,000 |

** King Abdullah University of Science and Technology **

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* Subtotal: King Abdullah University of Science and Technology 1,080,849 0 1,080,849

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| * Subtotal: International Agencies | 1,803,443 | 0 | 1,803,443 |

**Other Government**

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**Private/Non-Profit Agencies**

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**State Agencies**

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SEC. 7. RESEARCH ACTIVITY 579
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2013 Mathematics annual report
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Research in Finite von Neumann Algebras

National Science Foundation

9/1/2012 8/31/2015 59,054 0 59,054

Sums of Hermitian Operators and Connections to Connes’ Embedding Problem Hyperinvariant Subspaces

National Science Foundation

7/1/2009 6/30/2013 27,284 2,951 30,234

Bayesian Uncertainty Quantification in Predictions of Flows in Highly Heterogeneous Media and its Applications to the CO2 Sequestration, (with: Y. Efendiev, B. Mallick)

Department of Energy

9/1/2010 8/31/2014 86,929 8,926 95,854

Scalable Multilevel Uncertainty Quantification Concepts for Extreme-scale Multiscale Problems, (with: Y. Efendiev, B. Mallick)

Department of Energy

11/1/2013 10/31/2016 6,811 0 6,811

Improving Research and Educational Activities in Multifunctional Nanomaterials, (with: A. Belyanin, Y. Efendiev, K. Rajagopal, A. Sokolov)

Fund for the Improvement of Postsecondary Education

10/1/2010 9/30/2013 11,150 0 11,150

Center for Numerical Porous Media

King Abdullah University of Science and Technology

5/1/2012 2/28/2015 95,088 0 95,088

- Subtotal Devere, R.A. 192,892 23,947 216,839

- Subtotal Dykema, K.J. 86,337 2,951 89,288

- Efendiev, Y.E. 582

2013 Mathematics annual report
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SEC 7. RESEARCH ACTIVITY 583
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* Subtotal Guermond, J. 348,886 18,551 367,435

- **Howard, P.B.**

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* Subtotal Howard, P.B. 21,707 9,465 31,172

- **Johnson, W.B.**

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| Kanschat, G.            | Simulating our Complex World: Modeling, Computation and Analysis      | 9/1/2010    | 12/20/2013  | 6,147  | 0        | 6,147  |
|                         | **Subtotal Kanschat, G.**                                           |             |             |        |          |        |
|                         | 6,147                                                                |             |             |        |          |        |

| Kerr, D.                | Independence and Dichotomies in Dynamics and Operator Algebras       | 9/1/2012    | 8/31/2015   | 57,128 | 0        | 57,128 |
| National Science        | (REN) Special Meetings: Workshop in Analysis and Probability, (with: W. Johnson, D. Kerr, G. Pisier) | 6/1/2012    | 5/31/2015   | 34,483 | 0        | 34,483 |
| Foundation              | Workshop in Analysis and Probability                                 | 9/1/2012    | 8/31/2015   | 103,448| 0        | 103,448|
|                         | **Subtotal Kerr, D.**                                                |             |             |        |          |        |
|                         | 195,059                                                             |             |             |        |          |        |

| Kuchment, P.            | Collaborative Research: Mathematics of Emerging Imaging Methods in Medicine and Homeland Security | 9/1/2012    | 8/31/2017   | 112,000| 0        | 112,000|
|                         | **Subtotal Kuchment, P.**                                           |             |             |        |          |        |
|                         | 241,896                                                             |             |             | 2,060  |          | 243,956|

SEC. 7. RESEARCH ACTIVITY 585
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| **Kekashevych, V.**           |                                                                      |           |           |        |          |         |
| National Science Foundation   | Iterated Monodromy Groups                                            | 7/15/2010 | 8/31/2013 | 22,053 | 10,255   | 32,307  |
|                               |                                                                      |           |           |        |          |         |
| **Subtotal Kekashevych, V.**  |                                                                      |           |           |        |          | 22,053  |

| **Kite, S.G.**                |                                                                      |           |           |        |          |         |
| National Science Foundation   | Retention Through Remediation in Pre-Calculus Savings in the Thousands, (with: G. Allen, S. Nite, M. Pilant) | 8/15/2009 | 7/31/2014 | 109,096 | 23,972   | 133,068 |
|                               |                                                                      |           |           |        |          |         |
| **Subtotal Kite, S.G.**       |                                                                      |           |           |        |          | 109,096 |

| **Panchenko, D.**             |                                                                      |           |           |        |          |         |
| National Science Foundation   | Stability and Structure of Gibbs’ Measures in Mean-field Spin Glass Models | 7/1/2012  | 6/30/2015 | 50,096  | 0        | 50,096  |
|                               |                                                                      |           |           |        |          |         |
| **Subtotal Panchenko, D.**    |                                                                      |           |           |        |          | 50,096  |

| **Paouris, G.**               |                                                                      |           |           |        |          |         |
| National Science Foundation   | CAREER: Geometry of Measures in High Dimensions                      | 9/1/2012  | 8/31/2017 | 80,000  | 0        | 80,000  |
| National Science Foundation   | Measure-Theoretic Aspects of Convex Bodies                             | 7/1/2009  | 12/31/2013| 19,515  | 9,074    | 28,589  |
| National Science Foundation   | Set Theory and the Geometry of Banach Spaces                          | 6/1/2009  | 9/30/2013 | 15,145  | 0        | 15,145  |
| Alfred P. Sloan Foundation    | Alfred P. Sloan Fellowship                                           | 9/1/2011  | 9/15/2015 | 12,373  | 0        | 12,373  |
| U.S. Israel Binational Science Foundation | The Hierarchy of Mass Concentration on Convex Bodies | 9/1/2011  | 8/31/2015 | 9,500   | 0        | 9,500   |

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* Subtotal Petrova, G.P. | 264,422 | 13,917 | 268,339 |

* Pilant, M.S. *
| National Science Foundation | Retention Through Remediation in Pre-Calculus Savings in the Thousands, (with: G. Allen, S. Nite, M. Pilant) | 8/15/2009 | 7/31/2014 | 109,096 | 23,972 | 133,068 |

* Subtotal Pilant, M.S. | 109,096 | 23,972 | 133,068 |

* Pisier, G. *
| National Science Foundation | (REN) Special Meetings: Workshop in Analysis and Probability, (with: W. Johnson, D. Kerr, G. Pisier) | 6/1/2012 | 5/31/2015 | 34,483  | 0       | 34,483 |

* Subtotal Pisier, G. | 42,419 | 0 | 42,419 |

* Pitts, J.T. *
| National Science Foundation | (REN) Texas Geometry and Topology Conference, (with: J. Landsberg, J. Pitts) | 5/1/2012 | 4/30/2015 | 15,168 | 0 | 15,168 |

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SEC 7. RESEARCH ACTIVITY 591
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* Subtotal Robles, C.R. | 76,331 3,638 79,969

| National Science         | MCS: Randomization in Algorithmic Fewnomial Theory over Complete Fields | 9/15/2009 | 8/31/2013 | 47,007  | 19,936    | 66,943  |

* Subtotal Rojas, J.       | 48,391 19,936 68,327

| Department of Defense    | Braided Fusion Categories                                              | 2/1/2012 | 1/31/2014 | 20,437  | 8,927     | 29,363  |
| National Science         | Topological Phases of Matter and Their Application to Quantum Computing | 9/1/2011 | 8/31/2013 | 44,658  | 19,784    | 64,442  |

* Subtotal Lowell, E.C.    | 65,096 28,711 93,805

| National Science         | Uniqueness and Reconstructions Methods for Inverse Problems           | 7/1/2013 | 6/30/2016 | 23,397  | 0         | 23,397  |

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594 2013 MATHEMATICS ANNUAL REPORT
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SEC. 7. RESEARCH ACTIVITY 595
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<td>National Science Foundation (REN) Collaborative Proposal: Maplets for Calculus</td>
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<td>* Yu, G.</td>
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<td>National Science Foundation Functional Depth and Quantiles Limit Theory, Comparisons and Applications</td>
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*** Total: All Faculty | 7,578,927 | 389,495 | 7,968,422 |
Annual Report, 2013

THE DEPARTMENT OF PHYSICS AND ASTRONOMY
TEXAS A&M UNIVERSITY

College Station, Texas
Any information reported or learned after 06/24/2014, may not be included due to report deadlines. Please forgive any errors, and continue to report them, so that we might make corrections to maintain the accuracy of our long-term reports.
1. Foreword from the Department Head

The Department of Physics and Astronomy marked 2013 with excellence in teaching, research, and service. Sixteen undergraduates graduated with bachelor of arts and science degrees in 2013. Nine graduate students received master of science degrees, and seventeen of our graduate students completed their studies with doctorates of philosophy. Principal investigators in our department received over $13.2 million in research funding from various state and federal agencies, and our endowments (which exceed $20 million) contributed nearly a million more.

Assistant professors Rupak Mahapatra and Lucas Macri were granted tenure and promoted to associate professor. Alexey Belyanin took over as associate head for undergraduate programs. Prof. Nicholas Sunzette was named University Distinguished Professor and received the Bush Excellence Award for International Research. Dr. Alexendar Finkel’stein was named elected fellow of the American Physical Society. Prof. Helmut Katzgraber received a college-level AFS Distinguished Teaching Award. Dr. Tatiana Erukhimova received the John E. Trott Award. Mr. Bryan Jones received the President’s Meritorious Service Award and Ms. Cheryl Picone received a college-level Staff Award. Our graduate student Elizabeth Sooby received the Tsutsui Award in research, and our undergraduate Daniel Miller was named a 2013 Goldwater Scholar. We successfully nominated Lev Pitaevskii for an honorary degree from Texas A&M.

Dr. Grigory Rogachev joined our faculty as professor. Grisha will perform experiments in the cyclotron facility. Dr. Barun Dhar joined our faculty as lecturer. Barun teaches the introductory physics classes and helps coordinate recitations. Prof. George Kattawar retired after nearly four decades as a professor in our department and staff members Sandi Smith, Erwin Thomas, and Tom Weimar retired after many years of service. One of the most important developments in 2013 came as Prof. Marlan Scully, director of the Institute for Quantum Science and Engineering (IQSE), secured a three-year 10.8 million dollar investment from the Chancellor’s Research Initiative to promote multidisciplinary research in quantum biophotonics at Texas A&M. Biophotonics is the application of photonics (like electronics, but with light) to biological studies. The investment will allow the IQSE to invest in cutting-edge laser technology and bring in internationally renowned and interdisciplinary faculty members.

Our department is very active in outreach. In April 2013 our annual Physics and Engineering Festival brought in about 4000 visitors for two days talks, presentations, and hands-on demonstrations. Our astronomers have monthly star parties, and many local groups are hosted at our observatory. Our Saturday Morning Physics program has become one of the most exciting events of its kind, drawing well over a hundred local high-school students to our campus eight times each spring to study physics on Saturday mornings. The Mitchell Institute Physics Enhancement Program continued its efforts to provide in-depth standards-based training for high-school physics teachers from across Texas.

We were both delighted and saddened to learn that Prof. Jairo Sinova received a prestigious Humboldt Professorship, the highest award for international faculty given by the Humboldt Foundation. The delight was because of the incredible prestige this represents for a member of our faculty, and the sadness because it means he is leaving us for Germany.

On a sadder note, we lost Prof. James White who passed away in the summer, leaving behind an active research program. James was a leader in the LUX experiment to detect dark-matter particles with liquid xenon detectors. His passing was a blow to the entire collaboration. James was a friend, colleague, and mentor to so many people from our department that his loss represented...
an enormous blow. We also lost long-time friend and philanthropist George Mitchell. Mr. Mitchell’s visionary drive and donations enabled our buildings, and endowed the Mitchell Institute. He was a dear friend of physics. Steven Hawking eulogized Mr. Mitchell by saying “George P. Mitchell was a remarkable individual who combined vision with wisdom and persistence. Through sheer hard work and dedication, he leaves behind an extraordinary legacy. It can be said of very few people that they changed the world but George Mitchell is among those few.”
2. Departmental Statistics

This section contains information, clarified by each department and gathered from the following sources:

I. Personnel

Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyList_FINAL.

Non-Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyListNonTTF_FINAL.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2012, Fall 2013) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff

▷ Provided by the Department

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours

▷ SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2012, Fall 2013) SCH Summaries by College for [Semester] [Year].

PhD Degrees/Masters Degrees

▷ Queried from COGNOS and the College of Science Dean Database Degrees_Grad.

Undergraduate Degrees

▷ Queried from COGNOS and the College of Science Dean Database Degrees_Undergrad.

III. Research Activities

Research Publications

▷ Queried from Web of Science® and compiled from the College of Science Dean Database Publications_COUNT.

Research Presentations

▷ As reported by faculty and compiled from the College of Science Dean Database Presentations_COUNT.

Federal/State/University/Private/Industrial/International/Other Government

▷ Gathered from research proposals, research award notices, as reported by faculty, compiled from the College of Science Dean Database, Sec. 7.1 of following department annual report.
## 2.1 Statistical Abstract

### I. Personnel

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<td><strong>Other Govt</strong></td>
<td>137,612</td>
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<td><strong>Total</strong></td>
<td>13,806,495</td>
<td>13,243,149</td>
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</table>
3. Honors & Awards, 2013

By Faculty

▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2013.

By Students

▷ This section contains all honors and awards, as reported by the department, during the calendar year 2013.
### 3.1 Honors & Awards Received by Faculty, 2013

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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<tbody>
<tr>
<td>T. Erukhimova</td>
<td>John E. Trott, Jr. Award, Texas A&amp;M University</td>
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<tr>
<td>H. Katzgraber</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
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<tr>
<td>J. Sinova</td>
<td>Alexander von Humboldt Professorship, Alexander von Humboldt Foundation</td>
</tr>
<tr>
<td>N. Suntzeff</td>
<td>Bush Excellence Award For Faculty in International Research, Texas A&amp;M University</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2013

Graduate

▷ CMS Achievement Award
  Indara Suarez

▷ Ethel Ashworth-Tsutsui Memorial Award for Research
  Elizabeth Sooby

Undergraduate

▷ Cynthia Woods Mitchell Undergraduate Scholarship for Women in Physics
  Robin Snellings

▷ Donald F. Hagan '76 Scholarship
  Joshua Guerra
  Richard Vega

▷ Dr. Chia-Lai Wang Memorial Scholarship
  Ting Li

▷ George Bush Presidential Library Foundation Grant
  Nancy Jane Landez

▷ Goldwater Scholar
  Daniel Miller

▷ Jack McIntyre Scholarship in Physics
  Giacomo Bonasera
  Isaiah Mendoza
  Jose Dimas Valle

▷ James G. Potter Physics Scholarship
  Erika Cook
  Alex Gary

▷ John B. Beckham Science Award
  Chris Akers

▷ Marianne E. ’76 and Robert W. Hamm ’77 Scholarship in Physics
  Erika Cook
  Kelli Humbird
  Brock Medlin
  Jonathan Monroe
  Austin Schneider

▷ Matthew P. Hodges ’00 Memorial Scholarship
  Alex Gary

▷ Stepheni Crawford and Jack Crawford Fellowship in Science
  Layla Bakhtiari
▶ Student Presentation Award
   Leonardo A. Bello Puentes

▶ William Robba Graduate Study Fellowship
   James Gerity
4. Students, 2013

This section contains all degrees awarded, as reported by the department, during the calendar year 2013.
4.1 Graduate Degrees Awarded, 2013

Fall

▷ M.S.
Sean Andrew Yeager  Advisor(s): D. Toback

▷ Ph.D.
Kunj Bihari Prasad  Search for Lightly Ionizing Particles Using CDMS-II Data and Fabrication of CDMS Detectors with Improved Homogeneity in Properties  Advisor(s): R. Mahapatra
Ellen Nicole Simmons  The $\beta$-Delayed Proton and Gamma Deca of $^{27}P$  Advisor(s): R. Tribble
Don Deewayne Smith  Theory and Design of Smith-Purcell Semiconductor Tera-Hertz Sources  Advisor(s): A. Belyanin
Matthew Murray Springer  Time-Resolved Characterization of Ultrashort Pulse Propagation  Advisor(s): A. Sokolov
Benjamin Strycker  Nonlinear Phenomena Induced by Millijoule Femtosecond Laser Pulses at an Air-Water Interface  Advisor(s): A. Belyanin
Michael David Van Dyke  A Study of Conceptual and Mathematical Knowledge in Introductory Mechanics Courses  Advisor(s): W. Bassichis
Kai Wang  Ultrafast Optical Pulses: Synthesis and Applications  Advisor(s): A. Sokolov
Shuai Yang  Quantum Optical Coherence: Applications in Photon Switching, Control of Spontaneous Emission and Atom Localization  Advisor(s): M. Zubairy

Spring

▷ M.S.
Jonathan Thomas Button  Decay Detector for the Study of Giant Monopole Resonance in Unstable Nuclei  Advisor(s): D. Youngblood
Benjamin Brown Fenker  Advisor(s): D. Melconian
Ziqing Hong  Advisor(s): D. Toback
Heath Vernon Shipley  Advisor(s): C. Papovich

Samantha Leigh Hoffmann  Cepheid Variables and Their Application to the Cosmological Distance Scale  Advisor(s): L. Macri

Roy Joaquin Montalvo  Search for Supersymmetry in the Jets +Met + TAUS Final State Using the CMS Detector at the LHC  Advisor(s): T. Kamon

Abid Hasan Mujtaba  Homogeneous Einstein Metrics on SU(n) Manifolds, Hoop Conjecture for Black Rings, and Ergoregions in Magnetized Black Hole Spacetimes  Advisor(s): C. Pope

Summer

Yakup Boran  Advisor(s): D. Melconian

Ali Celik  Advisor(s): T. Kamon

Francisco Van Pham  Advisor(s): H. Schuessler

Muhammed Sayrac  High Harmonic Generation In Argon Hydrogen And Their Mixture With Neon  Advisor(s): H. Schuessler

Guangyao Chen  Initial Conditions from Color Glass Condensate  Advisor(s): C. Ko

Sean Donovan Downes  Hints of Universality from Inflection Point Inflation  Advisor(s): B. Dutta

Shan Hu  6d (2, 0) Theory and M5 Branes: A KK Mode Approach  Advisor(s): D. Nanopoulos

Xin Huang  Retrieval of Non-Spherical Dust Aerosol Properties from Satellite Observations  Advisor(s): G. Kattawar

Mehmet Ozkan  Supersymmetric Curvature Squared Invariants in Five and Six Dimensions  Advisor(s): E. Sezgin

SEC. 4.1 GRADUATE DEGREES 609

Advisor(s): R. Webb
### 4.2 Undergraduate Degrees Awarded, 2013

#### Fall

<table>
<thead>
<tr>
<th>Degree</th>
<th>Names</th>
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<tbody>
<tr>
<td>B.S.</td>
<td>Giacomo Bonasera</td>
</tr>
<tr>
<td></td>
<td>Kelli Denise Humbird</td>
</tr>
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<td></td>
<td>William Louis Hunter</td>
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<td></td>
<td>William Lewis Meador</td>
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#### Spring

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<tr>
<td>B.A.</td>
<td>Benjamin Michael Becker</td>
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<td></td>
<td>Sean Connor Walker</td>
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<tr>
<td>B.S.</td>
<td>Caleb Jordan Anderson</td>
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<td>Deepak Bastola</td>
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<td></td>
<td>Austin Alan Baty</td>
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<tr>
<td></td>
<td>Fernando Arturo Bracho Blok</td>
</tr>
<tr>
<td></td>
<td>Christopher James Davis</td>
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<td></td>
<td>Patrick Thomas Mccolgan</td>
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<tr>
<td></td>
<td>Drew P. Mitchell</td>
</tr>
<tr>
<td></td>
<td>Jia Lerd Ng</td>
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<tr>
<td></td>
<td>Alexander Anthony Waldrop</td>
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#### Summer

<table>
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<tr>
<th>Degree</th>
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<tbody>
<tr>
<td>B.S.</td>
<td>Andrea Delgado</td>
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## 5. Colloquium and Seminar Speakers, 2013

### Atomic and Molecular Optics Seminar

<table>
<thead>
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<th>Date</th>
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<th>Topic</th>
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<tr>
<td>2/4/2013</td>
<td>Mayukh Lahiri</td>
<td>University of Rochester</td>
<td>Coherence and Polarization Properties of Light in Time and Frequency Domains</td>
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<tr>
<td>2/25/2013</td>
<td>Gavrill Shchedrin</td>
<td>Michigan State University</td>
<td>Resonance Width Distribution for Open Quantum Systems</td>
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<tr>
<td>4/2/2013</td>
<td>Philip Hemmer</td>
<td>Texas A&amp;M University</td>
<td>Toward Molecule-Scale Imaging and Magnetic Sensing with Diamond</td>
</tr>
<tr>
<td>4/2/2013</td>
<td>Wolfgang Schleich</td>
<td>Universität Ulm</td>
<td>The Linearity of Quantum Mechanics and the Birth of the Schrödinger Equation</td>
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<tr>
<td>4/3/2013</td>
<td>Wolfgang Schleich</td>
<td>Universität Ulm</td>
<td>Quantum Physics at the Interface with Gravity</td>
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<tr>
<td>4/12/2013</td>
<td>Mikhail Schneider</td>
<td>Princeton University</td>
<td>Molecular Ensembles in Non-Resonant Optical Lattices</td>
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<tr>
<td>4/16/2013</td>
<td>Alexey Akimov</td>
<td>Harvard University</td>
<td>Form Plasmonics to Cold Atoms</td>
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<tr>
<td>4/16/2013</td>
<td>Amitabh Joshi</td>
<td>Eastern Illinois University</td>
<td>Stochastic Resonance in Atomic Optical Bistability and Nano Scale Systems</td>
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<tr>
<td>4/17/2013</td>
<td>Michal Bajcsy</td>
<td>Stanford University</td>
<td>Quantum Optics in Photonic-Crystal Nanocavities</td>
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<tr>
<td>4/17/2013</td>
<td>John Reintjes</td>
<td>Naval Research Laboratory, DC</td>
<td>Transmission of a Weak Optical Pulse Through a Dense Quantum Absorber</td>
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<tr>
<td>4/26/2013</td>
<td>Mikhail Belkin</td>
<td>University of Texas, Austin</td>
<td>Broadly-tunable Room-temperature THz Quantum Cascade Laser Sources</td>
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<tr>
<td>5/13/2013</td>
<td>Goong Chen</td>
<td>Texas A&amp;M University</td>
<td>Lie Groups and Lie Algebras in Physics</td>
</tr>
</tbody>
</table>
5/14/2013  
**Weng Chow**  
*Sandia National Laboratory*  
Microscopic Models for Engineering of Optoelectronic Devices

5/14/2013  
**Pierre Meystre**  
*The University of Arizona*  
Quantum Optomechanics

5/15/2013  
**Zixuan Hu**  
*Northwestern University*  
Modeling Light-Induced Charge Transfer Dynamics Across a Metal-Molecule Junction

7/1/2013  
**Eugene Frumker**  
*Ben-Gurion University, Beer-Sheva, Israel*  
When Attosecond Science Meets Polar Molecules

7/29/2013  
**Minh Nguyen**  
*University of Texas, Dallas*  
Energy Transfer Pathways in Hybrid Colloidal Nanocrystals/Silicon Structures

8/8/2013  
**Wayne Cheng-Wei Huang**  
*University of Nebraska*  
The Role of the Vacuum Field in a Harmonic System

8/29/2013  
**Walter Bradley**  
*Baylor University and Texas A&M University*  
SBIR: Small Business in Research

8/29/2013  
**Meimei Lai**  
*University of Maryland*  
Experiments Using Sub-Wavelength Diameter Tapered Optical Fibers in Rubidium Vapor

9/4/2013  
**Peter Rentzepis**  
*University of California, Irvine*  
How to Construct a Multi-keV X-ray Laser

9/16/2013  
**Sergei Suslov**  
*Arizona State University*  
On the Problem of Electromagnetic-Field Quantization

9/30/2013  
**Ralf Röhrsberger**  
*Deutsches Elektronen-Synchrotron, Hamburg*  
X-rays in the Quantum World: From Nanomagnetism to Quantum Optics

10/1/2013  
**Kai Wang**  
*Texas A&M University*  
Ultrafast Optical Pulses: Synthesis and Applications

10/2/2013  
**Benjamin Strycker**  
*Texas A&M University*  
Nonlinear Phenomena Induced by Millijoule Femtosecond Laser Pulses at an Air-Water Interface

10/4/2013  
**Matt Springer**
Texas A&M University
Time-Resolved Characterization of Ultrashort Pulse Propagation

10/29/2013  Edward Moses  
Lawrence Livermore National Laboratory  
Progress in Inertial Confinement Fusion Experiments on the NIF

10/30/2013  Thomas Udem  
Max-Planck Institute for Quantum Optics  
Precision Spectroscopy of Atomic Hydrogen

10/31/2013  Michael Brieger  
Berlin  
The Classical Face of Quantum Mechanics

11/4/2013  Eric Benck  
National Institute of Standards and Technology  
Magnetic Levitation for the Dissemination of the Redefined Kilogram

11/5/2013  Jens Lassen  
Canada’s National Lab for Particle and Nuclear Physics  
On-line Ionization Spectroscopy of Astatine with the Ion Guide Laser Ion Source

11/22/2013  Keith Schubert  
Electrical and Computer Engineering Baylor University  
Proton Computed Tomography and the Future of Ion Therapy

12/11/2013  Weng W. Chow  
Sandia National Laboratories  
Quantum-Dot Physics for Applications in Semiconductor Lasers and Quantum Optics

12/13/2013  Stephen A. Holditch  
Texas A&M University  
Hydraulic Fracturing: What is it and How to do it Right

12/17/2013  Wilton Virgo  
Texas A&M University  
The Zeeman Spectrum of TiO: A Novel Spin-Orbit Model for Stellar Magnetometry
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Title</th>
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<tr>
<td>1/24/2013</td>
<td>Robert Bernstein</td>
<td>Fermi National Accelerator Laboratory</td>
<td>Why You Should Pay Attention in Class: Charged Lepton Flavor Violation and Undergraduate Physics</td>
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<td>1/31/2013</td>
<td>Laurie McNeil</td>
<td>University of North Carolina</td>
<td>Organic Semiconductors</td>
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<td>2/7/2013</td>
<td>Shri Kulkarni</td>
<td>California Institute of Technology</td>
<td>The Restless Universe (Palomar Transient Factory)</td>
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<td>2/14/2013</td>
<td>Richard Taylor</td>
<td>University of Oregon</td>
<td>Fractal Vision: Using Retinal Implants to Restore Vision to the Blind</td>
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<td>2/28/2013</td>
<td>Hakeem Oluseyi</td>
<td>Florida Institute of Technology</td>
<td>Time-Domain Informatics in the Era of Large Astronomical Surveys</td>
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<td>3/7/2013</td>
<td>Dimitri Basov</td>
<td>University of California, San Diego</td>
<td>Shedding Infrared Light on High-Tc Superconductivity</td>
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<td>3/21/2013</td>
<td>Rick Trebino</td>
<td>Georgia Institute of Technology</td>
<td>Measuring Everything You’ve Always Wanted to Know About a Light Pulse</td>
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<tr>
<td>4/18/2013</td>
<td>Volker Koch</td>
<td>Lawrence Berkeley National Laboratory</td>
<td>The Properties of Strongly Interacting Matter</td>
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<td>4/25/2013</td>
<td>Chung-Pei Ma</td>
<td>University of California, Berkeley</td>
<td>Supermassive Black Holes in Nearby Galaxies</td>
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<td>5/2/2013</td>
<td>Boris Kayser</td>
<td>Fermi National Accelerator Laboratory</td>
<td>Are We Descended From Heavy Neutrinos?</td>
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<tr>
<td>5/7/2013</td>
<td>Vlad Yakovlev</td>
<td>Texas A&amp;M University</td>
<td>Shedding New Light on Diseases: When More Photons are Better than One</td>
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</table>
8/29/2013  Heather Knutson  
*California Institute of Technology*
Beyond Hot Jupiters: Exploring the Diversity of Exoplanetary Atmospheres

9/5/2013  Alexei Safonov  
*Texas A&M University*
Future after Higgs Discovery: the LHC Project

9/12/2013  Lifan Wang  
*Texas A&M University*
Supernova Inside Out

9/19/2013  David Hogg  
*New York University*
The Astronomer’s Theory of Everything

9/26/2013  David Roundy  
*Oregon State University*
Active Learning in Upper-Division Physics: Lessons from the Paradigms

10/3/2013  Hendrik Schatz  
*Michigan State University*
X-ray bursts, Palladium Oceans, and Cold Fusion - the Strange World of Accreting Neutron Stars

10/10/2013  Ed Prather  
*University of Arizona*
Are you really Teaching if No One is Really Learning? Designing Evidence-Based Instruction in Extreme Classes

10/17/2013  Dan Melconian  
*Texas A&M University*
Fundamentally Cool Physics with Trapped Atoms and Ions

10/24/2013  Leonid Levitov  
*Massachusetts Institute of Technology*
Atomic Collapse in Graphene

10/29/2013  Peter Kuchment  
*Texas A&M University*
Detection of Small Low Emission Sources

10/31/2013  Andrey Elagin  
*University of Chicago*
The Development of Large-Area Picosecond Photo-Detectors and Fast Timing Implications for Neutrino-less Double-Beta Decay Searches

10/31/2013  Joseph Polchinski  
*Kavli*
The Black Hole Information Paradox, Alive and Kicking

11/7/2013  Bhaskar Dutta  
*Texas A&M University*
The Current Status of Particle Theory Models

11/14/2013  Blas Cabrera
## Condensed Matter

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<th>Date</th>
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<tr>
<td>1/18/2013</td>
<td>John DiTusa</td>
<td>Louisiana State University</td>
<td>A New Route to a Non-Fermi Liquid</td>
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<td>1/25/2013</td>
<td>Igor Roshchin</td>
<td>Texas A&amp;M University</td>
<td>Controlling Magnetism with Non-Magnetic Materials</td>
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<td>2/15/2013</td>
<td>Valery Pokrovsky</td>
<td>Texas A&amp;M University</td>
<td>Bose-Condensation of Spin Waves in YIG</td>
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<td>2/22/2013</td>
<td>Axel Hoffmann</td>
<td>Argone National Lab</td>
<td>Connecting Spin Waves to Electronics: Towards Charge-Free Spintronics</td>
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<td>3/1/2013</td>
<td>Thomas Nattermann</td>
<td>University of Cologne</td>
<td>Pinning of Domain Walls in Helical Magnets</td>
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<tr>
<td>3/7/2013</td>
<td>Dimitri Basov</td>
<td>University of California San Diego</td>
<td>Many Body Effects in Graphene Revealed by Infrared Nano-Imaging</td>
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<tr>
<td>3/29/2013</td>
<td>Oleg Starykh</td>
<td>University of Utah</td>
<td>Surprises at the Magnetization Plateau</td>
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<tr>
<td>4/5/2013</td>
<td>Leonid Rokhinson</td>
<td>Purdue University</td>
<td>Observation of Fractional ac Josephson Effect: The Signature of Majorana Particles</td>
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<td>4/12/2013</td>
<td>Emil Yuzbashyan</td>
<td>Rutgers University</td>
<td>Quantum Quenches in p and s Wave Superfluids: Far from Equilibrium “Phase” Diagram</td>
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<td>4/19/2013</td>
<td>Andrew Comech</td>
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<td>Stability of Solitary Wave Solutions in Nonlinear Dirac Equation (Soler and Gross-Neveu Models) and in Dirac-Maxwell System</td>
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<td>4/26/2013</td>
<td>Ka Ming Tam</td>
<td>Louisiana State University</td>
<td>A GPU Implementation of the Monte Carlo Simulation of Random Frustrated Ising Systems</td>
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<td>8/30/2013</td>
<td>Jia Cai</td>
<td>Beijing Normal University</td>
<td>Defect Engineering of Graphene</td>
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<tr>
<td>9/6/2013</td>
<td>Jairo Sinova</td>
<td>Texas A&amp;M University</td>
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Anti-Damping Intrinsic Spin-Orbit Torque Arising from Berry Phase

9/20/2013  **Andriy Nevidomskyy**  
*Rice University*  
Interplay of the Orbital and Spin Degrees of Freedom in the Iron Pnictides

10/4/2013  **Douglas Natelson**  
*Rice University*  
Heating at the Nanoscale: Vibrational and Electronic Processes

10/11/2013  **Matthew Foster**  
*Rice University*  
Interaction-Mediated Surface State Instability in Dirty Topological Superconductors

10/25/2013  **Leonid Levitov**  
*Massachusetts Institute of Technology*  
Ballistic Heat Transfer and Energy Waves in an Electron System

11/1/2013  **Fuxiang Li**  
*Texas A&M University*  
Quantum Zeno Effect as a Topological Phase Transition in Full Counting Statistics and Spin Noise Spectroscopy

11/15/2013  **Louis Bouchard**  
*University of California, Los Angeles*  
Nanoscale Studies of Electronic and Magnetic Properties in Topological Materials

11/22/2013  **Nikolai Sinitsyn**  
*Los Alamos National Laboratory*  
Spin Noise Spectroscopy of Quantum Dots

12/13/2013  **Vadim Oganesyan**  
*City University of New York*  
Many-Body Localization and Related Phenomena
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<tr>
<td>1/14/2013</td>
<td>Oleg Lunin</td>
<td>State University of New York</td>
<td>Black Holes and Fuzzballs</td>
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<td>1/15/2013</td>
<td>Frank Garner</td>
<td>Radiation Effects Consulting</td>
<td>Response of Stainless Steel to High Dose Irradiation in Various Types of Nuclear Reactors</td>
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<td>Yang Bai</td>
<td>University of Wisconsin, Madison</td>
<td>Collider Constraints on Dark Matter Interactions</td>
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<tr>
<td>1/25/2013</td>
<td>Rober Bernstein</td>
<td>Fermi National Accelerator Laboratory</td>
<td>Muon g-2</td>
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<td>Phil Szepietowski</td>
<td>University of Virginia</td>
<td>Comments on a Maximization from Gauged Supergravity</td>
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<td>Ke Han</td>
<td>University of California, Berkeley</td>
<td>The CUORE (Cryogenic Underground Observatory for Rare Events) Experiment</td>
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<td>Stefania Gori</td>
<td>University of Chicago</td>
<td>Higgs and Light Sleptons</td>
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<td>Christopher Pope</td>
<td>Texas A&amp;M University</td>
<td>Global Properties of Black Holes in External Magnetic Fields</td>
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<td>2/14/2013</td>
<td>Rupak Mahapatra</td>
<td>Texas A&amp;M University</td>
<td>Worldwide Searches for Direct Detection of Dark Matter</td>
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<tr>
<td>2/15/2013</td>
<td>Chris Burton</td>
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<td>Finite-Temperature R-squared Quantum Gravity</td>
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<tr>
<td>2/18/2013</td>
<td>Per Kraus</td>
<td>University of California, Los Angeles</td>
<td>Explorations in Higher Spin Gravity</td>
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<tr>
<td>2/21/2013</td>
<td>Jiang-Hao Yu</td>
<td>University of Texas, Austin</td>
<td>Measuring Top Quark Polarization in Top Pair Plus Missing Energy</td>
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2/22/2013  Michael F. Simpson  
*Idaho National Laboratory*
Advanced Monitoring and Separations Processes for Electrorefiner Salt

2/25/2013  Julian Sonner  
*Massachusetts Institute of Technology*
Dynamics of Broken Symmetry

2/28/2013  Tom Shutt  
*Case*
LZ Experiment

2/28/2013  Matthew Snowball  
*University of Florida*
Higgs Spin/Parity Analysis

3/4/2013  Blaise Gouteraux  
*Nordic Institute of Theoretical Physics, Stockholm*
Zero-Temperature Holographic Phases with (un)Broken U(1) Symmetry

3/7/2013  Michael Graesser  
*Los Alamos National Laboratory*
Hunting Asymmetric Stops

3/18/2013  Johannes Henn  
*IAS, The School of Natural Sciences*

3/25/2013  Nabil Iqbal  
*Kavli Institute for Theoretical Physics*
Of Wilson Lines and Geodesics: Towards Entanglement Entropy in Higher Spin Gravity

3/28/2013  Cheng-Ju Stephen Lin  
*Lawrence Berkeley National Laboratory*
Recent Results from the Daya Bay Reactor Antineutrino Experiment

3/29/2013  Nicholas Suntzeff  
*Texas A&M University*
Results Coming from the Planck Satellite

4/1/2013  Aristos Donos  
*Imperial College*
Metal-Insulator Transition in Holography

4/1/2013  Jerome Gauntlet  
*Imperial College*
Spatially Modulated Phases in Holography

4/8/2013  Finn Larsen  
*University of Michigan*

4/15/2013  Guido Festuccia  
*IAS, The School of Natural Sciences*
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<td>Imperial College</td>
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<td>University of California, Berkeley</td>
<td>Carrier Transport, Two-species Capture, and Related Effects of Electrons and Holes in Ultrapure Germanium at MilliKelvin Temperature</td>
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<td>9/2/2013</td>
<td>Ilarion Melnikov</td>
<td>Harvard University &amp; Texas A&amp;I University</td>
<td>Hybrid Conformal Field Theories</td>
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<td>9/5/2013</td>
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<td>Dark Matter Searches by Looking at the Sun and AGN</td>
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<td>Travis Maxfield</td>
<td>University of Chicago</td>
<td>The Conformal Anomaly of M5-Branes</td>
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<td>9/19/2013</td>
<td>Pijushpani Bhattacharjee</td>
<td>Washington University, St. Louis and Saha Institute of Nuclear Physics in Kolkata, India</td>
<td>Dark Matter in the Galaxy: Rotation Curve and the Phase Space Distribution of Milky Way’s Dark Matter Particles</td>
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<td>Denis Klevers</td>
<td>University of Pennsylvania</td>
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<td>9/26/2013</td>
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<td>Rensselaer Polytechnic Institute</td>
<td>Latest Results on Reactor Antineutrino Disappearance at Daya Bay</td>
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<td>Bei Jia</td>
<td>Virginia Tech</td>
<td>Supersymmetry on Curved Spaces</td>
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<td>10/7/2013</td>
<td>Janet Hung</td>
<td>Perimeter Institute</td>
<td>Holographic Renyi Entropy and Relative Entropy</td>
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10/10/2013  Savvas Koushiappas  
*Brown University*  
Joint Dataset Analysis and Indirect Detection Dark Matter Constraints

10/14/2013  Xi Dong  
*Stanford University*  
Holographic Entanglement Beyond Einstein Gravity

10/17/2013  Louis Strigari  
*Indiana University*  
Astrophysical Interplay in Dark Matter Searches

10/18/2013  Kuver Sinha  
*Syracuse University*  
Vector Boson Fusion Processes: EW-kinos, Dark Matter, and Compressed Top Squarks at the LHC

10/21/2013  Kristan Jensen  
*Stony Brook University*  
The Holographic Dual of an EPR Pair has a Wormhole

10/24/2013  David Sanford  
*California Institute of Technology*  
Higgs Mass at 3-Loop Order and Focus Point Dark Matter

11/1/2013  Joe Polchinski  
*Kavli Institute For Theoretical Physics*  
Gauge/Gravity Duality and the Black Hole Interior

11/4/2013  Costis Papageorgakis  
*Rutgers University*  
On Instanton-Soliton Loops in 5D Super-Yang-Mills

11/7/2013  Peisi Huang  
*University of Wisconsin, Madison*  
Natural SUSY and the Higgs Boson

11/11/2013  Tom Faulkner  
*Institute for Advanced Study*  
Beyond Ryu-Takayanagi: Entanglement in Holographic QFT

11/14/2013  Jon Wilson  
*University of Michigan and Fermilab*  
Anomalies in Top Quark Forward-Backward Asymmetry Measurements at the Tevatron

11/18/2013  Jock McOrist  
*University of Surrey*  
A Metric for Heterotic Moduli

11/26/2013  Bibhushan Shakya  
*University of Michigan*  
Higgs Couplings and Naturalness in Lambda-SUSY

12/3/2013  Nader Mirabolfathi  
*University of California, Berkeley*
Toward $\sim eV$ Threshold Large Mass Detectors For GeV Scale Dark Matter And Coherent Neutrino Scattering Detection

12/6/2013  Nils Carqueville
Stony Brook University
Topological Defects and Generalised Orbifolds
### Nuclear Physics

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<td>Marco La Cognata</td>
<td>Istituto Nazionale di Fisica Nucleare, Laboratori Nazionali del Sud, Catania, Italy</td>
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<tr>
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<td>Investigating the Synthesis of Heavy Elements with the Trojan Horse Method</td>
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<td>1/18/2013</td>
<td>Yunpeng Liu</td>
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<td>Bc Meson Enhancement in Relativistic Heavy Ion Collisions at LHC</td>
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<td>1/25/2013</td>
<td>Naftali Auerbach</td>
<td>Tel Aviv University</td>
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<td>The Shear Viscosity to Entropy Density Ratio in Nuclei</td>
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<td>2/5/2013</td>
<td>Kasser Kalantar-Nayestanaki</td>
<td>KVI, University of Groningen</td>
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<td>Three-nucleon Forces and Their Importance in Three-nucleonsystems and Heavier Nuclei</td>
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<td>2/22/2013</td>
<td>Chiho Nonaka</td>
<td>Nagoya University: Kobayashi-Maskawa Institute</td>
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<td>A New Scheme of Causal Viscous Hydrodynamics for Relativistic Heavy-Ion Collisions: Riemann Solver for Quark-Gluon Plasma</td>
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<td>2/26/2013</td>
<td>Felix Liang</td>
<td>Oak Ridge National Laboratory</td>
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<td>The Effects of Neutron Transfer on Nuclear Fusion at Low Energies</td>
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<td>3/8/2013</td>
<td>Taesoo Song</td>
<td>Texas A&amp;M University</td>
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<td>Quarkonium Formation Time in Quark-Gluon Plasma</td>
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<td>3/18/2013</td>
<td>Grigory Rogachev</td>
<td>Florida State University</td>
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<td>Understanding of Nuclear Structure and Stellar Processes Through Nuclear Reactions</td>
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<td>3/25/2013</td>
<td>Michael Gonin</td>
<td>Universite’ Polytechnique</td>
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<td>3/28/2013</td>
<td>Adrian Dumitru</td>
<td>The City University of New York</td>
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<td>Magnetic Flux Loop in High-Energy Heavy-Ion Collisions</td>
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<td>3/29/2013</td>
<td>Anton Wiranata</td>
<td>Lawrence Berkeley National Laboratory</td>
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<td>The Ratio of eta/s of an Interacting Hadron Gas</td>
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<td>4/5/2013</td>
<td>Prasanth Jaikumar</td>
<td>California State University at Long Beach</td>
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<td>Using r-mode Oscillations to Constrain the Equation of State for Neutron Stars</td>
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<td>4/12/2013</td>
<td>Gerald Gabrielse</td>
<td>Harvard University</td>
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Using One Antiproton to Measure the Antiproton Magnetic Moment 680 Times More Precisely

4/12/2013  Yunpeng Liu  
Texas A&M University  
Gluon Dissociation of Charmonium Beyond the Dipole Approximation

4/19/2013  Kyong Chol Han  
Texas A&M University  
Medium Modification of Jet Fragmentation

4/26/2013  Bjoern Schenke  
Brookhaven National Laboratory  
Fluctuating Gluon Fields and Flow in High-Energy Nuclear Collisions

9/26/2013  Jiansong Wang  
Chinese Academy of Sciences  
Elastic Scattering Studies at RIBLL

9/27/2013  Zhiqiang Chen  
Chinese Academy of Sciences  
Accelerator Driven Systems Related Nuclear Data Research at IMP

10/18/2013  Su Houng Lee  
Yonsei University, Korea  
Nuclear Symmetry Energy from QCD Sum Rules

11/1/2013  Robert Webb  
Texas A&M University  
First Results from the LUX Dark Matter Experiment at the Sanford Underground Research Facility

11/15/2013  Vladimir Skokov  
Western Michigan University  
Heavy Quark Energy Loss in SemiQGP

12/13/2013  Yunpeng Liu  
Texas A&M University  
Hot Nuclear Matter Effects on J/psi Production in p+Pb Collisions at 5.02 TeV
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<td>Swinburne Institute for Technology</td>
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<td>Bill Cochran</td>
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<td>University of Toledo</td>
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<td>University of Texas, Austin</td>
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<td>Charles Danforth</td>
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<td>California Institute of Technology</td>
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<td>5/1/2013</td>
<td>Luisa Rebull</td>
<td>California Institute of Technology</td>
<td>YSOVAR: Mid-Infrared Variations in Young Stars</td>
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Peter Shull  
*Oklahoma State University*  
Supernova Interactions with the Interstellar Medium

Jo Bovy  
*Princeton University*  
MAPPING the Milky Way: Precision Measurements of the Structure and Dynamics of the Milky Way’s Disk

Jonathan Trump  
*Pennsylvania State University*  
How do Galaxies Grow Their Supermassive Black Holes?

Rachel Bezanson  
*University of Arizona*  
Tight Correlations Between Massive Galaxy Structural Properties and Dynamics: The Mass Fundamental Plane was in Place by z 2

Nicholas McConnell  
*University of Hawaii*  
Black Hole Safari: Hunting for Big Game in Giant Elliptical Galaxies

Feryal Ozel  
*University of Arizona*  
Neutron Stars and Black Holes: Insights into Their Formation, Evolution, and Structure from Their Masses and Radii

Zeljko Ivesic  
*University of Washington*  
LSST: A Digital Color Movie of the Universe

Marco Viero  
*California Institute of Technology*  
The Role of Large Herschel Surveys in Galaxy Evolution and Cosmology

Brice Ménard  
*Johns Hopkins University*  
The Large-Scale Distribution of Baryons

Christopher Britt  
*Texas Tech University*  
The Chandra Galactic Bulge Survey: X-ray Binaries, Cataclysmic Variables, and Some Surprises

Ryan Trainor  
*California Institute of Technology*  
Probing the Brightest QSOs though the Spatial Distribution of Galaxies and (Fluorescent) Lya Emitters

Peter Behroozi  
*Stanford University*  
What Can Galaxy Evolution Tell Us About Short Gamma-Ray Bursts?

Tsz Yan Lam  
*Max Planck Institute*  
Large-scale Structure in Modified Gravity Model
6. Faculty, 2013

Artem G. Abanov ........................................... Associate Professor
Thomas W. Adair ........................................... Professor
Glenn Agnolet ............................................ Professor
Roland E. Allen ........................................... Professor
Richard L. Arnowitt ..................................... Distinguished Professor Emeritus (A)
William H. Bassichis ................................... Professor
Katrin Becker ............................................. Professor
Melanie Becker .......................................... Professor
Alexey A. Belyanin ....................................... Professor
Siu Ah Chin ............................................... Professor
Darren L. DePoy ......................................... Professor
Barun Dhar ................................................ Lecturer
Nelson M. Duller ......................................... Professor Emeritus (A)
Bhaskar Dutta ............................................ Professor
Tatiana L. Erukhimova .................................. Senior Lecturer
Ricardo Eusebi ............................................ Assistant Professor
Alexander M. Finkelstein ................................ Professor
A. Lewis Ford .............................................. Professor
Rainer J. Fries ............................................. Associate Professor
Edward S. Fry ............................................. Distinguished Professor
Stephen A. Fulling ....................................... Professor (J)
Carl A. Gagliardi ......................................... Professor
John C. Hardy ............................................ Distinguished Professor
Harlan R. Harris ......................................... Assistant Professor (J)
Dudley R. Herschbach .................................. Distinguished Professor
Dave Hyland .............................................. Professor (J)
Teruki Kamon ............................................ Professor
George W. Kattawar .................................... Professor
Helmut G Katzgraber .................................. Associate Professor
Che-Ming Ko .............................................. Professor
Olga A. Kocharovskaya ................................ Distinguished Professor
Vitaly V. Kocharovsky ................................ Professor
Kevin Krisciunas ......................................... Lecturer
Jaan Laane ............................................... Professor (J)
David M. Lee ............................................. Distinguished Professor
Igor F. Lyuksyutov ...................................... Professor
Lucas Macri ............................................... Associate Professor
Rupak Mahapatra ...................................... Associate Professor
Peter M. McIntyre ...................................... Professor
Dan G. Melconian ...................................... Assistant Professor
Saskia Mioduszewski .................................. Associate Professor
Dimitri V. Nanopoulos ................................ Distinguished Professor
Donald G. Naugle ...................................... Professor
Casey Papovich .......................................... Associate Professor
Valery L. Pokrovsky .................................... Distinguished Professor
Christopher N. Pope .................................... Distinguished Professor
Ralf Rapp ................................................ Professor

SEC. 6.  FACULTY  631
John F. Reading .................................................. Professor
Grigory Rogachev .................................................. Professor
Igor V. Roshchin .................................................. Assistant Professor
Joseph H. Ross .................................................. Professor
Alexei N. Safonov .................................................. Associate Professor
Wayne M. Saslow .................................................. Professor
Hans A. Schuessler .................................................. Professor
Marlan O. Scully .................................................. Distinguished Professor
Ergin Sezgin .......................................................... Professor
Jairo Sinova .......................................................... Professor
Alexei V. Sokolov .................................................. Professor
Nicholas B. Suntzeff .................................................. Distinguished Professor
Winfried Teizer .................................................. Associate Professor
David Toback .................................................. Professor
Kim-Vy Tran .................................................. Associate Professor
Robert E. Tribble .................................................. Distinguished Professor
Lifan Wang .................................................. Associate Professor
Robert C. Webb .................................................. Professor
Michael B. Weimer .................................................. Professor
George R. Welch .................................................. Professor
James T. White .................................................. Professor
Wenhao Wu .................................................. Associate Professor
Vladislav Yakovlev .................................................. Professor (J)
Ping Yang .................................................. Professor (J)
Dave H. Younghblood .................................................. Professor
Aleksei M. Zheltikov .................................................. Professor
M. Suhail Zubairy .................................................. Professor

* For the Annual Report, faculty are defined as tenured, tenure-track and non-tenure track employees who were employed at any time during 2013 (01/01/2013-12/31/2013).
6.1 Professional Activities, 2013

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2013.

Subsections of professional activities are defined as follows:

Honors and Awards
▷ All professional honors and awards, both internal and external.

Service Activities
▷ All professional service and leadership roles, including: departmental, college, university, state, national and international.

Teaching
▷ Classes taught during the Spring, Summer and Fall sessions of 2013.
▷ Any missing enrollment numbers were gathered from the Student Information Management System (SIMS) at Texas A&M University.

Research Projects
▷ All research projects, funded and unfunded.
▷ Whenever possible, all research-related employees of that faculty member are listed along with the citation. Key for employees: (P)=Postdoc, (G)=Graduate Student, (U)=Undergraduate Student.
▷ Renewals are marked by “(REN)” at the beginning of their title.
▷ Unfunded grants are marked by “(UNFUNDED)” at the end of the citation.
▷ Additional information (including PIs, CoPIs, and funding) on all funded grants are listed in Section 6.

Presentations
▷ All posters, invited and contributed lectures (plenary, conferences, colloquia, seminars, etc.).
▷ Whenever reported, posters, invited and contributed lectures are noted in parentheses following the citation.
▷ Citations are in chronological order.

Publications
▷ All printed materials published during 2013.
▷ Pre-press, in-press and submitted publications were not included.
▷ Citations were formatted in APA Style and are in alphabetical order by lead author.
• SERVICE DURING 2013

International
▷ Event: Finkel’stein Seminar (Organizer)
▷ Editorial/Board: Research Council of Romania (Review: Proposals), Various International Journals (Referee: Journals)

National

Department
▷ Event: Condensed Matter Seminar (Organizer), Physics Festival (Contributor)
▷ Committee/Panel: Admission Committee (Member), Qualifing Exam (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 689. — Special Topics in (total enrollment: 14)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 691. — Research (total enrollment: 4)

Fall
▷ PHYS 689. — Special Topics in (total enrollment: 20)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Private
▷ (REN) Quantum Coherent Synthesis and Decomposition, The Robert A. Welch Foundation, coworkers: H. Chen (G), B. Yang (G)

• PUBLICATIONS DURING 2013

No report received from faculty member.
• SERVICE DURING 2013

National
▷ Professional Affiliation: NCAA Faculty (Athletic Representative)

University
▷ Service Position: Texas A&M University President on Intercollegiate Athletics (Advisor)
▷ Committee/Panel: Athletic Compliance Committee (Member), Athletic Council (Member), SEC Conference (Representative)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 169)
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 169)

Summer
▷ PHYS 685. — Directed Studies (total enrollment: 1)

Fall
▷ PHYS 202. — College Physics (total enrollment: 85)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2013**
  Department
  ▶ Event: Low Temperature Demonstration for Chemistry Open House (Presenter), Low Temperature Demonstrations for Aggieland Saturday (Presenter), Low Temperature Demonstrations for Physics Festival (Presenter)
  ▶ Committee/Panel: Helium Usage Committee (Member), Undergraduate Curriculum Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
  ▶ PHYS 412. — Quantum Mechanics I (total enrollment: 14)
  ▶ PHYS 491. — Research (total enrollment: 1)

  **Fall**
  ▶ PHYS 101. — Topics in Contemporary Physics (total enrollment: 182)
  ▶ PHYS 414. — Quantum Mechanics II (total enrollment: 11)
  ▶ PHYS 491. — Research (total enrollment: 1)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2013
  Department
  ▶ Event: Saturday Morning Physics Biomedical Physics (Presenter), Davidson Young Scholars on Sunday Following Physics Festival (Manager), Davidson Young Scholars on Sunday Following Physics Festival (Organizer), Sports Physics at the Physics Festival (Manager), Sports Physics at the Physics Festival (Organizer)

• TEACHING ASSIGNMENTS DURING 2013
  Summer
  ▶ PHYS 491. — Research (total enrollment: 4)
  Fall
  ▶ PHYS 201. — College Physics (total enrollment: 112)
  ▶ PHYS 491. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2013
  ▶ “Biochemical Response and the Effects of Bariatric Surgeries on Type 2 Diabetes,” Meeting of the American Physical Society, Baltimore, MD, March, 2013. (Individual)
  ▶ “Predictions of a Fundamental Statistical Picture,” Meeting of the American Physical Society Division of Particles and Fields, Santa Cruz, CA, August, 2013. (Individual)

• PUBLICATIONS DURING 2013
No report received from faculty member.
• **CHAIRS/PROFESSORSHIPS**
  ▶ Presidential Professor for Teaching Excellence [2003]

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Undergraduate Advisor, Physics Undergraduate Advising Office, Physics and Astronomy, [2007]

• **TEACHING ASSIGNMENTS DURING 2013**
  
  **Spring**
  ▶ PHYS 208. — *Electricity and Optics* (total enrollment: 178)
  ▶ PHYS 691. — *Research* (total enrollment: 2)

  **Summer**
  ▶ PHYS 691. — *Research* (total enrollment: 2)

  **Fall**
  ▶ PHYS 218. — *Mechanics* (total enrollment: 311)
  ▶ PHYS 685. — *Directed Studies* (total enrollment: 1)
  ▶ PHYS 691. — *Research* (total enrollment: 2)
• SERVICE DURING 2013

National
▷ Editorial/Board: National Science Foundation (Review: Proposals), JHEP, Nuclear Physics B (Referee: Journals)

Department
▷ Committee/Panel: Mitchell Institute External Funding Committee (Member)
▷ Event: Heterotic Strings and (0,2) QFT (Co-Organizer), String Geometry and Beyond (Co-Organizer), Topics in Holography, Supersymmetry and Higher Derivatives (Co-Organizer)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 691. — Research (total enrollment: 1)

Summer
▷ PHYS 691. — Research (total enrollment: 2)

Fall
▷ PHYS 616. — Methods of Theoretical Physics II (total enrollment: 9)
▷ PHYS 689. — Special Topics in (total enrollment: 22)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ FRG: Collaborative Research: Generalized Geometry, String Theory, and Deformations, National Science Foundation
▷ (REN) Strings, Branes, and the Search for Unification, National Science Foundation
▷ (REN) Strings, Branes, and the Search for Unification, National Science Foundation, coworkers: Y. Chung (G), G. Guo (G), Z. Wang (G)
MELANIE BECKER

PROFESSOR (979) 458-7912
PHYS-High Energy Physics/String Theory mbecker@physics.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  - Professor (J), Physics (Qatar), Texas A&M University - Qatar, /2010/

- SERVICE DURING 2013

  National
  - Editorial/Board: Book Proposal by Professor Arkani Hamed (IAS) et all for Cambridge University Press (Reviewed), *Nuclear Physics B and Journal of High Energy Physics* (Referee: Journals)
  - Committee/Panel: National Science Foundation (Panelist)

  Department
  - Event: Heterotic Strings and (0,2) QFT (Co-Organizer), Joe Polchinski’s (KITP) Colloquium and Seminar (Co-Hosted), String Geometry and Beyond (Co-Organizer)

- TEACHING ASSIGNMENTS DURING 2013

  Spring
  - PHYS 691. — Research (total enrollment: 2)

  Summer
  - PHYS 691. — Research (total enrollment: 2)

  Fall
  - PHYS 691. — Research (total enrollment: 2)

- RESEARCH PROJECTS DURING 2013

  Federal
  - FRG: Collaborative Research: Generalized Geometries in String, *National Science Foundation*, coworkers: D. Robbins (P), W. Schulgin (P), L. Wulff (P), N. Su (G), Z. Wang (G)
  - FRG: Collaborative Research: Generalized Geometry, String Theory, and Deformations, *National Science Foundation*, coworkers: D. Robbins (P), W. Schulgin (P), L. Wulff (P), N. Su (G), Z. Wang (G)
  - (REN) Strings, Branes, and the Search for Unification, *National Science Foundation*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Head for Undergraduate Programs, Physics and Astronomy, [2013]

• SERVICE DURING 2013

  International
  ▶ Event: Annual International Conferences Novel In-Plane Semiconductor Lasers (Organizer)
  ▶ Committee/Panel: Annual International Conferences Novel In-Plane Semiconductor Lasers (Chair)

  National

  College
  ▶ Ad Hoc Committee: Undergraduate Curriculum Committee (Member), Undergraduate Research Committee (Member)

  Department
  ▶ Service Position: Society of Physics Students (Advisor)
  ▶ Event: Lecturer Search Committee (Organizer), Mitchell Institute Physics Prep Program (Lecturer), Physics and Engineering Festival (Presenter)
  ▶ Committee/Panel: HE Experiment Search Committee (Member), Astrophysics Search Committee (Member), Lecturer Search Committee (Chair), Mitchell Institute Outreach Committee (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ PHYS 303. — Advanced Mechanics II (total enrollment: 15)
  ▶ PHYS 691. — Research (total enrollment: 3)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 3)

  Fall
  ▶ PHYS 302. — Advanced Mechanics (total enrollment: 31)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

  Federal
Improving Research and Educational Activities in Multifunctional Nanomaterials, *Fund for the Improvement of Postsecondary Education*

Collaborative Research: Ultrashort Pulses and Mid-infrared Frequency Combs from Quantum Cascade Lasers, *National Science Foundation*

Engineering Research Center (ERC) on Mid-Infrared Technologies for Health and Environment (MIRTHE), *National Science Foundation*, coworkers: A. Wojcik (P), F. Xie (G)

(REN) PIRE: US-Japan Cooperative Research and Education on Terahertz Dynamics in Nanostructures, *National Science Foundation*, coworkers: X. Yao (G)

**PRESENTATIONS DURING 2013**

*Giant Optical Nonlinearity and Generation of Coherent Mid-infrared and THz Radiation in Graphene,* 43th Winter Colloquium PQE, Snowbird, UT, January, 2013. (Invited)

*Nonlinear and Quantum Optics of Graphene,* Texas A&M University-PQE Workshop, College Station, TX, January, 2013. (Invited)


Department of Physics, Baylor University, Waco, TX, April, 2013. (Individual)

*Nonlinear Generation of Coherent Mid-infrared and THz Radiation in Graphene and Topological Insulators,* International Laser Physics Workshop, Prague, Czech Republic, July, 2013. (Invited)

Technical University of Vienna, Wien, Austria, July, 2013. (Individual)

*Nonlinear Generation of Coherent Mid-infrared and THz Radiation in Graphene and Topological Insulators,* The 12th International Conference on Intersubband Transitions in Quantum Wells, Lake George, NY, September, 2013. (Invited)

Stony Brook University, Stony Brook, NY, November, 2013. (Individual)

**PUBLICATIONS DURING 2013**


SIU AH CHIN

PROFESSOR (979) 845-4190
PHYS-Nuclear and Computational Physics
chin@physics.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Undergraduate Advisor, Physics and Astronomy, //

• SERVICE DURING 2013

  International
  ▷ Committee/Panel: International Advisory Committee (Member)

  National

  University
  ▷ Service Position: Hong Kong Students Association (Advisor)

  College
  ▷ Committee/Panel: Information Technology Committee (Member)

  Department
  ▷ Event: Physics Festival (Participant)
  ▷ Committee/Panel: Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ PHYS 208. — *Electricity and Optics* (total enrollment: 103)
  ▷ PHYS 691. — *Research* (total enrollment: 1)

  Summer
  ▷ PHYS 685. — *Directed Studies* (total enrollment: 1)
  ▷ PHYS 691. — *Research* (total enrollment: 1)

  Fall
  ▷ PHYS 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

  International

• PRESENTATIONS DURING 2013

• **CHAIRS/PROFESSORSHIPS**
  ▶ Rachal/Mitchell/Heep Endowed Professorship in Physics [2008]

• **SERVICE DURING 2013**
  Department
  ▶ Committee/Panel: Graduate Admissions Committee (Member), Performance/Evaluation Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**
  Spring
  ▶ ASTR 685. — **Directed Studies** (total enrollment: 1)
  ▶ ASTR 691. — **Research** (total enrollment: 1)
  Summer
  ▶ ASTR 685. — **Directed Studies** (total enrollment: 1)
  Fall
  ▶ ASTR 111. — **Overview of Modern Astronomy** (total enrollment: 42)
  ▶ ASTR 685. — **Directed Studies** (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2013**
  Federal
  ▶ Collaborative Research: Hobby Eberly Telescope Dark Energy Experiment, *National Science Foundation*, coworkers: J. Marshall (Research Scientist), J. Rheault (Research Associate), T. Li (G), R. Allen (Staff), T. Prochaska (Staff), S. Truelove (Administrative)
  ▶ REU Site: Astronomical Instrumentation at Texas A&M University, *National Science Foundation*

• **PRESENTATIONS DURING 2013**
  ▶ Ohio State University, Columbus, OH, 2013. (Invited)
  ▶ Texas A&M Commerce, College Station, TX, 2013. (Invited)

• **PUBLICATIONS DURING 2013**
Collins, K.A.; et al. (2013) KELT-6b: A Transiting Mildly-Inflated Saturn with a Metal-Poor Host, American Astronomical Society Meeting Abstracts 302.03.


Han, C.; et al. (2013) Microlensing Discovery of a Tight, Low-mass-ratio Planetary-mass Object around an Old Field Brown Dwarf *Astrophysical Journal*, vol. 778, 55.


• SERVICE DURING 2013

Department
▷ Service Position: Cooperative Group Problem Solving of Context-Rich Problems for all 218 Courses (Participant), Training of 18 Graduate Teaching Assistants (Supervisor)

• TEACHING ASSIGNMENTS DURING 2013

Fall
▷ PHYS 218. — Mechanics (total enrollment: 156)

Hired 09/01/2013.
No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Interim Director, George P. & Cynthia Woods Mitchell Institute for Fundamental Physics & Astronomy, Physics and Astronomy, [2012]

• SERVICE DURING 2013
  International
  ▶ Event: Center for Theoretical Underground Physics and Related Areas (CETUP) Workshop (Co-Organizer), VII International Conference on Interconnections Between Particle Physics and Cosmology (PPC2013) (Co-Organizer)
  ▶ Editorial/Board: BCVSPIN: Asia America Study Institute for Particle Physics and Cosmology (Referee: Journals), Center for Theoretical Underground Physics and Related Areas (Referee: Journals)

  National

  University
  ▶ Event: Texas A&M University Workshop on Dark Matter (Co-Organizer)

  Department
  ▶ Event: Mini-Workshop on Inflation (Co-Organizer), Saturday Morning Physics, Texas A&M University (Presenter)
  ▶ Committee/Panel: Graduate Curriculum Committee (Chair), Mitchell Institute for Fundamental Physics and Astronomy (Interim Director)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 638. — Quantum Field Theory II (total enrollment: 10)
  ▶ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 5)

  Fall
  ▶ ASTR 689. — Special Topics in (total enrollment: 28)
  ▶ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013

Federal
• PRESENTATIONS DURING 2013
  ▶ “Elementary Particle Physics at Moscow State University,” LHC - The first part of the journey, KITP; PASCOS 2013; 16th Lomonosov Conference, Moscow, Russia, 2013. (Invited)
  ▶ 13th International Conference on Topics in Astroparticle and Underground Physics, Pacific Grove, CA, 2013. (Individual)
  ▶ “Searching for Top Squarks at the LHC in Fully Hadronic Final State,” 116th Annual Meeting of the Texas Academy of Science, February, 2013. (Graduate, K. Wang)
  ▶ “Electroweak-ino via Vector Boson Fusion,” Snowmass Energy Frontier Workshop, Brookhaven National Laboratory, Upton, NY, April, 2013. (Invited)
  ▶ “Top Squark Searches and Bino-Higgsino Dark Matter at the LHC,” Phenomenology Symposium, PA, May, 2013. (Graduate, K. Wang)
  ▶ “Vector Boson Fusion as a Probe of Neutralinos, Charginos, and the Stop Rubicon at the LHC,” Phenomenology Symposium, PA, May, 2013. (Postdoc)
  ▶ “Embedding Cosmic Inflation,” 25th June talk at Erice International School of Subnuclear Physics’, June, 2013. (Graduate, S. Downes)
  ▶ “Supersymmetric Dark Matter: Probes at the Large Hadron Collider,” CETUP Workshop, SD, June, 2013. (Postdoc)
  ▶ “GammaRay Probes of Dark Matter Substructure,” CETUP Workshop, SD, July, 2013. (Graduate, S. Campbell)
  ▶ “The Galactic Center and the Fornax Galaxy Cluster,” VII International Conference on Interconnection between Particle Physics and Cosmology, SD, July, 2013. (Graduate, S. Campbell)
  ▶ VII International Conference on Interconnections Between Particle Physics and Cosmology (PPC2013), Lead, SD, July, 2013. (Individual)
  ▶ “Non-Thermal Dark Matter from Moduli Decay,” Dark Matter in Galaxies, the LHC and Direct and Indirect Searches: Are We Near the End of the Road, Aspen, CO, September, 2013. (Invited)
  ▶ “Sneutrino Dark Matter and Neutrinos,” Dark Matter in Galaxies, the LHC and Direct and Indirect Searches: Are We Near the End of the Road, Aspen, CO, September, 2013. (Invited)
Invited)
▷ Texas A&M University, College Station, TX, November, 2013. (Individual)
▷ “Model Dependence in (String) Inflation,” CosPA Symposium on Cosmology and Particle Astrophysics, November, 2013. (Graduate, S. Downes)
▷ “On Model Dependence in (String) Inflation,” 19th International Conference on Particles, String and Cosmology, November, 2013. (Graduate, S. Downes)

• PUBLICATIONS DURING 2013
• AWARDS DURING 2013
  University
  ▶ John E. Trott, Jr. Award, Texas A&M University

• SERVICE DURING 2013
  Regional
  ▶ Event: Physics Camp for the Youth Adventure Program (Organizer)
  University
  ▶ Committee/Panel: Center of Teaching Excellence Faculty and Student Advisory Board (Member)
  Department
  ▶ Event: 33 Physics Shows (Presenter), Physics Festival (Organizer), Mitchell Institute Physics Enhancement Program (Lecturer), Mitchell Institute Physics Enhancement Program (Organizer)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 208. — **Electricity and Optics** (total enrollment: 144)
  Fall
  ▶ PHYS 218. — **Mechanics** (total enrollment: 156)

• RESEARCH PROJECTS DURING 2013
  State
  ▶ DEEP: Discover, Explore, and Enjoy Physics & Engineering via High Impact Educational Experiences in Aggieland and Beyond, *Texas A&M University*

• PRESENTATIONS DURING 2013
  ▶ Teacher Summit 2013, College Station, TX, January, 2013. (Invited)
  ▶ “Teaching Undergraduates: Surviving or Thriving?,” Texas A&M Center of Teaching Excellence Fall 2013 TA Training Meetings, College Station, TX, August, 2013. (Invited)
  ▶ “You’re Educators. You’re Born to Make a Difference,” Fall Induction of Kappa Delta Pi Education Honor Society, College Station, TX, November, 2013. (Individual)
• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell-Heep-Munnerlyn Endowed Career Enhancement Professorship in Physics or Astronomy [2010]

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: European Physics Journal C (Referee: Journals)
  National
  ▶ Editorial/Board: NIM-A (Referee: Journals)
  Department
  ▶ Committee/Panel: Experimental HEP Search Committee (Member), Graduate Records Committee (Member), High Energy Physics Representative (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 218. — Mechanics (total enrollment: 242)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▶ PHYS 491. — Research (total enrollment: 2)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 152)
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Enhancing the Discovery Reach of the CMS Detector. Upgraded Jet Energy Correction and Uncertainties as Critical Components to Advanced Analysis Techniques, Department of Energy, coworkers: I. Osipenkov (Research Associate), A. Delgado (G), A. Perloff (G)
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  ▶ Radiation Hard Pixel Detectors for the LHC Upgrades, Department of Energy, coworkers: I. Osipenkov (Research Associate), A. Delgado (G), A. Perloff (G)

• PRESENTATIONS DURING 2013
- University of Buenos Aires, Buenos Aires, Argentina, July, 2013. (Individual)
- “CMS Results on Gauge Coupling Measurements,” LHC Workshop, August, 2013. (Individual)

- **PUBLICATIONS DURING 2013**
• SERVICE DURING 2013
  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals)
  Department
  ▶ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 691. — Research (total enrollment: 2)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 2)
  Fall
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Thermoelectric and Thermal Transport in Disordered and Strongly Correlated Electron Systems, National Science Foundation
  State
  ▶ Topological Effects and Quantum Pumping in Complex Systems with Strong Spin-orbit Coupling, Texas A&M University

• PUBLICATIONS DURING 2013

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Department Head, Physics and Astronomy, [1993]

• SERVICE DURING 2013
  College
  ▶ Event: Junior and Senior Science Bowl (Reviewer), Texas Junior Science and Humanities Symposium (Judge)
  ▶ Ad Hoc Committee: COS Institutional Effectiveness Committee (Member)
  ▶ Committee/Panel: Qatar Advisory Committee (Member)
  Department
  ▶ Event: Chemistry Open House (Participant), Mitchell Institute Physics Enhancement Program (Speaker), Physics Festivals (Participant)
  ▶ Committee/Panel: TA Allocations (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 202. — College Physics (total enrollment: 121)
  ▶ PHYS 285. — Directed Studies (total enrollment: 11)
  Summer
  ▶ PHYS 285. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ PHYS 201. — College Physics (total enrollment: 119)
  ▶ PHYS 285. — Directed Studies (total enrollment: 9)
• SERVICE DURING 2013

International
▷ Service Position: Working Group on Quark Recombination and Hadronization, JET Collaboration (Convener)
▷ Event: Hot Quarks International Conference (Organizer)
▷ Editorial/Board: Proceedings for the Hot Quarks Conference (Co-Editor)
▷ Committee/Panel: Hot Quarks Conference Series Standing Organizing Committee (Member)

National
▷ Event: Nuclear Matter Under Extreme Conditions (Lecturer)
▷ Committee/Panel: JET Collaboration Executive Committee (Member)

Department
▷ Service Position: REU Research (Advisor)
▷ Committee/Panel: Advisory Committee (Member), Colloquium Committee (Chair), Cyclotron Institute Space Allocation Committee (Member), Nuclear Theory Seminar (Member), Performance Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 601. — Analytical Mechanics (total enrollment: 17)
▷ PHYS 685. — Directed Studies (total enrollment: 2)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 691. — Research (total enrollment: 4)

Fall
▷ PHYS 218. — Mechanics (total enrollment: 156)
▷ PHYS 681. — Seminar (total enrollment: 8)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
A Topical Collaboration on Quantitative Jet and Electromagnetic Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions, Department of Energy

New Theoretical Developments in High Energy Nuclear Collisions, National Science Foundation, coworkers: G. Chen (P), S. Rose (G), S. Somanathan (G), Z. Yang (G)

- **PRESENTATIONS DURING 2013**
  - “Azimuthal Asymmetries from Jets Quenched In Fluctuating Backgrounds,” J. Phys. Conf. Ser., 2013. (Contributed)
  - “Recombination for JET Shower MC: Status and Discussion,” JET NLO and Monte Carlo Meeting, Detroit, MI, August, 2013. (Invited)

- **PUBLICATIONS DURING 2013**
• CHAIRS/PROFESSORSHIPS
  ▶ George P. Mitchell ’40 Chair in Experimental Physics [2005]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Head for Development, Physics and Astronomy, [2012]

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals)
  University
  ▶ Committee/Panel: Texas Institute for Advanced Studies (Deputy Director)
  Department
  ▶ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ MATH 150. — Functions, Trigonometry and Linear Systems (total enrollment: 286)
  ▶ PHYS 221. — Optics and Thermal Physics (total enrollment: 46)
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 3)
  Fall
  ▶ MATH 150. — Functions, Trigonometry and Linear Systems (total enrollment: 388)
  ▶ PHYS 221. — Optics and Thermal Physics (total enrollment: 93)
  ▶ PHYS 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013
  State
  ▶ DEEP: Discover, Explore, and Enjoy Physics & Engineering via High Impact Educational Experiences in Aggieland and Beyond, Texas A&M University
  Private
  ▶ The Integrating Cavity: A Powerful New Approach to Ring-Down Spectroscopy, The Robert A. Welch Foundation, coworkers: E. Figueroa (G), J. Mason (G)
• PRESENTATIONS DURING 2013
  ▶ “Remote Sensing of Sound Speed in the Ocean via Brillouin Scattering,” Texas A&M University, College Station, TX, June, 2013. (Individual)
  ▶ “Bell Inequality Experiments,” Texas A&M University/Princeton Summer School on Quantum Science and Engineering, Casper, WY, July, 2013. (Invited)
  ▶ “Einstein Determinism and Quantum Mechanics,” Oklahoma State University, Stillwater, OK, October, 2013. (Invited)

• PUBLICATIONS DURING 2013

SEC. 6.1  PROFESSIONAL ACTIVITIES  663
• SERVICE DURING 2013

National
▷ Committee/Panel: DOE/NSF Nuclear Science Advisory Committee Subpanel on Scientific Facilities (Member), eSTAR Letter of Intent Writing Committee (Member), Management Committee (Member), STAR Decadal Plan Committee (Chair), STAR Trigger Board, Spring (Member)

College
▷ Committee/Panel: Information Technology Committee (Member)

Department
▷ Committee/Panel: Cyclotron Institute Computer Committee (Chair), Cyclotron Institute Injury Reduction Committee (Member), Graduate Curriculum Committee (Chair), Teaching Assignments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 305. — Advanced Electricity and Magnetism II (total enrollment: 14)
▷ PHYS 691. — Research (total enrollment: 1)

Summer
▷ PHYS 691. — Research (total enrollment: 1)

Fall
▷ PHYS 304. — Advanced Electricity and Magnetism I (total enrollment: 32)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy
▷ (REN) QCD and Standard Model Studies, Department of Energy, coworkers: P. Djawotho (P), M. Mondal (P), Z. Chang (G)

• PRESENTATIONS DURING 2013
▷ “Gluon Polarization and Jet Production in STAR,” XXI International Workshop Deep Inelastic Scattering, Marseille, France, April, 2013. (Individual)
▷ “Transverse Single-Spin Asymmetry in STAR at Forward Rapidity,” 5th Workshop APS GHP, Denver, CO, April, 2013. (Individual)


- PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International
▷ Professional Affiliation: Canadian Association of Physicists (Member), Royal Society of Canada (Fellow)
▷ Editorial/Board: Natural Sciences and Engineering Research Council of Canada (Review: Proposals), Zeitschrift fur Naturforshung A (Referee: Journals)

National
▷ Professional Affiliation: American Physical Society (Fellow)
▷ Event: National Science Foundation Research Experience for Undergraduates Program (Participant)
▷ Ad Hoc Committee: JSA Outstanding Nuclear Science Award (Member)
▷ Committee/Panel: NSAC Subcommittee Charged by DOE/NSF to Assess Experimental Studies of Neutrinoless Double Beta Decay (Member), Program Advisory Committee, ATLAS Facility, Argonne National Laboratory (Chair)

Regional
▷ Committee/Panel: Jefferson Science Associates Programs Committee (Member)

University
▷ Committee/Panel: Distinguished Professor Committee (Member), Ad hoc Committees (Member), Reactor Safety Board (Member)

College
▷ Committee/Panel: Tenure and Promotion Advisory Committee (Member)

Department
▷ Committee/Panel: Promotions, Tenure and Appointments (Member), Senior Nuclear Physicist Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 208(H) — Electricity and Optics (total enrollment: 40)
▷ PHYS 208. — Electricity and Optics (total enrollment: 120)
▷ PHYS 691. — Research (total enrollment: 1)
• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) NNDC: Contract for Cyclotron Institute, Brookhaven National Laboratory
▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: L. Chen (P), V. Horvath (P), V. Iacob (P), N. Nica (P), I. Towner (P), M. Bencomo (G), J. Goodwin (G), K. Brandenburg (U)

Private
▷ (REN) Nuclear Decay Studies, The Robert A. Welch Foundation
▷ (REN) Nuclear Decay Studies, The Robert A. Welch Foundation, coworkers: L. Chen (P), V. Horvath (P), V. Iacob (P), N. Nica (P), H. Park (P), I. Towner (P), M. Bencomo (G), J. Goodwin (G), K. Brandenburg (U)

• PRESENTATIONS DURING 2013
▷ "\(^{119}\)mSn - a Difficult Experimental Case to Test Internal-conversion Theory," 20th Meeting of the Nuclear Structure and Decay Data (NSDD) Network, Kuwait Foundation for the Advancement of Sciences and Physics Department, Kuwait University, Kuwait, January, 2013. (Contributed)
▷ “Further Test of Internal-conversion Theory with a Measurement in \(^{119}\)mSn,” International Conference on Nuclear Data for Science and Technology, New York, NY, March, 2013. (Contributed)
▷ “Precise Measurement of Branching Ratios in the Decay of \(^{38}\)Ca,” APS Meeting, Denver, CO, April, 2013. (Contributed)
▷ “Ft Values Measured to \(\pm 0.1\)% for Superallowed Beta Transitions: Metrology at Sub-second Time Scales,” 19th International Conference on Radionuclide Metrology and its Applications, Antwerp, Belgium, June, 2013. (Invited)
▷ “Precise Test of Internal-conversion Theory: Transitions Measured in Five Nuclei Spanning 50 \(\leq Z \leq 78\),” 19th International Conference on Radionuclide Metrology and its Applications, Antwerp, Belgium, June, 2013. (Invited)
▷ “How Idiosyncratic is the Weak Force?,” REU, Cyclotron Institute, College Station, TX, July, 2013. (Individual)
▷ “A Further Test of Internal-conversion Theory with the 88.26-keV M4 Transition in \(^{127}\)Te,” APS Meeting, Newport News, VA, October, 2013. (Poster Individual)
▷ “Another Interesting Case of ICC Measurement: the 88-keV M4 Transition in \(^{127}\)Te,” Annual meeting of the U.S. Nuclear Data Program, Brookhaven National Laboratory, New York, NY, November, 2013. (Contributed)

• PUBLICATIONS DURING 2013

 SEC. 6.1  PROFESSIONAL ACTIVITIES  667
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ⊲ Professor (J), Chemistry, [2006/]

• SERVICE DURING 2013
  National
  ⊲ Professional Affiliation: National Academy of Sciences (Member)

• RESEARCH PROJECTS DURING 2013
  Federal
  ⊲ Instrument Development: A High Density Source of Cold, Slow Molecules, National Science Foundation

• PRESENTATIONS DURING 2013
  ⊲ “Glimpses of Chemical Wizardry,” University of San Carlos, Brazil, February, 2013.( Individual)
  ⊲ “Ben Frahnklin’s Scientific Amusements,” Texas A&M, Physics Festival, College Station, TX, April, 2013.( Individual)
  ⊲ “Chemical Physics: A Versatile and Hearty Hybrid,” Free University, Berlin, Germany, May, 2013.( Individual)
  ⊲ “Homage to Bretislav Friedrich,” Free University, Berlin, Germany, May, 2013.( Individual)
  ⊲ “Molecular Beams, Our Legacy from Otto Stern of Beauty and Peculiar Charm,” University of Hamburg, Hamburg, Germany, May, 2013.( Individual)
  ⊲ “PRISE Dinner: Zipf’s Law Perspective,” Harvard University, Cambridge, MA, June, 2013.( Individual)
  ⊲ “Prospects for Inducing Chemical Bonds via Superintense, High Frequency Lasers,” Academic Sinica, Taiwan, China, July, 2013.( Individual)
  ⊲ “The Impossible Takes a Little Longer,” Madame Curie Camp, Taiwan, China, July, 2013.( Individual)
  ⊲ “24/7 Exposition of Centrifugal Force,” Harvard University, Cambridge, MA, September, 2013.( Individual)
“Sex and the Single Methyl Group,” ACS. Symposium Honoring Carl Djerassi, Indianapolis, IN, September, 2013. (Individual)
“Applauding a Virtuoso Physicist,” Massachusetts Institute of Technology, Fest for Daniel Kleppner, Cambridge, MA, October, 2013. (Individual)
“Primer for Dimensional Scaling,” Donostia International Physics Center, Richie Workshop, October, 2013. (Individual)

PUBLICATIONS DURING 2013
TERUKI KAMON

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PHYS-High Energy Physics t-kamon@tamu.edu

• SERVICE DURING 2013

  International
  ▶ Event: 7th International Workshop on the Interconnection Between Particle Physics and Cosmology (Organizer)

  University
  ▶ Committee/Panel: Texas A&M Reactor Safety Board (Member)

  College
  ▶ Committee/Panel: Technology-Mediated Instruction Committee (Member)

  Department
  ▶ Event: Physics Festival (Organizer), High Energy Phenomenology Experiment and Cosmology (HEPEC) Seminar (Organizer), Texas Dark Matter Workshop (Organizer)
  ▶ Committee/Panel: Mitchell Institute Advisory Committee (Member), Mitchell Institute Building Committee (Member), Mitchell Institute Communication Committee (Member), Mitchell Institute for Fundamental Physics and Astronomy (Deputy Director), Performance Evaluation Committee (Member), PTA Committee (Chair), Theoretical Cosmology Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ PHYS 218. — Mechanics (total enrollment: 124)
  ▶ PHYS 685. — Directed Studies (total enrollment: 2)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 1)

  Fall
  ▶ PHYS 201. — College Physics (total enrollment: 142)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  ▶ Search for Supersymmetry in Events with Jets and Missing Transverse Energy in High-energy pp Collisions at 7 TeV at the CMS Experiment by Using Bi-Event Subtraction Technique (BEST), FERMI National Accelerator Laboratory

SEC. 6.1 PROFESSIONAL ACTIVITIES 671
International
  ▶ Creation of Experimental High Energy Physics Program, Qatar Foundation

- PRESENTATIONS DURING 2013
  ▶ “Searching for Physics Beyond the Standard Model Using Vector Boson Fusion and Di-Lepton Final States,” 116th Annual Meeting of the Texas Academy of Science, Schreiner University in Kerrville - Sean Wu, Kerrville, TX, February, 2013.( Graduate)
  ▶ “Searching for Top Squarks at the LHC in Fully Hadronic Final State,” 116th Annual Meeting of the Texas Academy of Science, Schreiner University in Kerrville, Kerrville, TX, February, 2013.( Graduate, K. Wang)
  ▶ “Probing Dark Matter with Vector Boson Fusion and Top Squark Decays at the LHC,” Texas Dark Matter Workshop, Texas A&M University, College Station, TX, March, 2013.( Postdoc)
  ▶ “VBF Productions for SUSY Searches,” CMS SUSY Workshop, ETH Honggerberg, Zurich, Switzerland, March, 2013.( Invited)
  ▶ “Electroweak-ino via Vector Boson Fusion,” Snowmass Energy Frontier Workshop, Brookhaven National Laboratory, Upton, NY, April, 2013.( Individual)
  ▶ “The Supersymmetric Electroweak Sector via Vector Boscon Fusion at the LHC,” Phenomenology 2013 Symposium, University of Pittsburgh, Pittsburgh, PA, May, 2013.( Postdoc)
  ▶ “Overview of LHC SUSY Searches in Colorless SUSY Sectors,” WCU High Energy Collider Physics Seminar, Kyungpook National University, Korea, June, 2013.( Individual)
  ▶ “SUSY Searches (II) with Leptons, Photons, Long-Lifetime, or No Large MET,” Tohoku Workshop on Higgs and Beyond, Tohoku University, Sendai, Japan, June, 2013.( Invited)
  ▶ “Interconnection Between the Frontiers,” VII International Conference on Interconnections between Particle Physics and Cosmology (PPC2013), Convention Center at the Deadwood Lodge, Deadwood, SD, July, 2013.( Invited)
“Search for New Physics with Weak Boson Fusion at LHC,” VII International Conference on Interconnections between Particle Physics and Cosmology (PPC2013), Convention Center at the Deadwood Lodge, Deadwood, SD, July, 2013. (Graduate, W. Flanagan)


“Dark Matter Searches in Monojet and Monophoton Events at CMS at LHC,” 21st International Conference on Supersymmetry and Unification of Fundamental Interactions, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy, August, 2013. (Postdoc)

“Searching for EWK SUSY and Stops with Vector Boson Fusion at the LHC,” 21st International Conference on Supersymmetry and Unification of Fundamental Interactions, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy, August, 2013. (Postdoc)

“Detector and Event Visualization with SketchUp at the CMS Post-doc in my DOE Program Experiment,” International Conference on Computing in High Energy and Nuclear Physics, Amsterdam, October, 2013. (Poster Postdoc)


“Probing Compressed Stop at the 14-TeV LHC,” CMS SUSY Top-Bottom-Tau (TBT) Meeting, December, 2013. (Graduate, W. Flanagan)

• PUBLICATIONS DURING 2013


Aaltonen, T.; et al. (2013) Production of kshort, kstar(892)and phi(1020) in Minimum Bias Events and kshort and lambda in Jets in pbarn $p\bar{p}$ Collisions at $\sqrt{s} =1.96$ TeV Physical Review D: Particles and Fields, vol. 88, 092005.


Aaltonen, T.; et al. (2013) Measurement of the Leptonic Asymmetry in t\bar{t} Events Produced in $p\bar{p}$bar Collisions at $\sqrt{s} =1.96$ TeV Physical Review D: Particles and Fields, vol. 88, 072003.


Aaltonen, T.; et al. (2013) Searches for the Higgs Boson Decaying to $W^+W^-$ → $\ell^+\nu\ell^-\bar{\nu}$ with the CDF II Detector Physical Review D: Particles and Fields, vol. 88, 052012.


Aaltonen, T.; et al. (2013) Search for $B_s \to \mu^+\mu^-$ and $B_d \to \mu^+\mu^-$ Decays with the Full CDF Run II Data Set Physical Review D: Particles and Fields, vol. 87, 072003.


Aaltonen, T.; et al. (2013) Measurement of the Differential Cross Section $d\sigma/d(cos\theta)$


- Chatrchyan, S.; et al. (2013) Measurement of Masses in the $t\bar{t}$ System by Kinematic Endpoints in pp Collisions at $\sqrt{s} = 7$ TeV European Physical Journal C, vol. 73, 2494.


- Chatrchyan, S.; et al. (2013) Measurement of the Top-antitop Production Cross Section
in the tau+jets Channel in pp Collisions at $\sqrt{s} = 7$ TeV *European Physical Journal C*, vol. 73, 2386.

Chatrchyan, S.; et al. (2013) Search for Physics Beyond the Standard Model in Events with $\tau$ Leptons, Jets, and Large Transverse Momentum Imbalance in pp Collisions at $\sqrt{s} = 7$ TeV *European Physical Journal C*, vol. 73, 2493.

Chatrchyan, S.; et al. (2013) Search for Supersymmetry in pp Collisions at $\sqrt{s} = 7$ TeV in Events with a Single Lepton, Jets, and Missing Transverse Momentum *European Physical Journal C*, vol. 73, 2404.


Chatrchyan, S.; et al. (2013) Search for Supersymmetry in pp Collisions at $\sqrt{s} = 7$ TeV in Events with a Single Lepton, Jets, and Missing Transverse Momentum *European Physical Journal C*, vol. 73, 2339.

Chatrchyan, S.; et al. (2013) Measurement of the Sum of W W and WZ Production with W+dijet Events in pp Collisions at $\sqrt{s} = 7$ TeV *European Physical Journal C*, vol. 73, 2283.


Chatrchyan, S.; et al. (2013) Measurement of the Production Cross Section for $Z\gamma \to \nu \bar{\nu} \gamma$ in pp Collisions at $\sqrt{s} = 7$ TeV and Limits on $ZZ\gamma$ and $Z\gamma\gamma$ Triple Gauge Boson Couplings *Journal of High Energy Physics*, vol. 1310, 164.


Chatrchyan, S.; et al. (2013) Measurement of the $\Lambda_c^0$ Lifetime in pp Collisions at $\sqrt{s} = 7$ TeV *Journal of High Energy Physics*, vol. 07, 163.


Chatrchyan, S.; et al. (2013) Study of the Underlying Event at Forward Rapidity in pp Collisions at √s = 0.9, 2.76, and 7 TeV Journal of High Energy Physics, vol. 1304, 072.


SEC. 6.1 PROFESSIONAL ACTIVITIES 677


Chatrchyan, S.; et al. (2013) Search for Z’ Resonances Decaying to $t\bar{t}$ in Dilepton+Jets Final States in pp Collisions at $\sqrt{s} = 7$ TeV Physical Review D: Particles and Fields, vol. 87, 072002.


Chatrchyan, S.; et al. (2013) Search for Contact Interactions in $\mu^+\mu^-$ Events in pp Collisions at $\sqrt{s} = 7$ TeV *Physical Review Letters*, vol. 87, 032001.


Chatrchyan, S.; et al. (2013) Measurement of the $Y_{1S}$, $Y_{2S}$ and $Y_{3S}$ Polarizations in pp Collisions at $\sqrt{s} = 7$ TeV *Physical Review Letters*, vol. 110, 081802.


Chatrchyan, S.; et al. (2013) Search for a New Bottomonium State Decaying to $\Upsilon(1S)\pi^+\pi^-$ in pp Collisions at $\sqrt{s} = 8$ TeV *Physics Letters B*, vol. 727, 57-76.


Chatrchyan, S.; et al. (2013) Measurement of the $\Upsilon(1S)$, $\Upsilon(2S)$, and $\Upsilon(3S)$ Cross Sections in pp Collisions at $\sqrt{s} = 7$ TeV *Physics Letters B*, vol. 727, 101-125.


Chatrchyan, S.; et al. (2013) Measurement of the $t\bar{t}$ Production Cross Section in pp Collisions at $\sqrt{s} = 7$ TeV with Lepton + Jets Final States *Physics Letters B*, vol. 720, 83-104.


On leave.

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GEORGE W. KATTAWAR

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PHYS-Atomic, Quantum Optics and Applied Physics kattawar@tamu.edu

• SERVICE DURING 2013

National

Department
▷ Research Group: Grant Proposal Committee (Member)
▷ Event: Kinematics to Physics Teachers at Cook’s Branch (Speaker), Physics Festival (Participant), Polarized Light in Nature to Graduate Students (Speaker), Polarized Light in Nature to Physics 101 Class (Speaker), Rainbows, Halos and Glories to Brazos Valley Astronomy Club (Speaker), REU Cyclotron Students (Speaker)
▷ Committee/Panel: Astronomy Committee (Member), Computer Committee (Member), Graduate Student Admissions and Appointments Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 689. — Special Topics in (total enrollment: 6)
▷ PHYS 691. — Research (total enrollment: 6)

Summer
▷ PHYS 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Three-Dimensional Polarized Radiative Transfer in a Dynamic Atmosphere-Ocean System, Department of Defense, coworkers: D. Sun (P)
▷ Collaborative Research: Development of A High-Resolution Real-Time Polarization Image Sensor for Marine Deployment, National Science Foundation, coworkers: D. Chen (G)

State
▷ Biological Response to the Dynamic Spectral-Polarized Underwater Light Field, University of Texas, coworkers: M. Gao (G), A. Marotta (G)

• PUBLICATIONS DURING 2013

SEC. 6.1 PROFESSIONAL ACTIVITIES 681


*Retired 08/01/2013.*
• AWARDS DURING 2013

College
▷ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2013

International
▷ Editorial/Board: *European Physics Journal B* (Referee: Journals)

National

University
▷ Committee/Panel: Supercomputing Steering Committee (Member)

Department
▷ Service Position: PHYS 201/202 Textbook Selection Committee (Member)
▷ Event: Physics Festival (Presenter)
▷ Committee/Panel: Awards Committee (Member), IT Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

Fall
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

Federal
▷ CAREER: Designing Quantum Computers and Understanding Glassy Systems, *National Science Foundation*, coworkers: R. McDonald (G), Z. Zhu (G)
PRESENTATIONS DURING 2013

- “Seeing the World Through Spin Glasses,” Santa Fe Institute, Santa Fe, NM, January, 2013. (Invited)
- “Are the Diluted Antiferromagnet in a Field and the Random-Field Ising Model in the same Universality Class?,” March Meeting of the American Physical Society, Baltimore, MD, March, 2013. (Contributed)
- “Equilibrium and Nonequilibrium Properties of Boolean Decision Problems on Scale-Free Graphs with Competing Interactions with External Biases,” March Meeting of the American Physical Society, Baltimore, MD, March, 2013. (Contributed)
- “Resilience of Topological Error-Correction Codes to Concurrent Qubit and Measurement Errors,” March Meeting of the American Physical Society, Baltimore, MD, March, 2013. (Contributed)
- “Self-Organized Criticality in Glassy Spin Systems Requires Long-range Interactions,” March Meeting of the American Physical Society, Baltimore, MD, March, 2013. (Contributed)
- “Boolean Decision Problems with Competing Interactions on Scale-Free Networks,” Ben-Gurion University, Israel, May, 2013. (Individual)
- “Understanding Topological Quantum Error-Correction Codes Using Classical Disordered Spin Models,” ETH, Zurich, Switzerland, June, 2013. (Invited)
- “Static and Dynamic Properties of Spin Glasses as seen Through the Parallel Tempering Telescope,” Santa Fe Institute Workshop on Deep Computation in Statistical Physics, Santa Fe, NM, August, 2013. (Individual)
- “Frustrating Frustrated Problems,” Material Science & Engineering Program, Texas A&M University, College Station, TX, October, 2013. (Individual)
- “Self-Organized Criticality in Hamiltonian Spin Systems: Intriguingly Ordinary or Ordinarily Intriguing?,” Los Alamos National Laboratory, Los Alamos, NM, October, 2013. (Individual)
- “Self-Organized Criticality in Hamiltonian Spin Systems: Intriguingly Ordinary or Ordinarily Intriguing?,” University of California, Davis, CA, November, 2013. (Individual)
- “Self-Organized Criticality in Hamiltonian Spin Systems: Intriguingly Ordinary or Ordinarily Intriguing?,” University of California, Santa Cruz, CA, November, 2013. (Individual)
- “Self-Organized Criticality in Hamiltonian Spin Systems: Intriguingly Ordinary or Ordinarily Intriguing?,” University of Konstanz, Konstanz, Germany, November, 2013. (Individual)
- “Self-Organized Criticality in Hamiltonian Spin Systems: Intriguingly Ordinary or Or-
• PUBLICATIONS DURING 2013


• SERVICE DURING 2013

International

National

Department
▷ Event: Nuclear Physics Program (Lecturer)
▷ Committee/Panel: Astrophysics Faculty Search (Member), Graduate Student Admissions and Applications Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 331. — *Theoretical Methods for Physicists I* (total enrollment: 38)
▷ PHYS 691. — *Research* (total enrollment: 2)

Summer
▷ PHYS 691. — *Research* (total enrollment: 2)

Fall
▷ PHYS 332. — *Theoretical Methods for Physicists II* (total enrollment: 26)
▷ PHYS 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ A Topical Collaboration on Quantitative Jet and Electromagnetic Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions, *Department of Energy*, coworkers: K. Han (G)
▷ (REN) Theoretical Nuclear Physics, *National Science Foundation*, coworkers: T. Song (P)

Private
▷ (REN) Theoretical Studies of Heavy Ion Collisions, *The Robert A. Welch Foundation*, coworkers: K. Han (G), F. Li (G)

• PRESENTATIONS DURING 2013
▷ “On Physics and Status of AMPT,” International Workshop on Particle Production in Proton-Proton Interactions and Beyond, Bad, Liebenzell, Germany, April, 2013. (Invited)


“Elliptic Flow as a Probe of the QCD Phase Diagram at Finite Chemical Potential,” 10th International Workshop on QCD Phase Transition and Relativistic Heavy Ion Physics, Chengdu, Sichuan, China, August, 2013. (Invited)

“Fluctuations and Correlations in AMPT,” 2nd Workshop on Initial Fluctuations and Final Correlations, Chengdu, China, August, 2013. (Invited)


“Hot Medium Effects on J/ψ Production in p+Pb Collisions at √s_{NN}=5.02 TeV,” International Workshop on Heavy Flavor and QCD Phase Transition in High Energy Collisions, Berkeley, CA, November, 2013. (Postdoc)

“Mean-Field Effects in Hot Dense Matter,” Tribute to Gerald E. Brown Conference, Stony Brook, NY, November, 2013. (Invited)


PUBLICATIONS DURING 2013


• SERVICE DURING 2013

International
▷ Editorial/Board: Israel Science Foundation (Review: Proposals)
▷ Committee/Panel: 22nd International Workshop on Laser Physics (Co-Chair), 5th International Conference: Frontiers of Nonlinear Physics (Chair), European Research Council Panels (Member)

National
▷ Event: 42nd Winter Colloquium Physics of Quantum Electronics (Organizer)

Department
▷ Committee/Panel: IQSE Advisory Committee (Chair), Promotion, Tenure and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 691. — Research (total enrollment: 1)

Summer
▷ PHYS 691. — Research (total enrollment: 2)

Fall
▷ PHYS 208. — Electricity and Optics (total enrollment: 257)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Control of Atoms-Light and Nuclei-X-Ray Photons Interactions in Solids via Quantum Interference, National Science Foundation, coworkers: F. Vagizov (Research Assistant), T. Akhmedzanov (G), X. Zhang (G)
▷ Dynamical Control of Resonant Light-Matter Interaction, National Science Foundation, coworkers: F. Vagizov (Research Assistant), T. Akhmedzanov (G), X. Zhang (G)

• PRESENTATIONS DURING 2013
“Dynamical Control of the Resonant Light-Matter Interaction,” Texas A&M University PQE Follow Workshop, College Station, TX, January, 2013. (Invited)


“Extremely Short Pulses Formation from Resonant Radiation in Atomic Gases,” Technical Digest of the International conference ICONO/LAT, Moscow, Russia, June, 2013. (Invited)


“Coherent Control of Single Gamma Photons with Thick Resonant Absorbers: Slow-down, Revival, and Shaping,” V-th International Conference Frontiers of Nonlinear Physics, Nizhny Novgorod, Russia, July, 2013. (Invited)

“Control of Light by Light in a Resonant Medium,” V-th International Conference Frontiers of Nonlinear Physics, Nizhny Novgorod, Russia, July, 2013. (Invited)


“Quantum Memories via Phase-Matching Condition,” V-th International Conference Frontiers of Nonlinear Physics, Nizhny Novgorod, Russia, July, 2013. (Invited)

“Quantum Optics with Gamma Photons and Nuclear Transitions,” 22-th International Laser Physics Workshop LPHYS’13, Prague, Czech Republic, July, 2013. (Invited)

“Quantum Optics with Gamma Photons and Nuclear Transitions,” 22-th International Laser Physics Workshop LPHYS’13, Prague, Czech Republic, July, 2013. (Invited)


“Multimode Cavity-Assisted Quantum Storage via Continues Phase-Matching Control,” The 4th Quantum Optics Workshop, Jeju Island, South Korea, October, 2013. (Invited)

“Quantum Memory via Phase-Matching Control,” Frontiers in Optics/ Laser Science (FiO/LS), Orlando, FL, October, 2013. (Invited)
“Quantum Optics with Gamma Photons and Nuclear Transitions: Coherent Control of the Waveforms of Recoilless Gamma Photons,” The 4th Quantum Optics Workshop, Jeju Island, South Korea, October, 2013. (Invited)

• PUBLICATIONS DURING 2013


• SERVICE DURING 2013

National

Department
▷ Committee/Panel: Performance Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 218. — Mechanics (total enrollment: 248)

• PRESENTATIONS DURING 2013

▷ “Nonlinear Optical Phenomena in Traps for Dipolar Excitons in Quantum-Well Heterostructures: Interplay Between Bose-Einstein Condensation and Polariton Mode Lasing,” International Conference Nonlinear Optics ICONO, Moscow, Russia, June, 2013. (Contributed)

▷ “Prospects for Low-Q Distributed-Feedback Sub-Monolayer Quantum-Dot Lasers: From Superradiant Pulsed Operation to Spontaneous Self-mode Locking,” International Conference Nonlinear Optics ICONO, Moscow, Russia, June, 2013. (Contributed)


▷ “Mode Superradiance and Collective Dynamics of Active Centers with Polarization Lifetime Exceeding Photon Lifetime,” V International Conference Frontiers of Nonlinear Physics, Nizhny Novgorod, Russia, July, 2013. (Invited)

▷ “Universality of the λ-Point Structure for the Bose-Einstein Condensation of an Ideal Gas in Different Traps,” V International Conference Frontiers of Nonlinear Physics, Nizhny Novgorod, Russia, July, 2013. (Invited)


▷ “Superradiant Lasing and Collective Dynamics of Active Centers with Polarization Lifetime Exceeding Photon Lifetime,” 6th International Conference CAOL, Sudak, Ukraine, September, 2013. (Invited)


▷ “Features of the Polariton Modes Lasing in the Traps for Bose-Condensation of the Dipolar Excitons,” IV Symposium Coherent Optical Emission in Semiconductor Compositions and
Structures, Zvenigorod, Russia, November, 2013.(Contributed)

**PUBLICATIONS DURING 2013**
▷ Kocharovsky, V.I.V.; Derishev, E.V.; Kocharovsky, V.V.; Martyanov, V.J. (July 2013) Fragments of the Relativistic Jet Physics, Synopsis of the V International Conference Frontiers of Nonlinear Physics, ed. Litvak, A. 291-292.
▷ Kocharovsky, V.I.V.; Kocharovskaya, E.R.; Kocharovsky, V.V. (September 2013) Superradiant Lasing and Collective Dynamics of Active Centers with Polarization Lifetime Exceeding Photon Lifetime, Technical Program of the 6th International Conference CAOL.
SERVICE DURING 2013

National
▷ Editorial/Board: American Journal of Physics, Astronomy and Astrophysics (Referee: Journals)

University
▷ Event: Development Assistant Retreat at G. Rollie White Visitors Center (Lecturer), On Astronomy at Madisonville Care Center (Lecturer)

College
▷ Event: Texas Junior Science and Humanities Symposium (Judge)

Center, Institute or Program
▷ Committee/Panel: McDonald Observatory Telescope Allocation Committee (Member)

Department
▷ Event: Carnegie Supernova Project Workshop at Cook’s Branch (Organizer), Third Mitchell Institute Workshop on Supernovae and Cosmology at Cook’s Branch (Organizer)

TEACHING ASSIGNMENTS DURING 2013

Spring
▷ ASTR 111. — Overview of Modern Astronomy (total enrollment: 121)

Summer
▷ ASTR 101. — Basic Astronomy (total enrollment: 43)

Fall
▷ ASTR 101. — Basic Astronomy (total enrollment: 267)

RESEARCH PROJECTS DURING 2013

Federal
▷ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, National Science Foundation, coworkers: P. Brown (P), M. Smitka (G)

PRESENTATIONS DURING 2013

PUBLICATIONS DURING 2013

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• SERVICE DURING 2013

National
▷ Editorial/Board: National Science Foundation (Review: Proposals)

College
▷ Event: Production of Liquid Helium and Helium Recovery (Participant)

Department
▷ Event: Physics Festival The Magic of Superconductivity (Lecturer)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 309. — Modern Physics (total enrollment: 43)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 691. — Research (total enrollment: 3)

Fall
▷ PHYS 685. — Directed Studies (total enrollment: 2)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Material World Network: Quantum Phenomena in Atomic Hydrogen Stabilized in Solid H2, National Science Foundation, coworkers: V. Khmelenko (Research Scientist), S. Mao (G), A. Meraki (G), S. Wilde (G), T. Dragon (U), P. McColgan (U)
▷ Physics of High Energy Density System in Condensed Helium, National Science Foundation, coworkers: V. Khmelenko (Research Scientist), S. Mao (G), A. Meraki (G), S. Wilde (G), T. Dragon (U), P. McColgan (U)

State
▷ Atomic Free Radicals in Nanoclusters Immersed in Superfluid Helium, Texas Higher Education Coordinating Board, coworkers: V. Khmelenko (Research Scientist), S. Mao (G), A. Meraki (G), S. Wilde (G), T. Dragon (U), P. McColgan (U)

• PRESENTATIONS DURING 2013

“The Magic of Superconductivity,” Physics Festival, Texas A&M University, College Station, TX, March, 2013.(Individual)

“2nd Workshop on MRI Phase Contrast & Quantitative Susceptibility Mapping QSM,” Department of Biomedical Engineering, Cornell University, Ithaca, NY, July, 2013.(Invited)


“Studies of Radicals Trapped in Multishell Nanoclusters,” International Conference on Chemistry and Physics at Low Temperatures, Jyvaskyla, Finland, July, 2013.(Poster Individual)


“Luminescence of Oxygen Atoms Stimulated by Metastable Helium Atoms at Cryogenic Temperatures,” Seminar of Department of Physics, University of Connecticut, Storrs, CT, October, 2013.(Individual)


**PUBLICATIONS DURING 2013**


171, 165-170.

- Khmelenko, V.V.; Boltnev, R.E.; Lee, D.M. (January 2013) Studies of Luminescence During Explosive Destruction of Nanoclusters Formed in Superfluid Helium, 43th Winter Colloquium on the Physics of Quantum Electronics 144.


• SERVICE DURING 2013

International
▷ Editorial/Board: European Physical Society (Referee: Journals)

National
▷ Editorial/Board: Department of Energy (Review: Proposals), American Institute of Physics and Institute of Physics (Referee: Journals)

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 03), Faculty Senate: The Budget Information Committee (Member)

Department
▷ Event: Physics Show (Participant)
▷ Committee/Panel: Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 202. — College Physics (total enrollment: 157)
▷ PHYS 691. — Research (total enrollment: 1)

Summer
▷ PHYS 691. — Research (total enrollment: 1)

Fall
▷ PHYS 202. — College Physics (total enrollment: 74)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: D. Rathnayaka (P), W. Bang (G), Z. Wei (G)
▷ Instrument Development: A High Density Source of Cold, Slow Molecules, National Science Foundation, coworkers: D. Rathnayaka (P)

Private
▷ (REN) Chemical Dynamics of Cold/Ultracold Molecules and Atomic Hydrogen, The Robert A. Welch Foundation, coworkers: D. Rathnayaka (P), W. Bang (G), L. Sheffield (G)
▷ Chemical Dynamics of Ultracold Molecules and Atomic Hydrogen, The Robert A. Welch Foundation, coworkers: D. Rathnayaka (P), K. Krasovitskiy (G), L. Sheffield (G)
• PRESENTATIONS DURING 2013
  ▶ “Pioneering Merged Molecular Beams with a Counter Rotating Source,” Optical Society of America, March, 2013. (Individual)

• PUBLICATIONS DURING 2013
• **CHAIRS/PROFESSORSHIPS**
  - Mitchell-Heep-Munnerlyn Endowed Career Enhancement Professorship in Physics or Astronomy [2010]

• **SERVICE DURING 2013**

  **International**
  - Committee/Panel: Munich Institute for Astro- and Particle Physics Symposium Scientific Organizing Committee (Member)

  **National**
  - Research Group: US Thirty Meter-Telescope Science Working Group (Member)
  - Committee/Panel: NSF/NOAO Time Allocation Committee (Member), Texas Symposium on Relativistic Astrophysics Organizing Committee (Member)

  **State**
  - Committee/Panel: Texas Symposium on Relativistic Astrophysics Organizing Committee (Member)

  **Regional**
  - Event: High-School Teachers Participating in the Mitchell Institute Physics Education Program (Speaker), Seventh-Grade Students at Coakley Junior High School (Speaker), Third-grade Students at Pebble Creek Elementary (Speaker), Twelfth-Grade Students at Cristoforo Colombo High School (Speaker)

  **College**
  - Event: Texas Junior Science & Humanities Symposium (Speaker)

  **Department**
  - Event: Physics Festival (Participant)
  - Committee/Panel: Advisory Committee (Member), Astronomy Committee (Member), Graduate Admissions Committee (Member), Graduate Curriculum Committee (Member), Mitchell Institute Branding & Web Committee (Member), Nominations Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**

  **Spring**
  - ASTR 681. — **Astronomy Seminar** (total enrollment: 4)
  - ASTR 685. — **Directed Studies** (total enrollment: 1)
  - ASTR 689. — **Special Topics in** (total enrollment: 13)
Spring

PHYS 691. — **Research** (total enrollment: 1)

Summer

ASTR 691. — **Research** (total enrollment: 2)

Fall

ASTR 681. — **Astronomy Seminar** (total enrollment: 8)

ASTR 685. — **Directed Studies** (total enrollment: 1)

ASTR 691. — **Research** (total enrollment: 2)

- **RESEARCH PROJECTS DURING 2013**

Federal

- Measuring the Hubble Flow Hubble Constant, *National Aeronautics and Space Administration*, coworkers: S. Hoffmann (G)
- The Absolute Calibration of Cepheid and Mira Period-Luminosity Relations in the Near-Infrared, *National Science Foundation*, coworkers: W. Yuan (G)
- Astronomy Teacher Professional Development for Laredo, Texas, *Space Telescope Science Institute*

- **PRESENTATIONS DURING 2013**

- “CSTAR Photometry of 20 Square Degrees Around the South Celestial Pole,” First TOROS Workshop, Salta, Argentina, June, 2013. (Contributed)
- “The SH0ES Project: H0 to 3% and Beyond,” Cosmic Flows Observations and Simulations, Marseille, France, June, 2013. (Invited)
- “The SH0ES Project: H0 to 3% and Beyond,” South African Astronomical Observatory, Cape Town, South Africa, September, 2013. (Individual)
- “MEGA-SH0ES: A Direct Measurement of H0 to 2%,” The Return of de Sitter II Workshop, Munich, Germany, October, 2013. (Invited)

- **PUBLICATIONS DURING 2013**


Zhou, X.; et al. (2013) Progress and Results from the Chinese Small Telescope ARray (CSTAR), IAU Symposium 231.
• SERVICE DURING 2013

National
▷ Committee/Panel: SNOWMass CF1C Infrastructure Committee (Member)

Department
▷ Committee/Panel: HEP Faculty Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 327. — Experimental Physics (total enrollment: 12)
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 685. — Directed Studies (total enrollment: 2)
▷ PHYS 691. — Research (total enrollment: 1)

Summer
▷ PHYS 491. — Research (total enrollment: 2)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 1)

Fall
▷ PHYS 218. — Mechanics (total enrollment: 155)
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Ton Scale Germanium: Beyond Zeptobarn WIMP Cross-Section, Department of Energy, coworkers: A. Aryasomayajula (G), A. Jastram (G), K. Koch (G), K. Prasad (G), S. Upadhyayula (G)
▷ CDMS Crystal Polishing at Texas A&M University, SLAC National Accelerator Laboratory, coworkers: A. Jastram (G), K. Prasad (G)

Private
▷ Tonne-Scale Germanium Dark Matter Search, California Institute of Technology

• PRESENTATIONS DURING 2013
▷ Texas A&M University, College Station, TX, April, 2013. (Individual)
PUBLICATIONS DURING 2013


• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell/Heep Chair in Experimental High Energy Physics [2004]

• SERVICE DURING 2013
  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 12)
  College
  ▶ Committee/Panel: International Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 205. — Concepts of Physics (total enrollment: 28)
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 685. — Directed Studies (total enrollment: 2)
  ▶ PHYS 691. — Research (total enrollment: 6)
  Summer
  ▶ PHYS 491. — Research (total enrollment: 3)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 8)
  Fall
  ▶ PHYS 201. — College Physics (total enrollment: 72)
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 685. — Directed Studies (total enrollment: 2)
  ▶ PHYS 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) New Technology for Future Colliders, Department of Energy, coworkers: F. Lu (Research Scientist), S. Assadi (P), A. McInturff (P), N. Pogue (P), A. Sattarov (P), J. Comeaux (G), K. Damborsky (G), J. Gerity (G), E. Holik (G), J. Kellams (G), K. Melconian (G), E. Sooby (G), A. Baxter (U), C. Collins (U), N. Glaser (U), D. Krause (U)
• PRESENTATIONS DURING 2013

• PUBLICATIONS DURING 2013
  ▶ Assadi, S.; et al. (September 2013) Nonlinear Beam Dynamics Studies of High-intensity, High-brightness Proton Drivers, Proceedings NAPAC’13 Particle Accelerator Conference.
  ▶ Melconian, K.; et al. (2013) Design and Development of a $MgB_2$-based Sector Dipole and Beam Transport Channel for a Strong-focusing Cyclotron, AIP Proceedings.
  ▶ Melconian, K.; et al. (July 2013) Design of a $MgB_2$ Beam Transport Channel for a Strong-focusing Cyclotron, Proceeding International on Magnet Technology.
• SERVICE DURING 2013

   National

   Department
   ▷ Event: Physics Festival (Participant), REU End-of-Summer Presentations (Organizer), Saturday Morning Physics (Participant)
   ▷ Committee/Panel: Cyclotron Institute Space Allocation Committee (Member), Faculty Search (Member), Physics & Astronomy Awards Committee (Member), Undergraduate Core Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

   Spring
   ▷ PHYS 201. — College Physics (total enrollment: 124)
   ▷ PHYS 685. — Directed Studies (total enrollment: 1)
   ▷ PHYS 691. — Research (total enrollment: 2)

   Summer
   ▷ PHYS 691. — Research (total enrollment: 2)

   Fall
   ▷ PHYS 218. — Mechanics (total enrollment: 151)
   ▷ PHYS 491. — Research (total enrollment: 1)
   ▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

   Federal
   ▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: P. Shidling (P), S. Behling (G), B. Fenker (G), M. Mehlman (G)
   ▷ Fundamental Electroweak Interaction Studies Using Trapped Atoms and Ions, Department of Energy, coworkers: P. Shidling (P), P. Shidling (P), M. Mehlman (G)
   ▷ Laser Trapping and Cooling Facility for Weak Interaction Experiments with Francium Isotopes at TRIUMF, Department of Energy

• PRESENTATIONS DURING 2013

   ▷ “Nuclear Physics with Trapped Atoms and Ions,” Saturday Morning Physics Lecture Series, Texas A&M University, College Station, TX, February, 2013. (Individual)
   ▷ “Fundamentally Cool Physics with Trapped Atoms and Ions,” Texas A&M University, College Station, TX, October, 2013. (Individual)
“Nuclear Spin Polarization of $^{37,41}K$ by Optical Pumping,” Texas Section of the American Physical Society Meeting, Brownsville, TX, October, 2013. (Contributed)


“Precision $\beta$-decay Studies Using Trapped Atoms and Ions,” National Superconducting Cyclotron Laboratory, Michigan State University, East Lansing, MI, November, 2013. (Individual)

“Precision Measurements of $\beta$-decay Correlation Parameters from Trapped Atoms and Ions,” 10th Latin American Symposium on Nuclear Physics and Applications, Montevideo, Uruguay, December, 2013. (Invited)

- **PUBLICATIONS DURING 2013**


SASKIA MIODUSZEWSKI
ASSOCIATE PROFESSOR (979) 845-1411
PHYS-Experimental Nuclear mio@comp.tamu.edu

• SERVICE DURING 2013

National
▷ Editorial/Board: National Science Foundation and Department of Energy (Review: Proposals)
▷ Committee/Panel: RHIC/AGS Users’ Executive Committee (Member), STAR Collaboration Council (Member), STAR Conveners Panel (Member), STAR God Parent Committee (Member), STAR Scientific Program Committee (Member), Writing Committee for STAR Letter of Intent for p+p/p+A Measurements Before a Transition to eRHIC (Member)

Department
▷ Committee/Panel: Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Fall
▷ PHYS 218. — Mechanics (total enrollment: 155)
▷ PHYS 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Toward Understanding the QGP with the STAR Experiment at RHIC, Department of Energy, coworkers: M. Cervantes (P), N. Sahoo (P)
▷ (REN) Toward Understanding the QGP with the STAR Experiment at RHIC, Department of Energy, coworkers: M. Cervantes (P), N. Sahoo (P)

• PUBLICATIONS DURING 2013


• CHAIRS/PROFESSORSHIPS
  ▷ Mitchell-Heep Chair in High Energy Physics [2002]

• SERVICE DURING 2013

  International
  ▷ Committee/Panel: High Power Laser Energy Research (HiPER) European Consortium (Member), Onassis International Foundation (Member)

  National
  ▷ Event: Journals, Newspapers, Radio and TV Channels, World ERT/NET, SKY TV, Alpha TV, Antenna TV (Speaker)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ PHYS 208. — Electricity and Optics (total enrollment: 118)
  ▷ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▷ PHYS 691. — Research (total enrollment: 4)

  Fall
  ▷ PHYS 208. — Electricity and Optics (total enrollment: 124)
  ▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▷ (REN) High Energy Physics at Texas A&M University, Department of Energy
  ▷ (REN) High Energy Physics at Texas A&M University, Department of Energy, coworkers: T. Li (P)

• PUBLICATIONS DURING 2013
No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [/]

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: New Zealand Government (Review: Proposals)

National
  ▶ Advisory Board: Advances in Condensed Matter Physics (Member)

College
  ▶ Ad Hoc Committee: Liquid Helium Usage Committee (Member)
  ▶ Committee/Panel: Research Advisory Committee (Member)

Department
  ▶ Committee/Panel: Performance Evaluation Committee (Member), Space Committee (Member)

Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Nominations Committee for MSEN Program (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 425. — Physics Laboratory (total enrollment: 11)
  ▶ PHYS 691. — Research (total enrollment: 3)

Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)

Fall
  ▶ MSEN 604. — Quantum Mechanics for Materials Scientist (total enrollment: 21)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013
  Federal
RFQ-Army Research Laboratory, Department of Defense, coworkers: K. Mader (G), J. Schuster (U), M. Wilson (U)

(REN) Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: M. Wilson (U)

Private
(REN) The Influence of Reduced Dimensionality, Disorder, and Interfaces on the Properties of Solids, The Robert A. Welch Foundation, coworkers: K. Mader (G), T. Morrison (G), L. Smith (G)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International
▷ Advisory Board: Science Advisory Committee for the Giant Magellan Telescope (Member)
▷ Editorial/Board: Subaru Telescope TAC (Review: Proposals)
▷ Committee/Panel: Conference SOC (Member), GMACS SAC (Chair)

National
▷ Advisory Board: National Optical Astronomy Observatory (Member)

Department
▷ Event: Astronomy Seminar (Organizer)
▷ Committee/Panel: Astronomy Committee (Member), Colloquium Committee (Member), Mitchell Institute Science Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ ASTR 314. — Survey of Astronomy (total enrollment: 39)
▷ ASTR 685. — Directed Studies (total enrollment: 4)

Summer
▷ ASTR 685. — Directed Studies (total enrollment: 1)
▷ ASTR 691. — Research (total enrollment: 3)

Fall
▷ ASTR 314. — Survey of Astronomy (total enrollment: 47)
▷ ASTR 685. — Directed Studies (total enrollment: 1)
▷ ASTR 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Herschel+CANDLES: Unraveling the Physical Processes that Regulate Star Formation and AGN Activity in Ordinary Galaxies at z=2, *National Aeronautics and Space Administration*
▷ Spectroscopic Observations of Lyman-Break Galaxies at Redshift z>6, *National Aeronautics and Space Administration*
▷ The Four Star Galaxy Evolution Survey: Opening a New Window into Galaxy Formation, *National Science Foundation*, coworkers: V. Tilvi (P)
A Detailed Analysis of the Stellar Populations in Galaxies During Reionization, *Space Telescope Science Institute*

Cosmic Assembly Near-IR Deep Extragalactic Survey (CANDELS) - I, *Space Telescope Science Institute*, coworkers: B. Salmon (G)

**Private**

Spectroscopy of a Highly Magnified Galaxy Behind the Bullet Cluster, *California Institute of Technology*


**PRESENTATIONS DURING 2013**

“Spitzer Spectroscopy of Infrared-Luminous Galaxies: Diagnostics of AGN and Star Formation and Contribution to Total Infrared Luminosity,” Astronomy Seminar, Texas A&M University, College Station, TX, March, 2013.( Graduate, H. Shipley)

“Measuring Galaxy Evolution from Near-Infrared Surveys,” Colloquium, University of Kansas, Lawrence, KS, April, 2013.( Individual)

“The XMM Cluster Survey (XCS): Results from the First Data Release,” Astronomy Seminar, Texas A&M University, College Station, TX, April, 2013.( Postdoc)

“The XMM Cluster Survey (XCS): Results from the First Data Release,” Cosmology Seminar, University of California, Berkeley, CA, April, 2013.( Postdoc)

“First Galaxies and Dark Matter Simulations,” Colloquium, Marathi Science Council, Goa, India, May, 2013.( Postdoc)


“The Distribution of Satellites around Massive Galaxies at 1 < z < 3: Dependence on Star Formation Activity,” ZFOURGE International Collaboration Meeting, Pasadena, CA, May, 2013.( Graduate, L. Kawinwanichakij)


“Soon after the Big BZag - Searching for the First Galaxies,” Colloquium, Birla Institute of Science and Technology, Goa, India, May, 2013.( Postdoc)

“The Spitzer/HETDEX Exploratory Large Area Survey,” HETDEX International Collaboration Meeting, Postdam, Germany, May, 2013.( Postdoc)

“Galaxy Assembly at Redshift Two Through Candels,” 1st Annual GMT Science Meeting, Chicago, IL, June, 2013.( Graduate, S. Boada)

“Rising Star-Formation Histories From Redshift 4 < Z < 6 in Candels,” 1st Annual GMT Science Meeting, Chicago, IL, June, 2013.( Graduate)

“Spitzer Spectroscopy of Infrared-luminous Galaxies: Diagnostics of Active Galactic Nuclei and Star Formation and Contribution to Total Infrared Luminosity,” 1st Annual GMT Science Meeting, Chicago, IL, June, 2013.( Graduate, H. Shipley)

“The HOD of BOSS galaxies in XCS Cluster,” XCS International Annual Meeting at Sussex University, Sussex, United Kingdom, July, 2013.( Postdoc)

“Galaxy Assembly at Cosmic High Noon Through Internal Colors,” Candels International Collaboration Meeting, Lexington, KY, August, 2013. (Graduate, S. Boada)

“Stellar Masses and Star-Formation Rates in Candels at Redshift 4 < z < 6,” Candels International Collaboration Meeting, Lexington, KY, August, 2013. (Graduate, B. Salmon)

“Measuring Galaxy Evolution from Near-Infrared Surveys,” Colloquium, University of Missouri, Kansas City, MO, September, 2013. (Individual)

“First Science with the Giant Magellan Telescope,” GMT International Board Meeting, College Station, TX, October, 2013. (Individual)

“Galaxy Assembly at Redshift Two Through Candels,” BashFest, Austin, TX, October, 2013. (Graduate, S. Boada)


“The Distribution of Satellites around Massive Galaxies at 1 < z < 3: Dependence on Star Formation Activity,” ZFOURGE International Collaboration Meeting, Cooks Branch, TX, October, 2013. (Graduate, L. Kawinwanichakij)

“The Evolution of Galaxy Structure from ZFOURGE and Candels,” ZFOURGE International Collaboration Meeting, Cooks Branch, TX, October, 2013. (Postdoc)

“The Stellar-Mass Star-formation Rate Relation of Galaxies at High Redshift 3.5 < z < 6.5 in Candels,” BashFest, Austin, TX, October, 2013. (Graduate, B. Salmon)

PUBLICATIONS DURING 2013


No report received from faculty member.
• SERVICE DURING 2013

International
▷ Event: International Congress of Statistical Physics StatPhys 25 (Organizer)
▷ Editorial/Board: Europhysics Letters (Referee: Journals)
▷ Committee/Panel: International Congress of Statistical Physics StatPhys 25 (Member)

National
▷ Committee/Panel: Editorial Board of Journal of Magnetism and Magnetic Materials (Member)

Department
▷ Committee/Panel: Distinguished Professors Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 689. — Special Topics in (total enrollment: 14)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 691. — Research (total enrollment: 2)

Fall
▷ PHYS 689. — Special Topics in (total enrollment: 8)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) Theory of Magnetic Heterostructures on the Nanometer Scale, Department of Energy, coworkers: O. Tretyakov (P), F. Li (G), M. Sears (G), C. Sun (G), K. Tikhonov (G), P. Zhou (G)

• PRESENTATIONS DURING 2013

▷ “Spontaneous Symmetry Breaking in the Bose-Einstein Condensate of Spin Waves,” Material Science Division Seminar, Argonne National Laboratory, Lemont, IL, May, 2013. (Invited)
▷ “Landau Days,” Landau Institute for Theoretical Physics, Russian Academy of Sciences, Chernogolovka, Russia, June, 2013. (Invited)
• "Coherence and Reflection Symmetry Breaking in the Bose-Einstein Condensate of Spin Waves," City Colloquium on Theoretical Physics, Cologne, Germany, July, 2013. (Individual)

• PUBLICATIONS DURING 2013
• CHAIRS/PROFESSORSHIPS
  ▶ Stephen Hawking Chair in Fundamental Physics [2002]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: EPSERC (Review: Proposals), Oxford and Cambridge College Research Fellowships (Referee)

  National

  Department
  ▶ Event: Spring Workshop on String Theory and Cosmology (Organizer), Spring Workshop on String Theory and Cosmology (Organizer)
  ▶ Committee/Panel: Theoretical Cosmology Search Committee (Member), Mitchell Institute Director Search Committee (Member), Mitchell Institute Scientific Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ PHYS 603. — Electromagnetic Theory (total enrollment: 26)
  ▶ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 2)

  Fall
  ▶ PHYS 689. — Special Topics in (total enrollment: 24)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy

  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy

• PRESENTATIONS DURING 2013
  ▶ “Black Holes, Conserved Charges and Thermodynamics in Supergravity,” Physics Department, Beijing Normal University, 2013. (Individual)
“Global Properties of Black Holes in External Magnetic Fields,” Seminar, Physics Department Texas A&M University, College Station, TX, February, 2013. (Individual)


PUBLICATIONS DURING 2013

RALF RAPP

PROFESSOR
PHYS-Quantum Chromodynamics, Nuclear Theory
(979) 845-1411 rapp@comp.tamu.edu

• SERVICE DURING 2013

International
▷ Editorial/Board: Int. J. Mod. Phys. A (Referee: Journals)
▷ Committee/Panel: Organizing Committee of International Workshop on Electromagnetic Probes of Strongly Interacting Matter (Member)

National

University
▷ Committee/Panel: Nuclear Solutions Institute Advisory Board (Member)

Department
▷ Event: Saturday Morning Physics (Director), Saturday Morning Physics (Organizer)
▷ Committee/Panel: Graduate Records (Member), IT Committee (Member), MS Isaac Sarver (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 401. — Computational Physics (total enrollment: 16)
▷ PHYS 691. — Research (total enrollment: 1)

Summer
▷ PHYS 691. — Research (total enrollment: 3)

Fall
▷ PHYS 625. — Nuclear Physics (total enrollment: 10)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Electromagnetic and Heavy-Quark Probes of QCD Matter, National Science Foundation, coworkers: M. He (P), P. Hohler (P), N. Holt (G), K. Huggins (G)
▷ QCD Matter Studies with Heavy Quarks and Dileptons, National Science Foundation, coworkers: P. Hohler (P), X. Du (G), N. Holt (G), S. Liu (G), I. Sarver (G)

• PRESENTATIONS DURING 2013
“Electromagnetic Emissivity of Matter under Extreme Conditions,” EMMI RRTF Symposium, Darmstadt, Germany, 2013. (Invited)


“Heavy Flavor and Deconfinement,” Sapore Gravis Workshop, Nantes, France, 2013. (Invited)

“Heavy Flavor and QCD Phase Structure in Heavy-Ion Collisions,” EMMI Workshop, Berkeley, CA, 2013. (Invited)

“Prospects + Challenges for Future Experiments in Heavy-Ion Collisions,” EM Radiation and Heavy Flavor in Heavy-Ion Collisions, Darmstadt, Germany, 2013. (Invited)

“Quarkonia in the Quark-Gluon Plasma,” Tsinghua University, Beijing, China, 2013. (Invited)

“Theory of Thermal Electromagnetic Radiation,” JET Collaboration Summer School, Ohio State University, Columbus, OH, 2013. (Invited)

• PUBLICATIONS DURING 2013


• TEACHING ASSIGNMENTS DURING 2013
  
  **Spring**

  - PHYS 201. — **College Physics** (total enrollment: 226)

  *On leave.*
GRIGORY ROGACHEV

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PHYS-Research
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Hired 09/01/2013.

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• PRESENTATIONS DURING 2013
  ▶ “Structure of Exotic Nuclei and Understanding of the rp-process,” Seminar at Texas A&M University, College Station, TX, March, 2013. (Individual)
  ▶ “Understanding of Nuclear Structure and Stellar Processes Through Nuclear Reactions,” Colloquium at Texas A&M University, College Station, TX, March, 2013. (Individual)
  ▶ “Introduction to Nuclear Astrophysics,” Seventh European Summer School on Experimental Nuclear Astrophysics. (Invited)

• PUBLICATIONS DURING 2013
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2010]

• **SERVICE DURING 2013**
  National
  ▶ Committee/Panel: Joint 12th MMM-Intermag Conference (Session Chair), Program Committee (Member)
  
  Department
  ▶ Event: Physics Festival (Participant)
  ▶ Committee/Panel: IT Committee (Member)
  
  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: MSEN Graduate Admission Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**
  Spring
  ▶ MSEN 602. — **Advanced Materials Science and Engineering** (total enrollment: 18)
  ▶ PHYS 691. — **Research** (total enrollment: 1)
  
  Summer
  ▶ PHYS 491. — **Research** (total enrollment: 1)
  ▶ PHYS 691. — **Research** (total enrollment: 1)
  
  Fall
  ▶ PHYS 444. — **The Art of Scientific Communication, Part 1: Communicating Science to Scientists** (total enrollment: 11)
  ▶ PHYS 445. — **The Art of Scientific Communication, Part 2: Communicating Science to Non-Scientists** (total enrollment: 9)
  ▶ PHYS 691. — **Research** (total enrollment: 1)

• **PRESENTATIONS DURING 2013**
  ▶ “Controlling Exchange Bias in FeMn with Cu,” 12th Joint MMM/Intermag Conference, Chicago, IL, January, 2013. (Individual)
  ▶ “Controlling Magnetism with Non-Magnetic Materials,” Condensed Matter Seminar, Texas A&M University, College Station, TX, January, 2013. (Individual)
  ▶ “New Magnetic State and Intrinsic Exchange Bias,” Condensed Matter Seminar, Purdue University, West Lafayette, IN, February, 2013. (Individual)
• PUBLICATIONS DURING 2013

JOSEPH H. ROSS

PROFESSOR (979) 845-3842
PHYS-Magnetic Resonance, Materials Physics jhross@tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Graduate Advisor, Physics Graduate Advising Office, Physics and Astronomy, [2009]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▶ Chair, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2013

  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals)

  College
  ▶ Committee/Panel: Graduate Instruction Committee (Member)

  Department
  ▶ Event: Physics Festival (Organizer)
  ▶ Committee/Panel: Graduate Credentials Committee (Member), Graduate Records Committee (Member), Space Advisory Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Materials Science and Engineering Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ PHYS 691. — Research (total enrollment: 5)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 5)

  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 154)
  ▶ PHYS 681. — Seminar (total enrollment: 7)
  ▶ PHYS 691. — Research (total enrollment: 11)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▶ IGERT: New Mathematical Tools for Next Generation Materials, National Science Foundation, coworkers: J. Chen (G)
  ▶ Materials World Network: Microstructural Design for Enhanced Efficiency in Solid State Energy Conversion, National Science Foundation, coworkers: J. Chen (G)

  Private
Magnetism and Anharmonic Lattice Vibrations in Clathrates and Related Materials, *The Robert A. Welch Foundation*

(REN) Magnetism and Electronic Behavior of Clathrates and Cage-Structured Materials, *The Robert A. Welch Foundation*, coworkers: A. Li (G), L. Sarybaev (G), A. Sirusi (G)

- **PRESENTATIONS DURING 2013**
  - “New Heat Capacity Results for NiMnIn,” MWN Collaboration Meeting, Texas A&M University, College Station, TX, January, 2013. (Individual)
  - “New Magnetic Shape-Memory Materials for Energy Applications,” Texas A&M University, College Station, TX, February, 2013. (Individual)
  - “NMR Measurement of New Semiconductor Clathrates $Ba_8Cu_xGe_{46-x}$, $x=4, 5.3, 6$,” Student Research Week, Texas A&M University, College Station, TX, March, 2013. (Individual)
  - “The Effect of Annealing on Magneto-Caloric Effect in $Ni_{43}Mn_{42}Co_4Sn_{11}$ Magnetic Shape Memory Alloys,” TMS Annual Meeting, San Antonio, TX, March, 2013. (Individual)
  - “XRD and In (115) NMR Measurements on $Ba_9In_xGe_{24-x}$ Chiral Clathrate,” Texas A&M University, College Station, TX, March, 2013. (Individual)
  - “Condensed Matter Physics,” Presentation for Visiting Graduate Students, Texas A&M University, College Station, TX, April, 2013. (Individual)
  - “NMR and Magnetic Measurements of New Materials,” Graduate Student Seminar, Texas A&M University, College Station, TX, September, 2013. (Individual)
  - “Heat Capacity Measurements on Materials for Magnetocaloric Devices,” MWN Collaboration Meeting, Texas A&M University, College Station, TX, November, 2013. (Individual)
• SERVICE DURING 2013

National
▷ Event: DPG and Trigger in the CMS GEM project (Co-Coordinator), Long Range Muon Upgrade Planning (Coordinator)
▷ Committee/Panel: CMS Collaboration Board (Member), US CMS Collaboration Board (Member), CMS Analysis Review Committees (Chair), US CMS Elections Committee (Co-Chair)

University
▷ Committee/Panel: Texas A&M UniversityCMS (Group Leader)

Department
▷ Committee/Panel: Advisory Committee (Member), Graduate Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 491.(H) — Research (total enrollment: 1)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 689. — Special Topics in (total enrollment: 12)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 491. — Research (total enrollment: 2)
▷ PHYS 691. — Research (total enrollment: 3)

Fall
▷ PHYS 218. — Mechanics (total enrollment: 148)
▷ PHYS 491.(H) — Research (total enrollment: 2)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy
Statement of Work for US CMS Texas A&M Research Foundation for Activities Related to the US CMS EMU Subsystem, *FERMI National Accelerator Laboratory*

- US CMS Texas A&M University for Activities Related to the US CMS SandC Subsystem, *FERMI National Accelerator Laboratory*

**International**

- Creation of Experimental High Energy Physics Program, *Qatar Foundation*

*No report received from faculty member.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: Physical Review, the Journal for Magnetism and Magnetic Materials, the American Journal of Physics (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 113)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Theory of Magnetic Heterostructures on the Nanometer Scale, Department of Energy, coworkers: F. Li (G), M. Sears (G), P. Zhou (G)
  ▶ IPA Agreement with NIST for Dr. Wayne Saslow, National Institute of Standards and Technology

• PRESENTATIONS DURING 2013

• PUBLICATIONS DURING 2013
• CHAIRS/PROFESSORSHIPS
  ▶ Schuessler/Mitchell/Heep Chair in Experimental Optical and Biomedical Physics [2004]

• SERVICE DURING 2013

National

Department
  ▶ Committee/Panel: AMO Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▶ PHYS 685. — Directed Studies (total enrollment: 3)
  ▶ PHYS 691. — Research (total enrollment: 6)

Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 5)

Fall
  ▶ PHYS 222. — Modern Physics for Engineers (total enrollment: 99)
  ▶ PHYS 222. — Modern Physics for Engineers (total enrollment: 99)
  ▶ PHYS 685. — Directed Studies (total enrollment: 2)
  ▶ PHYS 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2013

Federal
  ▶ Development of a Phase-Coherent Laser System for Attosecond Science and Precision Spectroscopy, National Science Foundation, coworkers: A. Kolomenskii (Research Scientist), J. Stohaber (P)
  ▶ MRI: Development: Spectrally Resolved, Ultrafast and Simultaneous Measurements of Methane and Carbon Dioxide in Sea Waters with Femtosecond Supercontinuum Fiber Laser, National Science Foundation, coworkers: F. Zhu (P), N. Kaya (G)

Private
  ▶ Optical Studies of Cold Molecular Ions Using Femtosecond and XUV Laser Radiation, The Robert A. Welch Foundation, coworkers: G. Kaya (G), C. Perkins (G)
(REN) Preparation of Ultracold Molecular Ions and Their Optical Studies Using Femtosecond Laser Pulses and High Harmonic Generation, *The Robert A. Welch Foundation*, coworkers: G. Kaya (G), C. Perkins (G)

**International**

(REN) Gas Tracers for Interwell Exploring Petroleum Reservoir Structure, *Qatar National Research Fund*, coworkers: A. Kolomenski (Research Scientist), J. Stohaber (P), F. Zhu (P), A. Rahman (G)

Precision Spectroscopy for Trace Detection and Analysis of Hydrocarbon Well Gases, *Qatar National Research Fund*, coworkers: A. Kolomenski (Research Scientist), H. Enhasi (P), N. Hart (G), G. Kaya (G), C. Perkins (G)


**PRESENTATIONS DURING 2013**

“Frame Dragging with Optical Vortices,” 1st Doha International Astronomy Conference, Doha, Qatar, February, 2013. (Poster Individual)

“Infrared Frequency Comb Measurements Based on an Erbium and a Ti-sapphire Laser,” 1st Doha International Astronomy Conference, Doha, Qatar, February, 2013. (Poster Individual)

“Optical Tracers in the Oil Field,” Annual Research and Industry Forum, Doha, Qatar, February, 2013. (Individual)


“Frequency Comb Spectroscopies in the Min IR,” International Conference on Coherent and Nonlinear Optics and on Lasers, Applications, and Technologies, Moscow, Russia, June, 2013. (Invited)


“Frequency Comb Assisted Precision Spectroscopy of Ar II,” Annual MPQ Meeting, Ringberg Castle, Germany, September, 2013. (Invited)

“Novel Frequency Comb Spectroscopies in the Near and Mid IR,” AMO Seminar, the University of Texas, Austin, TX, September, 2013. (Individual)


**PUBLICATIONS DURING 2013**


• CHAIRS/PROFESSORSHIPS
  ▶ Distinguished Research Chair (TEES) [2000]
  ▶ Hershel E. Burgess Chair in Physics (Non-High Energy Physics) [1997]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Professor (J), Aerospace Engineering, [2012]
  ▶ Professor (J), Chemistry, [2007]
  ▶ Associate Dean for External Relations, External Relations Office, College of Science, [2005]
  ▶ Director, Institute for Quantum Science and Engineering (IQSE), Physics and Astronomy, [2001]
  ▶ Director, Center for Theoretical Physics, Physics and Astronomy, [1995]

• SERVICE DURING 2013
  International
  ▶ Committee/Panel: Academia Europaea (Member)

  National
  ▶ Professional Affiliation: American Association for the Advancement of Science (Fellow), American Physical Society (Fellow), Optical Society of America (Fellow), American Academy of Arts and Sciences (Member)
  ▶ Event: Physics of Quantum Electronics (Organizer)
  ▶ Committee/Panel: National Academy of Science Review Panels (Member), NIH, NSF, PRL, PNAS, Foundations of Physics Review Committees, etc (Member), Physics of Quantum Electronics (Director)

  University
  ▶ Committee/Panel: Academicians Executive Committee (Member)

  College
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member), Executive Committee (Member)

  Center, Institute or Program
  ▶ Ad Hoc Committee: TIAS Ad Hoc Working Committee (Member)

  Department
  ▶ Committee/Panel: Colloquium Committee (Member), Executive Engineering Chair Committee (Member), AMO Search Committee (Member), Distinguished Professors Committee (Chair), Thesis/Dissertation Committees (Member)

Interdisciplinary/Intercollegiate
• Committee/Panel: Trotter Prize, Steering Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013

Spring
- PHYS 485. — Directed Studies (total enrollment: 1)
- PHYS 691. — Research (total enrollment: 8)

Summer
- PHYS 491. — Research (total enrollment: 1)
- PHYS 691. — Research (total enrollment: 8)

Fall
- PHYS 685. — Directed Studies (total enrollment: 1)
- PHYS 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2013

Federal
- Detection, Characterization and Mitigation of Endocrine Disrupting Chemicals, National Institutes of Health
- Engineering Research Center (ERC) on Mid-Infrared Technologies for Health and Environment (MIRTHE), National Science Foundation, coworkers: D. Voronine (P), A. Wojcik (P), Y. Wang (G), X. Yao (G)
- Princeton/Texas A&M UniversityLasing Without Inversion in He and He-like Ions in XUV and X-Ray Regions, National Science Foundation

Private

• PRESENTATIONS DURING 2013

- “Laser Spectroscopic Detection of Pathogens, Diagnosis of Tumors, and More,” Toxicology, Texas A&M University, College Station, TX, April, 2013. (Individual)
- “Paths into the Schrodinger Equation via Classical and Quantum Field Theories,” Texas Section APS Meeting, Tarleton State University, Stephenville, TX, April, 2013. (Individual)
“Time and Time Again,” Poetry Vs. Philosophy, Hispanic Studies, Texas A&M University, College Station, TX, April, 2013. (Individual)

“Quantum Thermodynamics: Increasing Quantum Heat Engine Efficiency via Quantum Coherence,” Quantum Optics and New Materials (V), Beijing, China, May, 2013. (Individual)


“Introduction to Quantum Chemistry, i.e. Bohr’n again,” Texas A&M University-Princeton Summer School on Science and Engineering, Casper, WY, July, 2013. (Individual)


“Bohr’s Molecular Model: 100 Years Later,” Baylor University, Waco, TX, September, 2013. (Individual)

“From Masers and Lasers to Phasers and Qasers,” Texas A&M University, Doha, Qatar, October, 2013. (Individual)

“From Masers and Lasers to Phasers and Qasers,” DESY, Hamburg, Germany, October, 2013. (Individual)

• PUBLICATIONS DURING 2013


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Co-Director, George P. & Cynthia Woods Mitchell Institute for Fundamental Physics &
  Astronomy, Physics and Astronomy, [2002]

• SERVICE DURING 2013
  National
  ▶ Editorial/Board:  *JHEP, Nucl. Phys. B and Classical and Quantum Grav.* (Referee:
  Journals)
  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 07), Faculty Senate Research Com-
  mittee (Member)
  Department
  ▶ Event: Mitchell Institute Conference on Conformal Field Theories Beyond Two Dimen-
  sions (Organizer)
  ▶ Committee/Panel: Graduate Admissions (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 689. — **Special Topics in** (total enrollment: 5)
  ▶ PHYS 691. — **Research** (total enrollment: 1)
  Summer
  ▶ PHYS 691. — **Research** (total enrollment: 2)
  Fall
  ▶ PHYS 689. — **Special Topics in** (total enrollment: 9)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Strings, Branes, and the Search for Unification, *National Science Foundation*,
  coworkers: K. Sinha (P)

• PRESENTATIONS DURING 2013
  ▶ “Higher Spin Gravities and Their Holographic Duals,” Michigan University, Ann Arbor,
  MI, February, 2013.( Individual)
  ▶ “Strings, Branes and Extra Dimensions,” Applied Mathematics Undergrad Seminar, Texas
  A&M University, College Station, TX, April, 2013.( Individual)
  ▶ “Superconformal Field Theories in Six Dimensions,” Superspace and Supergravity, Uppsala,
  Sweden, May, 2013.( Invited)

“Supersymmetry, Branes and Higher Dimensions,” Texas A&M University, College Station, TX, September, 2013. (Individual)


“Supersymmetric Warped AdS Solutions of Extended Topologically Massive Supergravity,” Texas A&M University, College Station, TX, November, 2013. (Individual)


- PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Head for Undergraduate Programs, Physics and Astronomy, //
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, //

• AWARDS DURING 2013
  International
  ▶ Alexander von Humboldt Professorship, Alexander von Humboldt Foundation

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: European and Asian Agencies (Review: Proposals), Various International Journals (Referee: Journals)

  National
  ▶ Committee/Panel: Cottrell Scholar Advisory Group (Member), Editorial Advisory Panel for Nature Communications (Member), National Science Foundation Panels (Review Panel), Research Corporation Advisory Board (Member)

  College
  ▶ Committee/Panel: Undergraduate Program Committee (Member)

  Department
  ▶ Event: Chemistry Open House (Volunteer), Condensed Matter Seminar (Organizer), Physics Open House (Volunteer)
  ▶ Committee/Panel: Advisory Committee (Member), Colloquium Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)
PHYS 491. — Research (total enrollment: 1)
PHYS 689. — Special Topics in (total enrollment: 6)
PHYS 691. — Research (total enrollment: 4)

- RESEARCH PROJECTS DURING 2013

Federal
- (REN) Spin-Dependent Transport and Thermoelectric Phenomena in Multi-Band Systems, National Science Foundation, coworkers: X. Pan (P), X. Liu (G)
- Realistic Spin-FETs and Efficient Spin-Logic Architectures for Low Power Logic Computing, Office of Naval Research, coworkers: X. Pan (P), O. Tretiakov (P)

State
- Topological Effects and Quantum Pumping in Complex Systems with Strong Spin-Orbit Coupling, Texas A&M University
- (REN) Southwest Academy for Nanoelectronics (SWAN), University of Texas
- Southwest Academy for Nanoelectronics (SWAN), University of Texas

Other
- Towards Spin-Reserving Heterogeneous Spin Networks, Ohio State University, coworkers: V. Amin (G)

- PUBLICATIONS DURING 2013


No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ▶ Stephen E. Harris Professorship in Quantum Optics [2006]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2013]

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: Discovery Grant Application for the Natural Sciences and Engineering Research Council of Canada (Reviewed)

  National
  ▶ Advisory Board: Journal of Raman Spectroscopy (Member)
  ▶ Editorial/Board: Phys. Rev. Letters and Optics Express (Referee: Journals)

  Department
  ▶ Event: Molecular Modulation and Attosecond Science at the 43rd PQE Conference at Snowbird (Co-Organizer), Physics Festival (Participant), Quantum Optics /AMO Physics Seminar (Organizer)
  ▶ Committee/Panel: Graduate Admissions Committee (Member), Graduate Student Credentials and Records Committee (Member), Space Advisory Committee (Member), Institute for Quantum Science and Engineering(IQSE)Evaluations and Promotions Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 691. — Research (total enrollment: 8)
  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 5)
  Fall
  ▶ PHYS 426. — Physics Laboratory (total enrollment: 27)
  ▶ PHYS 689. — Special Topics in (total enrollment: 7)
  ▶ PHYS 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013
  Federal
Improving Research and Educational Activities in Multifunctional Nanomaterials, 
*Fund for the Improvement of Postsecondary Education*

Detection, Characterization and Mitigation of Endocrine Disrupting Chemicals, 
*National Institutes of Health*

Crystal-Based Molecular Modulation for Arbitrary Spatio-Temporal Optical Waveform 
Synthesis, *National Science Foundation*, coworkers: A. Sinyukov (P), K. Wang (P), S. 
Zhdanova (G)

Development of a Phase-Coherent Laser System for Attosecond Science and Precision 
Spectroscopy, *National Science Foundation*, coworkers: A. Kolomenskii (Research Scien-
tist)

Private

(REN) Applications of Molecular Coherence in Ultrafast Optics, *The Robert A. Welch 
Foundation*, coworkers: M. Zhi (P), A. Sinyukov (G), B. Strycker (G), K. Wang (G), H. 
Xia (G)

**PRESENTATIONS DURING 2013**

- “Chemical-Specific Imaging of Shallowly Buried Objects Using Femtosecond Laser Pulses,” 
  43rd Winter Colloquium on the Physics of Quantum Electronics, Snowbird, UT, January, 
  2013. (Invited)
- “Chemical-Specific Imaging of Shallowly Buried Objects Using Femtosecond Laser Pulses,” 
  43rd Winter Colloquium on the Physics of Quantum Electronics, Snowbird, UT, January, 
  2013. (Poster Individual)
- “Femtosecond Laser Pulses Interacting with Molecules: Physics and Applications,” Lecture 
  at Russian Quantum Center, Skolkovo, Russia, January, 2013. (Individual)
- “Molecular Coherence in Gasses and Solids: Physics and Applications,” Lebedev Physics 
  Institute Seminar, Moscow, Russia, January, 2013. (Individual)
- “Non-Resonant Background Suppression in CARS Spectroscopy Through Cascaded Non-
  linear Optical Interactions,” Texas A&M University Physics of Quantum Electronics 
  Workshop, College Station, TX, January, 2013. (Invited)
- “Phase Effects in Surface-Enhanced Coherent Anti-Stokes Raman Scattering,” 43rd 
  Winter Colloquium on the Physics of Quantum Electronics, Snowbird, UT, January, 
  2013. (Poster Individual)
- “Quantum Coherence in Molecular Gasses and Solids: Physics and Applications,” Optics 
  Seminar, Institute for Physics of Microstructures, Nizhniy Novgorod, Russia, January, 
  2013. (Individual)
- “Quantum Coherence in Molecular Gasses and Solids: Physics and Applications,” Plasma 
  Physics Seminar, Institute for Applied Physics, Nizhniy Novgorod, Russia, January, 2013. 
  (Individual)
- “Remote Sensing with Femtosecond Laser Pulses,” Texas A&M University Physics of Quan-
mum Electronics Workshop, College Station, TX, January, 2013. (Invited)
- “Remote Sensing with Femtosecond Laser Pulses,” 43rd Winter Colloquium on the Physics 
  of Quantum Electronics, Snowbird, UT, January, 2013. (Invited)


“Molecular Coherence in Gases and Solids: Physics and Applications,” Max Planck Institute for the science of light Russell Division Workshop, Gossweinstein, Germany, June, 2013. (Invited)

“Quantum Coherence in Gasses and Solids: Physics and Applications,” Optics Seminar, Technical University, Kaiserslautern, Germany, June, 2013. (Individual)


“Pulse Shaping and Beam Shaping in Crystal-Based Molecular Modulation,” The Raman Route for Atto-Science and Photonic Waveform Synthesis Workshop, Limoges, France, September, 2013. (Invited)


• CHAIRS/PROFESSORSHIPS
  ▷ Mitchell-Heep-Munnerlyn Endowed Chair in Observational Astronomy [2006]

• AWARDS DURING 2013
  University
  ▷ Bush Excellence Award For Faculty in International Research, Texas A&M University

• SERVICE DURING 2013
  National
  ▷ Event: Nostalgia for the Light at the Glasscock Center (Presenter)
  ▷ Committee/Panel: American Astronomical Society (Vice President), Science Advisory Committee for the Las Cumbres Observatory Global Telescope (Member)
  State
  ▷ Committee/Panel: Office of Human Rights at the State Department (Member)
  Regional
  ▷ Committee/Panel: Brazos Valley Museum of Natural History (Board Member), Science and Technology Board for AdventGX (Member)
  College
  ▷ Committee/Panel: Distinguished Professors Executive Committee (Member)
  Department
  ▷ Event: Physics Festival (Participant)
  ▷ Committee/Panel: Promotion, Tenure, and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ ASTR 685. — Directed Studies (total enrollment: 1)
  Summer
  ▷ ASTR 685. — Directed Studies (total enrollment: 1)
  Fall
  ▷ ASTR 111. — Overview of Modern Astronomy (total enrollment: 148)
  ▷ ASTR 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, *National Science Foundation*

The Carnegie Supernova Project: Extending the Near-IR Hubble Diagram for SNe Ia to $z\leq0.08$, *National Science Foundation*

**PRESENTATIONS DURING 2013**

- Cerro Tololo Inter-American Observatory, La Serena, Chile, January, 2013. (Individual)
- Johnson Space Center, Houston, TX, January, 2013. (Individual)
- “Science Foreign Policy at the State Department: Why Would They Need a Cosmologist?,” APS Meeting, April, 2013. (Invited)
- Sam Houston State University, Huntsville, TX, April, 2013. (Individual)
- “Closing and Summary Presentation,” Cerro Tololo Inter-American Observatory 50th Anniversary, May, 2013. (Individual)
- “Closing and Summary Presentation,” Giant Magellan Telescope Observatory Science Meeting, Chicago, IL, June, 2013. (Individual)
- University of California, Davis, CA, July, 2013. (Individual)
- “Cooks Branch Meeting on Supernovae,” Carnegie Supernova Project, October, 2013. (Individual)
- Oklahoma State University, Stillwater, OK, October, 2013. (Individual)

**PUBLICATIONS DURING 2013**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2013

  International
  ▷ Editorial/Board: Various International Journals (Referee: Journals)

  National
  ▷ Editorial/Board: American Physical Society (Review: Proposals), National Science Foundation (Review: Proposals)

  University
  ▷ Committee/Panel: Faculty Senate (Faculty Senator - 02), Faculty Senate: International Programs (Member), Faculty Senate: The Research Committee (Chair)

  Department
  ▷ Committee/Panel: Graduate Curriculum Committee (Member), Several Thesis Committees (Chair), Several Thesis Committees (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▷ MSEN 691. — Research (total enrollment: 2)
  ▷ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▷ MSEN 691. — Research (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 3)

  Fall
  ▷ MSEN 691. — Research (total enrollment: 2)
  ▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013

  International
  ▷ Seed Funds for Fusion-Research Project: Molecular Motor Powered Shuttles Along Carbon Nanotube Tracks, WPI Research Initiative Advanced Institute for Materials Research, coworkers: J. Ramon-Azon (P), A. Sikora (P), A. Liao (G)
  ▷ Equipment for Biomolecular Motility Studies, WPI Research Initiative Advanced Institute for Materials Research
(REN) Revolving Operational Funds for Biomolecular Motility and Single Molecule Magnet Studies, *WPI Research Initiative Advanced Institute for Materials Research*, coworkers: K. Kim (P), D. Oliveira (P), A. Sikora (P), A. Liao (G), K. Reaves (G)

Seed funds for Fusion-Research project: An Atomistic Investigation of the Correlated State in Molecular Nanomagnets, *WPI Research Initiative Advanced Institute for Materials Research*, coworkers: K. Kim (P), K. Reaves (G), D. Packwood (Staff)

Target Project: Topology, Hierarchy, and Non-Equilibrium in Materials, *WPI Research Initiative Advanced Institute for Materials Research*, coworkers: K. Kim (P), K. Reaves (G), D. Packwood (Staff)

- **PRESENTATIONS DURING 2013**
  - “Characterization and Application of the Molecular Motor Kinesin,” AIMR International Symposium, Sendai, Japan, 2013.(Poster Individual)
  - “Deposition of Mn12-Ph and Related Molecules,” AIMR International Symposium, Sendai, Japan, 2013.(Poster Individual)
  - “Glass Micro-Wire Track for Guiding Kinesin-Powered Gliding Movement of Microtubules,” Third International Conference on Multifunctional, Hybrid and Nanomaterials, Sorrento, Italy, 2013.(Poster Individual)
  - “Lab-on-a-Chip Transport Devices Based on Molecular Motors,” Sonderkolloquium des Sonderforschungsbereichs Bauteiloberflachen, Technische Universitat Kaiserslautern, Kaiserslautern, Germany, 2013.(Individual)
  - “Lab-on-a-Wire Transport Devices Based on Molecular Motors,” Institute Seminar for Principal Investigators at AIMR, Sendai, Japan, 2013.(Individual)
  - “Nanotransport Using the Kinesin Motor Protein,” Third International Conference on Multifunctional, Hybrid and Nanomaterials, Sorrento, Italy, 2013.(Poster Individual)
  - “Properties of Superconducting Thin Films covered by Periodic Ferromagnetic Stripes,” 12th Joint MMM/Intermag Conference, Chicago, IL, 2013.(Poster Individual)
  - “The Kinesin Motor Protein as a Nanotransporter,” EURO Biomaterials Conference of the Deutsche Gesellschaft fr Materialkunde, Weimar, Germany, 2013.(Individual)
  - “Nanotransport Using the Kinesin Motor Protein,” Meeting of the American Physical Society, Baltimore, MD, March, 2013.(Individual)
  - “STM Studies of Mn12-Ph,” Meeting of the American Physical Society, Baltimore, MD, March, 2013.(Individual)

- **PUBLICATIONS DURING 2013**

756 2013 physics and astronomy annual report


• CHAIRS/PROFESSORSHIPS
  ▷ Thaman University Professorship in Undergraduate Teaching Excellence /2012/

• SERVICE DURING 2013
  National
  ▷ Committee/Panel: CDF Combined Top Quark/Exotic Physics Group (Co-Chair), CDF Speakers Committee (Member), CDF Spokesperson Election Committee (Chair), CDMS Documentation and Policies Committee (Member), CDMS Publications and Thesis Committee (Member)

University
  ▷ Committee/Panel: Texas A&M University/CDF Group Leader (Group Leader), Teaching Awards Selection Committee (Member)

Department
  ▷ Committee/Panel: Astronomy Faculty Search Committee (Member), Mechanics Scholar Committee (Member), Mitchell Institute Audio/Video Committee (Chair), Mitchell Institute External Funding Committee (Chair), Nuclear Solutions Institute Faculty Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▷ ASTR 109. — Big Bang and Black Holes (total enrollment: 81)
  ▷ PHYS 109(H) — Big Bang and Black Holes (total enrollment: 4)
  ▷ PHYS 109. — Big Bang and Black Holes (total enrollment: 14)
  ▷ PHYS 491. — Research (total enrollment: 1)
  ▷ PHYS 685. — Directed Studies (total enrollment: 2)
  ▷ PHYS 691. — Research (total enrollment: 2)

Summer
  ▷ PHYS 491. — Research (total enrollment: 2)
  ▷ PHYS 685. — Directed Studies (total enrollment: 2)
  ▷ PHYS 691. — Research (total enrollment: 3)

Fall
  ▷ ASTR 109. — Big Bang and Black Holes (total enrollment: 102)
  ▷ PHYS 109 — Big Bang and Black Holes (total enrollment: 20)
  ▷ PHYS 109.(H) — Big Bang and Black Holes (total enrollment: 4)
  ▷ PHYS 485. — Directed Studies (total enrollment: 1)
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
• PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy

Private
▷ Legacy Measurements in the Lepton+Jets and Dilepton Channels of the Forward-Backward Asymmetry of Top-Antitop Pair Production at CDF, Universities Research Association, Inc.

• PRESENTATIONS DURING 2013

▷ “New Particle and Interaction Searches at CDF: BSM Higgs, Top and SUSY,” Lake Louise Winter Institute, February, 2013. (Invited)
▷ “Cosmology, Particle Physics and Dark Matter,” Research Topics Seminar, Texas A&M University, College Station, TX, September, 2013. (Individual)
▷ “Overview of the Top BSM Group,” CDF Collaboration Meeting, September, 2013. (Individual)
▷ “Heavy, Long-Lived Neutral Particles that Decay to Photons at CDF II,” TX Section of the APS, October, 2013. (Individual)

• PUBLICATIONS DURING 2013


Chatrchyan, S.; et al. (2013) Search for Heavy Quarks Decaying into a Top Quark and a W or Z Boson Using Lepton + Jets Events in pp Collisions at $\sqrt{s} = 7$ TeV Journal of High Energy Physics, vol. 1301, 154.


Chatrchyan, S.; et al. (2013) Search for Z Resonances Decaying to $t\bar{t}$ in Dilepton+Jets Final States in pp Collisions at $\sqrt{s} = 7$ TeV Physical Review D: Particles and Fields, vol. 87, 72002.


Chatrchyan, S.; et al. (2013) Studies of Jet Quenching Using Isolated-Photon+Jet Cor-
relations in PbPb and pp Collisions at $\sqrt{s_{NN}} = 2.76$ TeV *Physics Letters B*, vol. 718, 773-794.

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- SERVICE DURING 2013
  National

  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 08)

  Department
  ▶ Service Position: ASTR 101, 102, 111, & 314 (Course Coordinator)
  ▶ Committee/Panel: Graduate Student Credentials and Records Committee (Chair), Mitchell Institute Astronomy Faculty Search (Chair), Mitchell Institute Communications Committee (Chair)

- TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ ASTR 691. — Research (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Summer
  ▶ ASTR 691. — Research (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Fall
  ▶ ASTR 691. — Research (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2013
  Federal
  ▶ A Candidate Galaxy Supercluster at z 2.2, National Aeronautics and Space Administration
  ▶ Mapping Cool Gas In and Around Star-Forming Cluster Galaxies at z 1.62, National Aeronautics and Space Administration
  ▶ The Four Star Galaxy Evolution Survey: Opening a New Window into Galaxy Formation, National Science Foundation, coworkers: A. Tomczak (G)
  ▶ At the Turn of the Tide: WFC3/IR Imaging and Spectroscopy of Two Galaxy Clusters at z 2, Space Telescope Science Institute
  ▶ Super-Group 1120-1202: A Unique Laboratory for Tracing Galaxy Evolution, Space Telescope Science Institute, coworkers: J. Monroe (U)

- PRESENTATIONS DURING 2013
IFU Spectroscopy of BCGs and Their Companions: Angular Momentum and Dynamical Mass,” Winter School, Jerusalem, January, 2013.(Poster Individual)

“The Great Observatories: New Windows into the Universe,” Texas Junior Sciences & Humanities Symposium, Texas A&M University, College Station, TX, January, 2013.( Individual)

“The Great Observatories: New Windows into the Universe,” Vietnamese Student Association, Texas A&M University, College Station, TX, February, 2013.( Individual)

“Mapping BCGs with the VIMOS IFS on the VLT,” GMTIFS Science Meeting, Pasadena, March, 2013.( Individual)


“Mass Functions in ZFOURGE & Candels: Evidence for a Rapid Increase in Low-Mass Passive Galaxies at z \leq 1,” ZFOURGE Team Meeting, Pasadena, May, 2013.( Individual)


“A New Window into the Universe: From Cosmic Dawn to Today,” Giant Magellan Telescope Third Mirror Casting, University of Arizona, Tucson, AZ, August, 2013.( Invited)

“Angular Momentum and Recent Mergers of Brightest Cluster Galaxies,” Texas A&M Astronomy Symposium, Texas A&M University, College Station, TX, August, 2013.( Individual)

“Automation of Galaxy Modeling Process,” Texas A&M Astronomy Symposium, College Station, TX, August, 2013.( Individual)

“Internal Catalog Checks,” Texas A&M Astronomy Symposium, College Station, TX, August, 2013.( Individual)

“Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Department of Astronomy, Columbia University, New York, NY, September, 2013.( Individual)

“Angular Momenta, Dynamical Masses, and Mergers of Brightest Cluster Galaxies,” Frank N. Bash Symposium, Austin, TX, October, 2013.(Poster Individual)

“Galaxy Stellar Mass Functions from ZFOURGE/CANDELS: An Excess of Low-Mass Galaxies Since z = 2 and the Rapid Buildup of Quiescent Galaxies,” Frank N. Bash Symposium, Austin, TX, October, 2013.(Poster Individual)

“Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Department of Astronomy, University of Wisconsin, Madison, WI, October, 2013.( Individual)

“Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Department of Physics, University of Wisconsin, Milwaukee, WI, October, 2013.( Individual)

“Galaxy Clusters & ZFOURGE,” Inter-Medium Program Studies (IMPS), University of California, Santa Cruz, CA, November, 2013.( Individual)

“Galaxy Clusters & ZFOURGE,” Department of Physics & Astronomy, Rutgers University, New Brunswick, NJ, December, 2013.( Individual)

● PUBLICATIONS DURING 2013


Tilvi, V.; Papovich, C.; Tran, K.V.; et al. (2013) Discovery of Lyman Break Galaxies at z ∼ 7 from the z-FourGE Survey Astronomical Journal, vol. 768, 56.

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Director, Nuclear Solutions Institute, Office of the Provost, [2010]
  ▶ Director, Cyclotron Institute, College of Science, [2003]

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: Review of Progress in Physics (Member)
  ▶ Committee/Panel: International Union of Pure and Applied Physics WG9 (IUPAP) (Chair)

  National
  ▶ Committee/Panel: DNP Fellowship Committee (Chair), Electron Ion Collider Advisory Committee (Member), Facility for Rare Isotope Beams Science Advisory Committee (Member), JLAB Science Council (Member), Joint Institute for Nuclear Astrophysics Advisory Board (Chair), Nishina Center Advisory Committee (Member), Program Review and Advisory Committee for Fundamental Neutron Physics Beamline at the SNS (Chair), Subcommittee for Nuclear Science Advisory Committee (Chair)

  University
  ▶ Committee/Panel: Visiting Committee, Colorado School of Mines (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member), Research Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 691. — Research (total enrollment: 7)

  Summer
  ▶ PHYS 491. — Research (total enrollment: 11)
  ▶ PHYS 691. — Research (total enrollment: 4)

  Fall
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013
Federal
▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: V. Goldberg (Research Scientist), L. Trache (Research Scientist), A. Zhanov (Research Scientist), A. Saastimoinen (P), R. Chyzh (G), M. Dag (G), M. McCleskey (G), E. Simmons (G), A. Spiridon (G)
▷ (REN) Fundamental Studies in Nuclear Science, Department of Energy, coworkers: M. McCluskey (P), B. Roeder (P), A. Zhanov (P)
▷ (REN) QCD and Standard Model Studies, Department of Energy
▷ (REN) Development of New Techniques to Determine Neutron and Charged-Particle Induced Reaction Rates, National Nuclear Security Administration, coworkers: B. Roeder (P), A. Zhanov (P), M. McCluskey (G)

• PRESENTATIONS DURING 2013
▷ “Honoring the Achievements of Joseph B. Natowitz,” Intenational Workshop on Nuclear Dynamics and Thermodynamics, College Station, TX, August, 2013. (Individual)
▷ “Asymptotic Normalization Coefficients as an Indirect Technique in Nuclear Astrophysics (and More),” Seventh European Summer School on Experimental Nuclear Astrophysics, Catania, Italy, September, 2013. (Individual)

• PUBLICATIONS DURING 2013


• SERVICE DURING 2013

International
▷ Event: Australia-China AST3 Science Working Group Meeting (Organizer)

National
▷ Committee/Panel: Scientific Committee on Antarctic Research of Astronomy & Astrophysics from Antarctica Steering Committee (Member), Scientific Committee on Antarctic Research of Astronomy & Astrophysics from Antarctica Working Group on Infrared Astronomy from Antarctica (Chair)

College
▷ Committee/Panel: Grievance Committee (Elected Member)

Department
▷ Event: Cook’s Branch Meeting on Astronomical Surveys (Organizer)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ ASTR 101. — Basic Astronomy (total enrollment: 256)
▷ ASTR 685. — Directed Studies (total enrollment: 2)
▷ ASTR 691. — Research (total enrollment: 1)

Summer
▷ ASTR 691. — Research (total enrollment: 1)

Fall
▷ ASTR 685. — Directed Studies (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Understanding Supernovae with a Swift Ultraviolet Archive, National Aeronautics and Space Administration
▷ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, National Science Foundation, coworkers: A. Wagers (G)

• PRESENTATIONS DURING 2013
▷ Australia-China AST3 Science Working Group Meeting, Swinburne University, Melbourne, Australia, February, 2013. (Invited)
▷ Cosmic Frontier Workshop, SLAC, Stanford, CA, March, 2013. (Individual)
“Supernovae,” Cooks Branch Meeting, Montgomery, TX, April, 2013. (Individual)

“Plans of AST-3 for the Upcoming Two Years,” China-Australia Collaboration on AST3, Tengchong, China, June, 2013. (Invited)


“Time-Domain Spectroscopic Surveys for the Future,” China-Chile Workshop on Astronomy, Vina del Mar, Chile, September, 2013. (Invited)

University of Michigan, Ann Arbor, MI, October, 2013. (Individual)

Baylor University, Waco, TX, December, 2013. (Individual)

PUBLICATIONS DURING 2013


• CHAIRS/PROFESSORSHIPS
  ▶ Ed Rachal Chair in High Energy Physics /2007/

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals)
  University
  ▶ Committee/Panel: ADVANCE Workshop Steering Committee (Member), CIRTL Steering Committee (Chair)
  College
  ▶ Ad Hoc Committee: Diversity Committee (Member), Statistics Department Head Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 155)
  ▶ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  Other
  ▶ Research Collaboration on the LZ Experiment at Sanford Laboratory, University of California
  ▶ The CIRTL Network: 25 Research Universities Preparing a National Faculty to Advance STEM Undergraduate Learning, University of Wisconsin

• PUBLICATIONS DURING 2013


Alvarez, V.; et al. (2013) Initial Results of Next-Demo, a Large-scale Prototype of the Next-100 Experiment Journal of Instrumentation, vol. 8, p04002.

Alvarez, V.; et al. (2013) Operation and First Results of the Next-Demo Prototype Using a Silicon Photomultiplier Tracking Array Journal of Instrumentation, vol. 8, P09011.

Akerib, D.S.; et al. (2013) Technical Results from the Surface Run of the LUX Dark Matter Experiment Astroparticle Physics, vol. 45 34.
• **TEACHING ASSIGNMENTS DURING 2013**

  **Spring**
  - PHYS 691. — **Research** (total enrollment: 3)

  **Summer**
  - PHYS 691. — **Research** (total enrollment: 3)

  **Fall**
  - PHYS 201. — **College Physics** (total enrollment: 75)
  - PHYS 408. — **Thermodynamics and Statistical Mechanics** (total enrollment: 20)
  - PHYS 691. — **Research** (total enrollment: 3)

• **RESEARCH PROJECTS DURING 2013**

  **Federal**
  - Structural Characterization of InAs / InAsSb Superlattices with Cross Sectional STM, *Department of Energy*
  - (REN) Mid-Infrared Technologies for Health and the Environment, *National Science Foundation*, coworkers: M. Fuller (G), K. Kanedy (G), F. Lopez (G), M. Wood (G)

*No report received from faculty member.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Department Head, Physics and Astronomy, [2011]

• SERVICE DURING 2013

  National
  ▶ Event: Annual Winter Colloquium on Quantum Electronics (Organizer)
  ▶ Editorial/Board: *Journal of Modern Optics, New Journal of Physics, Optics Letters, Optics Express*. (Referee: Journals), *Journal of Modern Optics* (Co-Editor), *Journal of Modern Optics* (Member)
  ▶ Committee/Panel: DAMOP (APS Divisiona) Committee (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member)

  Department
  ▶ Event: Physics Festival (Participant), Special Festival (Participant)
  ▶ Committee/Panel: Advisory Committee (Member), AMO Faculty Search Committee (Chair), Head Search Advisory Committee (Member), IT Committee (Chair), Long Range Planning Committee (Member), Performance Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Summer
  ▶ PHYS 666. — **Scientific Instrument Making** (total enrollment: 18)

  Fall
  ▶ PHYS 666. — **Scientific Instrument Making** (total enrollment: 18)

*No report received from faculty member.*
• SERVICE DURING 2013
  National
  ▶ Editorial/Board: Department of Energy and National Science Foundation (Review: Proposals)
  Department
  ▶ Event: Chemistry Open House (Participant), Hawking Science Fair (Participant)
  ▶ Committee/Panel: Graduate Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 666. — Scientific Instrument Making (total enrollment: 18)
  ▶ PHYS 691. — Research (total enrollment: 3)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 3)
  Fall
  ▶ MATH 613. — Graph Theory (total enrollment: 25)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  Private
  ▶ LZ20 Development: The LUX-ZEPLIN 20 Tonne Dark Matter Experiment Technical Development Plan for DUSEL, Case Western Reserve University, coworkers: R. Mannino (G), C. Sofka (G), T. Stiegler (G), D. Hrncir (U), Z. Marquez (U), P. Roberts (U)

Deceased 07/17/2013.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, (2013)

• SERVICE DURING 2013
  National
  ▶ Committee/Panel: National Science Foundation (Review Panel)
  Department
  ▶ Committee/Panel: Condensed Matter Physics Seminar (Chair), Graduate Admissions Committee (Member), Qualifying Exam Committee (Member)
  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: MSEN Committee on Qualification Procedures (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 225. — Electronic Circuits and Applications (total enrollment: 70)
  ▶ PHYS 691. — Research (total enrollment: 2)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 2)
  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 148)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: I. Schultz (G), Z. Wei (G)

• PRESENTATIONS DURING 2013
DAVE H. YOUNGBLOOD

PROFESSOR
PHYS-Nuclear
dhy@comp.tamu.edu

- SERVICE DURING 2013
  National
  ▶ Editorial/Board: Physical Review C and Physical Review Letters (Referee: Journals)

- TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ PHYS 218. — Mechanics (total enrollment: 120)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 127)
  ▶ PHYS 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: Y. Lui (Research Scientist), Y. Hu (P), J. Button (G), M. Henry (U)

- PRESENTATIONS DURING 2013
  ▶ “Study of Giant Monopole Resonance: Present and Future,” College of Physics, Qingdao University, Qingdao, China, June, 2013. (Individual)

- PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International
▷ Event: Spring School on Quantum Science and Technologies (Co-Organizer), Summer School on Quantum Science and Technologies (Co-Organizer)
▷ Committee/Panel: 2nd International Conference on Quantum Technologies Program Committee (Member), European Conference on Nonlinear Spectroscopy Steering Committee (Member), International Conference on Coherent and Nonlinear Optics (Co-Chair), Scientific Board of the Russian Quantum Center (Member)

National

Department
▷ Committee/Panel: Laser Physics Workshop Steering Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ PHYS 689. — Special Topics in (total enrollment: 30)
▷ PHYS 691. — Research (total enrollment: 4)

Summer
▷ PHYS 691. — Research (total enrollment: 4)

Fall
▷ PHYS 601. — Analytical Mechanics (total enrollment: 19)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

Private

• PRESENTATIONS DURING 2013


“Supercontinuum Generation by Mid-IR femtosecond Filaments in Molecular Gases,” OSA Technical Digest, 2013. (Individual)

“The Time of Light,” Rossiya Russian State Channel, Russia, 2013. (Individual)

“Advanced Photonics in Quantum Physics and Life Sciences,” Government of Moscow, Moscow, Russia, June, 2013. (Individual)

“Finely Phase-tuned Coherent Raman Scattering with Tailored Optical Driver Fields,” The International Conference on Coherent and Nonlinear Optics (ICONO) and The Lasers, Applications, and Technologies (LAT) ICONO/LAT, Technical digest ICONO-01, Moscow, Russia, June, 2013. (Invited)

“Finely Phase-tuned Coherent Raman Scattering with Tailored Optical Driver Fields,” The International Conference on Coherent and Nonlinear Optics, Moscow, Russia, June, 2013. (Individual)

“Mid-infrared Femtosecond Filaments in Transparent Media,” The International Conference on Coherent and Nonlinear Optics (ICONO) and The Lasers, Applications, and Technologies (LAT) ICONO/LAT, Technical digest ICONO-09, Moscow, Russia, June, 2013. (Invited)

“Parallel Multisite Long-term Optical Brain Interrogation in Freely Moving Mice with an Implantable Fiber-optic Interface,” The International Conference on Coherent and Nonlinear Optics (ICONO) and The Lasers, Applications, and Technologies (LAT) ICONO/LAT, Technical digest LAT-07, Moscow, Russia, June, 2013. (Invited)

“Subcycle Field Waveforms from Fissioning Soliton Breathers,” The International Conference on Coherent and Nonlinear Optics (ICONO) and The Lasers, Applications, and Technologies (LAT) ICONO/LAT, Technical digest ICONO-02, Moscow, Russia, June, 2013. (Invited)

“Nonlinear Optics of Microstructure Fibers,” International Summer School and NATO Advanced Studies Institute, Sicily, Italy, July, 2013. (Individual)

“Self-transforming Solitons,” The 5th International Conference Frontiers of Nonlinear Physics, Nizhny Novgorod, Russia, July, 2013. (Individual)

“Subcycle Fissioning Breathers,” The 2nd International Conference on Quantum Technologies, Moscow, Russia, July, 2013. (Invited)

“Ultrashort Pulses in Quantum Physics and Life Sciences,” Moscow Physicotechnical Institute, Dolgoprudnyi, Moscow, Russia, July, 2013. (Individual)
“Coherent Four Wave Mixing with Chirped Pulses,” Technical Digest Novosibirsk, Novosibirsk, Russia, August, 2013. (Invited)

“Coherent Four Wave Mixing with Chirped Pulses,” VI International Symposium Modern Problems of Laser Physics, Novosibirsk, Russia, August, 2013. (Invited)

“Microstructure Fibers in Ultrafast Optics and Biophotonics,” Conference on Fiber Optics, Perm, October, 2013. (Invited)

“Photonic-Crystal-Fiber Coherent Synthesizers of Ultrashort High-Power Field Waveforms,” International Workshop on Coherent Amplification, Nizhny Novgorod, Russia, December, 2013. (Invited)

PUBLICATIONS DURING 2013


• CHAIRS/PROFESSORSHIPS
  ▶ Munnerlyn-Heep Endowed Chair in Quantum Optics [2010]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Director, Institute for Quantum Science and Engineering (IQSE), [2001]

• SERVICE DURING 2013
  
  International
  ▶ Service Position: King Abdulaziz City for Science and Technology (Consultant)
  ▶ Committee/Panel: KACST 5th Meeting on Quantum Optics and Informatics (Co-Chair)

  National
  ▶ Editorial/Board: Various Journals (Referee: Journals)

  University
  ▶ Committee/Panel: Advance Fasit Team (Member), Promotion Committee, TAMU at Qatar (Member)

  College
  ▶ Committee/Panel: Faculty Advisory Council (Elected Member)

  Department
  ▶ Committee/Panel: Graduate Admissions Committee (Member), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  
  Spring
  ▶ PHYS 648. — Quantum Optics and Laser Physics (total enrollment: 19)
  ▶ PHYS 685. — Directed Studies (total enrollment: 2)
  ▶ PHYS 691. — Research (total enrollment: 5)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 4)

  Fall
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 603. — Electromagnetic Theory (total enrollment: 6)
  ▶ PHYS 648. — Quantum Optics and Laser Physics (total enrollment: 6)
  ▶ PHYS 691. — Research (total enrollment: 8)

• RESEARCH PROJECTS DURING 2013
International

- Applications of Quantum Interferometry and Coherence to Precision Sensing, Microscopy and Lithography, Qatar National Research Fund
- Coherent Control of Optical Processes in Nano Devices and Optical Switches, Qatar National Research Fund
- Precision Measurements with Applications in Optomechanical Systems, Lithography, and Nonreciprocity, Qatar National Research Fund
- Quantum Correlations for Quantum Communications, Qatar National Research Fund

**PRESENTATIONS DURING 2013**

- “Erasing the Memory - Reversing a Weak Measurement,” Texas A&M University Physics of Quantum Electronics Follow-on Workshop, Institute for Quantum Science and Engineering, Texas A&M University, College Station, TX, January, 2013. (Invited)
- “Quantum Optical Systems for Sub-wavelength Lithography and Photonless Optical Communication,” Conference on Quantum Optics and New Materials (V), Beijing Computational Science Research Center, Beijing, China, May, 2013. (Invited)
- “Optical Communication with Invisible Photons,” Department of Electronics, Quaid-i-Azam University, Islamabad, Pakistan, December, 2013. (Individual)

**PUBLICATIONS DURING 2013**


7. Research Activity, 2013

This section contains information on all funded research activity for the calendar year 2013. Information was initially reported by faculty and verified whenever possible through the granting agency. Because of calculations and rounding there is a small margin of error.

Information reported by faculty:
- Title
- Granting Agency
- PIs, Co-PIs, and co-workers (internal/external)
- Total Funding
- Indirect Costs
- Start & End Dates

Calendar year calculations:
- Total - Indirect = Direct
- # Days Total Grant = End Date - Start Date
- Daily Grant Award = Total Funding Reported / # Days Total Grant
- Grant Award for 2013 = # Days 2013 × Daily Grant Award
# 7.1 Summary of Research Support, 2013

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<td><strong>Federal Agencies</strong></td>
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<td><strong>Brookhaven National Laboratory</strong></td>
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<td>Hardy, J.C.</td>
<td>(REN) NNDC: Contract for Cyclotron Institute, (with: J. Hardy, N. Nica)</td>
<td>10/1/2011</td>
<td>9/30/2013</td>
<td>9,751</td>
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<td><strong>Subtotal: Brookhaven National Laboratory</strong></td>
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<td>9,751</td>
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<td><strong>Department of Defense</strong></td>
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<td><strong>Subtotal: Department of Defense</strong></td>
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<td>24,810</td>
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<td><strong>Department of Energy</strong></td>
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<tr>
<td>Eusebi, R.</td>
<td>Enhancing the Discovery Reach of the CMS Detector. Upgraded Jet Energy Correction and Uncertainties as Critical Components to Advanced Analysis Techniques</td>
<td>8/1/2012</td>
<td>4/30/2013</td>
<td>23,048</td>
<td>5,390</td>
<td>28,438</td>
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2013 Physics and Astronomy Annual Report
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<th>Grantee</th>
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<th>Direct</th>
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<td>Fries, R.J.</td>
<td>A Topical Collaboration on Quantitative Jet and Electromagnetic</td>
<td>6/1/2010</td>
<td>5/31/2015</td>
<td>12,437</td>
<td>1,163</td>
<td>13,600</td>
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<td></td>
<td>Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions,</td>
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<td></td>
<td>(with: R. Fries, C. Ko)</td>
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<td></td>
<td>Science, (with: C. Folden, C. Gagliardi, J. Hardy, D. Melconian,</td>
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<td></td>
<td>J. Natowitz, R. Tribble, S. Yennello, D. Youngblood)</td>
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<tr>
<td>Gagliardi, C.A.</td>
<td>(REN) QCD and Standard Model</td>
<td>12/1/2012</td>
<td>11/30/2015</td>
<td>99,165</td>
<td>24,614</td>
<td>123,780</td>
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<td>Studies, (with: C. Gagliardi, R. Tribble)</td>
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<td>Science, (with: C. Folden, C. Gagliardi, J. Hardy, D. Melconian,</td>
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<td>J. Natowitz, R. Tribble, S. Yennello, D. Youngblood)</td>
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<td></td>
<td>T. Kamon, D. Nanopoulos, C. Pope, A. Safonov, D. Toback, R. Webb, J.</td>
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<td>White)</td>
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<td>R. Eusebi, T. Kamon, D. Nanopoulos, C. Pope, A. Safonov, D. Toback, R.</td>
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<td>Webb, J. White)</td>
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<td>Systems: From Glasses to Quantum Computing</td>
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<td>Ko, C.</td>
<td>A Topical Collaboration on Quantitative Jet and Electromagnetic</td>
<td>6/1/2010</td>
<td>5/31/2015</td>
<td>12,437</td>
<td>1,163</td>
<td>13,600</td>
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<tr>
<td></td>
<td>Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions,</td>
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<td></td>
<td>(with: R. Fries, C. Ko)</td>
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<tr>
<td>Lyuksyutov, I.F.</td>
<td>(REN) Emergent Behavior in Magnet-Superconductor Hybrids, (with: I.</td>
<td>8/15/2010</td>
<td>8/14/2013</td>
<td>21,918</td>
<td>8,904</td>
<td>30,822</td>
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<td></td>
<td>Lyuksyutov, D. Naugle, W. Wu)</td>
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<td>Mahapatra, R.</td>
<td>Ton Scale Germanium: Beyond</td>
<td>4/15/2010</td>
<td>4/14/2015</td>
<td>125,400</td>
<td>24,600</td>
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<td>Zeptobarn WIMP Cross- Section</td>
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<td>McIntyre, P.M.</td>
<td>(REN) New Technology for Future</td>
<td>12/1/2009</td>
<td>4/30/2014</td>
<td>1,156,895</td>
<td>171,625</td>
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<td>McIntyre, P.M.</td>
<td>Test Cavity to Test SRE Materials to and Beyond the BSC Limit</td>
<td>6/15/2010</td>
<td>9/14/2013</td>
<td>85,752</td>
<td>15,397</td>
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- **Fermi National Accelerator Laboratory**

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  3/1/2012  2/28/2013  797  0  797

  Safonov, A.N.  
  Statement of Work for US CMS Texas A&M Research Foundation for Activities Related to the US CMS EMU Subsystem  
  1/1/2013  12/31/2013  268,236  0  268,236

  Safonov, A.N.  
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- **Subtotal**: Fermi National Accelerator Laboratory  
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- **Fund for the Improvement of Postsecondary Education**

  Belyanin, A.A.  
  Improving Research and Educational Activities in Multifunctional Nanomaterials, (with: A. Belyanin, Y. Efendiev, K. Rajagopal, A. Sokolov)  
  10/1/2010  9/30/2013  11,150  0  11,150

792  2013 Physics and Astronomy Annual Report
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**International Agencies**

- Qatar Foundation

SEC. 7. RESEARCH ACTIVITY 797
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<td>Kamon, T.</td>
<td>Creation of Experimental High Energy Physics Program, (with: T. Kamon, A. Safonov)</td>
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<td>Schuessler, H.A.</td>
<td>(REN) Gas Tracers for Intervill Exploring Petroleum Reservoir Structure</td>
<td>10/15/2012</td>
<td>10/14/2013</td>
<td>137,459</td>
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<td>Zubairy, M.</td>
<td>Applications of Quantum Interferometry and Coherence to Precision Sensing, Microscopy and Lithography</td>
<td>9/1/2009</td>
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<td>85,067</td>
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<td>Zubairy, M.</td>
<td>Coherent Control of Optical Processes in Nano Devices and Optical Switches</td>
<td>1/15/2012</td>
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<td>132,731</td>
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<td>Zubairy, M.</td>
<td>Precision Measurements with Applications in Optomechanical Systems, Lithography, and Nonreciprocity</td>
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<td>Zubairy, M.</td>
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2013 Physics and Astronomy Annual Report
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<td>Seed funds for Fusion-Research project: An Atomistic Investigation of the Correlated State in Molecular Nanomagnets</td>
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<td>Teizer, W.</td>
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<td>3/31/2013</td>
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* Subtotal: VPI Research Initiative Advanced Institute for Materials Research 131,722 0 131,722

* Subtotal: International Agencies 1,281,297 50,180 1,331,477

** Other Government **

* Ohio State University

Sinova, J. | Towards Spin-Reserving Heterogeneous Spin Networks | 5/1/2010  | 8/31/2014 | 40,756 | 17,466 | 58,222 |

* Subtotal: Ohio State University 40,756 17,466 58,222

* University of California

Webb, R.C. | Research Collaboration on the LZ Experiment at Sanford Laboratory | 10/1/2011 | 9/30/2014 | 18,890 | 0        | 18,890 |

* Subtotal: University of California 18,890 0 18,890

* University of Wisconsin

Webb, R.C. | The CIRTL Network: 25 Research Universities Preparing a National Faculty to Advance STEM Undergraduate Learning | 8/15/2013 | 7/31/2016 | 1,631  | 0        | 1,631  |

* Subtotal: University of Wisconsin 1,631 0 1,631

* Subtotal: Other Government 61,277 17,466 78,743

** Private/Non-Profit Agencies **

* California Institute of Technology

Mahapatra, R. | Tonne-Scale Germanium Dark Matter Search | 10/1/2009 | 9/30/2013 | 117,343 | 5,193 | 122,536 |

Papovich, C. | Spectroscopy of a Highly Magnified Galaxy Behind the Bullet Cluster | 7/26/2011 | 12/31/2013 | 2,032  | 945    | 2,977  |


* Subtotal: California Institute of Technology 137,034 14,173 151,208

* Case Western Reserve University

SEC. 7. RESEARCH ACTIVITY 799
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<td>Ko, C.</td>
<td>(REN) Theoretical Studies of Heavy Ion Collisions</td>
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<td>Lyuksyutov, I.F.</td>
<td>Chemical Dynamics of Ultracold Molecules and Atomic Hydrogen</td>
<td>6/1/2008</td>
<td>5/31/2013</td>
<td>21,370</td>
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<td>Naugle, D.G.</td>
<td>(REN) The Influence of Reduced Dimensionality, Disorder, and Interfaces on the Properties of Solids</td>
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<td>Ross, J.H.</td>
<td>Magnetism and Anharmonic Lattice Vibrations in Clathrates and Related Materials</td>
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<td>Schuessler, H.A.</td>
<td>(REN) Preparation of Ultracold Molecular Ions and Their Optical Studies Using Femtosecond Laser Pulses and High Harmonic Generation</td>
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<td>Scully, M.O.</td>
<td>Quantum Coherence and Decoherence in Atomic Molecular and Solid State Systems: Continuation and Extensions</td>
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<td>Zheltikov, A.M.</td>
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- **Subtotal:** Case Western Reserve University

  36,700 3,057 39,758

- **The Robert A. Welch Foundation**
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**State Agencies**

* Texas A&M University

Erukhimova, T.L. DEEP: Discover, Explore, and Enjoy Physics & Engineering via High Impact Educational Experiences in Aggieland and Beyond, (with: T. Erukhimova, E. Fry) | 9/1/2012 | 8/31/2015 | 25,023 | 0 | 25,023 |
Fry, E.S. DEEP: Discover, Explore, and Enjoy Physics & Engineering via High Impact Educational Experiences in Aggieland and Beyond, (with: T. Erukhimova, E. Fry) | 9/1/2012 | 8/31/2015 | 25,023 | 0 | 25,023 |

* Subsubtotal: Texas A&M University | 100,114 | 0 | 100,114 |

* Texas Higher Education Coordinating Board

Lee, D.M. Atomic Free Radicals in Nanoclusters Immersed in Superfluid Helium | 7/1/2010 | 8/31/2013 | 25,099 | 0 | 25,099 |

* Subsubtotal: Texas Higher Education Coordinating Board | 25,099 | 0 | 25,099 |

* University of Texas

Kattawar, G.W. Biological Response to the Dynamic Spectral-Polarized Underwater Light Field | 4/1/2009 | 9/30/2014 | 179,703 | 0 | 179,703 |
Sinova, J. Southwest Academy for Nanoelectronics (SWAN) | 9/1/2006 | 3/31/2013 | 3,630 | 1,556 | 5,185 |

SEC. 7. RESEARCH ACTIVITY 801
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<td>Sinova, J.</td>
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802 2013 Physics and Astronomy Annual Report
7.2 Summary of Individual Support, 2013

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<td>8/1/2012</td>
<td>7/31/2015</td>
<td>22,620</td>
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<td>National Science Foundation</td>
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<td>9/1/2009</td>
<td>8/31/2013</td>
<td>40,231</td>
<td>17,783</td>
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<td>Fund for the Improvement of Postsecondary Education</td>
<td>Improving Research and Educational Activities in Multifunctional Nanomaterials, (with: A. Belyanin, Y. Efendiev, K. Rajagopal, A. Sokolov)</td>
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<td>Collaborative Research: Ultrashort Pulses and Mid-infrared Frequency Combs from Quantum Cascade Lasers</td>
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<td>Engineering Research Center (ERC) on Mid-Infrared Technologies for Health and Environment (MIRTHE), (with: A. Belyanin, M. Scully)</td>
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<td>(REN) PIRE: US-Japan Cooperative Research and Education on Terahertz Dynamics in Nanostructures</td>
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<td>REU Site: Astronomical Instrumentation at Texas A&amp;M University, (with: D. DePoy, J. Marshall)</td>
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804 2013 PHYSICS AND ASTRONOMY ANNUAL REPORT
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<td><strong>Eusebi, R.</strong></td>
<td>Enhancing the Discovery Reach of the CMS Detector. Upgraded Jet Energy Correction and Uncertainties as Critical Components to Advanced Analysis Techniques</td>
<td>8/1/2012</td>
<td>4/30/2013</td>
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<td><strong>Fries, R.J.</strong></td>
<td>A Topical Collaboration on Quantitative Jet and Electromagnetic Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions, (with: R. Fries, C. Ko)</td>
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SEC. 7. RESEARCH ACTIVITY 805
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| Mioduszewski, S. | | | | | | Subtotal Mioduszewski, S. | 144,286 | 62,206 | 206,492 |

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<td><strong>Subtotal Zbeairy, N.</strong></td>
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<tr>
<td></td>
<td><strong>Total: All Faculty</strong></td>
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</table>

820 2013 Physics and Astronomy Annual Report
Contents

1. Foreword from Department Head ........................................ 823
2. Departmental Statistics ................................................... 827
   2.1 Statistical Abstract ............................................... 828
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   7.2 By Faculty Member ................................................ 907

Any information reported or learned after 05/22/2014, may not be included due to report deadlines. Please forgive any errors, and continue to report them, so that we might make corrections to maintain the accuracy of our long-term reports.
1. Foreword from the Department Head

This annual report summarizes the teaching, research, and service of the Statistics faculty during 2013. In addition, this report highlights honors and awards, as well as departmental events that took place in 2013.

Honors and Awards

The faculty of the Department of Statistics were recognized with numerous honors and awards.

- Distinguished Professor, Raymond Carroll, was elected to the rank of Fellow of the American Association for the Advancement of Science. Dr. Carroll was also the namesake of a Wikipedia page.
- Professor, Jianhua Huang, was elected Fellow of the American Statistical Association. He was also elected Fellow of the Institute of Mathematical Statistics.
- Professor, Faming Liang, was elected Fellow of the Institute of Mathematical Statistics.
- Distinguished Professor, Bani Mallick, was elected to the rank of Fellow of the American Association for the Advancement of Science.
- Ursula Müller-Harknett was promoted to Professor with Tenure effective September 1, 2013.
- Dean and Professor, H. Joseph Newton, was elected to the rank of Fellow of the American Association for the Advancement of Science.
- Professor of Statistics, Simon Sheather, received a Distinguished Achievement Award in Teaching from the Association of Former Students.
- Effective May 1, 2013, Professor Mike Speed, was named Professor Emeritus of Statistics.
- Distinguished Professor, Clifford Spiegelman, became a member of the Houston Forensic Science Local Government Corporation, an organization that has replaced the Houston Police Crime Lab.
- Professor, Suojin Wang, received a Visiting Fellowship Award from the Australian National University in Mathematical Sciences Research.

New Statistics Faculty

- Effective August 1, 2013, Dr. Anirban Bhattacharya, was hired as Assistant Professor of Statistics. He received his Ph.D. from Duke University in 2012.
- Effective August 1, 2013, Dr. Matthias Katzfuss, was hired as Assistant Professor of Statistics. He joined us as a Postdoc from Universitit Heidelberg in Germany. He received his Ph.D. from Ohio State University in 2011.
- Effective August 1, 2013, Dr. James Long, was hired as Assistant Professor of Statistics. He received his Ph.D. from the University of California, Berkley in 2013.

Former Students

- Dr. Tanya Garcia, has received a Huntington’s Disease Society of America, Human Biology Fellowship. Dr. Garcia received her Ph.D in statistics in 2011 from Texas A&M University under the direction of Yanyuan Ma. She is the first statistician to receive the HDSA Fellowship and she received the best score of all applicants.
- Dr. Jerry Oglesby, was selected as the recipient of the 2013 H. O. Hartley Award. This award is given annually to a former student of the department for distinguished service to the discipline of statistics. Dr. Oglesby received his Ph.D in statistics in 1971 from Texas A&M University under the direction of Ronald R. Hocking. He is currently the Senior Director of...
Global Academic Programs and Global Certification within the Education Division of SAS Institute Inc.

**Graduate Student Recognitions**

- Robyn Ball was awarded the 2013 Philanthropic Educational Organization Scholar Award. The PEO Sisterhood is an international organization devoted to promoting educational opportunities for women. This award is merit based and awarded to approximately 80 out of 800 women throughout the USA and Canada.

- Elizabeth Jennings was selected to receive the 2013 Margaret Sheather Memorial Award in Statistics for her master’s project, "Integrated Analysis of Genomics Data". The award was established in 2010 by Simon Sheather in memory of his mother and as a tribute to her many years of tireless dedication to helping others.

- Abhra Sarkar received a Section on Bayesian Statistical Science Student Paper Award for his manuscript, "Bayesian Semiparametric Density Deconvolution in the Presence of Conditionally Heteroscedastic Measurement Errors" with Mallick, Staudenmayer, Pati and Carroll. He received money to attend the Joint Statistical Meetings in Montreal and an award certificate.

- Emily Seem received the 2013 Anant M. Kshirsagar Fellowship. This Fellowship was established through the Texas A&M Foundation in 2010 by Texas A&M former students Ersen Arseven ’74 and Luisa Sia ’74 to honor their beloved professor, Dr. Anant M. Kshirsagar.

- Qifan Song received the 2013 Parzen Graduate Research Fellowship. This fellowship award was created to recognize students who have demonstrated exemplary research, above and beyond what is expected for graduation.

- Ya Su was selected as the 2013 Connor Award recipient. This award is presented to the student whom the committee deems the most outstanding among current students who have passed both the Theory and Methods Qualifying Exams at the Ph.D level and have completed eight specific required courses.

- Ganggang Xu was selected to receive one of the International Biometric Society’s Easter North American Region (ENAR) Distinguished Student Paper Awards for the 2012 ENAR Spring Meetings in Washington D.C.

**Departmental Initiatives**

- Texas A&M’s newest graduate degree, a Master’s of Science in Analytics, was offered in fall by the Department of Statistics in partnership with Mays Business School. The Texas Higher Education Coordinating Board gave its official approval on June 6, 2013. The degree program will position students to navigate the recent explosion of "big data" in the business world. The program is unique because it is part-time, making it convenient for working professionals. Students will take classes Tuesday and Thursday evenings either at Mays Business School’s educational facility at CITYCENTRE in Houston or live and online as a camera set up in the classroom beams video to anywhere in North America.

- Texas A&M former student Roland H. Acra, recently created an endowment through the Texas A&M Foundation to establish the Roland H. Acra ’86 Master of Science in Analytics Award. Funds from the endowment will be used to provide an annual award each May for the student or students who produced the most outstanding master’s project in analytics during the previous academic year.

- The analytics program also will benefit from a significant donation from SAS Institute Inc. The donation was given to aid the new Masters in Analytics program with the purpose of funding the curriculum development and contributing to the success of meeting the growing demands
Departmental Events

▷ The department hosted its 50th Anniversary Celebration in May 2013 with a grand gala that celebrated the last 50 years of excellence. Statisticians from all over the world (as far as Nigeria) returned to Aggieland to celebrate with current faculty, staff and students in this spectacular event.

▷ The 9th Annual Staff Appreciation Dinner was held at the home of Simon Sheather on June 7, 2013.

▷ The 2013 Aggie Reunion was held at the Joint Statistical Meetings (JSM) in Montral, Quebec, Canada on August 5, 2013.

▷ The 9th Annual New Graduate Student Orientation was held on August 20, 2013 in Blocker, we welcomed 16 new students to our program.

▷ The 2013 Faculty Retreat was held on September 4, 2013 at Pebble Creek Country Club. The faculty heard presentations and participated in team-building exercises while enjoying a day away from the office.

▷ The 7th Annual Stata Corp Social was held on October 16, 2013 in an effort to continue the collaborative relationship between the Department of Statistics and Stata Corp. Stata Corp generously hosted dinner for the department which included all faculty, staff and students, along with their spouses.
2. Departmental Statistics

This section contains information, clarified by each department and gathered from the following sources:

I. Personnel

Tenure-Track Faculty
▷ Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyList_FINAL.

Non-Tenure-Track Faculty
▷ Queried from the College, Dean Database (Fall 2012, Fall 2013) FacultyListNonTTF_FINAL.

Postdoctoral Fellows
▷ Provided by the Department

Graduate Student/Undergraduate Majors
▷ Office of Institutional Studies and Planning (OISP). (Fall 2012, Fall 2013) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff
▷ Provided by the Department

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours
▷ SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2012, Fall 2013) SCH Summaries by College for [Semester] [Year].

PhD Degrees/Masters Degrees
▷ Queried from COGNOS and the College of Science Dean Database Degrees_Grad.

Undergraduate Degrees
▷ Queried from COGNOS and the College of Science Dean Database Degrees_Undergrad.

III. Research Activities

Research Publications
▷ Queried from Web of Science® and compiled from the College of Science Dean Database Publications_COUNT.

Research Presentations
▷ As reported by faculty and compiled from the College of Science Dean Database Presentations_COUNT.

Federal/State/University/Private/Industrial/International/Other Government
▷ Gathered from research proposals, research award notices, as reported by faculty, compiled from the College of Science Dean Database, Sec. 7.1 of following department annual report.
# 2.1 Statistical Abstract

## I. Personnel

### a. Tenured and Tenure-Track Faculty

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<td>Distinguished Professor</td>
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### b. Non-Tenure-Track Faculty

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### d. Graduate Majors

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### e. Undergraduate Majors

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### f. Support Staff

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## II. Instructional Activities

### a. Graduate Semester Credit Hours

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### e. Undergraduate Degrees

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## III. Research Activities

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### f. Industrial/Corporate

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### g. International

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### h. Other Govt

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**Total**

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3. Honors & Awards, 2013

By Faculty

▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2013.

By Students

▷ This section contains all honors and awards, as reported by the department, during the calendar year 2013.
## 3.1 Honors & Awards Received by Faculty, 2013

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<th>Name</th>
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<tr>
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</tr>
<tr>
<td>J. Huang</td>
<td>Fellow, Institute of Mathematical Statistics</td>
</tr>
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<td>Fellow, American Statistical Association</td>
</tr>
<tr>
<td>F. Liang</td>
<td>Fellow, Institute of Mathematical Statistics</td>
</tr>
<tr>
<td>B. Mallick</td>
<td>Fellow, American Association for the Advancement of Science</td>
</tr>
<tr>
<td>H. Newton</td>
<td>Fellow, American Association for the Advancement of Science</td>
</tr>
<tr>
<td>S. Sheather</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>S. Wang</td>
<td>Visiting Fellowship Award, Australian National University Mathematical Sciences Research</td>
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</tbody>
</table>
### 3.2 Honors & Awards Received by Students, 2013

**Graduate**

- **Anant M. Kshirsagar Endowed Fellowship**
  - Emily Seem

- **Connor Award**
  - Ya Su

- **International Biometric Society’s Easter North American Region**
  - Ganggang Xu

- **JSM SBSS Student Paper Competition Winner**
  - Abhra Sarkar

- **Margaret Sheather Memorial Award in Statistics**
  - Elizabeth Jennings

- **Parzen Graduate Research Fellowship**
  - Qifan Song

- **Philanthropic Educational Organization (PEO) Scholar Award**
  - Robyn Ball
4. Students, 2013

This section contains all degrees awarded, as reported by the department, during the calendar year 2013.
4.1 Graduate Degrees Awarded, 2013

Fall

▷ M.S.

Sarah J Beck
Advisor(s): A. Dabney

Justin Matthew Bein
Advisor(s): C. Spiegelman

Abigail Brice Green
Advisor(s): S. Sinha

Nathan L Harper
Advisor(s): A. Dabney

Shilpa Jagannathan
Advisor(s): M. Longnecker

Jinsu Kim
Advisor(s): J. Huang

Shiheun Kim
Advisor(s): M. Longnecker

Laci Elizabeth Lizarraga
Advisor(s): A. Dabney

Yonatan Negash
Advisor(s): E. Jones

Jennifer L Phan
Advisor(s): J. Huang

Mark Anthony Pitts
Advisor(s): F. Speed

Jason Eugene Poole
Advisor(s): A. Dabney

Phillip Lawrence Stolz
Advisor(s): P. Dahm

Yuen Sum Wong
Advisor(s): J. Huang

▷ Ph.D.

Kun Xu
Semiparametric Estimation and Inference with Mis-Measured, Correlated or Mixed Observations, and the Application in Ecology, Medicine, and Neurology
Advisor(s): Y. Ma

Spring

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M.S.
Angela N. Brown  Advisor(s): T. Wehrly
Amber Elizabeth Dean  Advisor(s): J. Hart
Eric Leland Frederiksen  Advisor(s): J. Huang
Jorge Abraham Hasbun  Advisor(s): A. Dabney
Steven Matthew Jackson  Advisor(s): D. Cline
Janine Marie Jorgensen  Advisor(s): R. Carroll
Nicholas Nimchuk  Advisor(s): C. Spiegelman
Lakshmi Roychowdhury  Advisor(s): S. Lahiri
Tobias Walker  Advisor(s): A. Dabney
Stephanie Soyoung Whang  Advisor(s): J. Huang
Celeste Kay Wilson  Advisor(s): M. Sherman

Ph.D.
Robyn Lynn Ball  Statistical Methods for High Dimensional Biomedical Data  Advisor(s): A. Dabney
Beverly Jane Gaucher  Factor Analysis for Skewed Data and Skew-Normal Maximum Likelihood Factor Analysis  Advisor(s): J. Hart
Subhadeep Mukhopadhyay  Nonparametric Inference for High Dimensional Data  Advisor(s): S. Lahiri
Yiyi Wang  Statistical Models for Next Generation Sequencing Data  Advisor(s): D. Dahl

Summer

M.S.
Merve Akdede  Advisor(s): M. Longnecker
Ryan Douglass Brady
Advisor(s): C. Spiegelman

Tara Marie Cope
Advisor(s): T. Wehrly

Cody Lee Cox
Advisor(s): J. Huang

Servais D Daligou
Advisor(s): B. Mallick

Ji Hong
Advisor(s): M. Pourahmadi

Younguk Lee
Advisor(s): E. Jones

Zachary James Martin
Advisor(s): E. Jones

Stephanie Ross Platt
Advisor(s): S. Sheather

Ph.D.

Hsiang-Chun Chen
Inference for Clustered Mixed Outcomes from a Multivariate Generalized Linear Mixed Model
Advisor(s): T. Wehrly

Yichen Cheng
Stochastic Approximation and Its Application in MCMC
Advisor(s): F. Liang

Xinxin Zhu
Wind Speed Forecasting for Power System Operation
Advisor(s): H. Sang
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/18/2013</td>
<td>Ian McKeague</td>
<td>Columbia University</td>
<td>Adaptive Resampling for Detecting the Presence of Significant Predictors</td>
</tr>
<tr>
<td>1/22/2013</td>
<td>Anirban Bhattacharya</td>
<td>Duke University</td>
<td>Bayesian Shrinkage</td>
</tr>
<tr>
<td>1/25/2013</td>
<td>Ani Eloyan</td>
<td>Johns Hopkins University</td>
<td>Likelihood Based Population Independent Component Analysis</td>
</tr>
<tr>
<td>1/29/2013</td>
<td>Lingzho Xue</td>
<td>Princeton University</td>
<td>Regularized Learning of High-Dimensional Sparse Graphical Models</td>
</tr>
<tr>
<td>2/5/2013</td>
<td>Pavel Krivitsky</td>
<td>Penn State University</td>
<td>Modeling Dynamic Networks in Changing Populations Based on Static Egocentrically-Sampled Data</td>
</tr>
<tr>
<td>2/8/2013</td>
<td>Matthew Reimherr</td>
<td>University of Chicago</td>
<td>Association Studies with Functional Phenotypes</td>
</tr>
<tr>
<td>2/12/2013</td>
<td>Matthias Katzfuss</td>
<td>Universität Heidelberg, Germany</td>
<td>Low-Rank Spatial and Spatio-Temporal Models for Large Datasets</td>
</tr>
<tr>
<td>2/19/2013</td>
<td>James Long</td>
<td>University of California, Berkeley</td>
<td>Classification of Sparse, Irregularly Sampled Time Series and Feature Measurement Error</td>
</tr>
<tr>
<td>2/22/2013</td>
<td>Andreas Artemiou</td>
<td>Michigan Technological University</td>
<td>Sufficient Dimension Reduction Through Inverse Regression and Machine Learning</td>
</tr>
<tr>
<td>3/1/2013</td>
<td>Michael Schweinberger</td>
<td>Penn State University</td>
<td>Second-Generation Exponential-Family Models of Networks: Scaling Up</td>
</tr>
<tr>
<td>3/8/2013</td>
<td>Chae Young Lim</td>
<td>Michigan State University</td>
<td>Clustering Cancer Mortality Curves of U.S. States Based on Change Points</td>
</tr>
<tr>
<td>3/22/2013</td>
<td>Murali Haran</td>
<td>Penn State University</td>
<td>Dimension Reduction and Alleviation of Confounding for Spatial Generalized Linear Mixed Models</td>
</tr>
<tr>
<td>3/25/2013</td>
<td>Yu Shen</td>
<td></td>
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</tr>
</tbody>
</table>
University of Texas, M.D. Anderson Cancer Center
Statistical Challenges and Promises when Sampling Bias in Present
4/5/2013  Daniel B. Rowe
Marquette University
Proper Statistical Modeling of Complex-Valued FMRI Data

4/12/2013  Zhezhen Jin
Columbia University
Variance Estimation for Regression Models

4/19/2013  Daikwon Han
Texas A&M UniversityHealth Science Center
Integrating Geographic Information Systems and Spatial Methods into Epidemio-
logic Research: Opportunities and Challenges

4/26/2013  Adrian E. Raftery
University of Washington
Bayesian Reconstruction of Past Populations for Developing and Developed Coun-
tries

8/30/2013  Ching-Kang Ing
Academia Sinica
Orthogonal Greedy Algorithm and High-Dimensional Akaike’s Information Crite-
ri

9/6/2013  Jianhua Huang
Texas A&M University
Some Examples of Regularized Matrix Decomposition

9/13/2013  Mary C. Meyer
Colorado State University
Variable and Shape Selection in the Generalized Additive

9/20/2013  Guosheng Yin
University of Hong Kong
Heterogeneous Feature Screening in Ultrahigh Dimensional Data

9/25/2013  Robert Cezeaux, Nathaniel Litton
Capital One
Working as a Statistician in Financial Services Industry and at Capital One

9/27/2013  Xin Qi
Georgia State University
Restricted Local Polynomial Fitting and Parameter Estimation in ODE and PDE

10/7/2013  Roy Parsons
Dell
Review of Dell Global Services Engineering Organization and Ph.D Internship Op-
portunities

10/11/2013  Dennis K.J. Lin
Pennsylvania State University
Dimensional Analysis and its Applications in Statistics

10/17/2013  Yanyuan Ma

838  2013 Statistics annual report
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<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
<th>Presentation Title</th>
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</thead>
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<tr>
<td>10/18/2013</td>
<td>Eric C. Chi</td>
<td>Rice University</td>
<td>Some Recent Developments and Applications of the MM Algorithm</td>
</tr>
<tr>
<td>10/25/2013</td>
<td>Chuanhua Liu</td>
<td>Purdue University</td>
<td>Exact Prior-Free Probabilistic Inference: The Inferential Model Approach</td>
</tr>
<tr>
<td>11/1/2013</td>
<td>Bing Li</td>
<td>Pennsylvania State University</td>
<td>On an Additive Semi-Graphoid Model for Statistical Networks with Application to Pathway Analysis</td>
</tr>
<tr>
<td>11/8/2013</td>
<td>Anthea Monod</td>
<td>Technion - Israel Institute of Technology</td>
<td>Estimating Thresholding Levels for Random Fields via Euler Characteristics</td>
</tr>
<tr>
<td>11/15/2013</td>
<td>Michael Daniels</td>
<td>University of Texas, Austin</td>
<td>A Bayesian Nonparametric Approach to Monotone Missing Data in Longitudinal Studies with Informative Missingness</td>
</tr>
<tr>
<td>11/20/2013</td>
<td>Henrik Schmiediche</td>
<td>Statistics, Texas A&amp;M University</td>
<td>Henrik Talks Tech: A Workshop on Computing Resources</td>
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</table>
6. Faculty*, 2013

Derya G. Akleman .................................................. Senior Lecturer
Anirban Bhattacharya ........................................... Assistant Professor
James A. Calvin .................................................. Professor
Raymond J. Carroll .............................................. Distinguished Professor
Willa W. Chen ..................................................... Professor
Daren B.H Cline ................................................... Professor
Alan R. Dabney ..................................................... Associate Professor
David B. Dahl ..................................................... Associate Professor
P. Fred Dahm ..................................................... Professor
Ruzong Fan ....................................................... Associate Professor
Jeffrey D. Hart Carroll ............................................ Senior Lecturer
Keith L. Hatfield ................................................. Lecturer
Jianhua Z. Huang ............................................... Professor
Valen E. Johnson .................................................. Professor
Edward Jones ..................................................... Executive Professor
Mikyoung Jun ..................................................... Associate Professor
Matthias Katzfuss ............................................... Assistant Professor
Elizabeth Kolodziej ............................................ Senior Lecturer
Soumendra N. Lahiri .......................................... Professor
Faming Liang ..................................................... Professor
James P. Long .................................................... Assistant Professor
Michael T. Longnecker ....................................... Professor
Yanyuan Ma ...................................................... Professor
Bani K. Mallick .................................................. Distinguished Professor
Ursula U. Mueller-Harknett .................................. Professor
H. Joseph Newton .............................................. Professor
Mohsen Pourahmadi .......................................... Professor
Huiyan Sang ..................................................... Assistant Professor
Henrik Schmiediche .......................................... Senior Lecturer
Simon J. Sheather .............................................. Professor
Michael Sherman .............................................. Professor
Samiran Sinha ................................................... Associate Professor
William B. Smith ............................................... Senior Professor
Clifford H. Spiegelman ....................................... Distinguished Professor
Suhasini Subba Rao ............................................ Associate Professor
Ellen H. Toby .................................................... Senior Lecturer
Nathan Torno ..................................................... Professor
Soqin Wang ........................................................ Lecturer
Thomas E. Wehrly ............................................... Professor
R. Webster West .................................................. Professor
Lan Zhou ........................................................... Assistant Professor
Joel Zinn .......................................................... Professor (J)

* For the Annual Report, faculty are defined as tenured, tenure-track and non-tenure track employees who were employed at any time during 2013 (01/01/2013-12/31/2013).
6.1 Professional Activities, 2013

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2013.

Subsections of professional activities are defined as follows:

Honors and Awards
▷ All professional honors and awards, both internal and external.

Service Activities
▷ All professional service and leadership roles, including: departmental, college, university, state, national and international.

Teaching
▷ Classes taught during the Spring, Summer and Fall sessions of 2013.
▷ Any missing enrollment numbers were gathered from the Student Information Management System (SIMS) at Texas A&M University.

Research Projects
▷ All research projects, funded and unfunded.
▷ Whenever possible, all research-related employees of that faculty member are listed along with the citation. Key for employees: (P)=Postdoc, (G)=Graduate Student, (U)=Undergraduate Student.
▷ Renewals are marked by “(REN)” at the beginning of their title.
▷ Unfunded grants are marked by “(UNFUNDED)” at the end of the citation.
▷ Additional information (including PIs, CoPIs, and funding) on all funded grants are listed in Section 6.

Presentations
▷ All posters, invited and contributed lectures (plenary, conferences, colloquia, seminars, etc.).
▷ Whenever reported, posters, invited and contributed lectures are noted in parentheses following the citation.
▷ Citations are in chronological order.

Publications
▷ All printed materials published during 2013.
▷ Pre-press, in-press and submitted publications were not included.
▷ Citations were formatted in APA Style and are in alphabetical order by lead author.
• SERVICE DURING 2013

  College
  ▶ Committee/Panel: Diversity Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ STAT 651. — Statistics in Research I (total enrollment: 45)
  ▶ STAT 652. — Statistics in Research II (total enrollment: 32)
  ▶ STAT 653. — Statistics In Research III (total enrollment: 33)

  Fall
  ▶ STAT 651. — Statistics in Research I (total enrollment: 63)
  ▶ STAT 652. — Statistics in Research II (total enrollment: 47)
• TEACHING ASSIGNMENTS DURING 2013
  
  Fall
  ▷ STAT 302. — Statistical Methods (total enrollment: 76)

• PRESENTATIONS DURING 2013
  
  ▷ Joint Statistical Meetings, 2013. (Invited)

*Hired 08/01/2013.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2013
  International
  ▶ Advisory Board: Oxford Centre for Collaborative Applied Mathematics (Member)
  National
  ▶ Committee/Panel: National Institute for Statistical Science, Community Relations & Development Committee (Member)
  Department
  ▶ Committee/Panel: Promotion and Tenure Committee (Member)

Resigned 06/01/2013.
• CHAIRS/PROFESSORSHIPS
  ▶ Jill and Stuart Harlin ’83 Chair in Statistics [2013]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Director, Institute for Applied Mathematics and Computational Science (IAMCS), College of Science, [2011]
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▶ Member, Interdisciplinary Faculty, Nutrition, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• AWARDS DURING 2013
  National
  ▶ Fellow, American Association for the Advancement of Science

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: Journal of the American Statistical Association (Associate Editor)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ STAT 651. — Statistics in Research I (total enrollment: 35)
  ▶ STAT 691. — Research (total enrollment: 5)
  Summer
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 691. — Research (total enrollment: 3)
  Fall
  ▶ STAT 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Measurement Error, Nutrition and Breast/Colon Cancer, National Cancer Institute
  ▶ (REN) Nutrition, Biostatistics, and Bioinformatics, National Institutes of Health
  ▶ ATD: Bayesian Data Missing Approaches for Biological Threat Detection, National Science Foundation
  Private
Efficient Methods for Genotype-Specific Distributions with Unobserved Genotypes, *Columbia University*

**International**

- Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), *King Abdullah University of Science and Technology*

**Other**

- Dried Plums Contribute to Colon Health through Microbial-Derived Mechanisms, *California Table Grape Commission*

- **PRESENTATIONS DURING 2013**
  - Conference of the International Chinese Statistical Association, Hong Kong, China, 2013. (Invited)
  - Joint Statistical Meetings, 2013. (Invited)
  - North-West University - University of Potchefstroom, North West, South Africa, 2013. (Invited)
  - University of New South Wales, Australia, 2013. (Invited)
  - University of Saskatoon, 2013. (Invited)
  - University of Technology, Sydney, Australia, 2013. (Invited)

- **PUBLICATIONS DURING 2013**
• SERVICE DURING 2013
  National
  ▶ Editorial/Board: *Journal of Computational and Graphical Statistics* (Associate Editor)
  College
  ▶ Committee/Panel: Tenure and Promotion Advisory Committee (Member)
  Department
  ▶ Committee/Panel: Recruiting Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ STAT 303. — *Statistical Methods* (total enrollment: 100)
  ▶ STAT 651. — *Statistics in Research I* (total enrollment: 55)
  Fall
  ▶ STAT 612. — *Theory of Linear Models* (total enrollment: 17)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Restriction Likelihood in Time Series: Applications to Moderate and Near Integrated
  Autoregressions, Conintegration, Panel Data and Nonlinear Time Series, *National Science
  Foundation*

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National
▷ Editorial/Board: JASA (Referee: Journals)

Department
▷ Committee/Panel: Theory Qualifying Exam Committee (Member), Tenure and Promotion Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 303. — Statistical Methods (total enrollment: 102)
▷ STAT 621. — Advanced Stochastic Processes (total enrollment: 7)
▷ STAT 630. — Overview of Mathematical Statistics (total enrollment: 39)

Fall
▷ STAT 212. — Principles of Statistics II (total enrollment: 65)
▷ STAT 601. — Statistical Analysis (total enrollment: 55)

• PUBLICATIONS DURING 2013

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2013]

• SERVICE DURING 2013
  University
  ▶ Committee/Panel: Undergraduate Academic Appeals Panel (Member)
  Department
  ▶ Committee/Panel: MS Diagnostic Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ STAT 646. — Statistical Bioinformatics (total enrollment: 18)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 691. — Research (total enrollment: 2)
  Fall
  ▶ STAT 201. — Elementary Statistical Inference (total enrollment: 113)
  ▶ STAT 645. — Applied Biostatistics and Data Analysis (total enrollment: 36)
  ▶ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Integrated Program for Reducing Bovine Respiratory Disease Complex in Beef and Dairy Cattle, National Institute of Food and Agriculture
  ▶ Epigenetics of the Aging Astrocyte: Implications for Stroke, National Institutes of Health
  ▶ (REN) UBM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation
  Private
  ▶ Effects of Estrogens on Sporadic and Inflammation Associated Colon Cancer, American Cancer Society

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Bioinformatics, [2013]

• SERVICE DURING 2013

  National
  ▷ Committee/Panel: ASA Section on Bayesian Statistical Science Student Award Selection Committee (Member)

  Department
  ▷ Committee/Panel: Bioinformatics Faculty Committee (Member), Computing Committee (Member), Publicity Committee (Member)

*On leave.*

*Resigned 06/30/2013.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Graduate Advisor, Statistics Graduate Advising Office, Statistics, [1989]

• SERVICE DURING 2013
  National
  ▷ Editorial/Board: Thesis for Department of Bioinformatics and Computational Genetics, School of Molecular & Biomedical Science, The University of Adelaide (Reviewer), Various Journals (Referee: Journals)

  University
  ▷ Committee/Panel: Chapter of Mu Sigma Rho (Member), Merit Fellowship Review Committee (Member)

  College
  ▷ Committee/Panel: Graduate Instruction Committee (Member)

  Department
  ▷ Committee/Panel: Admissions and Recruiting Committee (Chair), Awards Committee (Member), CONACYT Admissions Review Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▷ STAT 212. — Principles of Statistics II (total enrollment: 61)
  ▷ STAT 691. — Research (total enrollment: 1)

  Summer
  ▷ STAT 651. — Statistics in Research I (total enrollment: 64)
  ▷ STAT 691. — Research (total enrollment: 1)

  Fall
  ▷ STAT 212. — Principles of Statistics II (total enrollment: 76)
  ▷ STAT 691. — Research (total enrollment: 1)
RUZONG FAN
ASSOCIATE PROFESSOR
STAT-Statistical Genetics
(979) 845-3152
rfan@stat.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2013

  National
  ▷ Editorial/Board: Book Review for Chapman & HallCRC (Referee), Annals of Human Genetics, Bioinformatics, Journal of Heredity, Genetic Epidemiology (Referee: Journals)
  ▷ Committee/Panel: Steering Committee of Workshop: Next Generation Analytic Tools for Large Scale Genetic Epidemiology Studies of Complex Diseases, National Institute of Health (Member)

  Department
  ▷ Research Group: Bioinformatics (Member)

On leave.

Resigned 09/01/2013.
• SERVICE DURING 2013
  University
    ▷ Service Position: Corps of Cadets Academic Advisor F-2 (Mentor)

  Department
    ▷ Committee/Panel: Undergraduate Service Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
    ▷ STAT 303. — Statistical Methods (total enrollment: 224)

  Fall
    ▷ STAT 303. — Statistical Methods (total enrollment: 242)
• SERVICE DURING 2013

International
▷ Event: Second International Society of Nonparametric Statistics Conference (Organizer)

National
▷ Editorial/Board: Various Journal (Referee: Journals)
▷ Committee/Panel: Noether Awards Committee (Member)

University
▷ Committee/Panel: Reviewed Master of Statistics Program at the University of Texas (Member)

Department
▷ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 303. — Statistical Methods (total enrollment: 100)
▷ STAT 613. — Intermediate Theory of Statistics (total enrollment: 15)
▷ STAT 691. — Research (total enrollment: 1)

Summer
▷ STAT 691. — Research (total enrollment: 3)

Fall
▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ New Methodology for Estimating Random Effects and for Statistical Simulation Studies, National Science Foundation

• PRESENTATIONS DURING 2013


• PUBLICATIONS DURING 2013

• TEACHING ASSIGNMENTS DURING 2013

Spring
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 300)

Summer
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 92)

Fall
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 386)
• SERVICE DURING 2013

International
▷ Editorial/Board: *International Statistical Review* (Referee: Journals)

National

Department
▷ Committee/Panel: Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 616. — *Multivariate Analysis* (total enrollment: 8)
▷ STAT 627. — *Nonparametric Function Estimation* (total enrollment: 7)
▷ STAT 685. — *Directed Studies* (total enrollment: 1)
▷ STAT 691. — *Research* (total enrollment: 7)

Summer
▷ STAT 691. — *Research* (total enrollment: 4)

Fall
▷ STAT 618. — *Statistical Aspects of Machine Learning and Data Mining* (total enrollment: 8)
▷ STAT 648. — *Applied Statistics and Data Analysis* (total enrollment: 14)
▷ STAT 691. — *Research* (total enrollment: 11)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Dynamic, Data-Driven Modeling of Nanoparticle Self Assembly Processes, *Department of Defense*
▷ A New Approach of Statistical Modeling and Analysis of Massive Spatial Data Sets, *National Science Foundation*
▷ Collaborative Research New Developments for Analysis of Two-Way Structured Functional Data, *National Science Foundation*
Conference on Statistical Methods for Complex Data, National Science Foundation International

Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

- PRESENTATIONS DURING 2013
  - Biostatistics Department, Johns Hopkins Bloomberg School of Public Health, April, 2013. (Invited)
  - “2nd Workshop on Biostatistics and Bioinformatics,” Georgia State University, Atlanta, GA, May, 2013. (Invited)
  - Joint Statistical Meetings, Montreal, Canada, August, 2013. (Invited)

- PUBLICATIONS DURING 2013
• SERVICE DURING 2013

International
▷ Committee/Panel: Royal Statistical Society (Fellow)

National
▷ Editorial/Board: Bayesian Analysis (Co-Editor), Journal of the American Statistical Association (Associate Editor)
▷ Committee/Panel: American Statistical Association (Fellow), Savage Award Thesis Committee (Member)

Department
▷ Committee/Panel: Chair Search Committee (Member), Faculty Search Committee (Member), Mitchell Award Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 611. — Theory of Statistics II (total enrollment: 13)
▷ STAT 691. — Research (total enrollment: 1)

Summer
▷ STAT 691. — Research (total enrollment: 2)

Fall
▷ STAT 414. — Mathematical Statistics I (total enrollment: 21)
▷ STAT 632. — Statistical Decision Theory (total enrollment: 17)
▷ STAT 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Consistent Model Selection in the $p >> n$ Setting, National Institutes of Health

State
▷ Reducing Symptom Burden Produced by Aggressive Cancer Therapies, University of Texas MD Anderson Cancer Center

• PRESENTATIONS DURING 2013

▷ “Uniformly Most Powerful Bayesian Tests,” University of Zurich, Zurich, Switzerland, February, 2013. (Invited)
• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National
▷ Committee/Panel: American Statistical Association Conference on Statistical Practice (Member)

State
▷ Event: Big Data and Analytics (Organizer)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 656 — Applied Analytics Using SAS Enterprise Miner (total enrollment: 31)
▷ STAT 684. — Professional Internship (total enrollment: 32)

Summer
▷ STAT 684. — Professional Internship (total enrollment: 1)

Fall
▷ STAT 684. — Professional Internship (total enrollment: 52)

• PRESENTATIONS DURING 2013

▷ “Using Data Mining Competitions to Promote Student Interest in Statistics as a Career,” Jamaican Statistical Society, October, 2013. (Contributed)
• SERVICE DURING 2013

International
▷ Event: ISI, Budapest, Hungary (Organizer), World Statistics Congress (Organizer)
▷ Editorial/Board: Journal of the Korean Statistical Society (Associate Editor)

National
▷ Advisory Board: Spatial Statistics Conference (Member)
▷ Editorial/Board: STAT (Associate Editor), JASA, JMVA, Annals of Statistics, JRSS Series B (Referee: Journals), Journal of Agricultural, Biological, and Environmental Statistics Book Review (Editor)

Department
▷ Committee/Panel: Awards Committee (Member), Graduate Student Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 211. — Principles of Statistics I (total enrollment: 119)
▷ STAT 691. — Research (total enrollment: 1)

Summer
▷ STAT 642. — The Methods of Statistics II (total enrollment: 18)
▷ STAT 685. — Directed Studies (total enrollment: 1)

Fall
▷ STAT 685. — Directed Studies (total enrollment: 1)
▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ In-Depth Development and Assessment of Covariance Models for Multivariate Nonstationary Processes on a Sphere, National Science Foundation

International
▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2013
▷ 12th International Meeting on Statistical Climate, Jeju, Korea, June, 2013. (Invited)
▷ European Meeting of Statisticians, Budapest, Hungary, July, 2013. (Invited)
59th ISIS World Statistics Congress, August, 2013. (Invited)
Joint Statistical Meeting, Canada, August, 2013. (Invited)
Department of Environmental Engineering, Postech, Korea, September, 2013. (Invited)
Department of Statistics, Hankuk University of Foreign Studies, Seoul, South Korea, September, 2013. (Invited)
Department of Statistics, Seoul National University, Seoul, South Korea, September, 2013. (Invited)
Institute for Applied Mathematics, University of Heidelberg, Heidelberg, Germany, October, 2013. (Invited)
“Annual Workshop on Graphical Models,” University of Heidelberg, Heidelberg, Germany, November, 2013. (Invited)
Stat+Climate Workshop, SARMA, University of Oslo, Oslo, Norway, November, 2013. (Invited)
Institute of Mathematics, University of Zurich, Zurich, Switzerland, December, 2013. (Invited)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013
  
  National
  ▶ Event: Spatial Statistics for Big Environmental Datasets (Organizer)

• TEACHING ASSIGNMENTS DURING 2013
  
  Fall
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 78)

• PRESENTATIONS DURING 2013
  
  ▶ “How to Use Statistics to Analyze Satellite Data,” Department of Atmospheric Sciences, Texas A&M University, College Station, TX, 2013. (Invited)
  ▶ “Low-Rank Spatial and Spatio-Temporal Models for Large Datasets,” DAGStat Third Joint Statistical Meeting Deutsche Arbeitsgemeinschaft Statistik, Freiburg, Germany, 2013. (Contributed)
  ▶ “Low-Rank Spatial and Spatio-Temporal Models for Large Datasets,” Department of Mathematical & Statistical Sciences; University of Colorado Denver, Denver, CO, 2013. (Invited)
  ▶ “Low-Rank Spatial and Spatio-Temporal Models for Large Datasets,” Department of Mathematical Sciences; University of Nevada, Las Vegas, NV, 2013. (Invited)
  ▶ “Low-Rank Spatial and Spatio-Temporal Models for Large Datasets,” Department of Statistics and Actuarial Science; University of Waterloo, Waterloo, ON, 2013. (Invited)
  ▶ “Low-Rank Spatial and Spatio-Temporal Models for Large Datasets,” Department of Statistics, Texas A&M University, College Station, TX, 2013. (Invited)
  ▶ “Low-Rank Spatial and Spatio-Temporal Models for Large Datasets,” Department of Statistics, University of South Carolina, Columbia, SC, 2013. (Invited)
  ▶ “Low-Rank Spatial and Spatio-Temporal Models for Large Datasets,” Research Training Group 1653 on Spatio/Temporal Graphical Models and Applications in Image Analysis; Annweiler, Germany, 2013. (Invited)
  ▶ “Low-Rank Spatial Models for Big Global Datasets,” Joint Statistical Meetings, Montreal, Canada, 2013. (Invited)
“Low-Rank Spatial Models for Large Datasets,” Third Workshop on Bayesian Inference for Latent Gaussian Models with Applications, Reykjavk, Iceland, 2013. (Invited)

“Nonstationary Spatial Modeling of Large Global Datasets,” 29th European Meeting of Statisticians, Budapest, Hungary, 2013. (Contributed)

“Nonstationary Spatial Modeling of Large Global Datasets,” Spatial Statistics, Columbus, OH, 2013. (Contributed)


PUBLICATIONS DURING 2013

Katzfuss, M. (2013) Bayesian Nonstationary Spatial Modeling for Very Large Datasets

Hired 08/01/2013.
• **TEACHING ASSIGNMENTS DURING 2013**

**Spring**
- STAT 408. — *Introduction to Linear Models* (total enrollment: 21)
- STAT 608. — *Least Squares and Regression Analysis* (total enrollment: 59)
- STAT 656. — *Applied Analytics Using SAS Enterprise Miner* (total enrollment: 29)

**Fall**
- STAT 303. — *Statistical Methods* (total enrollment: 250)
SOUMENDRA N. LAHIRI

PROFESSOR (979) 845-3141
STAT-Resampling Methods snlahiri@stat.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  - Professor (J), Mathematics, [2010]

- SERVICE DURING 2013
  International
  - Committee/Panel: Publication Committee, International Indian Statistical Association (Chair)

- RESEARCH PROJECTS DURING 2013
  Federal
  - Long Range Dependence and Resampling Methodology for Spatial Data, *National Science Foundation*

*On leave.*
FAMING LIANG

PROFESSOR (979) 845-8885
STAT-Markov Chain Monte Carlo fliang@stat.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2013]

• SERVICE DURING 2013

  International
  ▶ Editorial/Board: *International Journal of Operations Research and Information Systems* (Member)

  National

  Department
  ▶ Committee/Panel: Bioinformatics Committee (Member), Statistical Computing Examination Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ STAT 652. — *Statistics in Research II* (total enrollment: 18)
  ▶ STAT 691. — *Research* (total enrollment: 4)

  Summer
  ▶ STAT 691. — *Research* (total enrollment: 3)

  Fall
  ▶ STAT 414. — *Mathematical Statistics I* (total enrollment: 19)
  ▶ STAT 610. — *Theory of Statistics I* (total enrollment: 41)
  ▶ STAT 691. — *Research* (total enrollment: 7)

• RESEARCH PROJECTS DURING 2013

  Federal
  ▶ Collaborative Research: Effective Probabilistic Approach Using Order Reduction and Hybrid Models - A New Paradigm for Structural Dynamic Analysis, *National Science Foundation*

  ▶ Collaborative Research: Efficient Parallel Iterative Monte Carlo Methods for Statistical Analysis of Big Data, *National Science Foundation*

  ▶ Monte Carlo Methods for Analysis of Large Spatial Data, *National Science Foundation*
Sampling from Distributions with Intractable Integrals, *National Science Foundation*

**International**
- Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), *King Abdullah University of Science and Technology*

- **PRESENTATIONS DURING 2013**
  - “Bayesian Detection of Disease-Associated Rare Variants under Posterior Consistency,” University of Texas, Southwestern Medical Center, Dallas, TX, March, 2013. (Invited)
  - “Bayesian Detection of Disease-Associated Rare Variants under Posterior Consistency,” ICSA Symposium, Washington, DC, June, 2013. (Invited)
  - “Bayesian Detection of Disease-Associated Rare Variants under Posterior Consistency,” The IAMCSKAUST Miniworkshop, Beijing Institute of Genomics, Beijing, China, July, 2013. (Invited)
  - “Bayesian Variable Selection for High Dimensional Data with Applications in Biomedical Studies,” Department of Biostatistics, University of Florida, Gainesville, FL, November, 2013. (Invited)
  - “A Bootstrap Metropolis-Hastings Algorithm for Bayesian Analysis of Big Data,” ICSA, Hong Kong, December, 2013. (Invited)

- **PUBLICATIONS DURING 2013**


JAMES P. LONG
ASSISTANT PROFESSOR (979) 845-3141
STAT-Astrostatistics, Prediction with Measurement Error jlong@stat.tamu.edu

• SERVICE DURING 2013

  National
  ▷ Editorial/Board: Astronomy and Computing (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2013

  Fall
  ▷ STAT 211. — Principles of Statistics I (total enrollment: 78)

Hired 08/01/2013.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Associate Department Head, Statistics, [2005/]

• SERVICE DURING 2013

  National
  ▶ Committee/Panel: American Statistical Association Academic Representative (Member), American Statistical Association Committee on Recruitment and Retention of Membership (Member)

  Department
  ▶ Service Position: Internship Program (Coordinator)
  ▶ Committee/Panel: Assistantship Duties Committee (Chairman), Graduate Program Committee (Chairman), Graduate Service Committee (Member), Margaret Sheather Award Committee (Chairman), Methods Examination Committee (Chairman), Parzen Research Fellowship Award Committee (Chairman), Teaching Assignments Committee (Chairman), Undergraduate Service Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

  Spring
  ▶ STAT 642. — The Methods of Statistics II (total enrollment: 68)
  ▶ STAT 681. — Seminar (total enrollment: 9)
  ▶ STAT 685. — Directed Studies (total enrollment: 29)
  ▶ STAT 691. — Research (total enrollment: 7)

  Summer
  ▶ STAT 681. — Seminar (total enrollment: 20)
  ▶ STAT 684. — Professional Internship (total enrollment: 6)
  ▶ STAT 685. — Directed Studies (total enrollment: 14)
  ▶ STAT 691. — Research (total enrollment: 5)

  Fall
  ▶ STAT 641. — The Methods of Statistics I (total enrollment: 53)
  ▶ STAT 681. — Seminar (total enrollment: 20)
  ▶ STAT 685. — Directed Studies (total enrollment: 23)
  ▶ STAT 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2013

  Federal
Application of Weather Dynamics to Predict Population Changes and Enhanced IPM Strategies for the Gulf Coast Tick, *U.S. Department of Agriculture*

**PUBLICATIONS DURING 2013**

• SERVICE DURING 2013

National
▷ Event: Measurement Error for ICSA (Organizer)
▷ Editorial/Board: *Annals of the Institute Statistical Mathematics* (Associate Editor), *JRSSB* (Associate Editor), *Stat* (Associate Editor)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 211. — *Principles of Statistics I* (total enrollment: 74)
▷ STAT 691. — *Research* (total enrollment: 1)

Fall
▷ STAT 211. — *Principles of Statistics I* (total enrollment: 119)
▷ STAT 610. — *Theory of Statistics I* (total enrollment: 19)
▷ STAT 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Semiparametric Efficient Statistical Methods for Mixture Data, *Columbia University*
▷ A New Approach to Dimension Reduction via Semiparametrics, *National Science Foundation*
▷ Space-time Statistics for Wind Power Forecasting, *National Science Foundation*

Private
▷ Efficient Methods for Genotype-Specific Distributions with Unobserved Genotypes, *Columbia University*

• PRESENTATIONS DURING 2013

▷ “A Semiparametrics Approach to Dimension Reduction,” Department Seminar, Kansas State University, Manhattan, KS, March, 2013. (Invited)
▷ “A Short Course on Semiparametrics,” Northeastern Normal University, Changchun, China, June, 2013. (Invited)
▷ “Estimating Disease Onset Distribution Functions in Mutation Carriers with Censored Mixture Data,” Renmin University, Beijing, China, July, 2013. (Invited)
▷ “Nonparametric Estimation for Censored Mixture Data with Application to the Cooperative Huntingtons Observational Research Trial,” ICORS, St Petersburg, FL, July, 2013.
Invited)
▷ “Variance Estimation in the Analysis of Microarray Data,” ISI, Hong Kong, China, August, 2013.( Invited)
▷ “A Semiparametrics Approach to Dimension Reduction,” Department Seminar, University of South Carolina, Columbia, SC, October, 2013.( Invited)
▷ “Doubly Robust and Efficient Estimators for Heteroscedastic Partially Linear Single-Index Model Allowing High-Dimensional Covariates,” ICSA International Conference, Hong Kong, China, December, 2013.( Invited)
▷ “Efficient Semiparametric Distribution Estimation in Mixed Samples,” Statistica Sinica, Taipei, Taiwan, December, 2013.( Invited)
▷ “Estimating Disease Onset Distribution Functions in Mutation Carriers with Censored Mixture Data,” National Donghwaun University, Hualien, Taiwan, December, 2013.( Invited)
▷ “Estimation, Inference and Efficiency in Dimension Reduction:,” Department Seminar, Hongkong Baptist University, Hong Kong, China, December, 2013.( Invited)
▷ “Nonparametric Estimation for Censored Mixture Data with Application to the Cooperative Huntington’s Observational Research Trial,” National Sun Yat-Sen University, Kaohsiung, Taiwan, December, 2013.( Invited)

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Director, Center for Statistical Bioinformatics, Statistics, [2010]
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▶ Director, Bayesian Bioinformatics Lab, Statistics, []

• AWARDS DURING 2013
  National
  ▶ Fellow, American Association for the Advancement of Science

• SERVICE DURING 2013
  National
  ▶ Advisory Board: Computational Statistics Series, Wiley (Member)
  ▶ Editorial/Board: Department of Energy (Review Panel), Journal of Computational and Graphical Statistics, Biostatistics, Chemometrics, SIAM/ASA Journal on Uncertainty Quantification (Associate Editor)
  ▶ Committee/Panel: SHRP2: Safety Technical Coordinating Committee (TCC), Transportation Research Board, The National Academies (Member)
  College
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member)
  Department
  ▶ Committee/Panel: Chair Search Committee (Member), Executive Committee of Institute for Applied and Computational Science (Member), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ STAT 633. — Advanced Bayesian Modeling and Computation (total enrollment: 8)
  ▶ STAT 691. — Research (total enrollment: 3)
  Fall
  ▶ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Bayesian Uncertainty Quantification in Predictions of Flows in Highly Heterogeneous Media and its Applications to the CO2 Sequestration, Department of Energy
Scalable Multilevel Uncertainty Quantification Concepts for Extreme-Scale Multiscale Problems, Department of Energy

Support of Stockpile Stewardship Program, Lawrence Livermore National

(REN) Measurement Error, Nutrition and Breast/Colon Cancer, National Cancer Institute

ATD: Bayesian Data Missing Approaches for Biological Threat Detection, National Science Foundation

State

Joint Post-Doc MDACC & Texas A&M University Support, University of Texas MD Anderson Cancer Center

International

Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

PRESENTATIONS DURING 2013

ISBA, Varanasi, 2013. (Invited)

JSM, 2013. (Invited)

PUBLICATIONS DURING 2013


• SERVICE DURING 2013

International
▷ Event: IISA Conference, Chennai, India (Organizer)
▷ Committee/Panel: IISA Conference, Chennai, India (Session Chair)

National
▷ Committee/Panel: Joint Statistical Meetings (Session Chair), National Science Foundation (Panel Member)

College
▷ Ad Hoc Committee: Statistics Department Head Search Committee (Member)

Department
▷ Event: Visits and Colloquium Talks (Host/Organizer)
▷ Committee/Panel: Faculty Recruitment Committee (Member), Graduate Student Theory Qualifying Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 620. — Statistical Large Sample Theory (total enrollment: 13)
▷ STAT 681. — Seminar (total enrollment: 18)
▷ STAT 691. — Research (total enrollment: 1)

Summer
▷ STAT 691. — Research (total enrollment: 1)

Fall
▷ STAT 614. — Probability for Statistics (total enrollment: 19)
▷ STAT 651. — Statistics in Research I (total enrollment: 76)
▷ STAT 681. — Seminar (total enrollment: 23)
▷ STAT 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2013
▷ “Complete Case Estimators for Semiparametric Regression Models,” Iowa State University, Ames, IA, April, 2013. (Invited)
• PUBLICATIONS DURING 2013


H. JOSEPH NEWTON

PROFESSOR (979) 845-8817
STAT-Computational Statistics, Time Series jnewton@stat.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▶ George P. Mitchell ’40 Chair in Statistics [2006]
  ▶ Richard H. Harrison III/External Advisory and Development Council Endowed Dean’s Chair in Science [2000]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Dean, Dean’s Office, College of Science, [2002]

• AWARDS DURING 2013
  National
  ▶ Fellow, American Association for the Advancement of Science

• SERVICE DURING 2013
  University
  ▶ Committee/Panel: Council on the Research Environment (Chair), Intellectual Property Constituent Committee (Member), Transportation Services Advisory Committee (Member)
  College
  ▶ Committee/Panel: Executive Committee (Chair)
• SERVICE DURING 2013

National

College
▷ Committee/Panel: Tenure and Promotion Advisory Committee (Member)

Department
▷ Committee/Panel: Faculty Recruiting (Chair), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 303 — Statistical Methods (total enrollment: 10)
▷ STAT 674. — Time Series Analysis II (total enrollment: 6)
▷ STAT 691. — Research (total enrollment: 1)

Summer
▷ STAT 626. — Methods in Time Series Analysis (total enrollment: 25)
▷ STAT 691. — Research (total enrollment: 1)

Fall
▷ STAT 610. — Theory of Statistics I (total enrollment: 29)
▷ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Sparse Graphical Models for Multivariate Time Series, National Science Foundation

• PRESENTATIONS DURING 2013
▷ Lubar Business School, University of Wisconsin, Milwaukee, WI, April, 2013. (Invited)
▷ “Complex Time Series Data,” Oberwolfach Workshop, Germany, September, 2013. (Invited)

• PUBLICATIONS DURING 2013

HUIYAN SANG

ASSISTANT PROFESSOR
STAT-Spatial Modeling with Massive Datasets

(979) 845-3156 huiyan@stat.tamu.edu

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: ASA/SBSS Student Paper Competition (Reviewer),*Environmental and Ecological Statistics,* *Journal of Statistical Planning and Inference,* *JASA,* *SAM,* *Technometrics,* *Journal of Geophysical Research,* *STAT,* *Spatial Statistics* (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 96)
  ▶ STAT 611. — Theory of Statistics II (total enrollment: 21)
  ▶ STAT 691. — Research (total enrollment: 1)
  Fall
  ▶ STAT 647. — Spatial Statistics (total enrollment: 10)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ A New Approach of Statistical Modeling and Analysis of Massive Spatial Data Sets, *National Science Foundation*
  International
  ▶ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), *King Abdullah University of Science and Technology*

• PRESENTATIONS DURING 2013
  ▶ The Joint Statistical Meeting, Montreal, Canada, 2013. (Contributed)
• SERVICE DURING 2013

Regional
  ▶ Committee/Panel: Brazos HPC Architecture and Oversight Committee (Member)

University
  ▶ Committee/Panel: Information Policy Committee (Member), Information Technology Advisory Committee (Member)

College
  ▶ Committee/Panel: Systems Administrators Committee (Chair)

Department
  ▶ Committee/Panel: Computing Committee (Chair)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Department Head, Statistics, [2005]

• AWARDS DURING 2013
  College
  ▶ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2013
  National
  ▶ Committee/Panel: External Review Committee for the Department of Mathematics and Statistics, University of Cypress (Member), External Review Committee for the Department of Statistics at University of Kentucky (Chair)
  College
  ▶ Committee/Panel: Executive Committee (Member)
  Department
  ▶ Service Position: Online Learning (Director)

• TEACHING ASSIGNMENTS DURING 2013
  Fall
  ▶ STAT 608. — Least Squares and Regression Analysis (total enrollment: 13)
  ▶ STAT 684. — Professional Internship (total enrollment: 13)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Lipoprotein Density Profiling for Clinical Studies, National Institutes of Health
  ▶ Texas Census Research Data Center, National Science Foundation

• PUBLICATIONS DURING 2013
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]/

• SERVICE DURING 2013
  National
  ▶ Editorial/Board: TAS (Reviewed), Journal of the American Statistical Association and American Statistician (Associate Editor)
  Department
  ▶ Committee/Panel: Awards Committee (Chair), Examinations Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ STAT 302. — Statistical Methods (total enrollment: 107)
  Fall
  ▶ STAT 407. — Principles of Sample Surveys (total enrollment: 29)
  ▶ STAT 607. — Sampling (total enrollment: 74)
  ▶ STAT 636. — Methods in Multivariate Analysis (total enrollment: 63)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ (REN) Fetal Alcohol Exposure and Neurodevelopment, National Institutes of Health

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 605. — Advanced Topics in Computational Statistics (total enrollment: 10)
▷ STAT 641. — The Methods of Statistics I (total enrollment: 39)
▷ STAT 691. — Research (total enrollment: 1)

Summer
▷ STAT 652. — Statistics in Research II (total enrollment: 23)

Fall
▷ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Innovative Approaches for Analyzing SEER Breast Cancer Data, National Cancer Institute
▷ Collaborative Research: Statistical Methods Based on Parametric and Semiparametric Hierarchical Models to Solve Problems Related to Socio-Economic-Demographic Deprivation Measures, National Science Foundation

• PRESENTATIONS DURING 2013

▷ “Department of Mathematical Sciences, Boise State University,” Conditional Logistic Regression Analysis when a Covariate is Measured with Error, Boise, ID, March, 2013.(Invited)
▷ “Semiparametric Analysis of Linear Transformation Models with Covariate Measurement Errors,” ICSA Conference, Bethesda, MD, June, 2013.(Invited)
▷ “Semiparametric Analysis of Linear Transformation Models with Covariate Measurement Errors,” Department of Biostatistics, Columbia University, New York, NY, September, 2013.(Invited)
• TEACHING ASSIGNMENTS DURING 2013

Fall

▷ STAT 652. — Statistics in Research II (total enrollment: 34)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2013
  ▶ Senior Research Scientist, Texas Transportation Institute, [2007]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2013
  National
  ▶ Service Position: ASA Representative of AAAS Section P (Representative)
  ▶ Event: AAAS Session on Forensic Science (Organizer)
  ▶ Editorial/Board: Chemometrics and Intelligent Laboratory Systems (Co-Editor)
  ▶ Committee/Panel: NISS Board of Trustees (Member), Journal of Transportation and Statistics (Member), Houston Forensic Science Local Government Corporation (Member)

  Department
  ▶ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 75)
  ▶ STAT 658. — Transportation Statistics (total enrollment: 9)
  ▶ STAT 691. — Research (total enrollment: 1)

  Summer
  ▶ STAT 691. — Research (total enrollment: 1)

  Fall
  ▶ STAT 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2013
  ▶ “Improving Forensics,” Houston Forensic Science, LGC, Houston, TX, May, 2013. (Invited)
  ▶ “Research Questions and Data Resources in Transportation Statistics,” JSM, Montreal, Canada, August, 2013. (Invited)
  ▶ “Advanced Placement, Forensic Lecture,” Bellville High School, Bellville, TX, October, 2013. (Invited)
  ▶ “JFK Anniversary Lecture,” Texas A&M University, College Station, TX, November, 2013. (Invited)

• PUBLICATIONS DURING 2013
• SERVICE DURING 2013

National

University
▷ Committee/Panel: Library Committee (Member)

College
▷ Committee/Panel: Grievance Committee (Elected Member), International Programs Committee (Member)

Department
▷ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 301. — Introduction to Biometry (total enrollment: 98)
▷ STAT 691. — Research (total enrollment: 1)

Fall
▷ STAT 301. — Introduction to Biometry (total enrollment: 100)
▷ STAT 651. — Statistics in Research I (total enrollment: 77)

• RESEARCH PROJECTS DURING 2013

Federal
▷ Fourier Methods in the Analysis of Nonstationary and Nonlinear Stochastic Processes, National Science Foundation

• PRESENTATIONS DURING 2013
▷ Research Seminar, Cambridge, United Kingdom, May, 2013. (Invited)
▷ Oberwolfach, Germany, September, 2013. (Invited)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▷ Undergraduate Advisor, Statistics Undergraduate Advising Office, Statistics, [2006]

• **SERVICE DURING 2013**
  **College**
  ▷ Committee/Panel: Faculty Advisory Council (Elected Member), Undergraduate Program Committee (Member)

  **Department**
  ▷ Service Position: STAT 302 (Coordinator)

• **TEACHING ASSIGNMENTS DURING 2013**
  **Spring**
  ▷ STAT 212. — *Principles of Statistics II* (total enrollment: 81)
  ▷ STAT 302. — *Statistical Methods* (total enrollment: 156)

  **Fall**
  ▷ STAT 302. — *Statistical Methods* (total enrollment: 254)

*Retired 12/31/2013.*
TEACHING ASSIGNMENTS DURING 2013

Spring
▷ STAT 201. — Elementary Statistical Inference (total enrollment: 90)
▷ STAT 307. — Sample Survey Techniques (total enrollment: 39)

Resigned 05/31/2013.
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2013**
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]

• **AWARDS DURING 2013**
  
  **International**
  ▶ Visiting Fellowship Award, Australian National University Mathematical Sciences Research

• **SERVICE DURING 2013**
  
  **International**
  ▶ Event: 5th IAMCS-KAUST Symposium (Organizer)
  ▶ Committee/Panel: 5th International Conference on Mathematical Aspects of Computer and Information Sciences Program Committee (Member), IAMCS (Deputy Director)

  **National**
  ▶ Editorial/Board: Grant Proposals, Tenure and Promotion Case (Reviewed), *Journal of Nonparametric Statistics* (Editor-in-Chief)

  **Department**
  ▶ Committee/Panel: Awards Committee (Member), College of Science Strategic Planning Committee (Member), Graduate Student Qualifying Exams Committee (Member), Graduate Student Recruiting (Member), Parzen Research Fellowship Award Selection Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2013**
  
  **Spring**
  ▶ STAT 691 — *Research* (total enrollment: 1)

  **Fall**
  ▶ STAT 685 — *Directed Studies* (total enrollment: 1)
  ▶ STAT 691. — *Research* (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2013**
  
  **Private**

• **PRESENTATIONS DURING 2013**

894 2013 Statistics annual report
5th IAMCS-KAUST Spring Symposium, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, 2013. (Invited)
Australian National University, Australia, 2013. (Invited)
Graybill Conference, Fort Collins, CO, 2013. (Invited)
Monash University, Melbourne, Australia, 2013. (Invited)
Second International Biostatistics Workshop of Jilin University, China, 2013. (Invited)
Soochow University, Taipei, China, 2013. (Invited)
University of California, Los Angeles, CA, 2013. (Invited)
University of Melbourne, Australia, 2013. (Invited)
University of Wollongong, Australia, 2013. (Invited)
Wenzhou University, China, 2013. (Invited)

- PUBLICATIONS DURING 2013
• SERVICE DURING 2013
  
  University
  ▶ Committee/Panel: Kappa Chapter of Phi Beta Kappa (Treasurer), SEC Validity of Academic Credentials Review Committee (Member), University Athletic Council (Chair), University Disciplinary Appeals Panel (Member)

  College
  ▶ Committee/Panel: Research Advisory Committee (Member)

  Department
  ▶ Committee/Panel: Department Head Search Committee (Member), Examination Committee - Master’s Qualifying Exam (Member), Faculty and Staff Interaction Team (Member), Graduate Program Committee (Member), Graduate Service Committee (Member), Parzen Prize Committee (Chair), Promotion and Tenure Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2013
  
  Spring
  ▶ STAT 659. — Applied Categorical Data Analysis (total enrollment: 36)
  ▶ STAT 691. — Research (total enrollment: 1)

  Summer
  ▶ STAT 630. — Overview of Mathematical Statistics (total enrollment: 21)
  ▶ STAT 659. — Applied Categorical Data Analysis (total enrollment: 49)
  ▶ STAT 691. — Research (total enrollment: 3)

  Fall
  ▶ STAT 630. — Overview of Mathematical Statistics (total enrollment: 80)
R. WEBSTER WEST

PROFESSOR
STAT-Computational, Graphical Statistics
west@stat.tamu.edu

• SERVICE DURING 2013

National
➤ Committee/Panel: American Statistical Association (Chair elect)

State
➤ Committee/Panel: SETCASA (President)

University
➤ Event: 2011 COTS (Organizer)

Department
➤ Service Position: STAT 211 (Coordinator)
➤ Committee/Panel: Awards Committee (Member)

• RESEARCH PROJECTS DURING 2013

Federal
➤ Collaborative Research: INCIST Improving National Acceptance of Computing Intensive Statistical Techniques, National Science Foundation

On leave.

SEC. 6.1 PROFESSIONAL ACTIVITIES 897
LAN ZHOU

ASSISTANT PROFESSOR
STAT-Functional Data Analysis

(979) 845-1233
lzhu@stat.tamu.edu

• SERVICE DURING 2013
  International
  ▶ Editorial/Board: Canadian Journal of Statistics (Referee: Journals)
  National

• TEACHING ASSIGNMENTS DURING 2013
  Spring
  ▶ STAT 302. — Statistical Methods (total enrollment: 240)
  Fall
  ▶ STAT 302. — Statistical Methods (total enrollment: 245)

• RESEARCH PROJECTS DURING 2013
  Federal
  ▶ Statistical Methods for Complex Functional Data, National Science Foundation

• PRESENTATIONS DURING 2013
  ▶ “Workshop on Statistical Machine Learning and Biosciences, CAS Key Laboratory of Genome Sciences and Information,” Beijing Institute of Genomics, Chinese Academy of Sciences, Beijing, China, July, 2013. (Invited)
7. Research Activity, 2013

This section contains information on all funded research activity for the calendar year 2013. Information was initially reported by faculty and verified whenever possible through the granting agency. Because of calculations and rounding there is a small margin of error.

Information reported by faculty:
▶ Title
▶ Granting Agency
▶ PIs, Co-PIs, and co-workers (internal/external)
▶ Total Funding
▶ Indirect Costs
▶ Start & End Dates

Calendar year calculations:
▶ Total - Indirect = Direct
▶ # Days Total Grant = End Date - Start Date
▶ Daily Grant Award = Total Funding Reported / # Days Total Grant
▶ Grant Award for 2013 = # Days 2013 × Daily Grant Award
### 7.1 Summary of Research Support, 2013

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
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<tr>
<td><strong>Federal Agencies</strong></td>
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<td><em>Department of Defense</em></td>
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<td>Huang, J.Z.</td>
<td>Dynamic, Data-Driven Modeling of Nanoparticle Self Assembly Processes</td>
<td>1/1/2013</td>
<td>12/31/2015</td>
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<td>Scalable Multilevel Uncertainty Quantification Concepts for Extreme-scale Multiscale Problems, (with: Y. Efendiev, B. Mallick)</td>
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2013 Statistics annual report
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**International Agencies**

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SEC. 7. RESEARCH ACTIVITY 903
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* Subtotal: King Abdullah University of Science and Technology 492,881 0 492,881

** Subtotal: International Agencies 492,881 0 492,881

Other Government

- California Table Grape Commission

904 2013 Statistics Annual Report
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* Subtotal: California Table Grape Commission 1,407 0 1,407

* Subtotal: Other Government 1,407 0 1,407

Private/Non-Profit Agencies

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* Subtotal: American Cancer Society 179,500 0 179,500

**Columbia University**

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* Subtotal: Columbia University 325,948 0 325,948

**Robert Wood Johnson Foundation**

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* Subtotal: Robert Wood Johnson Foundation 47,445 5,706 53,151

* Subtotal: Private/Non-Profit Agencies 552,893 5,706 558,599

State Agencies

**University of Texas MD Anderson Cancer Center**

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<td>(REN) Measurement Error, Nutrition and Breast/Colon Cancer, (with: R. Carroll, B. Mallick)</td>
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SEC. 7. RESEARCH ACTIVITY 907
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908

2013 Statistics annual report
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<th>7/1/2012</th>
<th>6/30/2015</th>
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**Subtotal Jun, M.**


**Subtotal Lahiri, S.K.**

SEC. 7.  RESEARCH ACTIVITY  909
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- **Mallick, B.K.**

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