Annual Report, 2010

THE COLLEGE OF SCIENCE
TEXAS A&M UNIVERSITY

College Station, Texas
## Contents

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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 nearly $66 million in sponsored research projects that create new knowledge and drive economies around the world. Those awards only continue to increase, paced in 2010 by several large grants, including three significant at a university level - an $18 million National Institutes of Health Program of Excellence in Nanotechnology (Karen Wooley, chemistry); a $3.5 million National Science Foundation ADVANCE Center (Sherry Yennello, chemistry); and an $8 million NSF award to the Hobby Eberly Telescope Dark Energy Experiment (Darren DePoy, physics and astronomy).

Our graduate programs continue to gain ground in both quality and national prestige, as evidenced by the most recent annual survey released in 2010 by "U.S. News & World Report:" chemistry (T-19th overall, 8th public); mathematics (T-40th overall, 22nd public); physics (T-40th overall, 20th public); and statistics (T-12th overall, 3rd public). The National Research Council followed suit in the fall, listing mathematics (25th overall, 14th public) and statistics (10th overall) among the country’s best.

Our individual teaching, research, and service highlights in 2010 were many and magnified. To name but a representative few in teaching, chemist Wendy Keeney-Kennicutt was named a Piper Professor; astronomer Kevin Krisciunas was one of five U.S. professors honored with the Distinguished New Faculty Award; and two undergraduates, physics/math major Tyler Behm and biology major Abbee Mohan, were named Barry M. Goldwater Scholars.

In research two faculty were cited for top discoveries of 2010 (chemist Marvin Rowe, radiocarbon dating, "Archaeology” magazine; biologist Adam Jones, pipefish reproduction, "Discover” magazine). Other prestigious individual honors included physicist Rupak Mahapatra’s Department of Energy Early Career Research Award; mathematician Yalchin Efendiev’s Humboldt Foundation Fraunhofer-Bessel Research Award; chemist Paul Cremer’s Edith and Peter O’Donnell Award from The Academy of Medicine, Engineering and Science of Texas (TAMEST); and physicist Marlan Scully’s Sigma Xi Distinguished Scientist Award.

In service Chemistry and Physics and Astronomy again combined outreach forces to help host a campus-wide satellite event for the inaugural USA Science & Engineering Festival. In individual arenas, astronomer Nick Suntzeff was selected as Texas A&M’s inaugural Jefferson Science Fellow by the U.S. State Department and also named to three-year term as a vice president of the American Astronomical Association. Chemist John Gladysz earned selection as the first editor-in-chief of a new journal, "Organometallics,” while Educational Outreach and Women’s Programs Director Nancy Magnussen was honored for a decade of dynamic Science Olympiad service with the event’s Heart of Gold Award.

On a campus achievement front, five faculty (Donald Darensbourg, Marcetta Darensbourg, Ronald DeVore, Edward Fry, Frank Raushel) were promoted to distinguished professor, Texas A&M’s highest academic rank for faculty. For the fifth consecutive year, a college staff member (in this case, two: Biology’s James Hardin and Camilla Sturdivant) received the President’s Meritorious Service Award, the university’s top recognition for staff excellence. In addition, two associate deans
were honored for their exemplary service to students and faculty, respectively: Tim Scott, Robert M. Gates Inspiration Award; Sherry Yennello, Women’s Faculty Network Mentor of the Year Award.

In 2010 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 2006, Fall 2007, Fall 2008, Fall 2009, Fall 2010) *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 2006, Fall 2007, Fall 2008, Fall 2009, Fall 2010) *Enrollment Profile, Headcount by Major by Level, Fall for [Year].*

**Teaching**

▷ **SCH: Undergraduate and Graduate** - Office of Institutional Studies and Planning (OISP). (Spring 2006 - Fall 2010) *SCH Summaries by College for [Semester] [Year].*

▷ **FTE: 2006-2010** - Office of Institutional Studies and Planning (OISP). (Fall 2006, Fall 2007, Fall 2008, Fall 2009, Fall 2010) *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

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### Undergraduate Majors (Fall)

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### Graduate Majors (Fall)

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### SCH: Graduate

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### WSCH (Weighted Semester Credit Hours)

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<td>2008</td>
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Annual Report, 2010

THE DEPARTMENT OF BIOLOGY
TEXAS A&M UNIVERSITY

College Station, Texas
## Contents

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1. Foreword from the Department Head

The number of undergraduates enrolled in courses offered by the Department of Biology increased from 10,706 in 2009 to 10,881 in 2010. Similarly, the number of undergraduate majors enrolled in Biology increased from 1623 in 2009 to 1627 in 2010, so that the Department of Biology continues to have 70% of the undergraduate majors in the College of Science. A natural curiosity about how living organisms work drives both majors and non-majors to Biology courses. But the ever increasing number of postgraduate positions available in the biosciences, biotechnology and medicine is also a powerful attractant to Biology as a major as is the excellence of the program offered by the Department, which provides a thorough understanding of biological principles essential for success in these fields. Virtually all 46 tenure-track and 11 non-tenure-track faculty members are fully active in the undergraduate teaching program, and they reward the interest of both majors and non-majors with a broad and rigorous educational experience. Three hundred two Biology majors graduated in 2010. More than 30 were offered membership in Phi Beta Kappa honoring their academic excellence. The extent of the Department’s undergraduate teaching program, the involvement of the Department’s faculty members in the program, and the success of the Department’s students are all documented in the following pages.

The Department’s tenure-track faculty members maintain active research programs funded by a variety of agencies including the federal government and the state of Texas. The faculty published a total of 101 research articles in 2010, and five faculty members received special citations for their excellence in research. In 2010 as in 2009 there were more than 100 graduate students in Departmental research programs seeking either a PhD or MS degree. These students not only take advanced courses relevant to their field of research and learn how to independently conduct research aimed at creating knowledge, but also serve as Teaching Assistants for courses the Department offers to the undergraduates. These courses could not be successful without the dedicated effort of TA’s. About 15% of the undergraduate majors engage in a research project in the laboratory of a faculty member for one or more semesters. They are mentored in this effort by graduate students as well as by the faculty. The research of many of these undergraduates and all PhD students is published in top tier professional journals, and thus it has a significant impact on the field of biological science. The following pages document the sorts of research programs conducted in the Department of Biology as well as the success of the graduate and undergraduate students in them.

The Department of Biology’s faculty continues to provide extraordinary service to the university and beyond. One of its members was in 2010 elected Speaker for the Faculty Senate and began serving as the university Ombuds Officer, while another faculty member chaired the Council of Principal Investigators. Fully 27 senior faculty members served on a total of 70 university committees, while some also served on federal research funding panels. An accounting of faculty service is evident in the following pages.
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 of Science Dean Database (Fall 2009) FacultyList_FINAL, Queried from the College of Science Dean Database (Fall 2010) FacultyList_FINAL.

Non-Tenure-Track Faculty

▷ Queried from the College of Science Dean Database (Fall 2009) FINAL_nonTTF, Queried from the College of Science Dean Database (Fall 2010) FINAL_nonTTF2.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2009, Fall 2010) 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 2010) 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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<tr>
<td>Assistant Professor</td>
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<tr>
<td>Associate Professor</td>
<td>14</td>
<td>12</td>
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<tr>
<td>Distinguished Professor</td>
<td>3</td>
<td>2</td>
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<tr>
<td><strong>b. Non-Tenure-Track Faculty</strong></td>
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<tr>
<td>Visiting Professor</td>
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<tr>
<td>Visiting Assistant Professor</td>
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<tr>
<td>Visiting Associate Professor</td>
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<tr>
<td>Lecturer</td>
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<td>6</td>
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<tr>
<td>Senior Lecturer</td>
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<td>4</td>
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<tr>
<td><strong>c. Postdoctoral Fellows</strong></td>
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<td></td>
<td>13</td>
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<td><strong>d. Graduate Majors</strong></td>
<td>106</td>
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<tr>
<td><strong>e. Undergraduate Majors</strong></td>
<td>1,623</td>
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<td><strong>f. Support Staff</strong></td>
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## II. Instructional Activities

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<td><strong>b. Undergraduate Semester Credit Hours</strong></td>
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<td><strong>c. PhD Degrees</strong></td>
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<tr>
<td><strong>d. Masters Degrees</strong></td>
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<td><strong>e. Undergraduate Degrees</strong></td>
<td>281</td>
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## III. Research Activities

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<th>Category</th>
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<td><strong>b. Research Presentations</strong></td>
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<td><strong>c. Federal</strong></td>
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<td><strong>g. Industrial/Corporate</strong></td>
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<td><strong>h. International</strong></td>
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<td><strong>i. Other Govt</strong></td>
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<td><strong>Total</strong></td>
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3. Honors & Awards, 2010

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2010.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2010.
### 3.1 Honors & Awards Received by Faculty, 2010

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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<tbody>
<tr>
<td>D. Bell-Pedersen</td>
<td>Distinguished Lecturer, Texas A&amp;M University</td>
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<td></td>
<td>Ethel Ashworth-Tsutsui Memorial Award, Texas A&amp;M University</td>
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<tr>
<td>M. Benedik</td>
<td>American Society for Microbiology International Professorship for Africa, American Society</td>
</tr>
<tr>
<td>T. Hall</td>
<td>Jo Ann Treat Research Excellence Award, Texas A&amp;M Research Foundation</td>
</tr>
<tr>
<td>A. Holzenburg</td>
<td>Ambassador Scientist, Alexander von Humboldt Foundation</td>
</tr>
<tr>
<td></td>
<td>Fellow, Royal Microscopical Society</td>
</tr>
<tr>
<td>R. Moyes</td>
<td>Student Led Award - Teaching Excellence, Texas A&amp;M University</td>
</tr>
<tr>
<td>M. Wicksten</td>
<td>Certificate of Commendation from the Census of Marine Life, Participant in the Eastern Pacific Seamounts and Arctic Biodiversity Programs</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2010

Graduate

▷ American Society of Plant Biology Travel Grant  
   Carol B. Johnson

Undergraduate

▷ Texas A&M University Bio GSA Travel Grant  
   Clay M. Small

▷ Texas A&M University Graduate Student Council Travel Award  
   Clay M. Small

▷ Barry M. Goldwater Scholarship  
   Ashwathi Monhan

▷ Distinguished Student Award  
   Annika Butler  
   Brendan Morris

▷ H.R. Lewis Scholarship  
   Jasson Thomas Abraham

▷ National Science Foundation Doctoral Dissertation Improvement Grant Student/Postdoc Research Conference, Best Oral Presentation Lawrence Dillon Award  
   Kim Paczolt

▷ Phi Beta Kappa  
   Mahammad Arian  
   James Berg  
   Connor J. Biskamp  
   Curran D. Caffrey  
   Stacey M. Caraway  
   Lauren Carter  
   Bryan W. Clevenger  
   Crystal M. Cockrell  
   Paul Fickey  
   Meagan E. Finke  
   George Gold  
   Meredith R. Groves  
   Christopher Hollenbeck  
   Matthew A. Jeffreys  
   Katrina Jencks  
   Kyle A. Kaltwaser  
   Lacie D. Kilsby  
   Yicheng Lin  
   Matthew Martin  
   Zena Matlock
Rachel McCreary
Britnee E. McCutchin
Brendan O. Morris
Lauren M. Needham
Jessica A. Page
Alexander T. Rozanski
Caitlin Stanton
Danielle Stifter
Douglas F. Taylor
Lauren Tilotta
Katherine C. Westbrook

▷ Poster Competition 1st Place
Butler Annika

▷ Poster Competition 2nd Place
Grady Stephanie

▷ Poster Competition 3rd Place
Finch Katelyn

Undergraduate

▷ Phi Beta Kappa
John M. Camp
4. Students, 2010

This section contains all degrees awarded, as reported by the department, during the calendar year 2010.
4.1 Graduate Degrees Awarded, 2010

Fall

▶ M.S.
Silverius Osafomwan Enobakhare
Advisor(s): M. Manson
Leah Nicole Towers
The Mystery of the Chaetognatha: A Molecular Phylogenetic Approach Using Pelagic Chaetognath Species on Pelican Island, Galveston, TX
Advisor(s): M. Benedik

▶ Ph.D.
Christine Patrice Schwartz
Neurobiology of Bat Vocal Behavior
Advisor(s): M. Smotherman
Jedediah Tim Tressler
The Basal Ganglia as a Structure of Vocal Sensory-motor Integration and Modulation of Vocal Plasticity in Mammals: Behavioral and Experimental Evidence From Tadarida Brasiliensis
Advisor(s): M. Smotherman

Spring

▶ M.S.
Chace A. Craig
Advisor(s): M. Zoran

Summer

▶ Ph.D.
Lisa Lynn Ellis
Fitting it all Together: How Courtship- and Mating- Responsive Genes Affect Drosophila Melanogaster Male Behavior
Advisor(s): G. Carney
Rodrigo Andres Mella Herrera
Heterocyst Morphogenesis and Gene Expression in Anabaena Sp. Pcc 7120
Advisor(s): M. Benedik
Elly Mae Sweet
Inner Ear Sensory Epithelia Development and Regulation in Zebrafish
Advisor(s): B. Riley
4.2 Undergraduate Degrees Awarded, 2010

Fall

▷ B.A.

Maria Elizabeth Dixon
Devin Scott Flores
Glenda Linares
Benjamin Moises Martinez
Natalie Ann Rohan
Amir Reza Safi-i
Christine Frances Williams
Linda J Zang

▷ B.S.

Pydi Maha Swetha Akella
Kathryn Margaret Allbright
Crystal Leigh Ames
Adnan Bashir
Elizabeth Rush Biasatti
Suzanne Lynn Billington
Christopher Ryan Bridges
Adam Slade Brooks
Brittney Richelle Bussell
Cameron Allen Carter
Elizabeth Anne Chambers
Jeremy Gerard Cobb
Tyler Matthew Coffey
Madeline Grace Cosgrove
Justin Anderson Crouch
Travis Ryan Dalton
Rushi Dave
Christopher Michael Dealing
Kelsey Brooke Dunlap
Karen Thuy Duong
Elizabeth Ann Dyer
Kellye Michelle Fagan
Benjamin Andrew Falck
Aaron Jordan Fernandez
Jared Allan Fuller
Stacey Marie Godbeer
Armando Manuel Gonzalez
Ricki Michelle Gunter
Blane Austin Hartley
Andrew Marcus Hawrylak
Thomas Preston Hill
Muhammad Owais Iqbal
Theresa Marie James
Heather Christine Jones
Taylor Campbell Kauffman
Amanda Mary Amini
Keegan Devon Bradley
Michelle Renee Brigaitis
Christopher Robert Burton
Paige Marie Castelino
Joshua Ryan Devera
John Keeland Gentle
Bryan Christopher Kennedy
Pablo Francisco Martinez
Emily Lillian Mcfadin
Christine Thuy-Trang Nguyen
Michael Andrew Quezada
Alexander Thomas Rozanski
Perla Dennis Simental
Eric Ryan Slimp
Ian Levi Stines
Cassandra Nicole Thomas
Kirsten Alyssa Walquist
Myra Pearl Wong

Joseph Boehm Ahrens
Ashley Marie Albers
Christopher Pete Alvarado
Ellawyn Jean Baker
Sabrina Morgan Balloun
Brittni Ashton Beeson
Jared Michael Bench
Nolan B. Bentley
John Michael Betik
Connor Jordan Biskamp
Zachary Tyler Brady
Jennifer Elaine Bray
Allyson Elizabeth Burgess
Collin Patrick Burns
Laura Jean Burtonperry
Annika Dawn Butler
Courtney Sage Caffey
Monica Leigh Canchola
Stacey Michelle Carawan
Lauren Rebecca Caronna
Jessica R. Carr
Analise Christine Castellanos
Jason Brooks Cave
Varunjot Singh Chatha
Daniel Luis Chen
Johnson Cheng
Jenna Lauren Christopher
Bryan Wade Clevenger

SEC. 4.2 UNDERGRADUATE DEGREES
Heather Alana Clingan
Crystal Marie Cockrell
Crystal Michelle Coker
Andrianna Gene Cole
Robert Jeffrey Collins
Stephanie Brooks Cox
Brittany Renee Curtis
Thanh Tran Dang
Michael Bryan Davis
Colin Patrick Dejean
Elissa Blanton Dodd
Justin Reid Doty
Christie Lee Dyer
Chelsea Jo Elliott
Walter William Elrafie
William David Faram
Katelyn Elizabeth Finch
Meagan Elizabeth Finke
Stephen Robert Ford
Briana Diann French
Elaine Noelle Friedrichs
Marianne E. Fusselman
Aleyda Patricia Galán
Mikael Renee Garces
Alicia Marie Garrison
Arturo Gerardo Garza-Gongora
Kathryn Ann Gates
Kristin Ashlee Golla
Ricardo David Gonzalez Morones
Angela Maria Gracia
Stephanie Theresa Grady
Maranda Michel Gray
Meredith Rebekah Groves
Justin Reece Harms
Genevieve Marie Hartman
Maas Hendrikse
Sharidon Ruth Henley
Nicole Beatrice Hoathian
Blaire Elizabeth Hyde
Faiz Ahmed Javed
Matthew Aaron Jeffreys
Amanda Lee Jennings
Kavir Mahendra Jiva
Roy Wesley Jones
Sitara Hannah Joseph
Hersh V. Joshi
Stephen Gerard Kallus
Kyle Allen Kaltwasser
Lacie Dyan Kilsby
Lauren Ann Klein
Binny Kothari Kothari
Matthew Stephen Kriger
Justin Charles Kurtz
Young Jee Kwon
Stephen Christopher Lagutchik
Melanie Elizabeth Laine
Daniel Zoosub Lee
Shannon Elizabeth Leeth
Yicheng Lin
Yi-ting Lin
Vanessa Anne Loftis-Peavy
Timothy Parker Long
Sarah Elizabeth Lopez
Natalie Jeanine Machala
Sofia Cohinta Madinaveitia
Tucker Charles Mccord
Hali Joan Mccurry
Brittnee Ellen Mccutchin
Alyssa Stacy Nichole Mcknight
Rachel Marie Mckown
Gregory Michael Mcraith
Dillon Grey Mezzacappa
James Turner Midkiff
Rustin Gray Mikeska
Brittany Shantel Miles
James Bradley Miller
Sara Jane Mitcham
Brendan Oliver Morris
Rachel Lee Munsch
Andrew Frank Navetta
Lauren Marie Needham
Shelley Elizabeth Nemec
Emily Michelle Newman
Agnes Bich-ngoc Nguyen
Kim Mai Nguyen
William Michael O’Gorman
Karen Chioma Ounyirioha
Neal Scott Owen
Jessica Ariel Page
Victoria Lynn Pate
Atish Ketan Patel
Vikash Hasmukh Patel
Nishil Dilip Patel
Maluv H. Patel
Justin Howard Patten
Jessica Elizabeth Petty

SEC. 4.2
UNDERGRADUATE DEGREES
Kelly Trang Pham
Philip Anderson Pippin
Michelle Marie Quintanilla
Sonia Ray
John Graham Reed
Laura Ann Richards
Brittany Diane Ridgway
Rachel Kay Risinger
Jill Marie Robinson
Glorian Mari Roman-Cruz
Sarah Jean Sanford
Lynette Krystal Sepulveda
Sherene Esther Sharath
Serge Alexander Shkuro
David Alejandro Silva
Kristin Anna Silvey
Elana Rachelle Simmons
Cienna Paige Smith
John Earl Kinzie Smith
Sadie Elizabeth Snyer
Stanley Lloyd Staples
Matthew Defla Strawn
Matthew Ryan Strickler
Timothy James Tidwell
Trevor Wade Tumlinson
Brittany Glynaye Turner
Kennedy Kenneth Tyer
Wes Morgan Vanicek
Joshua Bennett Vaughn
Jenny Mae P. Villanueva
Asita Jenani Vinayagalingam
Timothy Wayne Virene
Jane Wang
Dominique Dianca Washington
Tyler James Welch
Daniel Chandler West
Katherine Cherie Westbrook
Sarah Jane Whinery
Dustin Thad Whitaker
Benjamin James White
Brian Paul Whitfield
Ryan Lee Whitmer
Bethanie Brent Williams
Shannon Laine Williams
Chester Chen Wu
Nasser Khaled Yaghi
Shih-jye Yei
Ker Shun Young
<table>
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<th>Name</th>
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<tbody>
<tr>
<td>Christopher Oliver Prompuntagorn</td>
<td>B.A.</td>
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<td>Namrata Singh</td>
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<td>Rachel Elizabeth Teator</td>
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<td>Jason Keith Applewhite</td>
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<td>Amanda Colleen Hamilton</td>
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<tr>
<td>Hussain Hassnain</td>
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<td>Loni Marie Littlepage</td>
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<td>Jamie Lynne Morris</td>
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<td>Sanjayan Cuhendran Nadaraja</td>
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<td>William Albert Payne</td>
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<td>Richard Stranahan Ruiz</td>
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<td>Toan T Tran</td>
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<td>Katharine Tess Whiteman</td>
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<td>Sara Michelle Wingate</td>
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<td>David Wong</td>
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<td>Simon Yanas</td>
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<td>Sharon Zhang</td>
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## Colloquium and Seminar Speakers, 2010

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<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Topic</th>
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<tr>
<td>1/19/2010</td>
<td>Lisa Campbell</td>
<td>Texas A&amp;M University</td>
<td>Phytoplankton Ecology from a New Perspective: Automated Imaging Flow Cytometer</td>
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<td>1/20/2010</td>
<td>Natividad Ruiz</td>
<td>Princeton University</td>
<td>Understanding Envelope Biogenesis in Escherichia Coli</td>
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<td>1/26/2010</td>
<td>Joel Levine</td>
<td>University of Toronto</td>
<td>Genetic Basis of Social Behavior in Drosophila</td>
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<tr>
<td>1/28/2010</td>
<td>David Somers</td>
<td>Ohio State University</td>
<td>Post-Translational Regulation of the Plant Circadian Clock</td>
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<tr>
<td>2/2/2010</td>
<td>Frances Van Dolah</td>
<td>Center for Coastal Environmental Health and Biomolecular Research</td>
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<tr>
<td>2/9/2010</td>
<td>Swaine Chen</td>
<td>Washington University School of Medicine</td>
<td>Type 1 Pili has Dual in Vivo Functions: Validation of Selection Analysis</td>
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<td>2/16/2010</td>
<td>Andy Groves</td>
<td>Baylor College of Medicine</td>
<td>Development and Regeneration of the Ear: The Beginning and the End</td>
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<td>2/18/2010</td>
<td>Jason DeBruyne</td>
<td>University of Pennsylvania</td>
<td>Making and Breaking Mammalian Circadian Clock Components</td>
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<td>2/23/2010</td>
<td>Paul Shaw</td>
<td>Washington University</td>
<td>Sleeping Together: Using Social Interactions to Understand the Role of Sleep in Plasticity</td>
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<tr>
<td>3/2/2010</td>
<td>Daoguo Zhou</td>
<td>Purdue University</td>
<td>Bacterial E3 Ubiquitin Ligases</td>
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<tr>
<td>3/9/2010</td>
<td>Gurol Suel</td>
<td>University of Texas Southwestern Medical Center at Dallas</td>
<td>Dissecting the Functional Importance of Gene Circuit Architecture</td>
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<tr>
<td>3/23/2010</td>
<td>Chris Kaiser</td>
<td>Massachusetts Institute of Technology</td>
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Redox Reactions in the ER and How They are Controlled

3/30/2010  Paul Fuchs  
*Johns Hopkins University*
Synaptic Physiology in the Mammalian Cochlea

4/6/2010  Aaron Mitchell  
*Carnegie Mellon University*
Candida Albicans Biofilms and Device-Associated Infection

4/13/2010  Carol Deutsch  
*University of Pennsylvania*
Kv Channels and the Ribosome: Tunnel Vision

4/27/2010  Tzung-Fu Hsieh
Regulation of Plant Gene Imprinting by Active DNA Demethylation

5/5/2010  Rick Aldrich  
*University of Texas, Austin*
Voltage and Calcium Activated Potassium Channels: Mechanisms of Molecular Coincidence Detectors

9/14/2010  Mark Zoran  
*Texas A&M University*
Neural Plasticity in Diverse Biological Contexts

9/21/2010  David Greenstein  
*University of Minnesota*
Signaling for Sex in C. elegans

9/28/2010  Keith Maggert  
*Texas A&M University*
The Nucleolus as Governing Body: Genome Structure and Gene Regulation

10/5/2010  Tom Stidham  
*Texas A&M University*
The Evolution of Modern Virds and Their Responses to Climate Change

10/12/2010  Scott Filler  
*University of California, Los Angeles*
Invasion of Normally Non-Phagocytic Host Cells by Candida Albicans

10/26/2010  Ry Young  
*Texas A&M University*
Phage Lysis: Do We Finally Have the Hole Story?

11/2/2010  Alvin Yeh  
*Texas A&M University*
An Approach to Digitizing Vertebrate Embryogenesis

11/9/2010  Jim Grau  
*Texas A&M University*
Learning Within the Spinal Cord: Underlying Mechanisms and Implications for Recovery after Injury
11/16/2010  Jeremy Draghi  
*University of Pennsylvania*  
Some Possible Evolutionary Consequences of Epistasis

11/23/2010  Deborah Bell-Pedersen  
*Texas A&M University*  
Using Neurospora To Determine How Organisms Tell Time

11/30/2010  Bruce Klein  
*University of Wisconsin*
6. Faculty, 2010

Rodolfo Aramayo ............................................ Associate Professor
Karl J. Aufderheide ........................................... Associate Professor
David E. Baumgardner .................................... Lecturer
Laura Beaster-Jones .......................................... Senior Lecturer
Deborah Bell-Pedersen ....................................... Professor
Michael J. Benedik ........................................... Professor
Kristen M. Bolt .............................................. Lecturer
Lisa Campbell .................................................. Professor (J)
Ginger E. Carney ............................................ Associate Professor
William B. Cohn ............................................. Lecturer
Charles D. Criscione ......................................... Assistant Professor
Sumana Datta .................................................. Associate Professor (J)
Barbara Doughty-Kemp .................................... Research Professor
David J. Earnest ................................................ Professor (J)
James W. Erickson ........................................... Associate Professor
Rene Garcia ..................................................... Associate Professor
Richard Gomer ................................................. Professor
Ira F. Greenbaum ............................................. Professor
Lawrence R. Griffing .......................................... Associate Professor
Timothy C. Hall ................................................ Distinguished Professor
Paul E. Hardin .................................................... Professor (J)
Mark L. Harlow ............................................... Assistant Professor
Andreas K. Holzenburg ..................................... Professor
Carol B. Johnson ............................................... Senior Lecturer
Adam G. Jones ............................................... Associate Professor
Walter M. Kemp .............................................. Professor
Arne C. Lekven ............................................... Associate Professor
Xiaorong Lin .................................................... Assistant Professor
Thierry Lints .................................................... Assistant Professor
Robyn Lints ..................................................... Assistant Professor
Steve Lockless ............................................... Assistant Professor
Duncan S. MacKenzie ........................................ Associate Professor
Keith A. Maggert .............................................. Assistant Professor
James R. Manhart ............................................ Associate Professor
Michael D. Manson .......................................... Professor
Thomas D. McKnight ....................................... Professor
U.J. McManus ................................................ Professor
Louis Morgan .................................................. Lecturer
Rita B. Moyes ................................................ Instructional Assistant Professor
Comer O. Patterson ......................................... Professor
Alan E. Pepper ............................................... Associate Professor
Brian D. Perkins ............................................ Associate Professor
Darrell Pilling ................................................ Research Assistant Professor
Hongmin Qin .................................................. Assistant Professor
Bruce B. Riley .................................................. Professor
Gil G. Rosenthal ............................................ Associate Professor
Kathryn J. Ryan .............................................. Assistant Professor
Matthew S. Sachs ................................................. Professor
Deborah A. Siegele ......................................... Associate Professor
James L. Smith ........................................... Assistant Professor
Michael Smotherman .................................. Associate Professor
Joseph Sorg .................................................... Assistant Professor
Thomas A. Stidham ...................................... Assistant Professor
Max Summers ................................................. Professor (J)
Andrew Tag ..................................................... Lecturer
Lathrop Taylor ............................................ Lecturer
Terry L. Thomas ........................................... Professor
Wayne K. Versaw ........................................ Associate Professor
Wei Wan ........................................................ Senior Lecturer
Mary K. Wicksten ......................................... Professor
Hugh D. Wilson ............................................. Professor
Leslie K. Winemiller ...................................... Senior Lecturer
Thomas K. Wood .......................................... Professor (J)
Ryland Young ................................................. Professor (J)
Wangjie Yu .................................................... Research Assistant Professor
Mark J. Zoran .................................................. Associate Professor

*For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2010 (01/01/2010-12/31/2010).
6.1 Professional Activities, 2010

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2010.

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 2010.
▷ 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 2010.
▷ 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 2010
▷ Member, Interdisciplinary Faculty, Biotechnology, [2006]
▷ Member, Interdisciplinary Faculty, Genetics, [2006]

SERVICE DURING 2010
International
▷ Editorial/Board: Biology and Fungal Biology, Israel Science Foundation, The Israel Academy of Sciences and Humanities (Reviewer), *International Journal of Biological Sciences* (Editor), *The International Journal of Biological Sciences* (Referee: Journals)

National

University
▷ Research Group: Laboratory for Genome Bioinformatics (Director)
▷ Committee/Panel: Export Control Task Force Committee (Member)

Department
▷ Committee/Panel: Information Technology Committee (Member)

Interdisciplinary/Intercollegiate
▷ Research Group: Chromosome Biology Interest Group (Member), Intercollegiate Program in Genetics (Member), Program for the Biology of Filamentous Fungi (Member)
▷ Committee/Panel: Graduate Faculty of the Health Science Center (Member)

TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 681. — Seminar (total enrollment: 9)
▷ BIOL 691. — Research (total enrollment: 2)
▷ GENE 691. — Research (total enrollment: 1)
▷ LBAR 485. — Directed Studies (total enrollment: 7)
▷ MICR 691. — Research (total enrollment: 1)

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

- BICH 450. — **Genomics** (total enrollment: 1)
- BIOL 450. — **Introduction to Genomics** (total enrollment: 13)
- BIOL 489. — **Special Topics in** (total enrollment: 7)
- BIOL 650. — **Genomics** (total enrollment: 5)
- BIOL 681. — **Seminar** (total enrollment: 4)
- BIOL 685. — **Directed Studies** (total enrollment: 3)
- BIOL 691. — **Research** (total enrollment: 3)
- GENE 691. — **Research** (total enrollment: 1)
- MICR 685. — **Directed Studies** (total enrollment: 1)
- MICR 691. — **Research** (total enrollment: 1)

- **RESEARCH PROJECTS DURING 2010**

  **Federal**
  - (REN) Genetic and Molecular Study of Meiotic Trans-sensing and Meiotic Silencing, *National Institutes of Health*, coworkers: D. Whan Lee (P), A. Lugena (G), R. Millimaki (G), V. Suescun (G), A. Corder (U), S. Gajjar (U), D. Garzon (U), M. McSwain (U)

  **State**
  - Laboratory for Genome Bioinformatics, *Texas A&M University*, coworkers: T. Hall (P), J. Hu (P), J. Vollmert (U), R. Weckiewicz (U)

- **PUBLICATIONS DURING 2010**
• SERVICE DURING 2010

National
▷ Professional Affiliation: Advanced Placement Biology Exam Test (Contributor), ETS Advanced Placement Exam Grading (Table Leader), Graduate Record Exam Test Development Pool (Contributor), Graduate Record Exam Test Development Pool (Reviewer)
▷ Editorial/Board: Journal of Cosmology (Review Panel)

University
▷ Event: Faculty Teaching Academy Series of Workshops and Discussions (Participant)
▷ Advisory Board: University 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
▷ Event: Grading Workshops, Critical Thinking Assessment Test Program (Participant)
▷ Committee/Panel: Sterling Evans Library Science Specialist (Liaison)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 112. — Introductory Biology II (total enrollment: 212)
▷ BIOL 291. — Research (total enrollment: 1)
▷ BIOL 413. — Cell Biology (total enrollment: 38)
▷ BIOL 491. — Research (total enrollment: 2)

Summer
▷ BIOL 112. — Introductory Biology II (total enrollment: 94)
▷ BIOL 491. — Research (total enrollment: 2)

Fall
▷ BIOL 213. — Molecular Cell Biology (total enrollment: 84)
▷ BIOL 491. — Research (total enrollment: 2)
• SERVICE DURING 2010
  National
  ▷ Editorial/Board: *Zootaxa* (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ BIOL 357. — *Ecology* (total enrollment: 116)
  Summer
  ▷ BIOL 485. — *Directed Studies* (total enrollment: 14)
  Fall
  ▷ BIOL 357. — *Ecology* (total enrollment: 95)
  ▷ BIOL 481. — *Seminar in Biology* (total enrollment: 12)
  ▷ BIOL 491. — *Research* (total enrollment: 2)
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 111. — Introductory Biology I (total enrollment: 261)
▷ BIOL 344. — Embryology (total enrollment: 30)

Fall
▷ BIOL 111. — Introductory Biology I (total enrollment: 302)
▷ BIOL 414. — Developmental Biology (total enrollment: 40)
DEBORAH BELL-PEDERSEN

PROFESSOR (979) 847-9237
BIOL-Circadian Clocks, Microbiology dpedersen@mail.bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Genetics, [1998]

• AWARDS DURING 2010
  University
  ▶ Distinguished Lecturer, Texas A&M University
  ▶ Ethel Ashworth-Tsutsui Memorial Award, Texas A&M University

• SERVICE DURING 2010
  International
  ▶ Event: 9th Mycological Congress IMC9 (Co-Organizer)
  National
  ▶ Event: 2010 MBI Workshop on Circadian Clocks in Plants and Fungi (Co-Organizer), Clocks Journal Club (Participant)
  ▶ Advisory Board: Fungal Photobiology, Fungal Genetics and Biology (Editor), *Eukaryotic Cell* (Editorial Board), *Fungal Genetics and Biology* (Associate Editor)
  ▶ Editorial/Board: National Institutes of Health, Nebraska EPSCoR (Review: Proposals), *Molecular Microbiology, Microbiology, Eukaryotic Cell, Molecular Biosystems, Genes and Development, Cell* (Referee: Journals)
  ▶ Committee/Panel: NIH Cellular Signaling and Regulatory Systems Study Section (Panel Member), Society for Research on Biological Clocks Program Committee (Chair)
  Regional
  ▶ Event: High School Student Taylor Wilson in Science Fair Project (Assisted), PBoFF Seminars (Organizer)
  University
  ▶ Service Position: Entries for Texas A&M UniversityPEER Program (Judge)
  ▶ Committee/Panel: Eminent Speaker Series Committee (Member)
  College
  ▶ Committee/Panel: Faculty Advisory Council (Representative-at-Large)
  Department
  ▶ Service Position: BIOL 489 Fungal Functional Genomics (Lecturer), Graduate Student Association (Faculty Advisor)
  ▶ Event: CBI Workshop (Participant), Genetics and Biology Graduate Student Recruiting (Participant), Second Biology Engineering Interface (Organizer)
  ▶ Committee/Panel: Awards Committee (Member), Chemistry: Biology Interface Training Program (Member), Executive Committee (Member), Executive Committee Texas A&M
University Chemical Biology Training Grant Program (Member), Faculty Search Committee (Member)

**Interdisciplinary/Intercollegiate**

- Research Group: Center for Research on Biological Clocks (Executive Member)
- Committee/Panel: UBM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences (Member)

- **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**
  - BIOL 491. — Research (total enrollment: 2)
  - BIOL 601. — Biological Clocks (total enrollment: 5)
  - BIOL 691. — Research (total enrollment: 2)
  - GENE 691. — Research (total enrollment: 1)
  - MICR 691. — Research (total enrollment: 3)

  **Summer**
  - BIOL 491. — Research (total enrollment: 1)
  - BIOL 691. — Research (total enrollment: 4)
  - GENE 691. — Research (total enrollment: 1)
  - MICR 691. — Research (total enrollment: 1)

  **Fall**
  - BIOL 481. — Seminar in Biology (total enrollment: 8)
  - BIOL 491. — Research (total enrollment: 3)
  - BIOL 691. — Research (total enrollment: 1)
  - GENE 691. — Research (total enrollment: 1)
  - MICR 691. — Research (total enrollment: 3)

- **RESEARCH PROJECTS DURING 2010**

  **Federal**
  - (REN) Coordination of Circadian Physiology of Diverse Species, *National Institutes of Health*, coworkers: R. dePaula (P), S. Li (P), X. Liu (P), I. Nsa (G)
  - (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*
  - URM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, *National Science Foundation*
• PRESENTATIONS DURING 2010
  ▶ “How Fungi keep Time: Circadian Oscillators and Rhythmic Outputs,” Biology, Department, University of Kentucky, Lexington, KY, 2010. (Invited)
  ▶ “How Fungi keep Time: Circadian Oscillators and Rhythmic Outputs,” Math Biology Interface Workshop, Ohio State University, Columbus, OH, 2010. (Invited)
  ▶ “How Organisms Tell Time,” Sigma Xi, College Station, TX, 2010. (Invited)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]
  ▷ Graduate Advisor, Biology Graduate Advising Office, Biology, [2006]

• AWARDS DURING 2010
  International
  ▷ American Society for Microbiology International Professorship for Africa, American Society

• SERVICE DURING 2010
  National
  ▷ Advisory Board: Bioengineered Bug, Microbiology and Biochemical Technoloty (Member)
  ▷ Editorial/Board: Marsden Fund, National Resource Council (Review: Proposals), Bio-
  engineered Bugs, Journal of Industrial Microbiology and Biotechnology, Journal of Bio-
  science and Bioengineering, Applied and Environmental Microbiolgy, Brooker Genetics
  (Referee: Journals)

  University
  ▷ Service Position: Dean Search Committee, Texas A&M UniversityLibraries (Member),
  Program Review Team. Texas A&M UniversityPress (Member)
  ▷ Committee/Panel: Academic Appeals Panel (Member), CAFRT (Committee on Academic
  Freedom, Responsibility and Tenure) (Member), Faculty Senate (Faculty Senator - 11),
  Faculty Senate (Speaker-elect), Faculty Senate Executive Committee (Member), Faculty
  Senate: The Bylaws Committee (Member), Faculty Senate: The Research Committee
  (Member), Grievance Committee (Chair)

  College
  ▷ Committee/Panel: Graduate Instruction Committee (Member), International Programs
  Committee (Member)

  Department
  ▷ Committee/Panel: Executive Committee (Member), Microbiology Faculty Search (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ BIOL 406. — Bacterial Genetics (total enrollment: 23)
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 606. — Microbial Genetics (total enrollment: 5)
  ▷ BIOL 681. — Seminar (total enrollment: 4)
- BIOL 691. — Research (total enrollment: 6)
- GENE 406. — Bacterial Genetics (total enrollment: 10)
- MICR 691. — Research (total enrollment: 5)

**Summer**
- BIOL 491. — Research (total enrollment: 1)
- BIOL 685. — Directed Studies (total enrollment: 1)
- BIOL 691. — Research (total enrollment: 2)
- MICR 691. — Research (total enrollment: 4)

**Fall**
- BIOL 681. — Seminar (total enrollment: 3)
- BIOL 689. — Special Topics in (total enrollment: 18)
- BIOL 691. — Research (total enrollment: 1)
- MICR 691. — Research (total enrollment: 2)

**RESEARCH PROJECTS DURING 2010**

- Private
  - (REN) Engineered Improved Micobial Nitrilases, The Robert A. Welch Foundation, coworkers: M. Abou Nader (P), A. Rodriquez (U)

**PRESENTATIONS DURING 2010**
- Department of Biology, Indiana University-Purdue University Indianapolis, Indianapolis, IN, 2010.( Individual)
- Department of Microbiology, University of Lagos, Nigeria, 2010.( Individual)

**PUBLICATIONS DURING 2010**
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 112. — Introductory Biology II (total enrollment: 433)

Fall
▷ BIOL 112. — Introductory Biology II (total enrollment: 195)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2010]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2007]

• SERVICE DURING 2010

  National
  ▶ Editorial/Board: National Science Foundation (Ad hoc Reviewer), Insect Biochem Mol Biol (Referee: Journals)

  Regional
  ▶ Event: Pebble Creek Elementary School Kids Klub Career Day (Speaker)

  University
  ▶ Committee/Panel: Council on Climate and Diversity (Member), Dean of Faculties Mentoring Program Oversight Committee (Member), Dean of Faculties Tenure and Promotion Panel Discussion, New Faculty Orientation (Panel Member), Phi Beta Kappa Members-in-Course Committee (Member), Phi Beta Kappa PhD Selection Committee (Member), Women’s Faculty Network (President), Women’s Faculty Network Steering Committee (Member), Women’s Faculty Network Luncheon Committee (Member), Women’s Faculty Network Mentoring Committee (Member)

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

  Department
  ▶ Event: Chemistry Open House (Participant)
  ▶ Committee/Panel: Graduate Review and Admissions Committee (Co-Chair)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Faculty of Neuroscience Admissions Committee (Member), Faculty of Neuroscience Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ BIOL 401. — Critical Writing in Biology (total enrollment: 95)
  ▶ BIOL 491. — Research (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 3)

  Summer
  ▶ BIOL 401. — Critical Writing in Biology (total enrollment: 13)
  ▶ BIOL 491. — Research (total enrollment: 4)
Fall

- BIOL 401. — Critical Writing in Biology (total enrollment: 96)
- BIOL 491. — Research (total enrollment: 4)
- BIOL 681. — Seminar (total enrollment: 4)
- BIOL 685. — Directed Studies (total enrollment: 1)
- BIOL 691. — Research (total enrollment: 1)
- BIOL 698. — Special Topics Behavior, Genes and Evolution (total enrollment: 12)

- RESEARCH PROJECTS DURING 2010

State

- Identifying the Neural Circuits Controlling a Complex Behavior, Texas Higher Education Coordinating Board, coworkers: L. Ellis (G), S. Saleem (G), C. Schwedes (G), R. Adams (U), S. Grady (U), K. Guillory (U), H. Han (U), N. Rohan (U), T. Saley (U)

- PUBLICATIONS DURING 2010

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 336)

Summer
▷ BIOL 111. — Introductory Biology I (total enrollment: 88)
▷ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 5)

Fall
▷ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 407)
▷ BIOL 485. — Directed Studies (total enrollment: 1)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

International
▷ Editorial/Board: *Infection, Genetics and Evolution, International Journal for Parasitology, Parasitology* (Referee: Journals)

National
▷ Committee/Panel: American Society of Parasitologists Nominating Committee (Elected Member), American Society of Parasitologists Priorities and Planning Committee (Member)

Department
▷ Committee/Panel: Graduate Recruiting and Admissions Committee (Elected Member)

Interdisciplinary/Intercollegiate
▷ Research Group: Ecology and Evolutionary Biology (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 291. — Research (total enrollment: 1)
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 689. — Special Topics in (total enrollment: 8)
▷ BIOL 691. — Research (total enrollment: 1)

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

Fall
▷ BIOL 214. — *Genes, Ecology and Evolution* (total enrollment: 78)
▷ BIOL 489. — Special Topics in (total enrollment: 3)
▷ BIOL 685. — Directed Studies (total enrollment: 1)
▷ BIOL 689. — Special Topics in (total enrollment: 2)
▷ BIOL 691. — Research (total enrollment: 1)
▷ WFSC 489. — Special Topics in (total enrollment: 6)
▷ WFSC 689. — Special Topics in (total enrollment: 2)
• PRESENTATIONS DURING 2010

• PUBLICATIONS DURING 2010
JAMES W. ERICKSON

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

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2010
  
  International
  ▶ Editorial/Board: Israel Binational Science Foundation (Review: Proposals)

  National
  ▶ Editorial/Board: NIDDK, NIH (External Review Committee), Genetics, Proc Natl Academy Sciences, Fly, Science, Gene (Referee: Journals)

  Regional
  ▶ Service Position: Super Techno Science Night at Southwood Valley Elementary School (Participant)

  University
  ▶ Committee/Panel: Committee for Academic Freedom, Responsibility and Tenure (Member), Institutional Biosafety Committee (Member)

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

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 101)
  ▶ BIOL 691. — Research (total enrollment: 3)

  Summer
  ▶ BIOL 691. — Research (total enrollment: 3)

  Fall
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 50)
  ▶ BIOL 601. — Biological Clocks (total enrollment: 3)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ⊲ Assistant Professor (J), Molecular and Cellular Medicine, [2008]
  ⊲ Member, Interdisciplinary Faculty, Genetics, [2003]
  ⊲ Member, Interdisciplinary Faculty, Neuroscience, [2003]

• SERVICE DURING 2010

  National
  ⊲ Event: The Biology of the C. elegans Male Meeting (Organizer)
  ⊲ Editorial/Board: Developmental Biology, Frontiers in Zoology, J. Neuroscience (Referee: Journals)

  Department
  ⊲ Committee/Panel: Annual Review Committee (Member), Awards Committee (Member), Executive Committee (Member), Graduate Programs Committee (Chair), Interface Diversity Committee (Member)

  Interdisciplinary/Intercollegiate
  ⊲ Committee/Panel: Executive Committee for Genetics Program (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ⊲ BIOL 615 — Signaling Behavior & Development (total enrollment: 7)
  ⊲ BIOL 691 — Research (total enrollment: 4)

  Summer
  ⊲ BIOL 691 — Research (total enrollment: 3)

  Fall
  ⊲ BIOL 491 — Research (total enrollment: 1)
  ⊲ BIOL 691 — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

  Private
  ⊲ Environmental and Genetic Regulation of Motivated Behavior, Howard Hughes Medical Institute, coworkers: P. Correa (G), X. Gou (G), D. Gualberto (G), C. Jee (G), B. LeBoeuf (G), L. Zhang (G)

• PRESENTATIONS DURING 2010
  ⊲ NIH Workshop for Postdocs, Bethesda, MD, March, 2010. (Invited)
  ⊲ Biology of the Male International Meeting, Madison, WI, June, 2010. (Individual)
Scott and White, Temple, TX, September, 2010. (Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

International
▷ Editorial/Board: Irish Health Research Board (Review: Proposals)
▷ Committee/Panel: Global Fibrosis Foundation Medical Advisory Council (Member), International Journal of Cell Biology, Journal of Biomedicine and Biotechnology, Advances in Molecular Imaging (Editorial Board)

National
▷ Ad Hoc Committee: NIH P01 Review HLB 1 Workgroup 023, Inflammatory Cells and Lung Injury (Member)
▷ Advisory Board: Promedior (Co-Founder), Promedior (Member), Trellis Bioscience, Promedior (Member)

State
▷ Committee/Panel: Rice IACUC (Chair)

University
▷ Event: ILSB Minisymposium Series (Organizer), Science, BL3 / BL2 Task Force Survey (Coordinator)
▷ Committee/Panel: Texas A&M UniversityChemistry Biology Interface Training Grant Assessment Committee (Chair)

Department
▷ Committee/Panel: Awards Committee (Member), Executive Committee (Member), Seminar Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

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

Fall
▷ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ An Autocrine Repressor of Cell Proliferation, *Department of Health and Human Services*, coworkers: S. Herlihy (U), K. Kendrick (U), J. Phillips (U)

▷ Regulating Fibrocyte Differentiation in Fibrosis, *National Institutes of Health*, coworkers: D. Pilling (P), N. Cox (G)

**PRESENTATIONS DURING 2010**

▷ “Dictyostelium Research,” Texas A&M UniversityBiology, College Station, TX, April, 2010. (Individual)

▷ “RasG and Galpha1 are Required for Chalone Function in Dictyostelium,” International Dictyostelium Meeting, Cardiff, United Kingdom, August, 2010. (Individual)

▷ “A Possible Therapy for Toxin-Induced Fibrosis,” Texas A&M Toxicology Program, College Station, TX, September, 2010. (Individual)

▷ “The Gomer Lab,” Texas A&M UniversityILSB, College Station, TX, November, 2010. (Individual)

**PUBLICATIONS DURING 2010**


_Hired 01/16/2010._
**IRA F. GREENBAUM**  
PROFESSOR  
BIOL-Evolutionary Biology  
(979) 845-7791  
ira@mail.bio.tamu.edu

- **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  - Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]
  - Member, Interdisciplinary Faculty, Genetics, [2006]

- **SERVICE DURING 2010**
  - **National**
  - **University**
    - Committee/Panel: Whos Who at Texas A&M University Selection Committee (Member)
  - **Department**
    - Committee/Panel: Lower Division Instruction (Director), Lower Division Instruction Advisory Committee (Chair)
  - **Spring**
    - BIOL 466. — *Principles of Evolution* (total enrollment: 34)
  - **Fall**
    - BIOL 318. — *Chordate Anatomy* (total enrollment: 47)
    - BIOL 697. — *Methods in Teaching Biology Laboratory* (total enrollment: 38)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▸ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

• SERVICE DURING 2010
  National
  ▸ Editorial/Board: National Science Foundation, (Review: Proposals), Plant Physiology, Plant Cell, Traffic, Plant Journal (Referee: Journals)
  ▸ Committee/Panel: Education Committee, American Society of Plant Biologists (Member), NSF Cell Biology Panel (Panel), Steering Committee, Planting Science Program for K-16 Education Outreach, Botanical Society of America and American Society of Plant Biologists (Member)
  University
  ▸ Committee/Panel: Explorations (Undergraduate Research Journal) Board and Steering Committee (Member)
  College
  ▸ Committee/Panel: Technology-Mediated Instruction Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▸ BIOL 291. — Research (total enrollment: 2)
  ▸ BIOL 430. — Biological Imaging (total enrollment: 42)
  ▸ BIOL 491. — Research (total enrollment: 6)
  Summer
  ▸ BIOL 491. — Research (total enrollment: 5)
  Fall
  ▸ BIOL 291. — Research (total enrollment: 2)
  ▸ BIOL 423. — Cell Biology Laboratory (total enrollment: 24)
  ▸ BIOL 491. — Research (total enrollment: 12)

• PRESENTATIONS DURING 2010
  ▸ “Networking in the Endoplasmic Reticulum,” University of California, San Diego, CA, January, 2010.( Invited)
  ▸ “Networking inside the Cell,” Texas A&M College of Science and College of Engineering, STEM Workshop, College Station, TX, January, 2010.( Invited)
• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ⊳ Director, Rice Biotechnology Laboratory (part of IDMB), Biology, [2007]
  ⊳ Director, Institute of Developmental and Molecular Biology (IDMB), Biology, [2007]
  ⊳ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ⊳ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ⊳ Member, Interdisciplinary Faculty, Genetics, [2006]
  ⊳ Director, Gene Technologies Laboratory (part of IDMB), Biology, [1998]

• AWARDS DURING 2010
  University
  ⊳ Jo Ann Treat Research Excellence Award, Texas A&M Research Foundation

• SERVICE DURING 2010
  International
  ⊳ Editorial/Board: Chinese Univ.Hong Kong (Reviewer)
  National
  ⊳ Editorial/Board: National Science Foundation (Review: Proposals), MS for Journals, Nature Genetics, New Phytol., JexpBot, Plant Cell Reports (Referee: Journals)
  University
  ⊳ Committee/Panel: Council of Principal Investigators Committee (Member), Distinguished Professors Executive Committee (Member), Presidential Search Committee (Member)
  College
  ⊳ Committee/Panel: Distinguished Professors Executive Committee (Member)
  Department
  ⊳ Committee/Panel: Awards Committee (Chair), Faculty Annual Review Committee (Member), Plant Care Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Summer
  ⊳ BIOL 491. — Research (total enrollment: 1)
  Fall
  ⊳ BIOL 101. — Botany (total enrollment: 98)

• RESEARCH PROJECTS DURING 2010
  Federal
Gene Networks and Chromatin Regulation of Phaseolin Transcription, National Science Foundation, coworkers: K. Cone (Staff)

- PUBLICATIONS DURING 2010
• CHAIRS/PROFESSORSHIPS
  ▷ John W. Lyons ’59 Endowed Chair in Biology [2005]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Director, Center for Biological Clocks Research, Biology, [2006]

• SERVICE DURING 2010

International
  ▷ Committee/Panel: Society for Research on Biological Rhythms Executive Committee (Member)

National

University
  ▷ Committee/Panel: Distinguished Professor Promotion Review Committee (Member), Materials Characterization Facility Advisory Committee (Member)

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

• TEACHING ASSIGNMENTS DURING 2010

Spring
  ▷ BIOL 681. — Seminar (total enrollment: 7)
  ▷ BIOL 691. — Research (total enrollment: 2)

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

Fall
  ▷ BIOL 213. — Molecular Cell Biology (total enrollment: 64)
  ▷ BIOL 681. — Seminar (total enrollment: 7)
  ▷ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
(REN) Regulation of Circadian Transcription, National Institutes of Health, coworkers: G. Mahesh (P), W. Yu (P), P. Agrawal (G), P. Kim (Staff)

Regulation of Circadian Transcription, National Institutes of Health, coworkers: G. Mahesh (P), W. Yu (P), P. Agrawal (G), P. Kim (Staff)

• PRESENTATIONS DURING 2010
  ▶ “Regulation of Chemosensory Physiology and Behavior by the Drosophila Circadian Clock,” Forest University, Winston-Salem, NC, January, 2010. (Invited)
  ▶ “Regulation of Chemosensory Physiology and Behavior by the Drosophila Circadian Clock,” University of Virginia, Charlottesville, VA, April, 2010. (Invited)
  ▶ “Post-translational Regulation of the Drosophila Circadian Clock,” University of Michigan, Ann Arbor, MI, November, 2010. (Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

  College
  ▷ Committee/Panel: Information Technology Committee (Member)

  Department
  ▷ Committee/Panel: Biology Computer Facilities (Member), Graduate Recruiting and Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▷ BIOL 434. — Regulatory and Behavioral Neuroscience (total enrollment: 58)
  ▷ BIOL 491. — Research (total enrollment: 3)

  Fall
  ▷ BIOL 491. — Research (total enrollment: 3)
  ▷ BIOL 689. — Special Topics in (total enrollment: 9)

• PRESENTATIONS DURING 2010
  ▷ Biophysics, San Francisco, CA, February, 2010.( Individual)
  ▷ “In Locomotion Control of Cockroaches through Neural Stimulation,” DARPA MEMS Meeting, San Francisco, CA, July, 2010.(Poster Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Texas A&M University System Health Science Center, [2005]
  ▶ Director, Materials Characterization Facility, Biology, [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]

• AWARDS DURING 2010
  International
  ▶ Ambassador Scientist, Alexander von Humboldt Foundation
  ▶ Fellow, Royal Microscopical Society

• SERVICE DURING 2010
  International
  ▶ Advisory Board: Subcellular Biochemistry (Member)
  ▶ Editorial/Board: "Micron", International Research and Review Journal for Microscopy (Member), Biotechnology and Biological Sciences Research Council (Review: Proposals), Micron (Referee: Journals)
  ▶ Committee/Panel: Berlin-Brandenburg Community of Humboldtians (Member)
  National
  ▶ Editorial/Board: Journal of Biological Chemistry, Microscopy & Microanalysis, Journal of Microscopy, The Plant Journal (Referee: Journals), The Journal of Biological Chemistry (Member)
  ▶ Committee/Panel: Education Committee of the Microscopy Society of America (Member), Microscopy & Microanalysis 2010 Organizing Committee (Member), Microscopy & Microanalysis 2010 Vendor Tutorials (Chair)
  State
  ▶ Professional Affiliation: Texas Chapter of the Alexander von Humboldt Association of America (Member)
  University
  ▶ Committee/Panel: ILSB Users Coordination Committee (Member), RGS Leadership Group (Member), SAXS User Committee (Member), Sustainability and Environmental Management Committee (Member), University Research Council (Ad hoc Member), Vice President for Research Faculty Advisory Committee (Member)
  Department
  ▶ Committee/Panel: ORP Evaluation Committee (Member)
Interdisciplinary/Intercollegiate
▷ Committee/Panel: Materials Science and Engineering Admission Committee (Member), MIC Electron Microscopy Advisory Committee (Member), MIC Light Microscopy Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BICH 691. — Research (total enrollment: 1)
▷ BIOL 604. — Fundamental SEM/ESEM (total enrollment: 13)
▷ BIOL 685. — Directed Studies (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 1)

Summer
▷ BICH 691. — Research (total enrollment: 1)
▷ BIOL 603. — Advanced TEM (total enrollment: 12)
▷ BIOL 691. — Research (total enrollment: 1)

Fall
▷ BICH 691 — Research (total enrollment: 1)
▷ BIOL 602. — Transmission Electron Microscopy (total enrollment: 12)
▷ BIOL 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2010
▷ RGS Division, Texas A&M University, College Station, TX, February, 2010. (Invited)
▷ Department of Physiology and Biophysics, University of Arkansas for Medical Sciences, Little Rock, AR, May, 2010. (Invited)
▷ Department of Physics, University of Arkansas, Fayetteville, AR, September, 2010. (Invited)
▷ Postdoctoral Association of the Health Science Center, Texas A&M University, College Station, TX, November, 2010. (Invited)
▷ Inea LLC, Kronberg-Taunus, Germany, December, 2010. (Invited)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

College
▷ Event: Texas Junior Academy of Science (Judge), Texas Science Olympiad (Coordinator), Texas Science Olympiad (Liaison)
▷ Committee/Panel: Executive Committee, Texas State Science Olympiad (Member)

Department
▷ Event: TA Workshop Sessions, Developing Good Exams and Writing Good Test Questions (Presenter)
▷ Committee/Panel: Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 113. — Introductory Biology (total enrollment: 139)

Fall
▷ BIOL 113. — Introductory Biology (total enrollment: 245)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2010

  International
  ▶ Editorial/Board: Proceedings of the Royal Society of London B (Referee: Journals)

  National

  University
  ▶ Editorial/Board: CONACYT Grant Program (Reviewer)

  Department
  ▶ Committee/Panel: Awards Committee (Member), Website Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Interdisciplinary Faculty of Reproductive Biology Seminar Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 125)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 691. — Research (total enrollment: 5)

  Summer
  ▶ BIOL 466. — Principles of Evolution (total enrollment: 26)
  ▶ BIOL 491. — Research (total enrollment: 3)
  ▶ BIOL 691. — Research (total enrollment: 5)

  Fall
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 7)
  ▶ BIOL 691. — Research (total enrollment: 6)
• **RESEARCH PROJECTS DURING 2010**

  **Federal**

  ➢ Dissertation Research: Sex-Specific Effects on Postcopulatory Sexual Selection and Sexual Conflict in a Sex-Role Reversed Pipefish, *National Science Foundation*, coworkers: K. Paczolt (G)

• **PRESENTATIONS DURING 2010**

  ➢ “Mate Choice and Sexual Selection: What Have We Learned Since Darwin?,” Lone Star Historians of Science Annual Meeting, College Station, TX, March, 2010. (Invited)


• **PUBLICATIONS DURING 2010**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Associate Dean for Strategic Initiatives, Main Office, College of Science, [2009]

• SERVICE DURING 2010
  College
  ▶ Committee/Panel: Executive Committee (Member), International Programs Committee (Chair)
  Department
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 518)
  ▶ BIOL 285. — Directed Studies (total enrollment: 1)
  Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 238)

• PRESENTATIONS DURING 2010
• SERVICE DURING 2010

National
▷ Editorial/Board: Developmental Biology, (Referee: Journals)

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

Department
▷ Committee/Panel: Annual Review Committee (Member), Biology Website Committee (Chair), Executive Committee (Member), Light Microscopy Advisory Committee (Member), Lower Division Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 615. — Signaling Behavior & Development (total enrollment: 7)
▷ BIOL 691. — Research (total enrollment: 3)

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

Fall
▷ BIOL 414. — Developmental Biology (total enrollment: 40)
▷ BIOL 681. — Seminar (total enrollment: 7)
▷ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Private
▷ WNT Regulation of Vertebrate Mesoderm Differentiation, American Cancer Society, coworkers: K. Baker (G), A. Narayana (G), A. Whitener (G), A. Butler (U), A. Castellanos (U), J. Midkiff (U), J. Salinas (U)
▷ WNT 8 Cis-Regulatory Analysis to Study Vertebrate Mesoderm Progenitor Specification, American Heart Association - Texas, coworkers: K. Baker (G), A. Narayanan (G)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

National
▷ Committee/Panel: Eukaryotic Cell (Advisory Board), PLoS ONE (Advisory Board)

Department
▷ Committee/Panel: Graduate Program Committee (Member), Seminar Committee (Member), Website Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 489. — Special Topics in (total enrollment: 28)
▷ BIOL 491. — Research (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 2)

Summer
▷ BIOL 491 — Research (total enrollment: 1)
▷ BIOL 685. — Directed Studies (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 1)

Fall
▷ BIOL 351. — Fund of Microbiol (total enrollment: 144)
▷ BIOL 491. — Research (total enrollment: 1)
▷ BIOL 681 — Seminar (total enrollment: 144)
▷ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Genetic Regulation of Invasive Hyphal Growth of Aspergillus Fumigatus, Department of Health and Human Services, coworkers: S. Upadhyay (Technician), J. Jackson (G), H. Choe (U), D. Prabakaran (U)

State
▷ Development of a Novel Antifungal Treatment, Texas Higher Education Coordinating Board, coworkers: L. Wang (P), B. Zhai (G), H. Choe (U), Y. Pavuluri (U), D. Prakakaran (U)
• PRESENTATIONS DURING 2010
  ▶ “The Transcription factor Znf2 Regulates Morphogenesis and Virulence in Cryptococcus Neoformans,” 8th South Central Medical Mycology Meeting, San Antonio, TX, November, 2010. (Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010
  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 01), Faculty Senate: The Core Curriculum Council (Member), Faculty Senate: The Planning Committee (Member)
  Department
  ▶ Committee/Panel: Student and Post-doc Research Symposium Organizing Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BIOL 112. — Introductory Biology II (total enrollment: 270)
  ▶ BIOL 691. — Research (total enrollment: 2)
  Summer
  ▶ BIOL 691. — Research (total enrollment: 2)
  Fall
  ▶ BIOL 112. — Introductory Biology II (total enrollment: 94)
  ▶ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  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: X. Bian (Research Assistant), P. Koo (G)

• PRESENTATIONS DURING 2010
  ▶ “DSX-MAB-3 Transcription Factors Specify Multiple Cell Fates within a C. elegans Male Motor Circuit,” University of Wisconsin, Madison, WI, 2010.(Poster Individual)
  ▶ “Mapping the Neural Circuits Controlling C. elegans Male Contact Response,” University of Wisconsin, Madison, WI, September, 2010.(Poster Postdoc)
• SERVICE DURING 2010
  Department
  ▷ Event: Seminar Series (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 628. — Principles of Neuroscience II (total enrollment: 4)
  ▷ BIOL 691. — Research (total enrollment: 2)
  Summer
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 691. — Research (total enrollment: 2)
  Fall
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 628. — Principles of Neuroscience II (total enrollment: 13)
  ▷ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010
  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)
STEVE LOCKLESS

ASSISTANT PROFESSOR
BIOL-Structural Biology/Neuroscience

(979) 845-9824
lockless@mail.bio.tamu.edu

• SERVICE DURING 2010
  Department
  ▷ Committee/Panel: Computer Committee (Member), Graduate Recruiting & Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ BIOL 491. — Research (total enrollment: 2)
  Fall
  ▷ BIOL 491.(H) — Research (total enrollment: 2)
  ▷ BIOL 681. — Seminar (total enrollment: 7)
  ▷ BIOL 689. — Special Topics in (total enrollment: 4)
  ▷ BIOL 691 — Research (total enrollment: 9)

• RESEARCH PROJECTS DURING 2010
  Private
  ▷ The Structural Basis for Ligand Recognition and Allostery in Signaling Proteins, The Robert A. Welch Foundation, coworkers: S. Liu (G), P. Mukherjee (G)

• PRESENTATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Reproductive Biology, [2006]
  ▶ Director, BioAquatics Facility, Biology, []

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: General and Comparative Endocrinology, Domestic Animal Endocrinology, Aquaculture Research (Referee: Journals)
  University
  ▶ Event: Student Research Week (Presentation Judge)
  ▶ Committee/Panel: Radiological Safety Committee (Member)
  Department
  ▶ Service Position: Zoological Society (Advisor)
  ▶ Event: Student Research Week (Poster Judge)
  ▶ Committee/Panel: Anatomy and Physiology Coordinator Search Committee (Chair), Animal Care Committee (Chair), Teaching Laboratory Safety Committee (Chair), Undergraduate Programs Committee (Chair)
  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Faculty of Reproductive Biology (Member), Graduate Degree Program in Marine Biology (Co-Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BIOL 388. — Principles of Animal Physiology (total enrollment: 49)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ ZOOL 691. — Research (total enrollment: 2)
  Summer
  ▶ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 144)
  ▶ ZOOL 691. — Research (total enrollment: 2)
  Fall
  ▶ BIOL 405. — Comparative Endocrinology (total enrollment: 26)
  ▶ BIOL 481. — Seminar in Biology (total enrollment: 10)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ ZOOL 691. — Research (total enrollment: 2)
PUBLICATIONS DURING 2010

KEITH A. MAGGERT
ASSISTANT PROFESSOR (979) 845-6610
BIOL-Genetics kmaggert@mail.bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: PLoS ONE, Genetics, Molecular and Cellular Biology (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BICH 691. — Research (total enrollment: 2)
  ▶ BIOL 481. — Seminar in Biology (total enrollment: 8)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 681. — Seminar (total enrollment: 2)
  ▶ BIOL 691. — Research (total enrollment: 3)
  Summer
  ▶ BICH 691. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)
  Fall
  ▶ BICH 691. — Research (total enrollment: 1)
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 87)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ DNA Methylation in Drosophila, National Institutes of Health, coworkers: P. Guerrero (G), J. Aldrich (U), C. Alfonso (U), S. Paredes (U)

• PRESENTATIONS DURING 2010
  ▶ “The Nucleolus and Genome Structure, Chromosome Instability, and Gene Regulation,” University of Texas, Arlington, TX, November, 2010. (Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010
  Department
    ▶ Committee/Panel: IEEF, Undergraduate Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
    ▶ BIOL 214. — **Genes, Ecology and Evolution** (total enrollment: 118)
    ▶ BIOL 691. — **Research** (total enrollment: 1)
  Summer
    ▶ BIOL 691. — **Research** (total enrollment: 1)
  Fall
    ▶ BIOL 214. — **Genes, Ecology and Evolution** (total enrollment: 83)
    ▶ BIOL 481. — **Seminar in Biology** (total enrollment: 9)
    ▶ BIOL 681. — **Seminar** (total enrollment: 1)
    ▶ BOTN 691. — **Research** (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
• SERVICE DURING 2010

National
▷ Editorial/Board: Journal of Bacteriology (Advisory Board), Molecular Microbiology (Advisory Board), Various Journals (Ad hoc Reviewer), Journal of Bacteriology, Molecular Microbiology (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BICH 691. — Research (total enrollment: 1)
▷ BIOL 112. — Introductory Biology II (total enrollment: 96)
▷ BIOL 291. — Research (total enrollment: 4)
▷ BIOL 438. — Bacterial Physiology (total enrollment: 37)
▷ BIOL 485. — Directed Studies (total enrollment: 1)
▷ BIOL 491. — Research (total enrollment: 11)
▷ BIOL 685. — Directed Studies (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 3)

Summer
▷ BICH 691. — Research (total enrollment: 1)
▷ BIOL 351. — Fund of Microbiol (total enrollment: 38)
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 691. — Research (total enrollment: 2)

Fall
▷ BICH 691. — Research (total enrollment: 1)
▷ BIOL 111. — Introductory Biology I (total enrollment: 89)
▷ BIOL 291. — Research (total enrollment: 4)
▷ BIOL 406. — Bacterial Genetics (total enrollment: 19)
▷ BIOL 491. — Research (total enrollment: 15)
▷ BIOL 606. — Microbial Genetics (total enrollment: 9)
▷ BIOL 691. — Research (total enrollment: 4)
▷ GENE 406. — Bacterial Genetics (total enrollment: 18)

• PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]
  ▷ Associate Department Head, Biology, [2003]

• SERVICE DURING 2010
  National
  ▷ Editorial/Board: National Science Foundation (Review: Proposals), Plant Cell, Plant Physiology, J. Cell Biology, Plant Molecular Biology (Referee: Journals)
  College
  ▷ Committee/Panel: College Quality Enhancement Plan Council (Member), Research Advisory Committee (Member), Teaching Lab Safety Committee (Member)
  Department
  ▷ Committee/Panel: Annual Review Committee (Chair), Undergraduate Program Committee (Member)
  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Faculty of Genetics Executive Committee (Member), Faculty of Genetics Seminar Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ BIOL 112. — Introductory Biology II (total enrollment: 270)
  ▷ BIOL 485. — Directed Studies (total enrollment: 2)
  ▷ BIOL 491(H) — Research (total enrollment: 2)
  ▷ BIOL 491. — Research (total enrollment: 15)
  ▷ BIOL 691. — Research (total enrollment: 2)
  Summer
  ▷ BIOL 285. — Directed Studies (total enrollment: 1)
  ▷ BIOL 484. — Internship (total enrollment: 1)
  ▷ BIOL 491. — Research (total enrollment: 4)
  ▷ BIOL 691. — Research (total enrollment: 2)
  ▷ SCEN 392. — Cooperative Education in Science (total enrollment: 1)
  Fall
  ▷ BIOL 213(H) — Molecular Cell Biology (total enrollment: 17)
  ▷ BIOL 213. — Molecular Cell Biology (total enrollment: 10)
- BIOL 291. — **Research** (total enrollment: 1)
- BIOL 484. — **Internship** (total enrollment: 2)
- BIOL 491. — **Research** (total enrollment: 15)
- BIOL 691. — **Research** (total enrollment: 1)

**RESEARCH PROJECTS DURING 2010**

**Federal**

- Advancing Drug Development in Medicinal Plants Using Transcriptomics and Metabolomics, *National Institutes of Health*, coworkers: K. Mandadi (Staff)
- URM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, *National Science Foundation*
U.J. MCMAHAN

PROFESSOR
BIOL-Nervous system

ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Department Head, Biology, [2008]

SERVICE DURING 2010

International
  ▶ Committee/Panel: International Brain Research Organizations Visiting Lecture Team Program (Director)

University
  ▶ Committee/Panel: CMD Director Search Committee (Member)

College
  ▶ Committee/Panel: Executive Committee (Member)

TEACHING ASSIGNMENTS DURING 2010

Spring
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 682. — Research Seminar (total enrollment: 2)
  ▶ BIOL 691. — Research (total enrollment: 1)

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

Fall
  ▶ BIOL 682. — Research Seminar (total enrollment: 62)
  ▶ BIOL 691. — Research (total enrollment: 1)

No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 206. — Introductory Microbiology (total enrollment: 18)

Summer
▷ BIOL 213. — Molecular Cell Biology (total enrollment: 34)

Resigned 07/01/2010.
• AWARDS DURING 2010
  University
  ▶ Student Led Award - Teaching Excellence, Texas A&M University

• SERVICE DURING 2010
  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: IEEF Committee (Member), Senate Subcommittee for Lecturers (Member), Women’s Faculty Network (Member)

  Department
  ▶ Committee/Panel: Biology Safety Committee (Member), Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BIOL 454. — Immunology (total enrollment: 87)
  ▶ BIOL 455. — Laboratory in Immunology (total enrollment: 29)
  ▶ BIOL 491. — Research (total enrollment: 4)

  Summer
  ▶ BIOL 352. — Diagnostic Bacteriology (total enrollment: 10)
  ▶ BIOL 491. — Research (total enrollment: 3)

  Fall
  ▶ BIOL 206. — Introductory Microbiology (total enrollment: 90)
  ▶ BIOL 456. — Medical Microbiology (total enrollment: 58)
  ▶ BIOL 491. — Research (total enrollment: 5)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]

• SERVICE DURING 2010

  National
  ▶ Event: Siemens-Westinghouse Science Talent Search Competition (Judge)

  State
  ▶ Event: College & Career Readiness Faculty Collaborative Science Symposium (Speaker), Implications of the College Readiness Standards on College of Science Majors (Organizer), Texas Higher Education Coordinating Board (Presenter)
  ▶ Editorial/Board: Texas Journal of Science (Referee: Journals)

  University
  ▶ Event: Workshop on Use of Calibrated Peer Review (Organizer)
  ▶ Committee/Panel: University Council on Teacher Education (Member)

  College
  ▶ Ad Hoc Committee: Advisory Council/Steering Committee - Center for Math and Science Education (Member)
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ BIOL 351. — Fund of Microbiol (total enrollment: 83)
  ▶ BIOL 491. — Research (total enrollment: 3)

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

  Fall
  ▶ BIOL 351. — Fund of Microbiol (total enrollment: 132)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2010
  
  International
  ▶ Committee/Panel: ICGI Subcommittee on Comparative Genomics and Evolution (Chair),
    Steering Committee, International Cotton Genome Initiative (Member)

  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), *BMC Plant Biology*,
    *BMC Genomics, Crop Science, PLoS ONE* (Referee: Journals)
  ▶ Committee/Panel: Navasota Ladies’ Tresses (Spiranthes Parksii) Endangered Species Re-
    covery Team, U.S. Fish and Wildlife Service (Member)

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

  University
  ▶ Ad Hoc Committee: Bioinformatics Resources Working Group (Member), VPRs Office
    (Member)
  ▶ Committee/Panel: Laboratory for Crop Transformation Advisory Committee (Member),
    Laboratory for Genome Technologies Advisory Committee (Member)

  Department
  ▶ Committee/Panel: Annual Review and Awards Committee (Member), Lower Division
    Advisory Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Gene Technologies Laboratory Advisory Committee (Member), Plant
    Growth Facilities Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ BIOL 635. — Plant Molecular Biology (total enrollment: 9)
  ▶ BIOL 691 — Research (total enrollment: 2)
  ▶ BOTN 691. — Research (total enrollment: 2)

  Summer
• RESEARCH PROJECTS DURING 2010

Federal
▷ Genetics of Serpentine Adaptation and Endemism, National Science Foundation, coworkers: M. Burrell (P)
▷ MRI: Acquisition of a Roche 454 FLX Pyrosequencing Instrument Development of a Nexus for Cross-Platform Next-Generation Sequencing and Bioinformatics, National Science Foundation
▷ Investigation of Population Genetics of Arundo Donax and Insect Herbivores in Support of the Biological Control Program, U.S. Department of Agriculture, coworkers: D. Tarin (P)

State
▷ Assessment of the Genetic Status of the Bracted Twistflower, Streptanthus Bracteatus (Brassicaceae), an Imperiled Geoendemic Species of the Balcones Canyonlands, Texas Parks and Wildlife, coworkers: M. Dixon (U)

Industrial
▷ Transitioning to True Molecular Breeding in Cotton: Whole-Genome Association Mapping to Identify Markers for Photoperiodic Flowering in Gossypium hirsutum L., Cotton Incorporated, coworkers: C. Jo-Logan Young (P), N. Ware (U)

• PRESENTATIONS DURING 2010

▷ “Streptanthus and Friends: A Supermodel for Plant evo-eco-devo,” Texas State University, San Marcos, TX, February, 2010.( Invited)

• PUBLICATIONS DURING 2010

BRIAN D. PERKINS

ASSOCIATE PROFESSOR  (979) 845-6505
BIOL-Retinal Cell Biology  bperkins@mail.bio.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  - Member, Interdisciplinary Faculty, Neuroscience, [2004]
  - Member, Interdisciplinary Faculty, Genetics, [/]

- SERVICE DURING 2010

  International
  - Editorial/Board: Biomedical Research Center, University College London (Review: Proposals)

  National
  - Advisory Board: Molecular Vision (Member)
  - Editorial/Board: Wellcome Trust (Review: Proposals), BMC Developmental Biology, Vision Research, Disease Models and Mechanisms, Human Molecular Genetics, Vision Research, Visual Neuroscience (Referee: Journals)

  University
  - Committee/Panel: Distinguished Lectureship Series Committee (Member), Faculty Senate (Faculty Senator - 04), Faculty Senate: The Academic Affairs Committee (Member), Faculty Senate: The Legislative Affairs Committee (Member)

  Department
  - Committee/Panel: Graduate Review and Admissions Committee (Chair)

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

- TEACHING ASSIGNMENTS DURING 2010

  Spring
  - BIOL 113. — Introductory Biology (total enrollment: 59)
  - BIOL 691. — Research (total enrollment: 2)

  Summer
  - BIOL 491. — Research (total enrollment: 1)
  - BIOL 691. — Research (total enrollment: 2)

  Fall
  - BIOL 491. — Research (total enrollment: 1)
  - BIOL 689. — Special Topics in (total enrollment: 18)
  - BIOL 691. — Research (total enrollment: 2)

- RESEARCH PROJECTS DURING 2010
Federal
▷ Cilia Assembly and Transport in the Vertebrate Retina, National Institutes of Health, coworkers: K. Denton (U), L. Dudinsky (U), M. Ramsey (U)

• PRESENTATIONS DURING 2010
▷ “Zebrafish Models of Inherited Blindness,” Department of Biochemistry, University of Louisville Medical School, Louisville, KY, March, 2010. (Invited)
▷ “Zebrafish Models of Ciliopathies,” Institute of Neuroscience, University of Oregon, Eugene, OR, October, 2010. (Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

National
▷ Editorial/Board: Cell Biology Text Book (Book Reviewer), National Science Foundation, USA (Review: Proposals), Current Biology, Journal of Cell Biology, Nature of Cell Biology (Referee: Journals)
▷ Committee/Panel: Cytoskeleton and Cell Division Panel (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 613. — Cell Biology (total enrollment: 20)
▷ BIOL 691. — Research (total enrollment: 1)
▷ GENE 691 — Research (total enrollment: 1)

Fall
▷ BIOL 213. — Molecular Cell Biology (total enrollment: 78)
▷ BIOL 291. — Research (total enrollment: 1)
▷ BIOL 491. — Research (total enrollment: 3)
▷ BIOL 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Private
▷ Small G Protein Regulators of Intraflagellar Transport (IFT), American Heart Association, coworkers: Z. Fan (P), R. Manshouri (U), A. Mathew (U), R. McMasters (U), D. Silva (U), P. Wu (U), Y. Wu (U)
▷ Identification of Effectors for IFT27, an Intraflagellar Transport (IFT) Particle Protein Functioning in the Cell Cycle, Polycystic Kidney Disease Foundation, coworkers: Z. Wang (P), X. Huang (G), G. Hartman (U), C. Retzloff (U), D. Silva (U), D. Vaclavik (U)

• PRESENTATIONS DURING 2010

▷ “GRC on Plant & Microbial Cytoskeleton,” Proctor Academy, Andover, NH, Augus, 2010.(Poster Individual)
▷ “IFT22 is a Small GTPase Component of IFT Particle Complex B and is Involved in Both Flagellar Assembly and Cell Size Control in Chlamydomonas,” 2010.(Poster Individual)
▷ “Characterization of an IFT Particle Complex B Core Protein IFT22 in Chlamydomonas,” 14th International Conference on the Cell and Molecular Biology of Chlamydomonas,
Wheaton College, Norton, MA, June, 2010.(Poster Individual)
▷ “Small GTPase Regulators of Intraflagellar Transport,” Departments of Pharmacology, Baylor College of Medicine, Houston, TX, September, 2010.( Invited)
▷ “Hierarchy of Intraflagellar Transport Particle Assembly: the Role of IFT25 and the Small G Protein IFT27 in Maintaining IFT Particle Integrity,” The 50th annual meeting of the American Society for Cell Biology, Philadelphia, PA, December, 2010.(Poster Individual)

- PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2010
  International
  ▶ Editorial/Board: BBSRC, Wellcome Trust (Review: Proposals)

  National
  ▶ Editorial/Board: Tenure: Robert Wood Johnson Medical School (Reviewed), Development, BMC Debelopmental Biology, PNAS, PLoS ONE (Referee: Journals)
  ▶ Committee/Panel: Developmental Dynamics, PLoS One (Editorial Advisory Board)

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

  Department
  ▶ Committee/Panel: Annual Review Committee (Member), Biology Lab Animal Care Committee (Member), IEEF Committee (Chair), Seminar Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Genetics Executive Committee (Member), Genetics Membership Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BIOL 344. — Embryology (total enrollment: 17)
  ▶ BIOL 691. — Research (total enrollment: 5)
  ▶ GENE 691. — Research (total enrollment: 2)
  ▶ ZOOL 344 — Embryology (total enrollment: 34)

  Summer
  ▶ BIOL 691. — Research (total enrollment: 5)
  ▶ GENE 691. — Research (total enrollment: 2)

  Fall
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 611. — Molecular Biology of Differentiation and Development (total enrollment: 6)
  ▶ BIOL 681. — Seminar (total enrollment: 23)
  ▶ BIOL 685. — Directed Studies (total enrollment: 19)
  ▶ BIOL 691. — Research (total enrollment: 3)
• RESEARCH PROJECTS DURING 2010

Federal
- (REN) Genetic Analysis of Inner Ear Development in Zebrafish, National Institute on Deafness and Other Communication Disorders, coworkers: B. Guo (Technician), H. Kwon (P), N. Bhat (G), B. Butler (G), M. Padanad (G), E. Sweet (G), S. Vemaraju (G)

• PRESENTATIONS DURING 2010
- “Induction and Early Patterning of the Zebrafish Otic Placode,” University of Wisconsin, Madison, WI, 2010. (Invited)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Genetics, [2008]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2008]
  ▶ Member, Interdisciplinary Faculty, Reproductive Biology, [2008]
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2010

  National
  ▶ Service Position: National Science Foundation -UBM (Mentor)

  Interdisciplinary/Intercollegiate
  ▶ Service Position: ABS-IGERT (Participant), IRG Ecology and Evolutionary Biology (Chair)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ BIOL 491. — Research (total enrollment: 7)
  ▶ BIOL 691. — Research (total enrollment: 4)

  Summer
  ▶ BIOL 291. — Research (total enrollment: 2)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 3)

  Fall
  ▶ BIOL 291. — Research (total enrollment: 2)
  ▶ BIOL 467. — Integrative Animal Behavior (total enrollment: 23)
  ▶ BIOL 491. — Research (total enrollment: 6)
  ▶ BIOL 681. — Seminar (total enrollment: 2)
  ▶ BIOL 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

  Federal

SEC. 6.1  PROFESSIONAL ACTIVITIES  101
Dissertation Research: Mate Choice, Genetic Variation and Population Structure in Hybrid Zones, National Science Foundation


Mate Choice and Evolutionary Genetics in Xiphophorus Hybrid Zones, National Science Foundation, coworkers: 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. Bonmisetty (U), R. Easterling (U), D. Macedo (U), A. Mason (U), L. McMahon (U), O. Ochoa (U), C. Passow (U)

PRESENTATIONS DURING 2010


“Sube como palma, cae como coco: evolución y pérdida de un ornamento bajo selección sexual,” Annual Fishes Symposium, Universidad de la República, Montevideo, Uruguay, August, 2010. (Invited)


“Sexual Communication and Natural Hybridization in Swordtail Fish (Xiphophorus),” IFRB, Texas A&M University, November, 2010. (Invited)

PUBLICATIONS DURING 2010


KATHRYN J. RYAN

ASSISTANT PROFESSOR
BIOL-Cell and Molecular Biology

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ◦ Member, Interdisciplinary Faculty, Genetics, [2007]

- SERVICE DURING 2010
  Interdisciplinary/Intercollegiate
  ◦ Committee/Panel: Chemistry/Biology Interface Program (Member)

- TEACHING ASSIGNMENTS DURING 2010
  Spring
  ◦ BIOL 491. — Research (total enrollment: 2)
  ◦ BIOL 613. — Cell Biology (total enrollment: 20)
  ◦ BIOL 691. — Research (total enrollment: 1)
  ◦ GENE 491 — Research (total enrollment: 1)

  Fall
  ◦ BIOL 413. — Cell Biology (total enrollment: 35)
  ◦ BIOL 491. — Research (total enrollment: 1)
  ◦ BIOL 685. — Directed Studies (total enrollment: 1)

- RESEARCH PROJECTS DURING 2010
  Federal
  ◦ Molecular Mechanisms of Nuclear Pore Complex Assembly, National Science Foundation, coworkers: M. Kopecky (Research Assistant), J. Luo (P), L. Allende (G), J. Fritz (U), M. Payne (U), C. Spanel-Weber (U)

- PRESENTATIONS DURING 2010
  ◦ “Nuclear Pore Complex Assembly Requires Proteasome Activity,” American Society of Cell Biology Meeting, 2010.(Poster Individual)

- PUBLICATIONS DURING 2010
• SERVICE DURING 2010

National
- Advisory Board: Fungal Genetics Stock Center (Chair), Fungal Genome Initiative (Member)
- Editorial/Board: Eukaryotic Cell, Faculty of 1000, Fungal Genetics and Biology, Genetics (Editorial Advisory Board), Fungal Genetics Newsletter (Editor-in-Chief), National Science Foundation (Review: Proposals), EMBO Reports, Eukaryotic Cell, Genes and Development, Journal of Molecular Biology, Molecular Cell Biology, Mycologia, PLOS One, Nature (Referee: Journals)
- Committee/Panel: National Science Foundation (Panel), Neurospora Policy Committee (Member)

University
- Committee/Panel: Texas A&M UniversityNEST (Member)

Department
- Committee/Panel: Annual Review Committee (Member), Faculty Mentoring Committee (Chair), Faculty Search Committee (Member), Seminar Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
- BIOL 489. — Special Topics in (total enrollment: 11)
- BIOL 491. — Research (total enrollment: 3)
- BIOL 691. — Research (total enrollment: 1)
- MICR 691. — Research (total enrollment: 1)

Summer
- BIOL 489. — Special Topics in (total enrollment: 5)
- BIOL 691. — Research (total enrollment: 1)
- MICR 691. — Research (total enrollment: 1)

Fall
- BIOL 489. — Special Topics in (total enrollment: 9)
- BIOL 681. — Seminar (total enrollment: 7)
- BIOL 691. — Research (total enrollment: 1)
- MICR 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
Control of Arg-2 Gene Expression in Neurospora, *National Institutes of Health*, coworkers: I. Ivanov (Visiting Scientist), C. Wu (P), Y. Zhang (P), A. Wakefield (G), J. Wei (G), C. Bennett (U)


Private


**PRESENTATIONS DURING 2010**

- “Gene Regulation through the Control of Ribosome Movement,” European Conference on Fungal Genetics 10, Noordwijkerhout, The Netherlands, April, 2010. (Individual)
- “Post-transcriptional Control of Gene Expression in a Model Filamentous Fungus,” Baylor University, Waco TX., November, 2010. (Invited)

**PUBLICATIONS DURING 2010**

DEBORAH A. SIEGELE

ASSOCIATE PROFESSOR (979) 862-4022
BIOL-Microbiology siegele@mail.bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2010
  National
    ▷ Editorial/Board: National Science Foundation (Review: Proposals), Journal of Bacteriology, FEMS Immunology & Medical Microbiology (Referee: Journals), Journal of Bacteriology (Editorial Advisory Board)
  University
    ▷ Committee/Panel: Graduate Appeals Panel (Member), Protein Chemistry Lab User Committee (Member)
  Department
    ▷ Committee/Panel: Annual Review Committee (Member), Graduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
    ▷ BIOL 351. — Fund of Microbiol (total enrollment: 112)
    ▷ BIOL 491. — Research (total enrollment: 8)
    ▷ BIOL 681. — Seminar (total enrollment: 7)
  Summer
    ▷ BIOL 491. — Research (total enrollment: 1)
  Fall
    ▷ BIOL 351. — Fund of Microbiol (total enrollment: 142)
    ▷ BIOL 491. — Research (total enrollment: 1)
    ▷ BIOL 622. — Microbial Physiology (total enrollment: 8)
    ▷ BIOL 681. — Seminar (total enrollment: 5)
    ▷ BIOL 685. — Directed Studies (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010
  Federal
    ▷ A Next Generation E. coli Model Organism Database, National Institutes of Health, coworkers: B. McIntosh (P), A. Zweifel (G), A. Supak (U), N. Liles (Staff), D. Renfro (Staff)
  State
A Next Generation E. coli Model Organism Resource, University of Southern California, coworkers: A. Zweifel (P)

- PRESENTATIONS DURING 2010
  - “Development of an Ontology of Microbial Phenotypes,” Molecular Genetics of Bacteria and Phages, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 2010.(Poster Individual)

- PUBLICATIONS DURING 2010
• SERVICE DURING 2010

International
▷ Editorial/Board: Canadian Journal of Microbiology (Referee: Journals)

National
▷ Editorial/Board: Current Protein and Peptide Science, FEMS Microbiology Letters, Probiotics and Antimicrobial Proteins (Referee: Journals)

• PRESENTATIONS DURING 2010
▷ “Oragenics, Product Development Portfolio,” Medical Microbiology Texas A&M University, College Station, TX, November, 2010. (Invited)

• PUBLICATIONS DURING 2010

Hired 07/01/2010.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2006]

• SERVICE DURING 2010

  International
  ▶ Editorial/Board: UK Science Foundation (Review: Proposals)

  National

  Department
  ▶ Committee/Panel: Animal Care Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Neuroscience Graduate Program Committee (Chair), Neuroscience Seminar Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 435. — Laboratory for Regulatory and Behavioral Neuroscience (total enrollment: 10)
  ▶ BIOL 691. — Research (total enrollment: 3)
  ▶ ZOOL 691. — Research (total enrollment: 1)

  Summer
  ▶ BIOL 691. — Research (total enrollment: 3)

  Fall
  ▶ BIOL 435. — Laboratory for Regulatory and Behavioral Neuroscience (total enrollment: 48)
  ▶ BIOL 491. — Research (total enrollment: 3)
  ▶ BIOL 681. — Seminar (total enrollment: 8)
  ▶ ZOOL 691. — Research (total enrollment: 3)

• PRESENTATIONS DURING 2010
  ▶ "Bat Behavior and Ecology and each of the Local Elementary Schools," San Diego, CA, 2010.(Poster Individual)
• PUBLICATIONS DURING 2010
  
• SERVICE DURING 2010
  National
  ▷ Editorial/Board: *Journal of Bacteriology, Journal of Clinical Microbiology* (Referee: Journals)

• PRESENTATIONS DURING 2010

• PUBLICATIONS DURING 2010

*Hired 11/01/2010.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2010
  National

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 90)
  ▷ BIOL 491. — Research (total enrollment: 1)
  Summer
  ▷ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 21)
  ▷ BIOL 691. — Research (total enrollment: 1)
  Fall
  ▷ BIOL 491. — Research (total enrollment: 4)

• PRESENTATIONS DURING 2010
  ▷ “Windows into Bird Evolution: the K-P Boundary, early Paleogene, and late Neogene,” University of Texas, Austin, TX, January, 2010. ( Individual)
  ▷ “The Biological Response to Climate Change,” Science Café at Revolution Café and Bar, Bryan, TX, September, 2010. ( Individual)
  ▷ “The Evolution of Modern Birds and Their Response to Climate Change,” Department of Biology, Texas A&M University, College Station, TX, October, 2010. ( Individual)

• PUBLICATIONS DURING 2010
ANDREW TAG

LECTURER

BIOL-Fungal Biology

(979) 458-3871

atat@mail.bio.tamu.edu

• SERVICE DURING 2010
  University
    ▶ Committee/Panel: Bioinformatic Resources Proposal Working Group (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Fall
    ▶ BIOL 111. — Introductory Biology I (total enrollment: 600)

• PRESENTATIONS DURING 2010
  ▶ “Bip1, a B-ZIP Transcription Factor from the Rice Blast Fungus, Magnaporthe Grisea, is required for Pathogenicity on Rice,” Biology Student Post-Doc Research Symposium, Texas A&M University, College Station, TX, September, 2010. (Individual)

• PUBLICATIONS DURING 2010
• TEACHING ASSIGNMENTS DURING 2010

Spring
  ▶ BIOL 320. — Integrated Hum AN/PHY II (total enrollment: 360)
  ▶ BIOL 485. — Directed Studies (total enrollment: 1)

Summer
  ▶ BIOL 320. — Integrated Hum AN/PHY II (total enrollment: 113)

Fall
  ▶ BIOL 320. — Integrated Hum AN/PHY II (total enrollment: 274)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Director, Shared Instrumentation Facility, Biology, [2010]
  ▶ Director, Laboratory for Functional Genomics, Biology, [2010]

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), PNAS, Plant Physiology, Plant Journal (Referee: Journals)
  University
  ▶ Committee/Panel: Council of Principal Investigators (Chair), Councilor on the Research Foundation Board of Trustees (Member), Research Administration and Shared Services (RASS) Committee (Member), Research Foundation PI Advisory Committee (Member)
  Department
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BIOL 451. — Bioinformatics (total enrollment: 31)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 651. — Bioinformatics (total enrollment: 13)
  ▶ BIOL 691. — Research (total enrollment: 2)
  Summer
  ▶ BIOL 691. — Research (total enrollment: 1)
  Fall
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 101)
  ▶ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health, coworkers: P. Beremand (P)

• PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

• SERVICE DURING 2010

  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), Plant Signaling and Behavior (Member), Chemosphere, Molecular Plant, Plant Physiology, Plos One (Referee: Journals)
  ▶ Committee/Panel: National Science Foundation (Review Panel)

  Department
  ▶ Committee/Panel: Lower Division Instruction Advisory Committee (Member), Student/Postdoc Research Conference Committee (Member), Undergraduate Program Committee (Member)

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

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 635. — Plant Molecular Biology (total enrollment: 9)
  ▶ BIOL 691. — Research (total enrollment: 3)

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

  Fall
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 102)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Plastidic Phosphate Transport and Plant Biomass Allocation, National Science Foundation, coworkers: S. Irigoyen (G), P. Mukherjee (G), L. Ratliff (U), J. Thacker (U)

  Private
The Structural Basis for Ligand Recognition and Alloster in Signaling Proteins, *The Robert A. Welch Foundation*

- **PRESENTATIONS DURING 2010**
  - “Analysis of Arabidopsis Chloroplast Phosphate Transport Mutants,” American Society of Plant Biology Meeting, Montreal, Canada, August, 2010. (Poster Graduate, P. Mukherjee)
  - “Disruption of PHT4;2, a Root Plastid Phosphate Transporter Gene, Leads to Altered Carbon Metabolism and Increased Cell Proliferation in Leaves,” American Society of Plant Biology Meeting, Montreal, Canada, August, 2010. (Poster Graduate, S. Irigoyen)
  - “The Physiological Role of Arabidopsis Thylakoid Phosphate Transporter PHT4;1,” The International Congress on Photosynthesis, Beijing, China, August, 2010. (Poster Graduate, P. Karlsson)
  - “Analysis of Arabidopsis Chloroplast Phosphate Transport Mutants,” Texas A&M University Department of Biology Student/Postdoc Research Conference, College Station, TX, September, 2010. (Graduate, P. Mukherjee)
  - “Members of the PHT2 and PHT4 Plastidic Phosphate Transporter Families have Distinct Roles in Carbon Partitioning and Cell Proliferation,” International Workshop on Plant Membrane Biology, Adelaide, Australia, September, 2010. (Poster Individual)
WEI WAN

• SERVICE DURING 2010

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 14), Faculty Senate: The Core Curriculum Council (Member), Faculty Senate: The Personnel and Welfare Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 111. — Introductory Biology I (total enrollment: 259)
▷ BIOL 206. — Introductory Microbiology (total enrollment: 40)
▷ BIOL 285. — Directed Studies (total enrollment: 1)

Summer
▷ BIOL 206. — Introductory Microbiology (total enrollment: 25)

Fall
▷ BIOL 111. — Introductory Biology I (total enrollment: 595)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International
▷ Research Group: Marine Biology Program (Participant)
▷ Committee/Panel: Student Awards Committee for Alcarkinus (Member)

National
▷ Editorial/Board: Smithsonian Institution Institution, Museum and Library Services Con-
  servation Project (Review: Proposals), Behavioral Ecology, Crustaceana, Marine Biology,
  Marine Biodiversity Records, Memoirs of the Australian Museum, Victoria, Zootaza (Ref-
  eree: Journals)

University
▷ Committee/Panel: Awards Committee (Member), Chapter of Sigma Xi (Member), Scientific
  Diving Advisory Board (Member), Selection Committee, University Scholars Program
  (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 335. — Invertebrate Zoology (total enrollment: 41)
▷ BIOL 491. — Research (total enrollment: 11)
▷ BIOL 691. — Research (total enrollment: 2)
▷ ZOOL 691. — Research (total enrollment: 2)

Summer
▷ BIOL 491. — Research (total enrollment: 5)
▷ BIOL 691. — Research (total enrollment: 4)

Fall
▷ BIOL 440. — Marine Biology (total enrollment: 28)
▷ BIOL 491. — Research (total enrollment: 11)
▷ ZOOL 685. — Directed Studies (total enrollment: 3)
▷ ZOOL 691. — Research (total enrollment: 3)

• PRESENTATIONS DURING 2010
▷ “Problems in the Taxonomy and Identification of Decapod Crustaceans of Southern Cal-
  ifornia,” Southern California Association for Marine Invertebrate Taxonomy, Torrance,
  CA, December, 2010. (Individual)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

National
  ▶ Editorial/Board: *Systematic Botany* (Referee: Journals)
  ▶ Committee/Panel: Texas Oklahoma Regional Consortium of Herbaria Steering Committee (Member)

College
  ▶ Committee/Panel: Grievance Committee (Elected Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
  ▶ BIOL 301. — *Taxonomy of Flowering Plants* (total enrollment: 23)
  ▶ BIOL 328. — *Plants and People* (total enrollment: 31)

Fall
  ▶ BIOL 301. — *Taxonomy of Flowering Plants* (total enrollment: 21)
  ▶ BIOL 328. — *Plants and People* (total enrollment: 33)

*No report received from faculty member.*
• SERVICE DURING 2010

National
▷ Editorial/Board: Zoology (Referee: Journals)

University
▷ Service Position: SHIP Lab Development, Teaching, and Demonstration (Developer)
▷ Event: Summer Honors Invitational, Lab Development and Demonstration (Participant)

Department
▷ Event: TA Workshop (Presenter)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BIOL 107. — Zoology (total enrollment: 150)

Fall
▷ BIOL 107. — Zoology (total enrollment: 149)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Adjunct Associate Professor, Psychology, [2007]
  ▶ Associate Dean for Graduate Studies, Office of Graduate Studies, College of Science, [2003]
  ▶ Director, Real Time Imaging Labs: Cell Physiology and Molecular Imaging, Biology, [2001]

• SERVICE DURING 2010

  National
  ▶ Service Position: USA Track & Field, Gulf Association (Certified Official)
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), BioEssays, Journal of Neuroscience, Invertebrate Biology (Referee: Journals)

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

  University
  ▶ Research Group: Texas A&M UniversityCenter for Research on Biological Clocks (Member)
  ▶ Service Position: Board of Directors, Texas A&M Track & Field Officials Association (Treasurer)
  ▶ Committee/Panel: Biosafety Advisory Committee (Member), Graduate Council (Member), Graduate Council (Vice Chair), Graduate Operations Committee (Member), Graduate Operations Committee (Representative), Institutional Animal Care and Use Committee (Member), NSF LSAMP Bridge to the Doctorate, Program Management Team (Member), Texas A&M UniversityChapter, Sigma Xi Society (Vice President), Texas A&M UniversityChapter, Society for Neuroscience (President)

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

  Department
  ▶ Committee/Panel: Biology Executive Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Graduate Recruiting Committee, IDP in Neuroscience (Member), Graduate Support Committee, TAMIN/IDP in Neuroscience (Member), Texas A&M Institute for Neuroscience (Member)

• TEACHING ASSIGNMENTS DURING 2010
Spring

- BIOL 491. — Research (total enrollment: 2)
- BIOL 681. — Seminar (total enrollment: 5)
- BIOL 685. — Directed Studies (total enrollment: 1)
- BIOL 691. — Research (total enrollment: 1)
- ZOOL 691. — Research (total enrollment: 2)

Summer

- BIOL 291 — Research (total enrollment: 1)
- BIOL 691. — Research (total enrollment: 2)
- ZOOL 691. — Research (total enrollment: 2)

Fall

- BIOL 491. — Research (total enrollment: 1)
- BIOL 634. — Comparative Neurobiology (total enrollment: 8)
- BIOL 691. — Research (total enrollment: 1)
- ZOOL 691. — Research (total enrollment: 2)

- RESEARCH PROJECTS DURING 2010

  Federal
  - (REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health, coworkers: A. Womac (Research Assistant)

- PRESENTATIONS DURING 2010
  - “Graduate Programs in Science at Texas A&M University,” 6th Annual TAMUS LSAMP Symposium, Reed Arena, Texas A&M University, College Station, TX, February, 2010. (Individual)
  - “Neural Plasticity in Diverse Biological Contexts,” Department of Biology, Texas A&M University, College Station, TX, September, 2010. (Individual)

- PUBLICATIONS DURING 2010
7. Research Activity, 2010

This section contains information on all funded research activity for the calendar year 2010. 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 2010 = # Days 2010 × Daily Grant Award
### 7.1 Summary of Research Support, 2010

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* National Science Foundation

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*Subtotal: National Science Foundation* 944,286 144,614 1,088,900

*U.S. Department of Agriculture*

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**Industrial/Corporate Agencies**

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**Private/Non-Profit Agencies**

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<td>Lin, X.</td>
<td>Investigation of the Mechanism of a Novel Treatment against Fungal Infections</td>
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<td>6/30/2012</td>
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**SEC. 7. RESEARCH ACTIVITY** 131
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<td>Sachs, M.S. Functional Analysis and Systems Biology of Filamentous Fungi Project I</td>
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<td>Lockless, S. The Structural Basis for Ligand Recognition and Allostery in Signaling Proteins</td>
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State Agencies

- Texas A&M University
  - Aramayo, R. Laboratory for Genome Bioinformatics | 1/1/2009 | 12/31/2010 | 26,464 | 0 | 26,464 |
  - Subtotal: Texas A&M University | 26,464 | 0 | 26,464 |

- Texas Higher Education Coordinating Board
  - Carney, G.E. Identifying the Neural Circuits Controlling a Complex Behavior | 5/15/2008 | 1/30/2011 | 55,303 | 0 | 55,303 |
  - Lin, X. Development of a Novel Antifungal Treatment | 7/1/2010 | 6/30/2012 | 49,247 | 0 | 49,247 |
  - Subtotal: Texas Higher Education Coordinating Board | 104,550 | 0 | 104,550 |

- Texas Parks and Wildlife

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| *Subtotal Lints, T.*                  |                                                                                                                                                                                                      |             |             | 163,649| 0        | 163,649   |

| *Lockless, S.*                        | The Structural Basis for Ligand Recognition and Allostery in Signaling Proteins                                                                                                                     | 7/1/2010    | 6/30/2012   | 25,068 | 0        | 25,068    |

| *Subtotal Lockless, S.*               |                                                                                                                                                                                                      |             |             | 25,068 | 0        | 25,068    |

| *Maggert, K.A.*                       | DNA Methylation in Drosophila                                                                                                                                                                        | 1/1/2006    | 12/31/2011  | 270,618| 0        | 270,618   |

| *Subtotal Maggert, K.A.*              |                                                                                                                                                                                                      |             |             | 270,618| 0        | 270,618   |


| *Subtotal Manhart, J.R.*              |                                                                                                                                                                                                      |             |             | 22,643 | 0        | 22,643    |


| National Science Foundation           | URM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, (with: D. Bell-Pedersen, V. Cassone, R. Honeycutt, T. McKnight, J. Walton, T. Wehrly)                           | 9/1/2004    | 8/31/2011   | 26,167 | 3,571    | 29,738    |

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<td>193,888</td>
<td>4,863</td>
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<td>193,888</td>
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<td>114,093</td>
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<td></td>
<td></td>
<td>126,597</td>
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</table>

|     |       | 5,593,914 | 519,402   | 6,113,316 |

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2010 Biology Annual Report
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1. Foreword from Department Head ........................................ 143
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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 have continued to receive recognition and awards on a national level, as well as from Texas A&M University. Donald Darensbourg, Marcetta Darensbourg, and Frank Raushel were appointed Distinguished Professors; David Bergbreiter, Ganesa Gopalakrishnan, Wendy Keeney-Kennicutt, Sherry Yennello and Vickie Williamson received Student Led Awards for Teaching Excellence; Kevin Burgess received an Association of Former Students Distinguished Achievement Award in Research; Wendy Keeney-Kennicutt, Piper Professor Award; Kenn Harding and Simon North, Distinguished Achievement College-Level Awards in Teaching; Joe Natowitz was elected to the 2010 class of Fellows of the American Chemical Society; Sherry Yennello, the Francis P. Garvan-John M. Olin Medal; Wayne Goodman, the Southwest Regional Science Award. Also, John Gladysz was selected as the new editor-in-chief of the American Chemical Society’s peer-reviewed journal Organometallics. Two of our staff members, Bob Hildreth and Linda Redd, received College of Science Outstanding Staff Achievement Awards. 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 2010, 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 students, graduate students, and post-doctoral researchers. Our total number of undergraduate chemistry majors is 252, and our total number of graduate students is 289.

The coming year offers many new challenges as the enrollment in our classes continues to grow and as we recruit new students and faculty. I appreciate the continued support and confidence from my colleagues and staff in the Department of Chemistry as we look to the future.
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 of Science Dean Database (Fall 2009) *FacultyList_FINAL*, Queried from the College of Science Dean Database (Fall 2010) *FacultyList_FINAL*.

Non-Tenure-Track Faculty
▷ Queried from the College of Science Dean Database (Fall 2009) *FacultyList_nonTTF*, Queried from the College of Science Dean Database (Fall 2010) *FacultyList_nonTTF2*.

Postdoctoral Fellows
▷ Provided by the Department

Graduate Student/Undergraduate Majors
▷ Office of Institutional Studies and Planning (OISP). (Fall 2009, Fall 2010) *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 2010) *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>Category</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Tenured and Tenure-Track Faculty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>32</td>
<td>28</td>
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<td>Assistant Professor</td>
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<td>Associate Professor</td>
<td>3</td>
<td>2</td>
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<tr>
<td>Distinguished Professor</td>
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<td>9</td>
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<td><strong>b. Non-Tenure-Track Faculty</strong></td>
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<tr>
<td>Visiting Professor</td>
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<tr>
<td>Visiting Assistant Professor</td>
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<td>Lecturer</td>
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<td>Senior Lecturer</td>
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<td><strong>c. Postdoctoral Fellows</strong></td>
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<td><strong>d. Graduate Majors</strong></td>
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<td>289</td>
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<td><strong>e. Undergraduate Majors</strong></td>
<td>254</td>
<td>252</td>
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<td><strong>f. Support Staff</strong></td>
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## II. Instructional Activities

<table>
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<tr>
<th>Category</th>
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<td>b. Undergraduate Semester Credit Hours</td>
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<tr>
<td>c. PhD Degrees</td>
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<td>39</td>
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<tr>
<td>d. Masters Degrees</td>
<td>5</td>
<td>3</td>
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<tr>
<td>e. Undergraduate Degrees</td>
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<td>46</td>
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## III. Research Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
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<tr>
<td>a. Research Publications</td>
<td>305</td>
<td>328</td>
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<tr>
<td>b. Research Presentations</td>
<td>336</td>
<td>362</td>
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<tr>
<td>c. Federal</td>
<td>11,634,015</td>
<td>13,704,974</td>
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<tr>
<td>d. State</td>
<td>381,305</td>
<td>226,435</td>
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<tr>
<td>e. University</td>
<td>0</td>
<td>0</td>
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<td>f. Private/Non-Profit</td>
<td>2,992,738</td>
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<td>g. Industrial/Corporate</td>
<td>129,377</td>
<td>330,421</td>
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<td>h. International</td>
<td>100,151</td>
<td>145,525</td>
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<tr>
<td>i. Other Govt</td>
<td>332,027</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>15,569,613</strong></td>
<td><strong>18,150,961</strong></td>
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</table>
3. Honors & Awards, 2010

By Faculty

▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2010.

By Students

▷ This section contains all honors and awards, as reported by the department, during the calendar year 2010.
## 3.1 Honors & Awards Received by Faculty, 2010

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>K. Burgess</td>
<td>Distinguished Achievement Award - Research, The Association of Former Students</td>
</tr>
<tr>
<td>P. Cremer</td>
<td>Edith and Peter O’Donnell Award, The Academy of Medicine, Engineering and Science of Texas Fellow, American Association for the Advancement of Science</td>
</tr>
<tr>
<td>D. Darensbourg</td>
<td>Award in Inorganic Chemistry, American Chemical Society</td>
</tr>
<tr>
<td>D. Goodman</td>
<td>Southwest Regional Science Award, American Chemical Society</td>
</tr>
<tr>
<td>K. Harding</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>R. Hildreth</td>
<td>Outstanding Staff Achievement Award, College of Science</td>
</tr>
<tr>
<td>W. Keeney-Kennicutt</td>
<td>Fellow, Wakonse</td>
</tr>
<tr>
<td></td>
<td>Piper Professor Award, Minnie Stevens Piper Foundation</td>
</tr>
<tr>
<td></td>
<td>Student Led Award - Teaching Excellence, Texas A&amp;M University</td>
</tr>
<tr>
<td>S. North</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>K. Wooley</td>
<td>Polymer Chemistry Division, Founding POLY Fellow, American Chemical Society</td>
</tr>
<tr>
<td>S. Yennello</td>
<td>Outstanding Mentoring Award, Women’s Faculty Network</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2010

Graduate

▷ Ashworth-Tsutsui Memorial Award for Research
   Haiyan Zhao

▷ Dow Chemical Graduate Fellowship
   Tai-Yen Chen
   Jixin Chen
   Youngmin Kim
   Michael Singleton

▷ Thomas J Harrison Memorial
   Hui Fu

Undergraduate

▷ Connie G. & Otto F. (Pete) ’45 Schumm Endowed Fund in Chemistry
   Megan Fish
   Stacey Moller
   Kyle Solomon
   Chiu Yu

▷ Dawn C. ’96 & David A. ’88 Mason Scholarship in Chemistry
   Cullan Lucas

▷ Dr. David W. Lipp ’66 Memorial Endowed Scholarship
   Rachel Chupik
   Kristine Jang
   Ivey Royall
   Abby Sisco

▷ Dr. George C. Bauer Memorial Scholarship
   Alaina Anderson
   Allison Williams

▷ Dr. Minoru Tsutsui Memorial Endowed Graduate Scholarship in Chemistry
   James Hemmer

▷ Eileen Lob Lewis ’65 & Harry S. (Hank) Lewis ’65 Premier Endowed Scholarship in Chemistry
   Megan Esteb
   Nicole Reusser

▷ Emile A. Schweikert Scholarship in Chemistry
   Alaina Anderson
   Samuel Choi
   Kurt Johnson

▷ Hach Scientific Foundation Chemistry Teaching Scholarship
Herman Alfred Liebhafsky Premier Endowed Scholarship in Chemistry
Colyn Jurek
Spencer Wehring

John L. Hogg Memorial Endowed Scholarship
Kevin Burnett

Sharon Merritt Birtcher ’89 Scholarship in Chemistry
Eliena Delgado
Joshua Horak
Victoria Thomas
4. Students, 2010

This section contains all degrees awarded, as reported by the department, during the calendar year 2010.
4.1 Graduate Degrees Awarded, 2010

Fall

▷ Ph.D.

Ryan Christopher Blase
High Resolution Ion Mobility Spectrometry with Increased Ion Transmission: Exploring the Analytical Utility of Periodic-focusing De Ion Guide Drift Cells
Advisor(s): D. Russell

Tai-yen Chen
Electronic and Magnetization Dynamics of Cobalt Substituted Iron Oxide Nanocrystals
Advisor(s): D. Son

Stephanie Marie Cologna
Isoelectric Trapping and Mass Spectrometry: Tools for Proteomics
Advisor(s): D. Russell

Jennifer Ann Cummings
D-aminoacylases and Dipeptidases Within the Amidohydrolase Superfamily: Relationship Between Enzyme Structure and Substrate Specificity
Advisor(s): F. Raushel

Jennifer Dianne Foulke-Abel
Natural Product Biosynthesis: Friend or Foe? From Anti-tumor Agent to Disease Causation
Advisor(s): C. Watanabe

Kristen Elise Funck
Magnetic Properties and Reactivity Studies of Families of Trigonal Bipyramidal Cyanide Clusters and Their Extended Structures
Advisor(s): K. Dunbar

Mohammad Akhtar Hossain
Digital Deposition of Ultrathin Pd Films on Well-defined Pt(111) Electrodes Via Surface-limited Redox Replacement Reaction: An Electron Spectroscopy-electrochemistry Study
Advisor(s): M. Soriaga

Liliya Lund
Biophysical and Mechanistic Characterization of Carbamoyl Phosphate Synthetase from Escherichia Coli
Advisor(s): F. Raushel

Matthew James Lundwall
Characterization and Reaction Studies of Silica Supported Platinum and Rhodium Model Catalysts
Advisor(s): D. Goodman

Ren Miao
Probing Iron Accumulation in Saccharomyces Serevisiae Using Integrative Biophysical and Biochemical Techniques
Advisor(s): P. Lindahl
Henry Nguyen

I. A1,3-strain Enabled Retention Of Chirality During Bis-cyclization of Beta-ketoamides: Asymmetric Synthesis and Bioactivity of Salinosporamide a and Derivatives II. Optimization of an Organic Syntheses: Asymmetric

Advisor(s): D. Romo

Yatsandra Oyola

The Dynamic Effect in the Hydroboration of Alkenes

Advisor(s): D. Singleton

Michael Lee Singleton

Effect of Secondary Interactions on The Fundamental Properties of Small Molecule Models of the Diiron Hydrogenase Active Site

Advisor(s): M. Daresbourg

Sarah Nicole Soisson

Isospin Dependence of Fragmentation

Advisor(s): S. Yennello

Edward Tutu

Synthesis Of Heptakis-2-o-sulfo-cyclomaltoheptaose, a Single-isomer Chiral Resolving Agent for Enantiomer Separations in Capillary Electrophoresis

Advisor(s): G. Vigh

Dan Zhao

Chemistry and Applications of Metal-organic Materials

Advisor(s): H. Zhou

Spring

▷ M.S.

Sean Michael Carroll

Advisor(s): K. Harding

▷ Ph.D.

Carolina Avendano

Cyanide Bridged Molecular Magnetic Materials with Anisotropic Transition Metal Ions: Investigation of Bistable Magnetic Phenomena

Advisor(s): K. Dunbar

Yang-hsiang Chan

Applications of Self-assembly for Molecular Electronics, Plasmon Coupling, and Ion Sensing

Advisor(s): J. Batteas

Jixin Chen

Nanofabrication, Plasmon Enhanced Fluorescence and Photo-oxidation Kinetics of Cdse Nanoparticles

Advisor(s): J. Batteas

Roy Tonacao Estrada

Fluorescent Labeling Reagents Optimized for Capillary Electrophoretic Separations

Advisor(s): G. Vigh

SEC. 4.1

GRADUATE DEGREES

153
Hui Fu
Stimuli-responsive Polymers In Solution and on Grafted Surfaces
Advisor(s): D. Bergbreiter

Jessica Hope Garber Morales
Biophysical and Bioanalytical Analysis of the Iron-ome in Mitochondria Isolated from Saccharomyces Cerevisiae
Advisor(s): P. Lindahl

Matthew Gary Hilfiger
Incorporation Of 4d and 5d Transition Metal Cyanometallates into Magnetic Clusters and Materials
Advisor(s): K. Dunbar

Roxanne Michelle Jenkins
Studies In Bioinorganic Chemistry: Synthesis and Reactivity of Nickel and Vanadyl Nxsy Complexes
Advisor(s): M. Darensbourg

Chang Suk Lee
Synthesis of Haptens for the Marine Toxin, Gymnodimine; Synthesis of Beta-lactone Fused Carbocycles and Nitrogen Heterocycles; Efforts Toward the Synthesis of the Proposed Structure of Thiolyngbyan
Advisor(s): D. Romo

Nazario Lopez Cruz
Tuning the Properties of Molecular Magnets and Conductors Based on Lanthanide and Transition Metal Ions Bridged by Tcnq Derivatives Or Cyanometallate Ligands by Varying the Dimensionality of the Structure and Metal Ion Identity
Advisor(s): K. Dunbar

Adriana Inez Moncada
Metal Catalyzed Formation of Aliphatic Polycarbonates Involving Oxetanes and Carbon Dioxide as Monomers
Advisor(s): D. Darensbourg

Sidhartha Raja Rajagopal Achary
Characterization of Individual Nanoparticles and Applications of Nanoparticles in Mass Spectrometry
Advisor(s): E. Schweikert

Lei Tao
Investigation on Gas-phase Structures of Biomolecules Using Ion Mobility-mass Spectrometry
Advisor(s): D. Russell

Brad Jay Williams
An on-target Performic Acid Oxidation Method Suitable for Disulfide Bond Elucidation Using Capillary Electrophoresis- Mass Spectrometry
Advisor(s): D. Russell

Zhaoxiang Wu
Investigation of Metalloproteins Utilizing High Resolution Mass Spectrometry
Advisor(s): D. Russell
Summer

▷ M.S.
Sean Christopher Collins  Mechanistic Investigation into the Sommelet-hauzer Rearrangement of an Allyl Ammonium Ylide Through Determination Of 13c Kies
Advisor(s): D. Singleton

Ryan John Kuppler  Ligand Design for Novel Metal-organic Polyhedra and Metal- Organic Frameworks for Alternative Energy Applications
Advisor(s): H. Zhou

▷ Ph.D.
Chin-yuan Chang  Kinetics of an Inverse Temperature Transition Process and its Application on Supported Lipid Bilayer
Advisor(s): P. Cremer

Buddhadeb Ghosh  Experimental Studies of Hydroxyl Radical Initiated Tropospheric Oxidation of Unsaturated Hydrocarbons
Advisor(s): S. North

Chih-hao Hsia  Studies of Optically Induced Magnetization Dynamics in Colloidal Iron Oxide Nanocrystals
Advisor(s): D. Son

Youngmin Kim  Synthesis, Characterization and Anion Complexation of Cationic Main Group Lewis Acids
Advisor(s): F. Gabbai

Zachary Wayne Kohley  Transverse Collective Flow and Emission Order of Mid-Rapidity Fragments in Fermi Energy Heavy Ion Collisions
Advisor(s): S. Yennello

Ding Li  Chemisorption of Aromatic Compounds on Well-defined Palladium Surfaces: Studies by Electron Spectroscopy and Electrochemistry
Advisor(s): M. Soriaga

Kay Ann Morris  Applications of B-lactones: Utility of Spiroepoxy-b-lactones and Development of a Double Diastereoselective Nucleophile Catalyzed, Aldol-lactonization Process Leading to B-lactone Fused Carbocycles and Tetrahydrofurans
Advisor(s): D. Romo

Manuel Zancanella  Synthetic Studies Toward Selected Members of the Pyrrole-imidazole Alkaloids: Axinellamine, Konbu’acidin and Palau’amine
Advisor(s): D. Romo

SEC. 4.1 GRADUATE DEGREES 155
# 4.2 Undergraduate Degrees Awarded, 2010

## Fall

<table>
<thead>
<tr>
<th>Program</th>
<th>Students</th>
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</thead>
<tbody>
<tr>
<td>B.S.</td>
<td>Ashley Rose Dittmer, Robert Philip Duttweiler, Eric Michael Ortega, Michael Allen Woodie</td>
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## Spring

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<thead>
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<th>Program</th>
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<tbody>
<tr>
<td>B.S.</td>
<td>Alisha Marie Bohnsack, Helen Ann Hamilton, Masato Hirai, Aaron Michael Hollas, Joshua Fonzy Ivy</td>
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</tbody>
</table>

156 2010 CHEMISTRY ANNUAL REPORT
Auburn Rose James
Ruben Lopez
Kathryn Michelle Webb
Jamie Nicole Wheeler

Summer

▷ B.A.
  Sienna Noel Heller
  Jessica Diane Hemann
  Yuliana Perez

▷ B.S.
  Sandra Anne Fiorentini
## 5. Colloquium and Seminar Speakers, 2010

### Frontiers Lecture Series

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>2/8/2010</td>
<td>Brian Stoltz</td>
<td>California Institute of Technology</td>
<td>Complex Natural Products as a Driving Force for Discovery in Organic Chemistry</td>
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<tr>
<td>2/9/2010</td>
<td>Brian Stoltz</td>
<td>California Institute of Technology</td>
<td>Oxidation Catalysis: The Development of Aerobic Based Oxidation Methodology for Synthetic Chemists</td>
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<tr>
<td>2/10/2010</td>
<td>Brian Stoltz</td>
<td>California Institute of Technology</td>
<td>The Intertwined Nature of Chemical Synthesis and the Discovery Process</td>
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<td>4/19/2010</td>
<td>Benjamin Cravatt</td>
<td>The Scripps Institute</td>
<td>Activity-Based Proteomics: Technology Development and Biological Applications</td>
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<tr>
<td>4/20/2010</td>
<td>Benjamin Cravatt</td>
<td>The Scripps Institute</td>
<td>Activity-Based Proteomics: Mapping Enzymatic Pathways in Human Disease</td>
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<tr>
<td>4/26/2010</td>
<td>Harry Gray</td>
<td>California Institute of Technology</td>
<td>The Oxo Wall</td>
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<td>4/28/2010</td>
<td>Harry Gray</td>
<td>California Institute of Technology</td>
<td>Metalloprotein Conformational Dynamics</td>
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<td>Name</td>
<td>Affiliation</td>
<td>Topic</td>
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<tr>
<td>1/7/2010</td>
<td>Arthur Bragg</td>
<td>University of California, Los Angeles</td>
<td>Watching Solvation in Liquids, One Solvent Molecule at a Time</td>
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<tr>
<td>1/8/2010</td>
<td>Adolfo Horn, Jr.</td>
<td>Universidade Estadual do Norte Fluminense</td>
<td>Development of Coordination Compounds with Pro-Oxidant, Antioxidant, Antitumor, and Antibacterial Activities</td>
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<tr>
<td>1/27/2010</td>
<td>Amar Flood</td>
<td>Indiana University</td>
<td>Strong CH Hydrogen Bonds: The Newest Player in the Field of Anion Receptors</td>
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<td>2/24/2010</td>
<td>Alan Heyduk</td>
<td>University of California, Irvine</td>
<td>Redox-Active Ligands: Enabling Multi-Electron Reactivity at Electron-Poor Metal Centers</td>
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<tr>
<td>3/2/2010</td>
<td>Peng Chen</td>
<td>Cornell University</td>
<td>Single-Molecule Nanocatalysis and Bioinorganic Chemistry</td>
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<tr>
<td>3/4/2010</td>
<td>Vahe Bandarian</td>
<td></td>
<td>Unraveling Nature’s Paradigm for Biosynthesis of 7-Deazapurines</td>
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<td>3/10/2010</td>
<td>Kyoung-Shin Choi</td>
<td>Purdue University</td>
<td>Electrochemical Synthesis of Electrode Materials with Controlled Architectures for Use in Clean Energy Production</td>
</tr>
<tr>
<td>3/11/2010</td>
<td>Jeff DeBrabander</td>
<td>University of Texas Southwestern Medical Center</td>
<td>Natural Products: Opportunities for Discovery</td>
</tr>
</tbody>
</table>
3/25/2010  **Kip Guy**  
*St. Jude Children’s Research Hospital*  
Discovery and Development of Novel Antimalarials

3/26/2010  **István Horváth**  
*City University of Hong Kong*  
Biomass Conversion to Fuels and Fluorous Chemistry

3/29/2010  **Carol Robinson**  
*University of Oxford*  
Protein Complexes-Learning to Fly

3/30/2010  **Carol Robinson**  
*University of Oxford*  
What Can we Learn from the Mass Spectrometry Regarding the Shape of Protein

3/31/2010  **Carol Robinson**  
*University of Oxford*  
Looking Towards the Future Mass Spectrometry as a Hybrid Structural Technique

4/1/2010  **Juren Rohr**  
*University of Kentucky*  
Modifying Biosyntheses of Natural Product Anticancer Drugs by Combinatorial Biosynthesis Challenges and Solutions

4/5/2010  **Jack Taunton**  
*University of California, San Francisco*  
Cellular Secrets Revealed by Covalent Kisses

4/7/2010  **Paula Diaconescu**  
*University of California, Los Angeles*  
Reactions of Heterocycles with Electrophilic Ferroocene-Diamide Complexes

4/8/2010  **David Gin**  
*Memorial Sloan-Kettering Cancer Center*  
Synthesis of Vaccine Adjuvants and Bioactive Alkaloids

4/9/2010  **Russell Chianelli**  
*University of Texas, El Paso*  
Transition Metal Sulfide Catalytic Materials: 100 Years of Science and Application

4/15/2010  **John Gladysz**  
*Texas A&M University*  
Turning Molecules Inside-Out; a Venture into Previously Uncharted Dynamic Terrain

4/15/2010  **Kenneth Raymond**  
*University of California, Berkeley*  
Lanthanide Coordination Chemistry from Basic to Imaging

4/15/2010  **Peter Stang**  
*University of Utah*  
A Biological Self-Assembly: Predesigned Metallacycles and Metallacages via Coordination

4/30/2010  **Richard Vachet**  

SEC. 5.  
**COLLOQUIUM AND SEMINAR SPEAKERS**  
161
Using Mass Spectrometry to Study Protein Amyloid Formation

5/5/2010 Daniel Mindiola
Indiana University
Metal-Ligand Multiple Bonds: From Methane Activation and Functionalization to Catalytic Prospects

5/7/2010 Donna Chen
University of South Carolina
Characterization and Chemistry of Au-Based Bimetallic Clusters on TiO$_2$(110)

5/12/2010 Bradley Holliday
University of Texas, Austin
Functional Conducting Metalopolymer Materials

5/13/2010 Joan Broderick
Montana State University
Insights into Maturation of the [FeFe]-Hydrogenase

5/18/2010 Albert Blanchard
Yeshiva University
Tuberculosis: Finding an Achilles Heel

9/2/2010 John Tovar
John Hopkins University
Topological and Supramolecular Considerations for Organic (bio)Electronics

9/8/2010 Jerry Atwood
University of Missouri
Metal Organic Nanocapsules

9/14/2010 Philippe Guyot-Sionnest
The University of Chicago
Energy Relaxation and Transport in Colloidal Quantum Dots

9/15/2010 David Muddiman
North Carolina State University
Development and Application of Mass Spectrometry for the Early Detection of Epithelial Ovarian Cancer

9/16/2010 Jiyong Hong
Duke University
The Chemistry and Biology of Subglutinols A and B

9/20/2010 Kaz Tatsumi
Nagoya University
Organometallic Routes to Fe-S Clusters-Challenge to Model the Active Sites of Reductases

9/21/2010 Kaz Tatsumi
Nagoya University
Syntheses of Dinuclear Ni-Fe Complexes Modeling the Active Site of Hydrogenase

9/22/2010 Kaz Tatsumi
Nagoya University
Activation of Small Molecules by Coordinatively Unsaturated Transition Metal Complexes Having Bulky Thiolate or N-Heterocyclic Carbene

9/23/2010  Ken Wagener  
*University of Florida*  
Using Metathesis to Control Macromolecular Morphology

9/28/2010  Dong Hee Son  
*Texas A&M University*  
Dynamics of Energy Relaxation and Energy Transfer in Nanocrystals

9/30/2010  Sukwon Hong  
*University of Florida*  
Exploring New Ligand Designs for Asymmetric Catalysis

10/5/2010  Brian Connell  
*Texas A&M University*  
Discovery and Development of Stereoselective Carbon-Carbon Bond-Forming Reactions

10/6/2010  Dieter Söll  
*Yale University*  
The Continuing Evolution of the Genetic Code

10/12/2010  Debra Dunaway-Mariano  
*The University of New Mexico*  
Enzyme Evolution: Where Darwin Encounters Ohno

10/12/2010  Scott Medalist  
*University of Illinois*  
Discovering and Predicting New Functions in the Enolase Superfamily

10/12/2010  John Richard  
*University at Buffalo*  
A Role for Flexible Loops in Enzymatic Catalysis

10/13/2010  David Tyler  
*University of Oregon*  
Coordination Chemistry of $H_2$ and $N_2$ in Aqueous Solution: Activation Reactions and the Formation of Ammonia

10/14/2010  Jung-Mo Anh  
*University of Texas, Dallas*  
Mimicking $\alpha$-Helices for Modulating Protein Functions

10/20/2010  Raphael Raptis  
*University of Puerto Rico*  
Redox-Active Octanuclear Complexes Containing $Fe_4O_4$-Cubanes; Possible Metalloprotein Models and MRI Contrast Agents

10/21/2010  Eike Bauer  
*University of Missouri*  
New Chiral Ruthenium Phosphoramidite Complexes for the Catalytic Activation of Propargylic Alcohols

10/22/2010  Muhammad Yousaf

SEC. 5.  
COLOQUIUM AND SEMINAR SPEAKERS  
163
University of North Carolina
Integrating Surfaces with Organic Chemistry Applied to Dynamic Cell Tissue Engineering and Studies of Cell Behavior

10/26/2010  Daniel Nocera
Massachusetts Institute of Technology
The Global Energy Challenge

10/27/2010  Daniel Nocera
Massachusetts Institute of Technology
Personalized Energy for the Non-Legacy World

10/28/2010  Ken Johnson
University of Texas, Austin
New Insights into how Substrate-induced Conformational Changes Govern Enzyme

11/1/2010  Daniel Neumark
University of California, Berkeley
Frequency and Time-Domain Studies of Gas-Phase, Cluster, and Solution Dynamics Using Photoelectron Spectroscopy

11/1/2010  Daniel Neumark
University of California, Berkeley
Slow Photoelectron Velocity-Map Imaging of Negative Ions: A New Tool for Molecular Spectroscopy and Dynamic

11/2/2010  Daniel Neumark
University of California, Berkeley
Spectroscopy and Dynamics of Excess Electrons in Clusters and in Solution

11/3/2010  Daniel Neumark
University of California, Berkeley
Femtosecond and Attosecond Soft X-Ray Science: Applications to Molecules and Clusters

11/9/2010  Lane Baker
Indiana University
Measuring Holes and Gaps with Ion Conductance Microscopy

11/11/2010  Charles Garner
Baylor University
New Nitrogen and Phosphorus Ligands: Pyrazolylpyridines and the First $C-2$-Chiral Phosphinine

11/16/2010  Richard Mabbs
Washington University
Cluster Anions as Molecular Scale Electron Beam Instruments: Photodetachment Angular Distributions as Indicators of Electron-Molecule Interactions

11/17/2010  Adam Matzger
University of Michigan
Coordination Polymers: The Good, the Bad, and the Ugly

11/18/2010  David Perrin
University of British Columbia
Two Challenges on the Interface of Chemistry and Biology

164  2010 CHEMISTRY ANNUAL REPORT
11/23/2010  **Stephan Link**  
*Rice University*  
Collective Plasmon Modes in Nanoparticle Assemblies

11/29/2010  **Josef Michl**  
*University of Colorado*  
Designing Highly Oxidized Matter

11/30/2010  **Josef Michl**  
*University of Colorado*  
Designing Ferroelectric Surfaces

12/1/2010  **Josef Michl**  
*University of Colorado*  
Designing Sensitizers for Singlet Fission

12/6/2010  **Julius Rebek**  
*The Scripps Research Institute*  
Reversible Encapsulation

12/7/2010  **Julius Rebek**  
*The Scripps Research Institute*  
The Inner Space of Molecules

12/8/2010  **Julius Rebek**  
*The Scripps Research Institute*  
Functional Cavitands

12/9/2010  **Brent Sumerlin**  
*Southern Methodist University*  
New Stimuli-Responsive Macromolecules: Polymer-Protein Bioconjugates and Sweet Tooth Micelles

12/13/2010  **Elisabeth Bouwman**  
*Leiden University*  
Development of Biomimetic [NiFe] Catalysts for Hydrogen Production

12/14/2010  **Rachel Martin**  
*University of California, Irvine*  
Switched Angle Spinning NMR Instrumentation and Methods Development for Oriented Membrane Systems
### 6. Faculty, 2010

- David P. Barondeau ........................................... Assistant Professor
- James D. Batteas ........................................... Associate Professor
- Tadhig P. Begley ........................................... Professor
- David E. Bergbreiter ........................................... Professor
- John W. Bevan ........................................... Professor
- Janet F. Bluemel ........................................... Professor
- Lawrence S. Brown ........................................... Senior Lecturer
- Kevin Burgess ........................................... Professor
- Abraham Clearfield ........................................... Distinguished Professor
- Brian T. Connell ........................................... Assistant Professor
- Paul S. Cremer ........................................... Professor
- Marcetta Y. Daresbourg ........................................... Distinguished Professor
- Donald J. Daresbourg ........................................... Distinguished Professor
- Kim R. Dunbar ........................................... Distinguished Professor
- John P. Fackler ........................................... Distinguished Professor Emeritus (A)
- Francois P. Gabbai ........................................... Professor
- Holly C. Gaede ........................................... Senior Lecturer
- Yi Qin Gao ........................................... Assistant Professor
- John A. Gladysz ........................................... Distinguished Professor
- D. Wayne Goodman ........................................... Distinguished Professor
- Ganesa Gopalakrishnan ........................................... Senior Lecturer
- Michael B. Hall ........................................... Professor
- Kenn E. Harding ........................................... Professor
- Dudley Herschbach ........................................... Professor (J)
- Robert A. Hildreth ........................................... Lecturer
- Christian B. Hilty ........................................... Assistant Professor
- Timothy R. Hughbanks ........................................... Professor
- Marian Hyman ........................................... Senior Lecturer
- Arthur E. Johnson ........................................... Distinguished Professor (J)
- Wendy Keeney-Kennicutt ........................................... Instructional Assistant Professor
- Jaan Laane ........................................... Professor
- Paul A. Lindahl ........................................... Professor
- Wenshe Liu ........................................... Assistant Professor
- Robert R. Lucchese ........................................... Professor
- Ronald D. Macfarlane ........................................... Distinguished Professor
- Elmo J. Mawk ........................................... Senior Lecturer
- Masud Monwar ........................................... Lecturer
- Christine A. Mullen ........................................... Senior Lecturer
- Carlos A. Murillo ........................................... Senior Lecturer
- Joseph B. Natowitz ........................................... Distinguished Professor
- Simon W. North ........................................... Professor
- Oleg V. Ozerov ........................................... Professor
- Joanna G. Pellois ........................................... Senior Lecturer
- James D. Pennington ........................................... Senior Lecturer
- Udani A. Perera ........................................... Lecturer
- Krishan Ponnampерума ........................................... Senior Lecturer
- Gerd W. Rabe ........................................... Senior Lecturer
Frank M. Rauschel ................................. Distinguished Professor
Daniel Romo ........................................... Professor
Michael P. Rosynek ................................. Professor
David H. Russell ..................................... Professor
James C. Sacchettini ............................... Professor (J)
Patricio Santander .................................. Lecturer
Amber R. Schaefer .................................. Lecturer
Emile A. Schweikert ................................. Professor
Marlan O. Scully ............................... Professor (J)
Eric E. Simanek ...................................... Professor
Daniel A. Singleton .................................... Professor
Dong Hee Son ......................................... Assistant Professor
Elizabeth Soriaga ................................... Senior Lecturer
Manuel P. Soriaga ................................... Professor
Earle G. Stone ....................................... Lecturer
Tammy H. Tiner ...................................... Senior Lecturer
Gyula Vigh ........................................... Professor
Coran M.H Watanabe ............................. Associate Professor
Rand L. Watson ...................................... Professor
Steven E. Wheeler ................................. Assistant Professor
Vickie M. Williamson ............................. Senior Lecturer
Karen L. Wooley ..................................... 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 tenure and non-tenure track employees who were employed at any time during 2010 (01/01/2010-12/31/2010).
6.1 Professional Activities, 2010

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2010.

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 2010.
▷ 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 2010.
▷ 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 2010

National
▷ Professional Affiliation: American Chemical Society (Treasurer)
▷ Editorial/Board: Stanford Synchrotron Radiation Laboratory (Review: Proposals), Biochemistry and the Journal of Biological Chemistry (Referee: Journals)

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 2010

Spring
▷ BICH 691. — Research (total enrollment: 1)
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 227)
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 4)

Summer
▷ BICH 691. — Research (total enrollment: 1)
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 31)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 30)
▷ CHEM 691. — Research (total enrollment: 4)

Fall
▷ BICH 691. — Research (total enrollment: 1)
▷ CHEM 628. — Coordination and Bioinorganic Chemistry (total enrollment: 10)
▷ CHEM 681. — Seminar (total enrollment: 17)
▷ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

Private
▷ Protein Self-Modification Reaction Mechanisms, The Robert A. Welch Foundation, coworkers: J. Bridwell (G), C. Tsai (G)

• PUBLICATIONS DURING 2010


No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2010

  International
    ▶ Editorial/Board: ISRN Nanotechnology (Member)

  University
    ▶ Professional Affiliation: Texas A&M University Chapter of American Chemical Society (Past Chair)
    ▶ Committee/Panel: Advisory Committee - Materials Characterization Facility (Member), Executive Committee - Materials Science and Engineering (Member), Materials Science and Engineering Faculty (Member)

  Department
    ▶ Committee/Panel: Graduate Admissions and Review Committee (Chair), Graduate Admissions and Review Committee (Member), Graduate Curriculum Committee (Member), Graduate Recruiting (Coordinator), Shops Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
    ▶ CHEM 315. — Quantitative Analysis (total enrollment: 33)
    ▶ CHEM 602 — Analytical Chemistry II (total enrollment: 11)
    ▶ CHEM 691. — Research (total enrollment: 8)

  Summer
    ▶ CHEM 491. — Research (total enrollment: 1)
    ▶ CHEM 691. — Research (total enrollment: 8)

  Fall
    ▶ CHEM 415. — Analytical Chemistry (total enrollment: 38)
    ▶ CHEM 691. — Research (total enrollment: 8)
    ▶ MSEN 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

  Federal
    ▶ ARRA Solvation Studies of Responsive Polymers in Solution and at Surfaces, National Science Foundation, coworkers: X. Hong (P), A. Wan (G)
    ▶ Collaborative Research: Conduction in Confined Molecular Assemblies, National Science Foundation

2010 CHEMISTRY ANNUAL REPORT
Probing the Role of Surface Defects and Disorder on the Tribology of Nanoscopic Contacts, *National Science Foundation*

REU Site: Biological, Environmental, and Materials Chemistry Research at Texas A&M University, *National Science Foundation*

**State**

Fueling the Hydrogen Economy: Catalytic Approaches to Hydrogen, *Energy Resources Program*

**PRESENTATIONS DURING 2010**


- “Fabrication and Optical Tuning of Nanoscale Quantum Dot Assemblies for Light Harvesting and Chemical Sensing,” Louisiana State University, Eunice, LA, February, 2010. (Individual)


- “Plasmon Enhanced Photoluminescence and Optical Tuning of QD Assemblies,” University of Texas, Austin, TX, May, 2010. (Individual)


- “Creating Nanoscale Assemblies of QDs on Surfaces for Chemical Sensing and Display Applications,” Xavier University, Cincinnati, OH, September, 2010. (Individual)

- “Electronic Properties and Assembly of Zinc Metalloporphyrin Islands on Au(111) Surfaces,” AVS 57th International Symposium and Exposition, October, 2010. (Graduate, A. Schuckman)

- “Tales from the Nanoscale: Patterning of QD Arrays for Chemical Sensing and Display Applications,” Appalachian State University, Boone NC, October, 2010. (Individual)


- “Fabrication of Sub-100nm Molecular Ensembles of a Thiol-Tethered Zinc Porphyrin at the Au(111) Surface,” 66th Southwest and 62nd Southeastern Regional ACS Meeting, November, 2010. (Poster Graduate, B. Ewers)


- “Self-Assembly and Memory Effects of Porphyrin Nanofibers,” Materials Research Society Fall Meeting, November, 2010. (Poster Graduate, A. Wan)


**PUBLICATIONS DURING 2010**


• CHAIRS/PROFESSORSHIPS
  ▶ Robert A. Welch Foundation Chair and Derek Barton Professor in Chemistry [2009]

• SERVICE DURING 2010

National
  ▶ Editorial/Board: Biochimica et Biophysica Acta - Proteins and Proteomics (Editor), Bioorganic Chemistry (Member), Chemical Biology and Drug Design (Member), Comprehensive Natural Products Chemistry (Member), Molecular BioSystems (Member), Molecular Biosystems on Posttranslational Modification of Proteins (Co-Editor), Vitamins and Hormones (Member), Wiley Encyclopedia of Chemical Biology (Chair)
  ▶ Committee/Panel: NIH Mentoring Workshop for New Faculty (Co-Chair)

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

Department
  ▶ Committee/Panel: Director of Research Development Search Committee (Member), Division of Biological Chemistry (Chair), Executive Committee, (Member), Faculty Search Bio/Bio (Member), Organic Search Committee (Member), Protein Chemistry Laboratory Advisory Committee (Member), Scott Medal/Symposium Organizing Committee (Member)

Interdisciplinary/Intercollegiate
  ▶ Service Position: Life Sciences Building Executive Committee (Member), Life Sciences Building Seminar Program (Participant)

• TEACHING ASSIGNMENTS DURING 2010

Spring
  ▶ CHEM 691. — Research (total enrollment: 2)

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

Fall
  ▶ CHEM 689. — Special Topics in (total enrollment: 14)
  ▶ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

Federal
  ▶ Genomics of Coenzyme Metabolism in Bacterial Pathogens, National Institutes of Health
  ▶ Mentoring for the Future in Academic Chemistry, National Institutes of Health
Resolving the Problem of Orphan Enzyme Activities, *National Institutes of Health*

The Mechanistic Enzymology of Thiamin Biosynthesis, *National Institutes of Health*

**PRESENTATIONS DURING 2010**

- IISC, Bangalore, January, 2010. (Invited)
- Indian Institute of Technology, Kharagpur, West Bengal, January, 2010. (Invited)
- NCBS, Bangalore, January, 2010. (Invited)
- NII Delhi, January, 2010. (Invited)
- Presidency College Calcutta, Kolkata, West Bengal, January, 2010. (Invited)
- Ramakrishna University, Calcutta, Kolkata, West Bengal, January, 2010. (Invited)
- Texas Christian University, Dallas, TX, April, 2010. (Invited)
- University of South Florida, Tampa, FL, April, 2010. (Invited)
- University of Pennsylvania, Philadelphia, PA, October, 2010. (Invited)
- University of Michigan, Ann Arbor, MI, October, 2010. (Invited)
- University of Colorado, Boulder, CO, November, 2010. (Invited)
- University of Texas, Arlington, TX, November, 2010. (Invited)
- Pacificchem, December, 2010. (Invited)
- University of Texas Southwestern, Dallas, TX, December, 2010. (Invited)

**PUBLICATIONS DURING 2010**


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

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [*2004*]

• **SERVICE DURING 2010**
  **International**
  ▶ Advisory Board: IUPAC Conference on Polymers in Organic Chemistry, Doha, Qatar
  Advisory Committee (Member)

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

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

  **Department**
  ▶ Research Group: XPS User Group (Member)
  ▶ Committee/Panel: Promotion and Tenure Committee (Member), Teaching and Staff Awards Committee (Chairman)

• **TEACHING ASSIGNMENTS DURING 2010**
  **Spring**
  ▶ CHEM 228.(H) — *Organic Chemistry II* (total enrollment: 42)
  ▶ CHEM 491. — *Research* (total enrollment: 3)
  ▶ CHEM 691. — *Research* (total enrollment: 7)

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

  **Fall**
  ▶ CHEM 231. — *Techniques of Organic Chemistry* (total enrollment: 60)
• CHEM 491. — **Research** (total enrollment: 2)
• CHEM 691. — **Research** (total enrollment: 6)

**RESEARCH PROJECTS DURING 2010**

**Federal**

▷ **ARRA Solvation Studies of Responsive Polymers in Solution and at Surfaces**, *National Science Foundation*, coworkers: K. Tan (P), H. Fu (G), A. Mijilis (U), D. Policarpio (U)
▷ **Biphasic Catalysis using Soluble Polymer Supports**, *National Science Foundation*, coworkers: C. Hobbs (G), T. Khamatnurova (G), U. Priyadarshani (G), H.L. Su (G), Y.C. Yang (G)

**Private**

▷ **Synthesis, Characterization and Applications of Novel Lipophilic Metathesis Catalysts**, *Qatar National Research Fund*, coworkers: C. Hobbs (G), H. Su (G), J. Ling (U)
▷ **Phase Facilitated Catalysis and Synthesis**, *The Robert A. Welch Foundation*, coworkers: C. Hobbs (G), T. Khamatnurova (G), Y. Yang (P)

**PRESENTATIONS DURING 2010**

▷ **“Polyisobutylene-bound Ligands and Sequestrants for Transition Metal Catalysis,”** International Conference on Organometallic Chemistry, Taipei, Taiwan, 2010. (Individual)
▷ **“Designing Responsive Polymers,”** Qatar Chemical Conference, Qatar, January, 2010. (Individual)
▷ **“Designing Separability into Homogeneous Catalysts,”** Aachen, Germany, April, 2010. (Individual)
▷ **“Designing, Controlling and Using Polymer Responsive Solubility,”** Dresden, Germany, April, 2010. (Individual)
▷ **“Soluble Polyethylene Oligomers as Supports for NHC Ligands,”** 240th National American Chemical Society Meeting, Boston MA, August, 2010. (Individual)
▷ **“Soluble Polymers as Tools in Green Chemistry,”** Chulalongkorn University, Bangkok Thailand, September, 2010. (Individual)
“Soluble Polymers as Tools in Green Chemistry,” Mahidol University, Bangkok Thailand, September, 2010. (Individual)


PUBLICATIONS DURING 2010


• CHAIRS/PROFESSORSHIPS
  ▶ Davidson Chair in Science [2005]

• SERVICE DURING 2010
  National

  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 (Alternate Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 327. — Physical Chemistry (total enrollment: 31)
  ▶ CHEM 681. — Seminar (total enrollment: 4)

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

  Fall
  ▶ CHEM 327. — Physical Chemistry (total enrollment: 55)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) Spectroscopic and Computational Characterization of Non-Covalent Interactions, *National Science Foundation*, coworkers: Z. Wang (P), S. Belov (G), F. Lovas (G), B. McElmurry (G), L. Rivera (G), V. Vaks (G)

  Private
  ▶ (REN) The Structure and Dynamics of Prototypical Hydrogen-Bonded Interactions, *The Robert A. Welch Foundation*, coworkers: B. McElmurry (G), L. Rivera-Rivera (G), W. Scott (G), A. Suzhuk (G)

• PRESENTATIONS DURING 2010

- **PUBLICATIONS DURING 2010**
• SERVICE DURING 2010
  National
  ▶ Editorial/Board: National Science Foundation Panel (Review: Proposals)
  University
  ▶ Professional Affiliation: Texas A&M University Chapter of American Chemical Society (Chair)
  College
  ▶ Committee/Panel: Faculty Advisory Council (Chair), Faculty Advisory Council (Elected Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 618. — NMR Spectroscopy (total enrollment: 7)
  ▶ CHEM 691. — Research (total enrollment: 4)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▶ CHEM 462. — Inorganic Chemistry (total enrollment: 23)
  ▶ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ 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

• PRESENTATIONS DURING 2010
  ▶ “20 Years of Research on Immobilized Catalysts: A Personal Perspective,” Texas A&M University ACS Student Chapter, College Station, TX, February, 2010. (Invited)
  ▶ “HRMAS Spectroscopy as a Powerful Analytical Method for Silica Modified by Immobilized Catalysts and Polymer Coatings,” SPE Polyolefins Conference, Houston, TX, Febru-
ary, 2010.(Poster Individual)
▷ “Recognizing Opportunities and Making the Best Use of Them,” Women in Science and Engineering (WISE) Conference 2010, Texas A&M University, College Station, TX, February, 2010. (Invited)
▷ “The Nature of the Union Carbide Catalyst (\(\text{Cp}_2\text{Cr}/\text{SiO}_2\)): A Paramagnetic Solid-State NMR Study,” SPE Polyolefins Conference, Houston, TX, February, 2010. (Poster Individual)
▷ “Chelate Phosphine Linkers with Long Alkyl Chains for Immobilizing Catalysts on Oxide Supports,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), Department of Engineering and Physics, College Station, TX, April, 2010. (Poster Individual)
▷ “Homogeneous Catalysts Immobilized on Silica by Optimized Linker Systems for Superior Lifetimes and Activities,” Southern Methodist University, Dallas, TX, April, 2010. (Invited)
▷ “Phosphine Oxide Adsorption on Silica Surfaces,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), Department of Engineering and Physics, College Station, TX, April, 2010. (Poster Individual)
▷ “Rigid Biphenyl and Tetraphenylelement Linker Scaffolds that Prevent Interactions of Catalysts with Oxide Supports,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), Department of Engineering and Physics, College Station, TX, April, 2010. (Poster Individual)
▷ “New Insights on Organic-Inorganic Hybrid Materials and Polymers by Solid-State NMR Spectroscopy,” Polymer Technology Center PTC, Texas A&M University, College Station, TX, October, 2010. (Invited)
▷ “New Developments in the Department of Chemistry,” Fall Banquet of the Texas A&M Section of the ACS, College Station, TX, November, 2010. (Invited)

**PUBLICATIONS DURING 2010**
• SERVICE DURING 2010

University
▷ Service Position: Chemistry Coordinator TAMU-Qatar (Coordinator)

College
▷ Committee/Panel: Qatar Advisory Committee (Member)

Department
▷ Service Position: Chemistry 107/117 (Coordinator)
▷ Committee/Panel: Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 61)

Fall
▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 539)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 212)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 34)
▷ CHEM 116. — Molecular Science for Citizens Laboratory (total enrollment: 19)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 73)
▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 3)

• PUBLICATIONS DURING 2010
• CHAIRS/PROFESSORSHIPS
  ▶ Rachal Professorship in Chemistry [2004]

• AWARDS DURING 2010
  University
  ▶ Distinguished Achievement Award - Research, The Association of Former Students

• SERVICE DURING 2010
  University
  ▶ Committee/Panel: Sterling C. Evans Library Council (Representative)
  Department
  ▶ Research Group: NMR and Mass Spectrometry User Group (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 691. — Research (total enrollment: 9)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 5)
  Fall
  ▶ CHEM 610. — Organic Reactions (total enrollment: 20)
  ▶ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Development of an Optimized System for Non-Covalent Delivery of Proteins into Cells, National Institute of General Medical Sciences, coworkers: A. Loudet (P), A. Kamkaew (G), E. Ko (G), K. Rauwerdink (G)
  ▶ Fluorescent Probes for Multiplexed Intracellular Imaging, National Institutes of Health, coworkers: J. Jose (G), Z. Liu (G)
  ▶ ARRA Solar-Driven Catalysis, National Science Foundation, coworkers: A. Raghuraman (P), S. Khumsubdee (G), Y. Zhu (G)
  ▶ (REN) The Texas Two-Step Approach to Privileged Chirons, National Science Foundation, coworkers: D. Fedoseyenko (P), Y. Zhu (P), S. Khumsubdee (G)

• PRESENTATIONS DURING 2010
• PUBLICATIONS DURING 2010
Dipyrromethene Derivatives for Photodynamic Therapy *Journal of Medicinal Chemistry*, vol. 53, 2865-2874.


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2007]

• SERVICE DURING 2010

  International
  ▶ Committee/Panel: IUPAC Symposium (Chair)

  National
  ▶ Editorial/Board: Early Career Research Program of DOE Basic Energy Sciences (Reviewer), Oak Ridge Neutron Powder Beam Line (Member)
  ▶ Committee/Panel: ACS Cotton Gold Medal Committee (Member)

  University
  ▶ Service Position: Fulbright Scholar from Nigeria (Host)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ CHEM 635. — Introduction to X-ray Diffraction Methods (total enrollment: 13)
  ▶ CHEM 691. — Research (total enrollment: 4)

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

  Fall
  ▶ CHEM 635 — Introduction to X-ray Diffraction Methods (total enrollment: 21)
  ▶ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Separation of Americium from Curium by Ion Exchange, Department of Energy, coworkers: B. Shpeier (Research Scientist), J. Burns (G)
  ▶ (REN) The Synthesis, Structures and Chemical Properties of Macrocyclic Ligands Covalently Bonded into Layered Arrays, Department of Energy, coworkers: P. Zhang (P), J. Burns (G), V. Funderburk (U), C. Gatlin (U)
  ▶ (REN) Pillared Layered Compounds: Their Synthesis, Structure and Properties, National Science Foundation, coworkers: B. Shpeizer (Research Scientist), P. Zhang (P), K. Gagnon (G), T. Kinnibrugh (G), H. Perry (G), Z. Beal (U), T. Clover (U), J. Law (U), M. Raiford (U)

  Private
Metal Phosphonates as Crystal Engineered Solids, The Robert A. Welch Foundation, coworkers: P. Zhang (P), N. Garcia (U), C. Gatlin (U), M. Raiford (U), R. Ray (U)

• PRESENTATIONS DURING 2010
  - “Metal Phosphonates as Crystal Engineered Solids,” The Robert A. Welch, 2010.( Individual)
  - “Separation of Americium from Curium by Ion Exchange,” Savannah River Nuclear Solutions, LLC, 2010.( Individual)
  - “Weird Structures,” American Crystallographic Association Meeting, Chicago, IL, July, 2010.( Invited)
  - “Zirconium Phosphonates as Ion Exchangers for Lanthanide-actinide Separations,” Purdue University, Lafette, West Lafayette, IN, September, 2010.( Individual)

• PUBLICATIONS DURING 2010


BRIAN T. CONNELL
ASSISTANT PROFESSOR (979) 845-5746
CHEM-Organic connell@chem.tamu.edu

• SERVICE DURING 2010

National

Department
▷ Committee/Panel: Graduate Admissions and Review Committee (Member), Mass Spec User Committee (Member), NMR User Committee (Member), Organic Division Faculty Search Committee (Member), X-ray User Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

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

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

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 54)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Aerosol Growth and Chemical Compositions from Heterogeneous Processing of Organic Compounds, National Science Foundation, coworkers: A. Bugarin (G)

State
▷ Total Synthesis of Guaianolide Natural Products, Texas Higher Education Coordinating Board, coworkers: Y. Kim (P), Z. Sun (P)

• PRESENTATIONS DURING 2010

▷ “Asymmetric Synthesis of Butadien-2-ylcarbinols from Aldehydes via (Silylmethyl)allenic Alcohols,” The Dow Chemical Company BEST Symposium, Midland, MI, September, 2010.( Individual)
▷ “Asymmetric Nickel/NCN-Pincer Ligand-Catalyzed Negishi Cross-Coupling Reactions of Racemic -αBromoketones,” National Conference of SACNAS, Anaheim, CA, October,
2010. (Individual)
▷ “Discovery and Development of Stereoselective Carbon-Carbon Bond-Forming Reactions,” Texas A&M University, College Station, TX, October, 2010. (Individual)

PUBLICATIONS DURING 2010
PAUL S. CREMER

CHEM-Analytical, Biological & Phys. Chem.  cremer@chem.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▷ A.E. Martell Endowed Chair [2007]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• AWARDS DURING 2010
  National
  ▷ Fellow, American Association for the Advancement of Science
  State
  ▷ Edith and Peter O’Donnell Award, The Academy of Medicine, Engineering and Science of Texas

• SERVICE DURING 2010
  National
  ▷ Service Position: Institutes for Defense Analysis (Consultant)
  ▷ Advisory Board: NESAC/Bio (Member)
  College
  ▷ Event: Junior Faculty Success Program (Participant)
  ▷ Committee/Panel: Tenure and Promotion Advisory Committee (Member)
  Department
  ▷ Committee/Panel: Advanced Research Institute for Renewable Energy (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ CHEM 602 — Analytical Chemistry II (total enrollment: 16)
  ▷ CHEM 691. — Research (total enrollment: 14)
  Summer
  ▷ CHEM 691. — Research (total enrollment: 14)

SEC. 6.1  PROFESSIONAL ACTIVITIES  195
Fall
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 9)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Developing Label-Free Assays for Ligand Receptor Binding at Biointerfaces, Department of Defense
▷ (REN) Creating Platforms for the Proteomics of Membrane Proteins, National Institute of General Medical Sciences
▷ Probing Protein-Salt Interactions with Micro-fluidics and Nonlinear Optics, National Science Foundation

State
▷ Fueling the Hydrogen Economy: Catalytic Approaches to Hydrogen, Energy Resources Program
▷ Patterning Nanoscale Arrays by Evaporative Templating, Texas Higher Education Coordinating Board

Private
▷ The Effect of Osmolytes on Water and Protein Structure, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2010
▷ “Using Supported Lipid Bilayers for Protein Sensing and Separation,” Department of Chemistry, University of California, Riverside, CA, January, 2010. (Individual)
▷ “Using Supported Lipid Bilayers for Protein Sensing,” Texas Junior Science and Humanities Symposium, Texas A&M University, College Station, TX, January, 2010. (Individual)
▷ “Using Supported Lipid Bilayers for Protein Sensing,” The Academy of Medicine, Engineering, and Science of Texas, San Antonio, TX, January, 2010. (Individual)
▷ “How Does Urea Denature Proteins?,” Department of Chemistry, Rice University, Houston, TX, March, 2010. (Individual)
▷ “How Does Urea Denature Proteins?,” Max Planck Institute of Colloids and Interfaces, Potsdam, Germany, May, 2010. (Individual)
▷ “Hydrophobic Collapse and the Hofmeister Series,” Physics Department, Technical University of Munich, Garching, Germany, May, 2010. (Individual)
“Using Supported Lipid Bilayers for Protein Sensing and Separation,” Department of Chemistry, York University, Toronto, ON, May, 2010. (Individual)


“Detecting Biomolecules by Local pH Modulation,” Chemistry Department, Northern Illinois University, Dekalb, IL, September, 2010. (Individual)


“Creating Biosensors with Lipid Bilayers and in Bulk Solution,” Bioengineering Department, University of California, Berkeley, CA, October, 2010. (Individual)

“Detecting Biomolecules by Local pH Modulation,” Chemistry Department, University of Texas, Austin, TX, October, 2010. (Individual)

· PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Director, X-Ray Diffraction Laboratory (formerly Crystal and Molecular Structure Laboratory), Chemistry, [1985]

• AWARDS DURING 2010
  National
  ▷ Award in Inorganic Chemistry, American Chemical Society

• SERVICE DURING 2010
  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)
  ▷ Committee/Panel: Editorial Advisory Board of Advances in Inorganic Chemistry (Member), Editorial Advisory Board of Organometallics (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ CHEM 489. — Special Topics in (total enrollment: 37)
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 4)
  Summer
  ▷ CHEM 491. — Research (total enrollment: 2)
  ▷ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▷ CHEM 103. — Structure and Bonding (total enrollment: 27)
  ▷ CHEM 113. — Physical and Chemical Principles (total enrollment: 27)
  ▷ CHEM 491. — Research (total enrollment: 4)
  ▷ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ Biodegradable Copolymers Produced from Carbon Dioxide and Epoxides by Well-Defined Metal Catalysts: Mechanistic and Technology Enabling Studies, National Science Foun-
dation, coworkers: W. Chung (G), O. Karroonnirun (G), A. Moncada (G), R. Poland (G), S. Rajkumar (G), S. Wei (G), A. Yeung (G), C. Costanzo (U), C. Escobedo (U), S. Wilson (U)

Private

▷ Detection and Reaction Dynamics of Intermediates in Ruthenium Catalyzed Process, Qatar National Research Fund, coworkers: R. Poland (G), S. Wei (G)

▷ The Influence of Electronic and Steric Effects on Reactivity of Metah-(ETA-2- Aromatic) Bond: A Laser Flash Photolysis Study with Infrared Detection., Qatar National Research Fund, coworkers: R. Poland (G), S. Wei (G)

▷ Mixed Metal Cyanide Derivatives and Their Role in Catalysis, The Robert A. Welch Foundation, coworkers: W. Chung (G), O. Karroonnirun (G), A. Moncada (G), R. Poland (G), S. Rajkumar (G), S. Wei (G), S. Wilson (G), A. Yeung (G), C. Costanzo (U), C. Escobedo (U)

• PRESENTATIONS DURING 2010

▷ “Copolymerization Reactions of Carbon Dioxide and Cyclic Ethers. The Intermediacy of Cyclic Carbonates,” Inorganic/Bioinorganic Reaction Mechanisms, Kloster Banz, Germany, January 2010, 2010. (Invited)


▷ “Copolymers Produced from Carbon Dioxide and Epoxides or Oxetane. Tuning Selectivity for Copolymer vs. Cyclic Carbonate,” National Tsing Hua University, Taipei, Taiwan, May, 2010. (Invited)


▷ “Making Plastics from Carbon Dioxide. Carbon Dioxide - A Waste or a Raw Material,” National Taiwan Normal University, Taipei, Taiwan, May, 2010. (Invited)


▷ “Making Plastics from Carbon Dioxide,” Northwestern University, Evanston, IL, November, 2010. (Invited)

• PUBLICATIONS DURING 2010


as Chemical Feedstock (pp. 213-248). Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim.


MARCETTA Y. DARENSBOURG

DISTINGUISHED PROFESSOR (979) 845-5417
CHEM-Inorganic Chemistry marcetta@chem.tamu.edu

• SERVICE DURING 2010

International
▷ Editorial/Board: Chemical Communications Editorial Advisory Board (Member), European Journal of Inorganic Chemistry (Guest Editor), Various Manuscripts (Reviewed)

National
▷ Professional Affiliation: Inorganic Chemistry Editorial/Board (Member)
▷ Editorial/Board: Various Journals (Referee: Journals)
▷ Committee/Panel: American Chemical Society’s Petroleum Research Fund (Advisory Board), National Science Foundation Center for Chemical Innovation Science Advisory Board (Member)

College
▷ Service Position: Junior Faculty Success Program (Participant)
▷ Committee/Panel: Diversity Committee (Member)

Department
▷ Research Group: ESR User Group (Member), NMR User Group (Member), X-ray Diffraction User Group (Member)
▷ Committee/Panel: Advisory Council (Member), Faculty Awards (Member), Library Committee (Member), Organic Division Faculty Search Committee (Chair), P&T Committee (Member), Space Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 489. — Special Topics in (total enrollment: 12)
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 8)

Summer
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 691. — Research (total enrollment: 7)

Fall
▷ CHEM 362. — Descriptive Inorganic Chemistry (total enrollment: 26)
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2010
Federal
▷ (REN) Bioorganometallic Chemistry of Enzyme Active Sites with Focus on Hydrogenase, *National Science Foundation*, coworkers: C. Hsieh (P), R. Bethel (G), S. Brothers (G), J. Denny (G), J. Hess (G), R. Jenkins (G), T. Pinder (G), R. Pulukkody (G), M. Singleton (G), R. Chupik (U), P. Duttweiler (U), A. Lunsford (U), A. Todd (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), S. Brothers (G), J. Denny (G), J. Hess (G), R. Jenkins (G), T. Pinder (G), R. Pulukkody (G), M. Singleton (G), R. Chupik (U), P. Duttweiler (U), A. Lunsford (U), A. Todd (U)

• PRESENTATIONS DURING 2010
▷ “Organoiron Components in *H*₂*ase* Enzyme Active Sites,” University of Wisconsin, Madison, WI, February, 2010. (Invited)
▷ “Hydrogenase Active Sites: A New Paradigm for Natural Product-Inspired Synthesis Based on Organometallic Chemistry,” F. Gordon A. Stone - Inorganic and Organometallic Chemistry Symposium, Baylor University, Baylor, TX, May, 2010. (Invited)
▷ “Faculty Research Presentations to REU Students,” Texas A&M University, College Station, TX, June, 2010. (Invited)
▷ “Towards Synthetic Analogues of Hmd or [Fe]-Hydrogenase Active Site and A Supramolecular Cavity for [FeFe]-Hydrogenase Active Site,” 9th Internation Hydrogenase Conference, Uppsala, Sweden, June, 2010. (Invited)
▷ “A Cyclodextrin Host/Guest Approach to a Hydrogenase Active Site Biomimetic Cavity,” 5th International Symposium on Bioorganometallic Chemistry, Ruhr-Universitat Bochum, Bochum, Germany, July, 2010. (Poster Invited)
▷ “Approaches to Synthetic Models Relating to the Maturation of [FeFe]Hydrogenase,” CBI Symposium, Texas A&M University, College Station, TX, August, 2010. (Poster Invited)
▷ “Bioinorganic and Bioorganometallic Chemistry: Biomimetics of H₂ase Active Sites, Dinitrosyl Iron Complexes, and Ni-biomolecules,” First Year Orientation Session, Texas A&M University, College Station, TX, August, 2010. (Poster Invited)
“The NO Release Ability of a Trinitrosyl Iron Complex (TNIC) Stabilized by an N-Heterocyclic Carbene,” CBI Symposium, Texas A&M University, College Station, TX, August, 2010.(Poster Invited)

“Biomimetics of Hydrogenase Active Sites: Challenges and Explorations,” Pacific Northwest National Laboratory - Center for Molecular Electro catalysis, Richland, WA, October, 2010.(Poster Invited)

“Biomimetics of Hydrogenase Active Sites: Challenges and Explorations,” Portland State University, Portland, OR, October, 2010.(Invited)

“Influence of Sulfoxygenation on the Properties of Dithiolato-Bridged Biomimetics of the [FeFe]-Hydrogenase Active Site,” 2010 PACIFICHEM, Honolulu, HI, December, 2010.(Invited)

- PUBLICATIONS DURING 2010

SEC. 6.1 PROFESSIONAL ACTIVITIES
KIM R. DUNBAR
DISTINGUISHED PROFESSOR
CHEM-Inorganic Chemistry
dunbar@chem.tamu.edu

- CHAIRS/PROFESSORSHIPS
  - Davidson Chair in Science [2004]

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  - Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  - Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

- SERVICE DURING 2010

  International
  - Advisory Board: American Advisor for Molmagnet, The European Funding Network for Research on Magnetism (Advisor), International Conference on Molecule-Based Magnets (Member)

  National
  - Professional Affiliation: American Association for the Advancement of Science (Fellow), American Chemical Society (Member), American Institute of Chemists (Fellow), Kappa Mu Epsilon National Mathematics Honor Society (Member), New York Academy of Science (Member), Phi Lambda Upsilon Chemical Honorary, Nu Chapter (Member), Pi Sigma Pi National Scholastic Honorary (Member), Sigma Xi Chemical Honorary (Member)
  - Event: Gordon Research Conference Council (Member)
  - Editorial/Board: *Inorganic Chemistry* (Associate Editor)

  University
  - Committee/Panel: Committee for the Association of Former Students Teaching Award (Chair)

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

  Department
  - Committee/Panel: NMR Users Committee (Member), SQUID Instrumentation Committee (Chair), X-ray Committee (Member)

- TEACHING ASSIGNMENTS DURING 2010

  Spring
  - CHEM 433. — *Advanced Inorganic Chemistry Laboratory* (total enrollment: 11)
  - CHEM 491. — *Research* (total enrollment: 1)
  - CHEM 691. — *Research* (total enrollment: 12)

  Summer
CHEM 491. — Research (total enrollment: 2)  
CHEM 691. — Research (total enrollment: 12)

Fall
CHEM 433. — Advanced Inorganic Chemistry Laboratory (total enrollment: 10)  
CHEM 491. — Research (total enrollment: 1)  
CHEM 691. — Research (total enrollment: 10)

• RESEARCH PROJECTS DURING 2010

Federal
(REN) Design Principles for Nanomagnets Based on Molecules-Investigation of Effect of Spin, Orbital and Molecular Shape Anistropies, Department of Energy, coworkers: A. Prosvirin (P), X. Wang (P), H. Zhao (P), A. Brown (G), M. Saber (G), C. Sanders (G), H. Southerland (G), M. Woodie (U)
(REN) Molecular Magnets Based on Modular Approach: Investigation of Coupling Anisotropy and Electronic Factors on Bistability, Department of Energy, coworkers: X. Wang (P), H. Zhao (P), A. Brown (G), M. Saber (G), C. Sanders (G), H. southerland (G), M. Woodie (U), A. Prosvirin (Staff)
(REN) Magnetism, Conductivity and the Interplay between these Properties in d, p and f Block Materials with Organocyanide Ligands, National Science Foundation, coworkers: A. Ota (P), H. Zhao (P), C. Avendano (G), N. Lopez (G), Z. Zhang (G), A. Dittmer (U)

Private
(REN) Magnetism, Conductivity and the Interplay between these Properties, The Robert A. Welch Foundation, coworkers: H. Zhao (P), C. Avendano (G), N. Lopez (G), Z. Zhang (G), A. Dittmer (U)

Other
(REN) Design, Synthesis, and Photochemistry of New Ru(II) Complexes as Potential Photo-Cisplatin Analogs, Ohio State University, coworkers: C. Avendano (G), Z. Li (G), N. Lopez (G), B. Pena (G), A. Dittmer (U)

• PRESENTATIONS DURING 2010
Michigan State University, East Lansing, MI, February, 2010.( Invited)
The University of Michigan, Ann Arbor, MI, February, 2010.( Invited)
Wayne State University, Detroit, MI, February, 2010.( Invited)
“ Supramolecular Nanotubes Based on Ln(III) Ions and tptz Ligands: Gas Sorption and Single Crystal X-ray Studies of [Ln(tptz)(HCOO)3]2.5H2O (Ln = Pr, Sm),” ACS Meeting, San Francisco, CA, March, 2010.( Contributed)
Boston University, Boston, MA, April, 2010.( Invited)
University of California, Berkeley, CA, April, 2010.( Invited)
“R.B. Woodward Lectures in the Chemical Sciences,” Harvard University, Cambridge, MA, April, 2010.( Invited)
PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]/
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]/

• SERVICE DURING 2010
  National
  ▶ Professional Affiliation: American Association for the Advancement of Science (Fellow), American Chemical Society (Career Consultant), American Crystallographic Association (Member), American Institute of Chemists (Fellow), Inorganic Synthesis Corporation (Member)
  ▶ Advisory Board: Chemistry Department, Valparaiso University (Advisory Committee)
  ▶ Editorial/Board: Comments on Inorganic Chemistry (Editor), Journal of Cluster Science (Board Member), Profiles in Inorganic Chemistry (Editor)
  ▶ Committee/Panel: National Science Foundation, Fellowship Committee (Member)
  Regional
  ▶ Committee/Panel: College Station Rotary Service Club (President), ELCA Campus Ministry for the Brazos Valley (Vice President)
  University
  ▶ Committee/Panel: National Advisory Board PEER, College of Veterinary Medicine (Member), Parencia Chair Committee for AgrLife in Entomology (Member), University Summer Performance Series Committee (Board Member), Texas A&M UniversityChapter Sigma Xi, Planning and Executive Committees (Member)
  College
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 491. — Research (total enrollment: 2)
  Fall
  ▶ CHEM 491. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Private
  ▶ Camille and Henry Dreyfus Foundation Senior Scientist Mentor Grant, Camille and Henry Dreyfus Foundation, coworkers: B. Emerich (U), M. Freeman (U), A. James (U), A. Rozanski (U)

• PRESENTATIONS DURING 2010
  ▶ “Novel Findings Regarding Metal-Metal Interactions and Structures of Closed Shell nd10 Copper(I) and Gold(I),” 239th ACS National Meeting, San Francisco, CA, March, 2010. (Individual)
  ▶ “Scientific Fraud/Misconduct,” April, 2010. (Individual)
  ▶ Baylor University, Waco, TX, June, 2010. (Individual)

• PUBLICATIONS DURING 2010
• CHAIRS/PROFESSORSHIPS
  ▶ Davidson Chair in Science /2008/

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, /2006/

• SERVICE DURING 2010

  Department
  ▶ Research Group: Laboratory For Molecular Simulation Users Committee (Member), NMR Users Committee (Member), X-Ray Powder Users Committee (Chair), X-Ray Single Crystal Users Committee (Member)
  ▶ Committee/Panel: Graduate Awards Committee (Chair), Graduate Curriculum Committee (Chair), Inorganic Chemistry Division (Member), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ CHEM 104. — Chemistry of the Elements (total enrollment: 17)
  ▶ CHEM 114 — Quantitative Analysis (total enrollment: 16)
  ▶ CHEM 681. — Seminar (total enrollment: 40)
  ▶ CHEM 691. — Research (total enrollment: 6)
  ▶ CHEM 695. — Frontiers in Chemical Research (total enrollment: 49)

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

  Fall
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 633. — Principles of Inorganic Chemistry (total enrollment: 17)
  ▶ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Cationic Boranes - Synthesis, Reduction, and Generation of Radicals, National Science Foundation, coworkers: D. Cao (P), K. Chansaenpak (G), M. Hirai (G), S. James (G), I. Ke (G), L. Leamer (G), T. Lin (G), C. Wade (G), H. Zhao (G)
(REN) Cationic Lewis Acids as Anion Receptors, *National Science Foundation*, coworkers: K. Chansaenpak (G), M. Hirai (G), S. James (G), I. Ke (G), L. Leamer (G), T. Lin (G), C. Wade (G), H. Zhao (G)

**Private**

- Synthesis and Reduction Chemistry of α-Phosphonyl-Carbocations and α-Phosphonio-Carbocations, *The Robert A. Welch Foundation*, coworkers: Y. Kim (G), T. Lin (G)

### PRESENTATIONS DURING 2010

- “Strategies to Increase the Lewis Acidity of Polyfunctional Main Group Derivatives,” 2010. (Invited)
- “Anion Sensing with Cationic Main Group Lewis Acids,” University of California, San Diego, CA, January, 2010. (Individual)
- “Heavier Main Group Lewis Acids,” University of Alberta, Edmonton, Canada, September, 2010. (Individual)
- “Heavier Main Group Lewis Acids,” University of Calgary, Calgary, Canada, September, 2010. (Individual)
- “Heavier Main Group Lewis Acids,” University of Wisconsin, Madison, WI, October, 2010. (Individual)
- “A Bidentate Lewis Acidic Borane with a Telluronium Ion as an Anion-binding Site,” Pacifichem, Honolulu, Hawai, December, 2010. (Individual)
• PUBLICATIONS DURING 2010
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  ▶ Undergraduate Advisor, Chemistry Undergraduate Advising Office, Chemistry, //

• **SERVICE DURING 2010**

  **National**
  ▶ Professional Affiliation: American Chemical Society, Chemical Education Division (Member), Biophysical Society (Member)
  ▶ Editorial/Board: Langmuir (Reviewer)
  ▶ Committee/Panel: National Science Foundation Research Experience for Undergraduates (Panelist)

  **University**
  ▶ Event: Faculty Teaching Academy (Participant), Sciences Career Fair (Volunteer)
  ▶ Committee/Panel: Faculty Advisory Board, Center for Teaching Excellence (Member), Faculty Senate (Faculty Senator - 10), Faculty Senate: Bylaw Committee (Chair), Faculty Senate: Committee on Committees (Member), Faculty Senate: The Academic Affairs Committee (Member), Faculty Senate: The Personnel and Welfare Committee (Member), Parent’s Council, University Children’s Center (Member), Research Roadmap Committee (Member), REU Workshop (Panelist), Search Committee, Assistant Dean for Undergraduate Research (Member), Writing Course Advisory Committee (Member)

  **College**
  ▶ Committee/Panel: Undergraduate Program Committee (Member)

  **Department**
  ▶ Event: Chemistry Open House (Volunteer), Summer Research Experience for Undergraduates (Director)
  ▶ Committee/Panel: Academic Operations Council (Member), Council on Undergraduate Research (Member), Teaching Awards Committee (Member), Undergraduate Awards Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**
  ▶ CHEM 106. — Molecular Science for Citizens (total enrollment: 54)
  ▶ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 22)

  **Summer**
  ▶ CHEM 491. — Research (total enrollment: 18)

  **Fall**
  ▶ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 14)
CHEM 481. — Seminar (total enrollment: 21)

- RESEARCH PROJECTS DURING 2010
  
  Federal
  - REU Site: Biological, Environmental, and Materials Chemistry Research at Texas A&M University, National Science Foundation

  No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 631. — Statistical Thermodynamics (total enrollment: 11)

• PUBLICATIONS DURING 2010


Resigned 07/31/2010.
JOHN A. GLADYSZ

DISTINGUISHED PROFESSOR
CHEM-Organic/Organometallic Chemistry

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gladysz@chem.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▶ Dow Chair in Chemical Invention [2007]

• SERVICE DURING 2010

  International
  ▶ Advisory Board: International Conference on Organometallic Chemistry (ICOMC) (Member), Perugia Fluorine Days (Member)

  National
  ▶ Advisory Board: New Journal of Chemistry (Member)
  ▶ Editorial/Board: Chemical Reviews (Associate Editor), Sheffield/Academic Press Postgraduate Series (Member)
  ▶ Committee/Panel: ACS Committee on Data Accessibility, Integrity, and Stewardship (Member), Organometallics Editor Search Committee (Member)

  University
  ▶ Committee/Panel: Distinguished Lecture Committee (Member), Executive Committee, Distinguished Professors (Member)

  Department
  ▶ Committee/Panel: Awards Committee (Member), Executive Advisory Committee (Member), Organic Division (Chair)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ CHEM 691. — Research (total enrollment: 10)

  Summer
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 10)

  Fall
  ▶ CHEM 691. — Research (total enrollment: 10)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Complexes in Which sp Carbon Chains Span Two Metals, National Science Foundation, coworkers: J. Breitenfeld (Visiting Scientist), R. Herrmann (Visiting Scientist), S. Dey (Research Associate), S. Gauthier (Research Associate), Y. Kobayashi (Research Associate), N. Weisbach (Research Associate), Z. Baranova (G), M. Clough (G)

  Private
Phase Transfer Activation and Recycling of Ruthenium Catalysts for RCM and ROMP, Qatar National Research Fund, coworkers: X. Zhenxing (Research Associate)

Fluorous Chemistry without Fluorous Solvents: New Catalyst Recovery Protocols based upon Fluoropolymers, The Robert A. Welch Foundation, coworkers: J. Guerrero-Leal (Research Assistant), M. Clough (G), A. Sullivan (G), B. Macha (U), D. Mandal (U)

Selective Methane Oxidations in Fluorous Media, The Robert A. Welch Foundation

Industrial

Methane Oxidation in Fluorous Media, Edwards Nanoscience, Inc

Presentations During 2010


“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” Louisiana State University, Baton Rouge, LA, March, 2010. (Invited)

“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” University of Arkansas, Fayetteville, AR, March, 2010. (Invited)


“Werner Complexes as Organocatalysts,” CARLa Winter School on Homogeneous Catalysis, Heidelberg Germany, March, 2010. (Contributed)

“Turning Molecules Inside-Out; a Venture into Previously Uncharted Dynamic Terrain,” 15th Annual F.A. Cotton Medal for Excellence in Chemical Research, College Station, TX, April, 2010. (Invited)


Publications During 2010


• CHAIRS/PROFESSORSHIPS
  ▷ Robert A. Welch Foundation Chair in Chemistry [1994]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▷ Director, Center for Surface Science and Catalysis, Chemistry, []

• AWARDS DURING 2010
  Regional
  ▷ Southwest Regional Science Award, American Chemical Society

• SERVICE DURING 2010
  National
  ▷ Editorial/Board: Topics in Catalysis, Catalysis Letters, Journal of Molecular Catalysis A: Chemical (Editorial Advisory Board)
  ▷ Research Group: XPS User Group (Member)
  ▷ Advisory Board: Industry University Cooperative Chemistry Program (Representative)
  ▷ Committee/Panel: Awards Committee (Member), Electronics and Machine Shop User Group (Machine Shop Liason) (Member), Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ CHEM 623. — Surface Chemistry (total enrollment: 15)
  ▷ CHEM 691. — Research (total enrollment: 5)
  Summer
  ▷ CHEM 691. — Research (total enrollment: 5)
  Fall
  ▷ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ (REN) The Physical and Chemical Properties of Nanostructured Mixed-Metal Catalysts, Department of Energy, coworkers: K. Katsiev (P), S. McMchure (P), Z. Yan (P), M. Lundwall (G), J. Wang (G)
  ▷ "State"
Fueling the Hydrogen Economy: Catalytic Approaches to Hydrogen, *Energy Resources Program*, coworkers: M. Lundwall (G), S. Skiles (G), F. Yang (G), Z. Zhou (G)

**International**

- Activation Studies with Cobalt Catalysts for Gas-to-Liquid Conversion, *Qatar Foundation*, coworkers: Z. Yan (P), J. Wang (G), Z. Zhou (G)

**Other**


**PRESENTATIONS DURING 2010**

- Notre Dame University, South Bend, IN, January, 2010. (Invited)
- ACS National Meeting, Boston, MA, August, 2010. (Invited)

**PUBLICATIONS DURING 2010**


• SERVICE DURING 2010

Department
▷ Event: “Hands on Experience in Chemistry” in National Chemistry Week (Organizer)
▷ Committee/Panel: Advisory Council (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 287)

Summer
▷ CHEM 228. — Organic Chemistry II (total enrollment: 107)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 63)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 284)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 83)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 38)

No report received from faculty member.
MICHAEL B. HALL

PROFESSOR
CHEM-Inorganic Chemistry

(979) 845-7361
hall@science.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▶ Davidson Chair in Science [2004]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▶ Executive Associate Dean, Main Office, College of Science, [2002]
  ▶ Director, Laboratory for Molecular Simulation, Chemistry, [1997]

• SERVICE DURING 2010
  University
  ▶ Committee/Panel: Supercomputer 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: Computer User Group (Chair), IT Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 641. — Structural Inorganic Chemistry (total enrollment: 23)
  ▶ CHEM 691. — Research (total enrollment: 2)
  Summer
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691 — Research (total enrollment: 3)
  Fall
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) Modeling Interfaces Through an Extension of Continuum Mechanics to the Nanoscale with Application to Fracture, Debonding, and Composites, Air Force Office of Scientific Research

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2010 CHEMISTRY ANNUAL REPORT
(REN) Theoretical Studies of Inorganic, Organometallic, and Bioinorganic Systems, National Science Foundation, coworkers: A. Gamiz-Hernandez (P), C. Liu (P), X. Yang (P)

Private

▷ Computational Investigation of the Reactions of Olefins with Nickel Dithiolenes, Qatar National Research Fund, coworkers: L. Dang (P), X. Yang (P)

▷ (REN) Computational Chemistry of Transition Metal Systems, The Robert A. Welch Foundation, coworkers: J. Keith (P), E. Trufan (P), I. Milovanovic (G), A. Renz (G), Z. Xu (G)

Other

▷ (REN) Dinuclear Complexes with an All Carbon Cyclopentadienyl Frame, University of Northern Iowa

• PRESENTATIONS DURING 2010

▷ “Modelling Transition Metal Reaction,” IRMG Inorganic/Bioinorganic Reaction Mechanism, Kloster Banz, Germany, January, 2010.( Invited)

▷ “Modelling Hydrogenases Activity,” 9th International Hydrogenase Conference, Uppsala, Sweden, June, 2010.( Invited)


• PUBLICATIONS DURING 2010


KENN E. HARDING

PROFESSOR (979) 845-5433
CHEM-Organic Chemistry harding@chem.tamu.edu

• AWARDS DURING 2010
  College
    ▶ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2010
  National
    ▶ Professional Affiliation: Phi Kappa Phi Honor Society (President)

  College
    ▶ Committee/Panel: Teaching Lab Safety Committee (Member)

  Department
    ▶ Service Position: Organic Teaching Laboratories (Coordinator)
    ▶ Committee/Panel: Chemistry Education Committee (Member), Cume Preparation and Grading (Participant), Graduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
    ▶ CHEM 647. — Spectra of Organic Compounds (total enrollment: 18)
    ▶ CHEM 685. — Directed Studies (total enrollment: 1)
    ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 14)

  Summer
    ▶ CHEM 227. — Organic Chemistry I (total enrollment: 68)
    ▶ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 40)

  Fall
    ▶ CHEM 227.(H) — Organic Chemistry I (total enrollment: 45)
    ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 4)

No report received from faculty member.
• AWARDS DURING 2010

College
▷ Outstanding Staff Achievement Award, College of Science

• SERVICE DURING 2010

University
▷ Professional Affiliation: Christian Faculty Network (Member)
▷ Event: TAMU Veritas Forum (Host/Organizer)
▷ Advisory Board: Aggie Christian Graduate (Faculty Advisor)

Department
▷ Event: 18th Annual Chemistry Open House and Science Exploration Gallery (Contributor)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 79)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 86)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 67)

No report received from faculty member.
• SERVICE DURING 2010

National
▷ Editorial/Board: NMR in Biomedicine, Chemical Reviews, Analytical Chemistry, Biochemistry, National Science Foundation (Review: Proposals)

University
▷ Committee/Panel: Executive Committee, Professional Program in Biotechnology (Member)

Department
▷ Committee/Panel: Information Technology Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ BICH 691. — Research (total enrollment: 2)
▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 307)
▷ CHEM 691. — Research (total enrollment: 5)

Summer
▷ BICH 691. — Research (total enrollment: 2)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 5)

Fall
▷ BICH 691. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

Federal
▷ CAREER: Biochemical Reaction Mechanisms by Real-Time Hyperpolarization Enhanced Nuclear Magnetic Resonance, National Science Foundation, coworkers: S. Bowen (G), Y. Lee (G), M. Ragavan (G), G. Sekar (G), H. Zeng (G)

Private
▷ Metallocene Catalyzed Polymerization Investigated by Hyperpolarized NMR, American Chemical Society
▷ Structure and Function of Membrane Proteins by NMR Using DNP Hyperpolarization, Camille and Henry Dreyfus Foundation, coworkers: S. Bowen (G), S. Hwang (G), Y. Lee (G), M. Ragavan (G), G. Sekar (G), H. Zeng (G)
Molecular Basis for Autotransporter Function, *The Robert A. Welch Foundation*, coworkers: S. Hwang (G), G. Sekar (G), H. Zeng (G)

Structural Perspectives on Transmembrane Helix Assembly by NMR, *The Robert A. Welch Foundation*, coworkers: S. Hwang (G), G. Sekar (G)

**PRESENTATIONS DURING 2010**

“Chemical and Biochemical Reactions Studied by Dynamic Nuclear Polarization Enhanced NMR,” University of California Santa Barbara, Santa Barbara, CA, January, 2010. (Invited)

“Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” University of Georgia, Athens, GA, February, 2010. (Invited)

“Characterization of Transient Species in Reactions Studied by DNP-NMR,” 51st Experimental Nuclear Magnetic Resonance Conference, Daytona Beach, FL, April, 2010. (Poster Individual)


“Quantitative Analysis of Enzyme Catalyzed Reactions by Hyperpolarized NMR,” 51st Experimental Nuclear Magnetic Resonance Conference, Daytona Beach, FL, April, 2010. (Poster Individual)

“Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” Eidgenössische Technische Hochschule, Zürich, Switzerland, July, 2010. (Invited)


**PUBLICATIONS DURING 2010**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, First Year Chemistry Program, Chemistry, [2010]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2010

  National
  ▶ Event: North American Solid State Chemistry Conference (Organizer)

  Department
  ▶ Research Group: X-Ray Diffraction User Group (Member)
  ▶ Service Position: Graduate Admissions and Recruiting (Department Coordinator)
  ▶ Committee/Panel: Computer User Group (Member), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ CHEM 634. — Physical Methods in Inorganic Chemistry (total enrollment: 13)
  ▶ CHEM 691. — Research (total enrollment: 4)
  ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 18)

  Summer
  ▶ CHEM 691. — Research (total enrollment: 4)

  Fall
  ▶ CHEM 673. — Symmetry and Group Theory in Chemistry (total enrollment: 16)
  ▶ CHEM 691. — Research (total enrollment: 3)
  ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 35)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Investigation of Magnetism in Discrete Rare Earth Clusters and Low Dimensional Solids, National Science Foundation, coworkers: S. Dempsey (G), L. Roy (G), L. Sweet (G)

No report received from faculty member.
• SERVICE DURING 2010

College
▷ Service Position: Susan M. Arseven Memorial Award (Organizing Board)
▷ Event: Sixteenth Annual Women in Science and Engineering Career Development Conference, Breaking Barriers Through Communication (Organizing Board)
▷ Advisory Board: Women in Science and Engineering Executive Board (Member)
▷ Committee/Panel: Ethel Ashworth-Tsutsui Memorial Awards in Research and Mentoring (Organizing Board)

Department
▷ Service Position: Chemistry 320 Instrumental Analysis Laboratory (Coordinator), Graduate Studies (Associate Advisor)
▷ Committee/Panel: Analytical Laboratories Review Committee (Member), Graduate Admissions and Review Committee (Member), Graduate Awards Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 320. — Instrumental Analysis Laboratory (total enrollment: 26)
▷ CHEM 686. — Ethics in Chemical Research and Scholarship (total enrollment: 76)

Retired 08/31/2010.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Associate Director, First Year Chemistry Program, Chemistry,

• AWARDS DURING 2010

State
  ▶ Piper Professor Award, Minnie Stevens Piper Foundation

University
  ▶ Fellow, Wakonse
  ▶ Student Led Award - Teaching Excellence, Texas A&M University

• SERVICE DURING 2010

Regional
  ▶ Service Position: American Chemical Society Local Chapter (Alternate Councilor)
  ▶ Event: 7th graders of Jane Long Middle School in Bryan (Demonstration Coordinator)

University
  ▶ Service Position: Age of Oak (Faculty Advisor), Aggie School Volunteers (Faculty Advisor), ATMentors (Member), Calibrated Peer Review for Texas A&M University (Master Administrator), Century Scholars, Uscholar, Texas A&M University Scholars (Mentor), Dean of Faculties (Mediator), Graduate Teaching Academy (Fellow), Graduate Teaching Academy (Mentor), Instructional Technology Showcase, Outside the Box Uses of Elearning (Panelist), Instructional Technology Showcase, Second Life (Panelist), Physical Science - Youth Adventure Program (Instructor), Rugby Little Sisters (Faculty Advisor), Teaching at the University Level, APECS (Association of Polar Early Career Scientists) Career Development Workshop, IPY Oslo Science Conference, The Research Council of Norway (Panelist), Texas Environmental Action Coalition (Faculty Advisor), Using Second Life to Teach Across the Disciplines, 6th Annual Teaching with Technology (Panelist)
  ▶ Committee/Panel: CTE Portal Committee (Member), Disability Services Faculty Advisory Board (Member), Faculty Senate Sub-committee on the Status of Non-Tenure Track Faculty (Co-Chair), Faculty Senate Task Force for Academic Excellence (Member), GLBT Members of the University Community (ALLY), Organization for Professional Academic Lecturers Plus NTTF (Co-Chair), Texas A&M University Second Life User Group (Member)

College
  ▶ Event: All Chemistry Events and Pentathalon, Texas Science Olympiad (Coordinator), Mitchell Institute for Fundamental Physics (Chemistry Coordinator), Texas A&M Regional Junior Science Bowl (Judge), Texas A&M Regional Science Bowl (Judge), Texas Science Olympiad Coaches Clinic (Co-Organizer), Texas Science Olympiad Coaches Clinic (Presenter)
Department
▷ Service Position: 5th Comprehensive Review of the MCAT Exam (Reviewer), Chemistry 116 (Coordinator), Chemistry Open House and Exploration Gallery (Coordinator)
▷ Event: First Year Chemistry Study Hall and Computer Lab (Participant)
▷ Committee/Panel: TA Training (Speaker)

- TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 519)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 48)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 49)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 24)
▷ CHEM 485.(H) — Directed Studies (total enrollment: 6)

Fall
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 517)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 244)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 45)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 108)
▷ CHEM 485.(H) — Directed Studies (total enrollment: 5)

- PRESENTATIONS DURING 2010

▷ “How I Learned to Structure My Class Lessons Learned,” Texas A&M University Faculty Teaching Academy, February, 2010.( Invited)
▷ “Large Classrooms are Two-way Streets,” Texas A&M University Faculty Teaching Academy, February, 2010.( Invited)
▷ “Chemistry at Texas A&M University,” St. Joseph School, Bryan, TX, April, 2010.( Invited)
▷ “Second Life,” South Conference, Canyon of the Eagles, TX, April, 2010.( Invited)
▷ “Chemistry and Second Life,” ITS Workshop: ReBOOT CAMP Second Life, Texas A&M University, College Station, TX, August, 2010.( Invited)
▷ “New Faculty Orientation,” NTTF at Texas A&M University, College Station, TX, August, 2010.( Invited)
▷ “The Interwebs: Collaboration across the Virtual Spaces of Twitter and Facebook, and Second,” University of Texas, Denton, TX, August, 2010.( Invited)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Professor (J), Physics and Astronomy, [2007]

• SERVICE DURING 2010

  International
  ▶ Editorial/Board: *International Journal of Spectroscopy* (Board Member), *Journal of Molecular Structure* (Editor), *Laser Chemistry* (Board Member)
  ▶ Committee/Panel: International Committee, European Congress on Molecular Spectroscopy (Elected Member)

  National
  ▶ Professional Affiliation: Alexander von Humboldt Association of America (Co-Chair), Alexander von Humboldt Association of America (President)
  ▶ Editorial/Board: Frontiers of Molecular Spectroscopy (Editor)

  University
  ▶ Committee/Panel: Council of Faculty Senate Speakers (Member)

  Department
  ▶ Committee/Panel: Faculty Awards Committee (Member), Graduate Student Awards Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ CHEM 322. — Physical Chemistry for Engineers (total enrollment: 90)
  ▶ CHEM 691. — Research (total enrollment: 3)

  Summer
  ▶ CHEM 327. — Physical Chemistry (total enrollment: 24)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 3)

  Fall
  ▶ CHEM 322. — Physical Chemistry for Engineers (total enrollment: 37)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

  Private
• PRESENTATIONS DURING 2010


▷ “Raman Spectra and Internal Rotation Potential Energy Function of Butadiene and its Deuterated Isotopomers,” Austin Symposium on Molecular Structure, Austin, TX, March, 2010. (Poster Individual)

▷ “Spectroscopic and Ab Initio Investigation of Intramolecular \(\pi\)-Type Hydrogen Bonding,” Austin Symposium on Molecular Structure, Austin, TX, March, 2010. (Invited)


• PUBLICATIONS DURING 2010


• PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, Biology Interface Training Program, Chemistry, //

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: Scientific Journals (Referee: Journals)
  ▶ Committee/Panel: National Institutes of Health (Panelist)
  University
  ▶ Committee/Panel: Biological Clocks External Advisory Committee (Member)
  Department
  ▶ Committee/Panel: Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BICH 689. — Special Topics in (total enrollment: 8)
  ▶ BICH 691. — Research (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 4)
  Summer
  ▶ BICH 691. — Research (total enrollment: 3)
  ▶ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▶ BICH 689. — Special Topics in (total enrollment: 12)
  ▶ BICH 691. — Research (total enrollment: 2)
  ▶ CHEM 489. — Special Topics in (total enrollment: 11)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Iron in Mitochondrial Physiology and Disease, Department of Health and Human Services, coworkers: L. Lindahl (Visiting Scientist), M. Chakrabarti (P), A. Cockrell (G), G. Holmes-Hampton (G), N. Jhurry (G), S. McCormick (G), R. Miao (G), J. Park (G), N. Williams (U)
  ▶ Training at the Chemistry-Biology Interface, National Institute of General Medical Sciences
(REN) Bioinorganic Chemistry of Carbon Monoxide Dehydrogenase, National Institutes of Health

Integrated Modeling and Analysis of Animal Cell Cytokinesis, National Science Foundation, coworkers: W. Angerer (P), Y. Jung (P), M. Vilela (P), T. Wang (P)

Private

Probing Iron Metabolism in Mitochondria using EPR and Mossbauer Spectroscopy, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2010


“Biophysical Probes of Iron Trafficking in Cells,” Wayne State University, Detroit, MI, February, 2010.( Invited)

“Whole-Cell Mathematical Modeling,” University of Maryland, College Park, MD, April, 2010.( Invited)

“Biophysical Probes of Iron Trafficking in Cells,” American Chemical Society Meeting, Boston MA, August, 2010.( Invited)

“Biophysical Probes of Iron Metabolism in Eukaryotic Cells,” University of Texas, Arlington, TX, September, 2010.( Invited)

“Whole-Cell Mathematical Modeling,” Trinity University, San Antonio TX, September, 2010.( Invited)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International
▷ Professional Affiliation: Chinese-American Chemistry Professor Association (Member)

National
▷ Professional Affiliation: American Chemical Society (Member)

University
▷ Service Position: Chemistry-Biology Interface Training Program (Mentor)
▷ Committee/Panel: Graduate Admissions and Review Committee of Professional Program in Biotechnology (Member)

Department
▷ Committee/Panel: Graduate Admissions and Review Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 681. — Seminar (total enrollment: 12)
▷ CHEM 689. — Special Topics in (total enrollment: 6)
▷ CHEM 691. — Research (total enrollment: 5)

Summer
▷ CHEM 691. — Research (total enrollment: 5)

Fall
▷ CHEM 627. — Principles of Biological Chemistry (total enrollment: 19)
▷ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

Private

• PRESENTATIONS DURING 2010
▷ “Using an Expanded Genetic Code for Protein Function Investigation,” 3rd Texas Enzyme Conference, Austin, TX, January, 2010.( Individual)
“Site Specific Post-translational Modifications of Protein by Expanding the Genetic Code: Protein Methylation and Structure Enrichment,” 239th ACS National Meeting, San Francisco, CA, March, 2010. (Graduate, L. Dodd)

“Expanding the Genetic Code,” East China University of Science and Technology, Shanghai, China, May, 2010. (Individual)


“Genetic Incorporation of Two Different Noncanonical Amino Acids into One Protein in Escherichia Coli,” Gordon Research Conference, Proctor Academy, Andover, NH, June, 2010. (Individual)


“Genetically Encoded Photocaged $\epsilon$-methyl-L-lysine,” 240th ACS National Meeting, Boston, MA, August, 2010. (Graduate, Y. Wang)

“De Novo Engineering of Pyrrolysyl-tRNA Synthetase for Genetic Incorporation of L-phenylalanine and it’s Derivatives,” Joint 66th Southwest and 62nd Southeastern Regional Meeting of the ACS, New Orleans, LA, December, 2010. (Graduate, Y. Wang)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

University
▷ Committee/Panel: Executive Committee of the Center for Atmospheric Chemistry and the Environment (Chair)

College
▷ Committee/Panel: Information Technology Committee (Member)

Department
▷ Committee/Panel: Chemistry Executive Committee (Member), Library Committee (Member), Phys/Nuc/Chemistry Division (Chair)

• TEACHING ASSIGNMENTS DURING 2010

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

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

Fall
▷ CHEM 328. — Physical Chemistry II (total enrollment: 35)
▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Molecular Photoionization Studies of Nucleobases and Correlated Systems, Department of Energy
▷ Resonant and Nonresonant Vibrational Effects in the Photoionization Dynamics of Asymmetric Systems, Department of Energy
▷ (REN) Spectroscopic and Computational Characterization of Non-Covalent Interactions, National Science Foundation
▷ Spectroscopic and Computational Investigations of Fundamental Characteristics in Non-Covalent Interactions, National Science Foundation

Private
▷ Molecule and Recoil Frame Photoelectron Angular Distributions from Nonlinear Molecules, The Robert A. Welch Foundation

Other
▷ (REN) Photoelectron-Vibration Coupling in Nonlinear Molecules, Louisiana State University
• PRESENTATIONS DURING 2010

▷ “Photoionization in the Molecular Frame,” Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, Japan, March, 2010. (Invited)
▷ “Photoionization in the Molecular Frame,” Texas A&M University/Princeton Summer Workshop on Quantum Optics and Molecular Physics, Casper, WY, July, 2010. (Invited)
▷ “Photoionization in the Molecular Frame,” X-Ray Science Division, Argonne National Laboratory, September, 2010. (Invited)
▷ “Photoionization in the Molecular Frame,” Southwest Theoretical Chemistry Conference, Denton, TX, October, 2010. (Contributed)

• PUBLICATIONS DURING 2010


244 2010 CHEMISTRY ANNUAL REPORT
Model Morphed Potential for the OC:HBr Complex Physical Chemistry Chemical Physics, vol. 12, 7258-7265.

• SERVICE DURING 2010

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 2010

Spring
▷ CHEM 315. — Quantitative Analysis (total enrollment: 34)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 21)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 2)

Summer
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 2)

Fall
▷ CHEM 315. — Quantitative Analysis (total enrollment: 36)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 38)
▷ CHEM 491. — Research (total enrollment: 4)
▷ CHEM 681. — Seminar (total enrollment: 19)
▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) Lipoprotein Density Profiling for Clinical Studies, National Institutes of Health

• PUBLICATIONS DURING 2010

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No report received from faculty member.
- **SERVICE DURING 2010**

  **National**
  ▶ Professional Affiliation: American Chemical Society, Chemical Education Division (Member)
  ▶ Committee/Panel: Laboratory Assessment Examination Committee (Member)

  **Department**
  ▶ Service Position: Chem 320 Instrumental Analysis Laboratory (Coordinator)

- **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**
  ▶ CHEM 102. — *Fundamentals of Chemistry II* (total enrollment: 234)
  ▶ CHEM 107. — *General Chemistry for Engineering Students* (total enrollment: 304)
  ▶ CHEM 317. — *Quantitative Analysis* (total enrollment: 32)

  **Fall**
  ▶ CHEM 101. — *Fundamentals of Chemistry I* (total enrollment: 250)
  ▶ CHEM 317. — *Quantitative Analysis* (total enrollment: 24)
  ▶ CHEM 320. — *Instrumental Analysis Laboratory* (total enrollment: 22)

- **PRESENTATIONS DURING 2010**

TEACHING ASSIGNMENTS DURING 2010

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 250)
▷ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 21)

PUBLICATIONS DURING 2010

Hired 09/01/2010.
• SERVICE DURING 2010

National
▷ Professional Affiliation: American Chemical Society - Chemical Education and Biological Chemistry Divisions (Member)

College
▷ Event: Faculty Advisory Committee to the Vice President for Student Affairs (Representative)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 201)
▷ CHEM 242. — Elementary Organic Chemistry Laboratory (total enrollment: 73)

Summer
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 61)
▷ CHEM 242. — Elementary Organic Chemistry Laboratory (total enrollment: 16)

Fall
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 124)
• SERVICE DURING 2010
  Department
    ▷ Research Group: Laboratory for Molecular Structure and Bonding (Executive Director)

• PUBLICATIONS DURING 2010

On leave.

SEC. 6.1 PROFESSIONAL ACTIVITIES 251
• **CHAIRS/PROFESSORSHIPS**
  ▶ Cyclotron Institute Bright Chair in Nuclear Science [2002]

• **SERVICE DURING 2010**
  
  **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 2010**
  
  **Spring**
  ▶ CHEM 691. — Research (total enrollment: 1)
  
  **Summer**
  ▶ CHEM 691. — Research (total enrollment: 1)
  
  **Fall**
  ▶ CHEM 101.(H) — Fundamentals of Chemistry I (total enrollment: 27)
  ▶ CHEM 111.(H) — Fundamentals of Chemistry Laboratory I (total enrollment: 23)
  ▶ CHEM 691. — Research (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2010**
  
  **Federal**
  ▶ Cyclotron-Based Nuclear Science, Department of Energy
Highly Excited Nuclei, *Department of Energy*, coworkers: M. Barbui (P), Z. Chen (P), J. Hagel (P), M. Rodrigues (P), R. Wada (P), C. Amanchukwu (G), C. Bottosso (G), M. Huang (G)

Private

Nuclear Reaction Studies, *The Robert A. Welch Foundation*, coworkers: M. Barbui (P), Z. Chen (P), J. Hagel (P), M. Rodrigues (P), R. Wada (P), C. Amanchukwu (G), C. Bottosso (G), M. Huang (G)

**PUBLICATIONS DURING 2010**


C: Nuclear Physics, vol. 82,.

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Graduate Advisor, Chemistry Graduate Advising Office, Chemistry, /2009/
  ▷ Associate Director, Center for Atmospheric Chemistry and the Environment, Chemistry, //

• AWARDS DURING 2010
  College
  ▷ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2010
  International
  ▷ Editorial/Board: Various International Journals (Referee: Journals)
  National
  ▷ Editorial/Board: National Science Foundation, ACS, AIP (Review: Proposals)
  University
  ▷ Research Group: Center for Atmospheric Chemistry and the Environment (Associate Director)
  ▷ Committee/Panel: National Aerothermochemistry Laboratory (Co-Director)
  College
  ▷ Committee/Panel: Graduate Instruction Committee (Member), Grievance Committee (Chair), Grievance Committee (Elected 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 2010
  Spring
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 621. — Chemical Kinetics (total enrollment: 13)
  ▷ CHEM 681. — Seminar (total enrollment: 8)
  ▷ CHEM 691. — Research (total enrollment: 13)
  Summer
  ▷ CHEM 491. — Research (total enrollment: 2)
  ▷ CHEM 685. — Directed Studies (total enrollment: 1)
CHEM 691. — Research (total enrollment: 12)

Fall
CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 26)
CHEM 491. — Research (total enrollment: 1)
CHEM 691. — Research (total enrollment: 58)

RESEARCH PROJECTS DURING 2010

Federal
- (REN) Application of Advanced Laser Diagnostics Towards Hypersonic Wind Tunnels and Combustion Systems, National Aeronautics and Space Administration, coworkers: D. Kim (G), R. Sanchez-Gonzalez (G)

State
- (REN) Development and Deployment of a FAGE Instrument for Urban Hox Measurements, Texas Air Research Center, coworkers: Q. Liu (P)
- Development and Deployment of a FAGE Instrument for Urban Hox Measurements Year 2, Texas Air Research Center, coworkers: Q. Liu (P)
- (REN) Literature Search and Chemical Mechanism Comparison in Support of the Refinement of the Refinement of Isoprene Oxidation Chemical Mechanism in CAMx, Texas Commission of Environmental Quality, coworkers: B. Ghosh (G)

Private
- (REN) Photofragment Imaging of Atmospheric Free Radicals, The Robert A. Welch Foundation, coworkers: M. Grubb (G), M. Warter (G)
- Photofragment Imaging of Atmospheric Free Radicals, The Robert A. Welch Foundation, coworkers: M. Grubb (G)

PRESENTATIONS DURING 2010
- “A Chemists View on Isoprene Chemistry,” Guest Lecture, Atmos. 613, Texas A&M University, College Station, TX, 2010. (Individual)
- “Direct Imaging of Atmospheric Radical Photochemistry: from Energetics to Detailed Dynamics,” Washington University, St. Louis, MO, 2010. (Invited)
- “Measurements of Nighttime $N_2O_5/NO_3$ during the SHARP Campaign,” CACE Symposium, Texas A&M University, College Station, TX, 2010. (Invited)
- “Roaming in Atmospheric Chemistry: ROONO isomerization and $NO_3$ Dissociation,” Workshop, Argonne National Laboratory, 2010. (Invited)

PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International
▷ Event: Symposium at the Upcoming Pacifichem 2010 Meeting (Organizer)

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 Admis-
  sions and Review Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 636. — Mechanistic Inorganic Chemistry (total enrollment: 11)
▷ CHEM 691. — Research (total enrollment: 8)

Summer
▷ CHEM 691. — Research (total enrollment: 9)

Fall
▷ CHEM 491 — Research (total enrollment: 1)
▷ CHEM 642. — Organometallic Chemistry and Homogeneous Catalysis (total enrollment: 17)
▷ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) New Horizons in c-F Activation by Main Group Electrophiles, *Department of En-
  ergy*, coworkers: D. Herbert (P), D. Smith (P), B. McCulloch (G)
▷ Rigid Chelating Ligands as Tools for Discovery of New Reactions and Applications in
  Catalysis, *National Science Foundation*, coworkers: D. Herbert (P), W. Gu (G), C. Hamill
  (G), C. Lee (G), C. Palit (G), R. Ramirez (G), S. Timpa (G), Y. Zhu (G)

Private
▷ Powering the Planet: A Chemical Bonding Center in the Direct Conversion of Sunlight into
  Chemical Fuel, *California Institute of Technology*, coworkers: D. Smith (P), J. Davidson
Recyclable Catalysts and Structural Discovery through Ligand Design, *Camille and Henry Dreyfus Foundation*

New Discoveries of Main Group Hypercoordinate Compounds and Beyond, *The Robert A. Welch Foundation*, coworkers: W. Gu (G), L. Press (G)

**PRESENTATIONS DURING 2010**

- “Rigid Chelating Ligands in Discovery of New Structures and Reactions,” University of Houston, Houston, TX, April, 2010. (Invited)
- “Binuclear Metal Complexes Supported by Pincer Ligands,” 93rd Canadian Society for Chemistry Conference, Toronto, Canada, May, 2010. (Postdoc)
- “Catalysis of C-F Activation by Highly Electrophilic Si (and Al) Compounds, Contractors’,” Meeting for the DOE Catalysis Program, Baltimore, MD, June, 2010. (Poster Individual)
- “Approaches to Complexes of Pincer Ligands with a Central Silylene Donor,” 240th ACS National Meeting, Boston, MA, August, 2010. (Contributed)
- “Synthesis and Characterization of Oxygenous Ligands and Their Relevance to Water Oxidation,” 240th ACS National Meeting, Boston, MA, August, 2010. (Graduate, R. Huacuja)
- “Investigations into C-H and C-X activation at PNP ligated Rh(II) centres,” Dalton Discussion 12: Catalytic C-H and C-X Bond Activation, University of Durham, United Kingdom, September, 2010. (Poster Postdoc)
“Main Group Cations and Main Group Anions for C-F Activation,” Joint Southeastern/Southwestern Regional meeting of the American Chemical Society, New Orleans, LA, December, 2010. (Invited)

• PUBLICATIONS DURING 2010
  ▷ Gu, W.X.; McCulloch, B.J.; Reibenspies, J.H.; Ozerov, O.V. (2010) Improved Methods for the Halogenation of the \([HCB_{11}-H_{11}]^-\) Anion *Chemical Communications*, vol. 46, 2820-2822.
• SERVICE DURING 2010

  Department
    ▶ Event: Chemistry Open House (Participant)
    ▶ Committee/Panel: Undergraduate Awards Committee (Member)

No report received from faculty member.
JAMES D. PENNINGTON

SENIOR LECTURER (979) 845-2686
CHEM-Organic Chemistry pennington@chem.tamu.edu

· SERVICE DURING 2010
  Regional
  ▶ Event: Robertson County Science Fair (Judge)
  University
  ▶ Event: Youth Adventure Program (Coordinator), Youth Adventure Program (Instructor)
  College
  ▶ Event: Science Olympiad (Experimental Design Competition) (Coordinator)
  Department
  ▶ Event: Chemistry Road Show (Coordinator)

· TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 228. — Organic Chemistry II (total enrollment: 214)
  Fall
  ▶ CHEM 227. — Organic Chemistry I (total enrollment: 253)
  ▶ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 123)

· PRESENTATIONS DURING 2010
  ▶ “Chemistry Road Show,” Anson Jones Elementary Bryan ISD, Bryan, TX, January, 2010.( Individual)
  ▶ “Chemistry Road Show,” Burton Jr./Sr. High School, Burton, TX, January, 2010.( Individual)
  ▶ “Chemistry Road Show,” Centerville ISD, Centerville, TX, January, 2010.( Individual)
  ▶ “Chemistry Road Show,” Junior Science and Humanities Symposium, College Station, TX, January, 2010.( Individual)
  ▶ “Chemistry Road Show,” Aggieland Saturday, College Station, TX, February, 2010.( Individual)
  ▶ “Chemistry Road Show,” Gause ISD, Gause, TX, February, 2010.( Individual)
  ▶ “Chemistry Road Show,” Homeschool Group, Spring, TX, February, 2010.( Individual)
  ▶ “Chemistry Road Show,” Homeschool Group, The Woodlands, TX, February, 2010.( Individual)
  ▶ “Chemistry Road Show,” Iola Elementary, Iola, TX, February, 2010.( Individual)
  ▶ “Chemistry Road Show,” Livingston Junior High School, Livingston, TX, February, 2010.( Individual)
  ▶ “Chemistry Road Show,” MAES Science Extravaganza, College Station, TX, February, 2010.( Individual)
“Chemistry Road Show,” Bryan High School, Bryan, TX, March, 2010. (Individual)
“Chemistry Road Show,” Hudson High School, Lufkin, TX, March, 2010. (Individual)
“Chemistry Road Show,” Normangee Elementary, Normangee, TX, March, 2010. (Individual)
“Chemistry Road Show,” Saturday Morning Physics, College Station, TX, March, 2010. (Individual)
“Chemistry Road Show,” A&M Consolidated Middle School, College Station, TX, April, 2010. (Individual)
“Chemistry Road Show,” Avid, Bryan ISD, Bryan, TX, April, 2010. (Individual)
“Chemistry Road Show,” Bonham Elementary, Bryan, TX, April, 2010. (Individual)
“Chemistry Road Show,” College Bound Inc., College Station, TX, April, 2010. (Individual)
“Chemistry Road Show,” ISWEEEP, George R. Brown Convention Center, Houston, TX, April, 2010. (Individual)
“Chemistry Road Show,” Navarro Elementary School, Bryan, TX, April, 2010. (Individual)
“Chemistry Road Show,” O-Chem 228, College Station, TX, May, 2010. (Individual)
“Chemistry Road Show,” AGGIE STEM, College Station, TX, June, 2010. (Individual)
“Chemistry Road Show,” Aggie Summer Institute, College Station, TX, June, 2010. (Individual)
“Chemistry Road Show,” Austin Memorial Library Summer Reading Program, Cleveland, TX, June, 2010. (Individual)
“Chemistry Road Show,” Hearne Public Library, Hearne, TX, June, 2010. (Individual)
“Chemistry Road Show,” KinderCare Learning Center, College Station, TX, June, 2010. (Individual)
“Chemistry Road Show,” Larry J. Ringer Library Summer Reading Program, College Station, TX, June, 2010. (Individual)
“Chemistry Road Show,” Texas Reds Festival, Bryan, TX, June, 2010. (Individual)
“Chemistry Road Show,” Clara Mounce Library Summer Reading Program, Bryan, TX, July, 2010. (Individual)
“Chemistry Road Show,” Cleveland Civic Center, Cleveland, TX, August, 2010. (Individual)
“Chemistry Road Show,” Mineola High School, Mineola, TX, September, 2010. (Individual)
“Chemistry Road Show,” Pebble Creek Elementary, College Station, TX, September, 2010. (Individual)
“Chemistry Road Show,” Sam Houston Elementary, Bryan, TX?, September, 2010. (Individual)
“Chemistry Road Show,” Sam Rayburn Middle School, College Station, TX, September, 2010. (Individual)
“Chemistry Road Show,” Saturday Morning Biophysics Outreach FALL Program, College Station, TX, September, 2010. (Individual)
“Chemistry Road Show,” Chemistry Open House, Texas A&M University, College Station, TX, October, 2010. (Individual)
“Chemistry Road Show,” Lago Vista Elementary School, Lago Vista, TX, October, 2010. (Individual)
“Chemistry Road Show,” Luling Elementary/Jr. High, Luling, TX, October, 2010. (Individual)
“Chemistry Road Show,” South Knoll Elementary, College Station, TX, October, 2010. (Individual)
Lago Vista Elementary, Lago Vista, TX, October, 2010. (Individual)
South Knoll Elementary, College Station, TX, October, 2010. (Individual)
“Chemistry Road Show,” Zavalla High School, Zavalla, TX, November, 2010. (Individual)
Livingston Jr. High, Livingston, TX, November, 2010. (Individual)
Zavalla High School, Zavalla, TX, November, 2010. (Individual)
“Chemistry Open House,” CHEM 100, College Station, TX, December, 2010. (Individual)
“Chemistry Open House,” Expanding Your Horizons, College Station, TX, December, 2010. (Individual)
Expanding Your Horizons, December, 2010. (Individual)
No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 227. — Organic Chemistry I (total enrollment: 242)

Fall
▷ CHEM 228. — Organic Chemistry II (total enrollment: 156)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 128)

No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2010

Spring
➢ CHEM 102. — *Fundamentals of Chemistry II* (total enrollment: 528)

Fall
➢ CHEM 101. — *Fundamentals of Chemistry I* (total enrollment: 502)
➢ CHEM 111. — *Fundamentals of Chemistry Laboratory I* (total enrollment: 160)
➢ CHEM 112. — *Fundamentals of Chemistry Laboratory II* (total enrollment: 44)
➢ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 72)

• PUBLICATIONS DURING 2010
• CHAIRS/PROFESSORSHIPS
  ▶ Davidson Chair in Science [2004]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]
  ▶ Director, Center for Biological Nuclear Magnetic Resonance, Chemistry, [/]

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: Archives of Biochemistry & Biophysics (Member), Biochemistry (Member), BioOrganic Chemistry (Member)

  University
  ▶ Advisory Board: Gene Technologies Laboratory (Member), Protein Chemistry Laboratory (Member)
  ▶ Committee/Panel: Biochemistry and Biophysics Promotion and Tenure Committee (Member)

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

  Department
  ▶ Research Group: NMR User Group (Member)
  ▶ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ BICH 491. — Research (total enrollment: 1)
  ▶ CHEM 672. — Bioorganic Reaction Mechanisms (total enrollment: 18)
  ▶ CHEM 681. — Seminar (total enrollment: 12)
  ▶ CHEM 691. — Research (total enrollment: 10)

  Summer
  ▶ BICH 691. — Research (total enrollment: 3)
  ▶ CHEM 491. — Research (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 10)

  Fall
  ▶ BICH 491. — Research (total enrollment: 1)
  ▶ BICH 691. — Research (total enrollment: 2)
• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) Enzymatic Detoxification of Organophosphate Nerve Agents, National Institutes of Health
▷ (REN) Mechanism and Control of Urea Biosynthesis, National Institutes of Health
▷ Porphyrin and Corrinoid Biosynthesis, National Institutes of Health

State
▷ Phosphonate Mimics of Tetrahedral Intermediates as Potent Inhibitors of Enzyme Catalyzed Reactions, Advanced Research Program/Advanced Technology Program

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

• PRESENTATIONS DURING 2010

▷ “Rescue of Orphan Enzymes,” Department of Chemistry, University of California, Berkeley, CA, October, 2010. (Invited)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

National
▷ Editorial/Board: NSF CAREER Proposals (Review: Proposals)
▷ Committee/Panel: National Science Foundation Panel (Reviewer), UTSA External Scientific Advisory Committee (Member)

Department
▷ Committee/Panel: Executive Committee (Member), External Awards Committee (Member), P&T Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 491. — Research (total enrollment: 4)
▷ CHEM 615. — Organic Synthesis (total enrollment: 14)
▷ CHEM 691. — Research (total enrollment: 8)

Summer
▷ CHEM 691. — Research (total enrollment: 7)

Fall
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Bioactive Natural Product Total Synthesis via B-lactones, Department of Health and Human Services, coworkers: G. Liu (G), K. Morris (G), M. Shirley (G)
▷ New Methods for Simultaneous Arming and SAR Studies of Natural Products, Department of Health and Human Services, coworkers: J. Li (G), O. Robles (G), C. Xiao (G)
▷ (REN) Synthetic/Mechanistic Studies of Bioactive Marine Agents, Department of Health and Human Services, coworkers: Y. Wang (P), M. Abbasov (G), J. Reyes (G), M. Zancanella (G)
▷ β-Lactones: Bioactive Targets and Vehicles for Synthesis, National Institute of General Medical Sciences, coworkers: F. Li (G), H. Nguyen (G), A. Tully (G)
▷ Novel Asymmetric Routes to 2-Oxetanones and Their Applications, National Science Foundation, coworkers: S. Chamni (G), C. Levarett (G)

• PRESENTATIONS DURING 2010
▷ “Simultaneous Arming and SAR Studies of Natural Products for Chemical Genetics,” Gordon Research Conferences, Ventura, CA, February, 2010.(Poster Invited)

“Double-Diastereoselective Nucleophile Catalyzed Laconizations,” Student Research Week, Texas A&M University, College Station, TX, March, 2010. (Poster Graduate, K. Arendt)


“Double Diastereoselective, Nucleophile Catalyzed Aldol Lactonizations (NCAL) Leading to b-Lactone Fused Carbocycles and Tetrahydrofurans,” 240th ACS National Meeting, Boston, MA, August, 2010. (Graduate, K. Arendt)


• PUBLICATIONS DURING 2010


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• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Associate Department Head, Chemistry, [1981]

• SERVICE DURING 2010
  University
  ▶ Committee/Panel: Laboratory Safety Sub-Committee (Member)

  College
  ▶ Committee/Panel: Teaching Lab Safety Committee (Member), Technology-Mediated Instruction Committee (Member)

  Department
  ▶ Committee/Panel: Colloquium and Seminar Committee (Member), Graduate Curriculum Committee (Member), Internal Awards Committee (Member), Safety Committee (Chair), Space Committee (Chair), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 470. — Industrial Chemistry (total enrollment: 36)
  ▶ CHEM 691. — Research (total enrollment: 4)

  Fall
  ▶ CHEM 101.(H) — Fundamentals of Chemistry I (total enrollment: 26)
  ▶ CHEM 111.(H) — Fundamentals of Chemistry Laboratory I (total enrollment: 26)
• **CHAIRS/PROFESSORSHIPS**

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Department Head, Chemistry, [2006]

• **SERVICE DURING 2010**

  National
  ▶ Event: NIH EBIT (Enabling Bioanalytical & Biophysical Technologies) (Reviewer)
  ▶ Editorial/Board: NIH Biophysical and Biochemical Sciences Fellowship Study Sections
    NSF MRI Instrument Acquisition (Review: Proposals)

  University
  ▶ Committee/Panel: VPR Search Committee (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member)

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

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Life Sciences Building Executive Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2010**

  Spring
  ▶ CHEM 691. — Research (total enrollment: 10)

  Summer
  ▶ CHEM 691. — Research (total enrollment: 12)

  Fall
  ▶ CHEM 691. — Research (total enrollment: 12)

• **RESEARCH PROJECTS DURING 2010**

  Federal
  ▶ (REN) Development of Laser Ion Beam Photodissociation Methods, *Department of Energy*
(REN) Nanoparticle Laser Desorption Ionization and IM-MS Applied Structural Mass Spectrometry, Department of Energy

Mass Spectrometry Based Molecular Imaging of Native Biological Nanodomains, Department of Health and Human Services

MRI: Development of Ion Mobility Mass Spectrometer for Protein Chemistry, National Science Foundation

Private

Studies of the Structure of Gas-Phase Peptide Ions, The Robert A. Welch Foundation

Presentations during 2010


“Ion Mobility-Mass Spectrometry as a Structural Probe of Intrinsically Disordered Peptides/Proteins (IDP),” Seminar Speaker, ACS 240th National Meeting, August, 2010. (Individual)

Publications during 2010


• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 169)
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 12)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 270)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 94)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 24)
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 182)
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 11)

Fall
▷ CHEM 228. — Organic Chemistry II (total enrollment: 115)
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 12)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 42)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 40)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, Elemental Analysis Laboratory, Chemistry,
  ▶ Director, Center for Chemical Characterization and Analysis (CCCA), Chemistry,

• SERVICE DURING 2010
  National
  ▶ Committee/Panel: NIH Review Panel of the P41 Center Grant Application (Member),
    Reactor Safety Board, Nuclear Science Center (Chair), Research Park Advisory Committee
    (Member)
  University
  ▶ Committee/Panel: Board of Managers, TamChem LLC (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 434. — Analytical Instrumentation Laboratory (total enrollment: 10)
  ▶ CHEM 691. — Research (total enrollment: 5)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▶ CHEM 601 — Analytical Chemistry I (total enrollment: 15)
  ▶ CHEM 681 — Seminar (total enrollment: 17)
  ▶ CHEM 689. — Special Topics in (total enrollment: 7)
  ▶ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) Secondary Ion Mass Spectrometry with Massive Projectiles, National Science Foundation,
    coworkers: S. Verkhoturov (Research Scientist), L. Chen (G), D. DeBord (G), M.
    Eller (G), A. Mukherjee (G)

• PRESENTATIONS DURING 2010
  ▶ “Characterization and Quantification of Nanoparticle-Antibody Conjugates on Cells Using
    Individual Impact \( C_{60} \) ToF-SIMS,” Desorption 2010, May, 2010. (Individual)
  ▶ “Mapping of Single Cluster Impacts via Synchronized Detection of Co-Emitted Ions and
“Secondary Ion Emission from Cluster Impacts, is there a Magic Bullet for SIMS?,” Desorption 2010, May, 2010. (Individual)
“Secondary Ion Mass Spectrometry with Massive Projectiles,” University of Texas, Dallas, TX, September, 2010. (Individual)
“Two is Company, Three is a Crowd, but how many is a Cluster,” ASTM E-42 Workshop on Surface Analysis, October, 2010. (Individual)

**PUBLICATIONS DURING 2010**


• **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**

  ▷ **CHEM 101. — Fundamentals of Chemistry I** (total enrollment: 464)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]
  ▶ Director, First Year Chemistry Program, Chemistry, [2006]

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: Funding Agencies of EU (Review: Proposals), National Science Foundation CCLI program (Reviewer), Variety of Scientific Journals (Referee: Journals)
  ▶ Committee/Panel: NIH SBCA Study Section (Review Panel), Organizing committee for the 8th International Polymer Therapeutics Symposium (Member)

  Department
  ▶ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 491. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Molecular Recognition in Dendrimers Based on Melamine, National Institutes of Health
  ▶ S10-38: Delivery of Brefeldin a with Triazine Dendrimers, Science Applications International Corporation

  Private
  ▶ Molecular Recognition in Cyclodextrin-Containing Dendrimers, The Robert A. Welch Foundation

• PUBLICATIONS DURING 2010


On leave.
DANIEL A. SINGLETON

PROFESSOR
CHEM-Organic Chemistry
singleton@mail.chem.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▶ Davidson Chair in Science [2005]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, Nuclear Magnetic Resonance Laboratory (NMR), Chemistry, []

• SERVICE DURING 2010

  National
  ▶ Editorial/Board: The Journal of Organic Chemistry (Associate Editor)
  ▶ Committee/Panel: The Open Organic Chemistry Journal, Member (Editorial Board)

  College
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Member)

  Department
  ▶ Research Group: Computer User Group (Member), NMR User Group (Chair)
  ▶ Committee/Panel: Departmental External Review Committee (Chair), IT Committee (Member), Organic Division (Chair), Undergraduate Curriculum Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 12)
  ▶ CHEM 691. — Research (total enrollment: 9)

  Summer
  ▶ CHEM 691. — Research (total enrollment: 7)

  Fall
  ▶ CHEM 646. — Organic Chemistry (total enrollment: 20)
  ▶ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ New Concepts in Organic Selectivity and Mechanisms, National Institutes of Health, coworkers: J. Hirschi (P), J. Waas (P), X. Bogle (G), Z. Chen (G), S. Collins (G), O. James (G), Y. Oyola (G), R. Plata (G), L. Quijan (G), M. Vetticatt (G), J. Hunt (U), H. Werner (U)

• PUBLICATIONS DURING 2010


No report received from faculty member.
DONG HEE SON
ASSISTANT PROFESSOR (979) 458-2990
CHEM-Physical, Analytical dhson@chem.tamu.edu

- SERVICE DURING 2010
  Department
  ▶ Event: Physical Chemistry Laboratory (Coordinator)
  ▶ Committee/Panel: Admission and Retention Committee (Member), Steering Committee of Interdepartmental Nano-Micro Seminar (Member), Undergraduate Curriculum Committee (Member)

- TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 691. — Research (total enrollment: 5)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 6)
  Fall
  ▶ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 186)
  ▶ CHEM 601 — Analytical Chemistry I (total enrollment: 15)
  ▶ CHEM 691. — Research (total enrollment: 5)

- RESEARCH PROJECTS DURING 2010
  Federal
  ▶ CAREER: Ultrafast Electronic Magnetic and Coherent Lattice Dynamics and the Dynamic Structure-Property Relationship in Nanocrystalline Transition Metal Oxides, National Science Foundation, coworkers: T. Chen (G), H. Chen (G)
  Private
  ▶ Energy Transfer in Doped Anisotropic Semiconductor Nanostructures, The Robert A. Welch Foundation, coworkers: E. Berdugo (G), H. Chen (G), Y. Park (G)

- PRESENTATIONS DURING 2010
  ▶ Department of Chemistry, McGill University, Montreal, Canada, February, 2010.( Individual)
  ▶ Department of Chemistry, Princeton University, Princeton, NJ, February, 2010.( Individual)
  ▶ Department of Chemistry, Rice University, Houston TX, March, 2010.( Individual)
  ▶ Department of Chemistry, University of New Mexico, Albuquerque NM, March, 2010.( Individual)
  ▶ Department of Chemistry, SUNY, Stony Brook, NY, April, 2010.( Individual)
Department of Chemistry, University of California, Berkeley, CA, April, 2010. (Individual)
Department of Chemistry, University of Pennsylvania, Philadelphia PA, April, 2010. (Individual)
Department of Chemistry, Northwestern University, Chicago IL, May, 2010. (Individual)
Department of Chemistry, University of Illinois, Chicago IL, May, 2010. (Individual)
Material Research and Science and Engineering Center, University of Chicago, Chicago IL, May, 2010. (Individual)
Department of Chemistry, Cornell University, Ithaca, NY, August, 2010. (Individual)
Department of Chemistry, University of Colorado, Boulder CO, September, 2010. (Individual)

- PUBLICATIONS DURING 2010
• SERVICE DURING 2010
  
  Department
  ▷ Event: Quantitative Analysis Laboratory Chemistry 318 (Coordinator)
  ▷ Committee/Panel: Analytical Chemistry Laboratory Development Committee (Member),
    Undergraduate Curriculum Committee (Member)
  
• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▷ CHEM 316. — Quantitative Analysis (total enrollment: 104)
  ▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 86)
  
  Summer
  ▷ CHEM 316. — Quantitative Analysis (total enrollment: 34)
  ▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 19)
  
  Fall
  ▷ CHEM 316. — Quantitative Analysis (total enrollment: 134)
  ▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 110)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2010
  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 2010
  Spring
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 22)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 602. — Analytical Chemistry II (total enrollment: 16)
  ▶ CHEM 681. — Seminar (total enrollment: 21)
  ▶ CHEM 691. — Research (total enrollment: 5)

  Summer
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 79)
  ▶ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 48)
  ▶ CHEM 691. — Research (total enrollment: 4)

  Fall
  ▶ CHEM 315. — Quantitative Analysis (total enrollment: 33)
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 37)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 4)

No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2010

Spring
▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 480)
▶ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 24)

Fall
▶ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 488)
▶ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 223)
▶ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 23)
▶ CHEM 116. — Molecular Science for Citizens Laboratory (total enrollment: 14)
▶ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 106)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Undergraduate Advisor, Chemistry Undergraduate Advising Office, Chemistry, //

• SERVICE DURING 2010
  University
  ▶ Service Position: Student Affiliate Chapter of the American Chemical Society (Faculty Advisor)
  ▶ Committee/Panel: Scholarship Committee (Representative)
  Department
  ▶ Service Position: Undergraduate Studies (Associate Coordinator)
  ▶ Committee/Panel: Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 228. — Organic Chemistry II (total enrollment: 164)
  Summer
  ▶ SCEN 392. — Cooperative Education in Science (total enrollment: 1)
  Fall
  ▶ CHEM 100. — Horizons in Chemistry (total enrollment: 89)
  ▶ CHEM 227. — Organic Chemistry I (total enrollment: 186)
• CHAIRS/PROFESSORSHIPS
  ▶ Gradipore Chair in Separation Science in Chemistry [2001]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: Special Issue of Electrophoresis (Editor), Electrophoresis (Member), Journal of Chromatography (Member), Journal of Separation Science (Member)

  Department
  ▶ Committee/Panel: Graduate Awards Committee (Member), Graduate Curriculum Committee (Chair), Graduate Curriculum Committee (Member), Library Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ CHEM 603. — Modern Chromatographic Separation Methods (total enrollment: 7)
  ▶ CHEM 691. — Research (total enrollment: 4)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 3)
  Fall
  ▶ CHEM 601. — Analytical Chemistry I (total enrollment: 15)
  ▶ CHEM 691. — Research (total enrollment: 2)

• PUBLICATIONS DURING 2010

No report received from faculty member.
• SERVICE DURING 2010

National
▷ Event: American Cancer Society Study Section (Participant), Evaluation of NIH Innovator Award Program (Participant), NIH-Rise Proposal with Bimal Banik/Texas Pan American (Participant), NMR Proposal for Life Sciences Building (Participant)

University
▷ Event: Evaluation of Research Corporation Young Investigators Award Program (Participant)
▷ Committee/Panel: CBI Diversity Committee (Chair)

College
▷ Committee/Panel: Diversity Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 489. — Special Topics in (total enrollment: 22)
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 691. — Research (total enrollment: 3)

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

Fall
▷ CHEM 491. — Research (total enrollment: 4)
▷ CHEM 681 — Seminar (total enrollment: 17)
▷ CHEM 689. — Special Topics in (total enrollment: 6)
▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Private
▷ Probing the Biosynthesis of the Anti-Tumor Agent Azinomycin B, American Cancer Society, coworkers: D. Simkhada (P), H. Zhang (P), H. Agbo (G), J. Foulke- Abel (G), R. Lee (G), S. Mori (G), R. Hatty (U), M. Lebo (U), N. Satsangi (U), F. Yu (U)
▷ Probing the Molecular Origin and Biological Actions of Substituted Cyclohexadienals, The Robert A. Welch Foundation, coworkers: B. Russell (P), H. Agbo (G), J. Foulke-Abel (G), V. Gowda (G), J. Hook (U), W. Kolar (U)
• PRESENTATIONS DURING 2010

• PUBLICATIONS DURING 2010
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 102.(H) — Fundamentals of Chemistry II (total enrollment: 32)
▷ CHEM 691. — Research (total enrollment: 1)

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

• RESEARCH PROJECTS DURING 2010

Private
▷ Excitation of Atoms and Molecules in Collisions with Fast, Highly-charged Ions, The Robert A. Welch Foundation, coworkers: V. Horvat (P)

Retired 05/31/2010.
• SERVICE DURING 2010
  National
  ▷ Committee/Panel: NSF TeraGrid Resource Allocation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Fall
  ▷ CHEM 327. — Physical Chemistry (total enrollment: 32)

• PRESENTATIONS DURING 2010
  ▷ “High-Accuracy ab Initio Thermochemistry of Organic Molecules,” Summer School on Quantum Science and Engineering, Casper, WY, 2010.( Invited)
  ▷ “Substituent Effects in Non-Covalent Interactions and Molecular Electrostatic Potentials,” Southwest Theoretical Chemistry Conference (SWTCC), Center for Advanced Scientific Computing and Modeling and the University of North Texas, Denton, TX, 2010.( Invited)
  ▷ “Unraveling the Origin of Substituent Effects in Non-Covalent Interaction with Aromatic Rings,” Molecular Quantum Mechanics Conference, University of California, Berkeley, CA, 2010.( Invited)

Hired 08/01/2010.
• SERVICE DURING 2010

National
▷ Event: ACS Award for Achievement in Research for the Teaching and Learning of Chemistry: Symposium in Honor of Michael R. Abraham at the 239th National Meeting of the American Chemical Society (Organizer), Biennial Conference on Chemical Education (Exhibits Chair), Peer-Reviewed Symposium in Chemical Education Research (Organizer)
▷ Editorial/Board: Chemical Education Research Section, Journal of Chemical Education (Feature Editor), Chemical Educator (Reviewer), Journal for Science Education and Technology (Board Member), Journal of Chemical Education (Reviewer), School Science and Mathematics Journal (Associate Editor)
▷ Committee/Panel: ACS DivChed Chemical Education Research Committee (Member)

State
▷ Committee/Panel: Region V, Associated Chemistry Teachers of Texas (Director)

University
▷ Service Position: On-Line Web Learning Homework (Administrator)

Department
▷ Event: New Families Welcome, New Student Programs (Host)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 521)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 23)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 24)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 500)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 243)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 68)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 105)
▷ CHEM 485. — Directed Studies (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Students’ Attempts at Understanding the Unobservable: A Multi-Method Approach to Visualization Analysis and Design, National Science Foundation
• PRESENTATIONS DURING 2010
  ▶ “Teaching Chemistry with Visualizations,” 55th Annual ACS PentaSectional Meeting, Norman, OK, April, 2010.( Individual)
  ▶ “Ten Years of OWL: Impressions and Findings,” 21th Biennial Conference on Chemical Education, Denton, TX, August, 2010.( Individual)
  ▶ “Using Screencasts for Examination Reviews: Student and Instructor Impressions,” 21th Biennial Conference on Chemical Education, Denton, TX, August, 2010.( Individual)
• CHAIRS/PROFESSORSHIPS
  ▶ W.T. Doherty-Welch Foundation Chair in Chemistry [2009]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Professor (J), Chemical Engineering, [2009]

• AWARDS DURING 2010
  National
    ▶ Polymer Chemistry Division, Founding POLY Fellow, American Chemical Society

• SERVICE DURING 2010
  International
    ▶ Advisory Board: 20th IUPAC International Symposium on Ionic Polymerization (Member), Dutch BioMedical Materials Program (Member), International Journal of Nanomedicine (Member)
  National
    ▶ Advisory Board: Bioconjugate Chemistry, Editorial (Member), Mitsubishi Technical (Member), NIH Namomedicine Development Centers (Member), University of California, Santa Barbara, Materials Research Laboratory (Member), University of Nebraska NIH COBRE Center (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 (Member), NSF-PREM Program Advisory Committee (Member)
  University
    ▶ Advisory Board: University of Delaware, Materials Science and Engineering Department (Member)
    ▶ Committee/Panel: Bayer Lectureship Committee (Chair), Faculty Search Committee, Department of Biochemistry and Biophysics (Member), Faculty Search Committee, Department of Nuclear Engineering, Life Sciences Radiochemistry (Member), Faculty Search Committee, Department of Nuclear Engineering, Nuclear Forensics, Nonproliferation, and/or Nuclear Security Risk Analysis (Member)
  Department
    ▶ Committee/Panel: Executive Committee (Member), Faculty Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) The Development of Non-Toxic Anti-Fouling Coatings Based Upon Nanoscopic Surface Complexities, Department of Defense
▷ Novel Strategies for Ultrahigh Specific Activity Targeted Nanoparticles, Department of Energy
▷ Adhesion-Based Nanotherapeutics in Urinary Tract Infection, National Institutes of Health
▷ Integrated Nanosystems for Diagnosis and Therapy, National Institutes of Health
▷ Charged Block Copolymer Assembly of Unique Nanoscale Objects, National Science Foundation
▷ Nanoscale Engineering and Manufacture Effected Through Molecular Architecture and Structure, National Science Foundation
▷ Scientific Methodology Development, Utilizing the Physical and Chemical Manipulation of Discrete Nanoscale Objects, National Science Foundation
▷ The Development of Non-toxic and Anti-fouling Coatings Based upon Nanoscopic Surface Complexities, Office of Naval Research

Private
▷ Integrated Nanosystems for Diagnosis and Therapy, Washington University

Industrial
▷ Photonic Shell-Crosslinked Nanoparticle Probes for Optical Imaging and Monitoring, Covidien, Inc.
▷ The Development of Nanoparticulate Embedded Therapeutics, Covidien, Inc.
▷ Negative Active EUV Photoresists with Controlled Molecular Architecture, Dow Chemical Co.

• PRESENTATIONS DURING 2010

▷ “Increasing the Complexity of Materials by Designing Polymer Nanostructures for Hierarchical Assembly,” Materials Research Outreach Program Symposium, Santa Barbara, CA, February, 2010.( Individual)
▷ “Strategic Design of Polymers as Well-defined Materials for Nanomedicine,” St. Louis Institute for Nanomedicine Symposium, St. Louis, MO, February, 2010.( Individual)
▷ “Strategic Design of Polymers as Well-defined Materials for Nanomedicine,” Texas A&M University Biomaterials Day, College Station, TX, February, 2010.( Individual)
▷ “Combinations of Polymerization Strategies to Afford Functional Polymers and Regioselectively-functionalized Nanoscopic Objects: Complex Materials from Hierarchi-

▷ ‘Diverse Opportunities from Materials to Medicine for Well-defined Polymer Chemistry,’ Texas A&M University College of Science External Advisory and Development Council Meeting, College Station, TX, March, 2010.( Individual)


▷ ‘Combinations of Polymerization Strategies to Afford Functional Polymers and Regioselectively-functionalized Nanoscopic Objects,’ 12th Dresden Polymer Discussion, Meissen, Germany, April, 2010.( Individual)


▷ ‘Well-defined, Biologically Inspired Nanoscopic Objects Derived from Synthetic Polymer Building Blocks,’ 3rd International NanoBio Conference, Zurich, Switzerland, August, 2010.( Individual)

▷ ‘Combinations of Polymerization Strategies to Afford Functional Polymers and Regioselectively-functionalized Nanoscopic Objects,’ Unilever Global, Shanghai, China, September, 2010.( Individual)

▷ ‘Nanoscopic Polymer Objects of Unique Shapes and Morphologies and Well-defined Structures and Dimensions as Controlled Drug Delivery Devices,’ Symposium on Innovative Polymers for Controlled Delivery, Suzhou, China, September, 2010.( Individual)

▷ ‘Sophisticated Plastics: Diverse Opportunities from Materials to Medicine for Well-defined Polymer Chemistry,’ Indiana State University, Department of Chemistry and Physics, Terre Haute, IA, September, 2010.( Individual)


▷ ‘Complex Macromolecular and Nanoscale Structures by Combinations of Living Radical and Ring Opening Polymerizations,’ Adrich Symposium in Materials Science, University of Michigan, Ann Arbor, MI, November, 2010.( Individual)

▷ ‘Hierarchical Construction of Increasingly Complex, Functional Nanostructures,’ University of Texas, Department of Chemistry and Biochemistry, Austin, TX, November, 2010.( Individual)

▷ ‘Sophisticated Plastics: Diverse Opportunities from Materials to Medicine for Well-defined Polymer Chemistry,’ Trinity University, Department of Chemistry, San Antonio, TX, November, 2010.( Individual)

▷ ‘Sophisticated Plastics: Diverse Opportunities from Materials to Medicine for Well-defined Polymer Chemistry,’ Texas A&M University Society of Plastic Engineers, Texas A&M University, College Station, TX, November, 2010.( Individual)

▷ ‘Well-defined, Biologically Inspired Nanoscopic Objects Derived from Synthetic Polymer Building Blocks,’ University of Texas at Dallas, Department of Chemistry, Richardson,


“Sophisticated Plastics: Diverse Opportunities from Materials to Medicine for Well-defined Polymer Chemistry,” Hope College, Department of Chemistry, Honolulu, Hawaii, December, 2010. (Individual)

**PUBLICATIONS DURING 2010**


• SERVICE DURING 2010

International
▷ Committee/Panel: 11th International Symposium for Chinese Organic Chemists (Co-Chair)

National

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 16)
▷ CHEM 681. — Seminar (total enrollment: 28)
▷ CHEM 691. — Research (total enrollment: 5)

Summer
▷ CHEM 691. — Research (total enrollment: 7)

Fall
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 11)
▷ CHEM 681. — Seminar (total enrollment: 35)
▷ CHEM 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2010

Private
▷ Synthesis of the Carboxyclic Core of Zoanthamines, The Robert A. Welch Foundation, coworkers: L. Fang (P), G. Tian (P), T. Hood (G), J. Huang (G), C. Huehls (G), T. Kaiser (G), K. Rosa-Perez (G), H. Xue (G), F. Yang (G)

• PRESENTATIONS DURING 2010

▷ “Toward the Total Synthesis of Iriomoteolide 1a- A Reductive Cyclization Approach,” 11th International Symposium for Chinese Organic Chemists, Taipei City, Taiwan, October, 2010.( Invited)

• PUBLICATIONS DURING 2010

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• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 465)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 24)

• PUBLICATIONS DURING 2010
DANNY L. YEAGER

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CHEM-Physical/Nuclear Chem. Division yeager@chem.tamu.edu

• SERVICE DURING 2010

University
▷ Service Position: Chapter of the Brazos Valley Coalition Against the War (Faculty Advisor), Texas A&M University [ALLY]
▷ Event: Texas A&M Phi Beta Kappa Induction: The Heisenberg Uncertainty Principle (Speaker)
▷ Committee/Panel: Texas A&M University Chapter of Phi Beta Kappa (President)

Department
▷ Committee/Panel: Computer Committee (Member), Information and Communications Technology Committee (Member), Phi Beta Kappa (President)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 328. — Physical Chemistry II (total enrollment: 35)

Summer
▷ CHEM 328. — Physical Chemistry II (total enrollment: 18)

Fall
▷ CHEM 648. — Principles of Quantum Mechanics (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

Private
▷ Electron Atom/Molecule Scattering and Auger Resonances and Photoionization Cross Sections Using Complex Scaled Multiconfigurational Based Methods, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2010

▷ “The Effects of Higher Angular Momentum Functions on Shape Resonances,” Eighth International Conference of Computational Methods in Sciences and Engineering, Psalidi, Kos, Greece, October, 2010.( Invited)

• PUBLICATIONS DURING 2010


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• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Associate Dean for Faculty Affairs, Office of Faculty Affairs, College of Science, [2008]

• AWARDS DURING 2010
  University
  ▶ Outstanding Mentoring Award, Women’s Faculty Network

• SERVICE DURING 2010
  National
  ▶ Committee/Panel: APS Division of Nuclear Physics Education Committee (Chair), Department of Energy Committee of Visitors (Chair), Gender Equity Conversations (Co-Chair)
  University
  ▶ Service Position: Texas A&M University (Mediator)
  ▶ Committee/Panel: Diversity Operations Committee (Member), Vision 2020 Executive 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 2010
  Spring
  ▶ CHEM 691. — Research (total enrollment: 7)
  Summer
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 6)
  ▶ PHYS 491. — Research (total enrollment: 11)
  Fall
  ▶ CHEM 106. — Molecular Science for Citizens (total enrollment: 78)
  ▶ CHEM 681. — Seminar (total enrollment: 15)
  ▶ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010
  Federal
Cyclotron-Based Nuclear Science, *Department of Energy*, coworkers: G. Souliotis (Associate Research Scientist), R. Tripathi (P), Z. Kohley (G), L. May (G), S. Soisson (G), B. Stein (G), S. Wuenschel (G), G. Bonasera (U), R. Dienhoffer (U), J. Erchinger (U), T. Fagan (U), K. Huseman (U), W. Smith (U)

ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace, *National Science Foundation*

Expanding Opportunities through the Science Scholars Program, *National Science Foundation*

Professional Development Skills for Women, *National Science Foundation*

(REN) REU Site: Nuclear and Particle Science at Texas A&M University, *National Science Foundation*

REU Site: Nuclear and Particle Science at Texas A&M University, *National Science Foundation*, coworkers: A. Aguero (U), C. Canahui (U), A. Delgado (U), J. Erchinger (U), J. Lopez (U), R. Magana (U), J. Martinez (U), J. Olvera (U), A. Ortiz (U), B. Pietsch (U), J. Roe (U), J. Sefcik (U), V. Siller (U), H. Stephens (U), K. Whitmore (U), K. Wunder (U), E. Wunde

Private

(REN) The Equation of State for a Two-Component Nuclear System, *The Robert A. Welch Foundation*, coworkers: G. Souliotis (Associate Research Scientist), R. Tripathi (P), Z. Kohley (G), L. May (G), S. Soisson (G), B. Stein (G), S. Wuenschel (G), G. Bonasera (U), R. Dienhoffer (U), J. Erchinger (U), T. Fagan (U), K. Huseman (U), W. Smith (U)

**PRESENTATIONS DURING 2010**

- “Improving Climate and Gender Equity in Physics Departments,” American Physical Society Meeting, February, 2010. (Individual)
- “Elucidating the Symmetry Energy of Nuclear Matter with Heavy-ion Reactions Nuclear Reactions,” American Physical Society Division of Nuclear Physics Meeting, Santa Fe, NM, November, 2010. (Individual)
- “Promoting Success of Women Faculty Through a Psychologically Healthy Workplace,” ADVANCE Program Workshop, Alexandria, VA, November, 2010. (Individual)

**PUBLICATIONS DURING 2010**


Soisson, S.N.; Stein, B.C.; May, LW; Dienhoffer, RQ; Jandel, M; Souliotis, GA; Shetty, DV; Galanopoulos, S; Keksis, AL; Wuenschel, S; Kohley, Z; Yennello, SJ; Bullough, MA; Greenwood, NM; Walsh, SM; Wilburn, CD”. (2010) A Dual-Axis Dual-Lateral Position-Sensitive Detector for Charged Particle detection Nuclear Instruments and Methods in Physics Research Section A: Accelerators Spectrometers Detectors and Associated Equipment, vol. 613, 240-244.


• SERVICE DURING 2010

International
▷ Event: MRS Forum (Organizer)
▷ Editorial/Board: Chem. Rev. Thematic Issue (Guest Editor), Comments On Inorganic Chemistry (Member)
▷ Committee/Panel: Doha Carbon and Energy Forum (Panel Member)

National
▷ Event: ARPA-E Summit (Participant), CCS Summit (Speaker)
▷ Editorial/Board: National Science Foundation (Review Panel)

University
▷ Research Group: Multiple Center Proposals to NSF and DOE (Organizer), Multiple MRI and IGERT Proposals (Participant)
▷ Event: Energy IUMRI (Organizer)

College
▷ Committee/Panel: Grievance Committee (Elected Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 44)
▷ CHEM 362. — Descriptive Inorganic Chemistry (total enrollment: 31)
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 8)

Summer
▷ CHEM 691. — Research (total enrollment: 7)

Fall
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 10)
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 681. — Seminar (total enrollment: 39)
▷ CHEM 691. — Research (total enrollment: 10)
▷ CHEM 695. — Frontiers in Chemical Research (total enrollment: 78)

• RESEARCH PROJECTS DURING 2010

Federal
▷ A Biomimetic Approach to New Adsorption Hydrogen Storage Metal-Organic Frameworks, Department of Energy
Stimuli-Responsive Metal-Organic Frameworks for Energy-Efficient Post-Combustion Carbon Dioxide Capture, Department of Energy

CAREER: From Biomimetic Reaction Platforms to Nanostructured Artificial Enzymes, National Science Foundation

Mash-Adjustable Molecular Sieve Membranes for Olefin/Paraffin in Separations, National Science Foundation

Private

The Discovery of Stable Metal-Organic Frameworks with Record-High Surface Areas, The Robert A. Welch Foundation

Other

The Center for Gas Separation Relevant to Clean Energy Technologies, University of California - Berkeley

- PRESENTATIONS DURING 2010


- PUBLICATIONS DURING 2010


7. Research Activity, 2010

This section contains information on all funded research activity for the calendar year 2010. 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 2010 = # Days 2010 × Daily Grant Award
### 7.1 Summary of Research Support, 2010

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
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RESEARCH ACTIVITY  
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320 2010 CHEMISTRY ANNUAL REPORT
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| Batteas, J.D.    | Probing the Role of Surface Defects and Disorder on the Tribology of Nanoscopic Contacts | 7/1/2008  | 6/30/2011 | 53,383   | 19,041   | 72,424    |

SEC. 7. RESEARCH ACTIVITY 321
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326 2010 Chemistry Annual Report
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SEC. 7. RESEARCH ACTIVITY
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<td>Darensbourg, D.J.</td>
<td>The Influence of Electronic and Steric Effects on Reactivity of Metah-(ETA-2- Aromatic) Bond: A Laser Flash Photolysis Study with Infrared Detection.</td>
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**The Robert A. Welch Foundation**

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328 2010 CHEMISTRY ANNUAL REPORT
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<td>Gabbai, F.P.</td>
<td>Synthesis and Reduction Chemistry of α-Phosphonyl-Carbocations and α-Phosphonio-Carbocations</td>
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**SEC. 7.**

**RESEARCH ACTIVITY** 329
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* Subtotal: The Robert A. Welch Foundation | 1,763,634 | 0 | 1,763,634

* Subtotal: Private/Non-Profit Agencies | 2,673,078 | 91,381 | 2,764,459

**State Agencies**

**Advanced Research Program/Advanced Technology Program**

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**Energy Resources Program**

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** Subtotal: Texas Air Research Center 43,547 0 43,547

*** Subtotal: Texas Commission of Environmental Quality 7,796 0 7,796

** Subtotal: Texas Higher Education Coordinating Board 72,760 0 72,760

* Subtotal: State Agencies 226,435 0 226,435

*** Total: All Grantees 15,878,053 2,272,908 18,150,961
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| * Subtotal Clearfield, A.           |                                                                        |         |           | 195,917 | 52,528   | 248,445 |

*Connell, B.T.*

| Texas Higher Education Coordinating Board | Total Synthesis of Guaianolide Natural Products                          | 5/15/2008 | 5/14/2010 | 27,366  | 0        | 27,366  |
| * Subtotal Connell, B.T.            |                                                                        |         |           | 77,819  | 20,801   | 98,620  |

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**SEC. 7. RESEARCH ACTIVITY** 335
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336  
2010 CHEMISTRY ANNUAL REPORT
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<td>Adhesion-Based Nanotherapeutics in Urinary Tract Infection</td>
<td>8/1/2010</td>
<td>7/31/2014</td>
<td>198,201</td>
<td>0</td>
<td>198,201</td>
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<tr>
<td>National Institutes of Health</td>
<td>Integrated Nanosystems for Diagnosis and Therapy, (with: J. Sacchettini, K. Wooley)</td>
<td>8/20/2010</td>
<td>8/19/2015</td>
<td>651,140</td>
<td>0</td>
<td>651,140</td>
</tr>
<tr>
<td>National Institutes of Health</td>
<td>Integrated Nanosystems for Diagnosis and Therapy</td>
<td>5/1/2008</td>
<td>9/30/2010</td>
<td>595,637</td>
<td>0</td>
<td>595,637</td>
</tr>
<tr>
<td>National Science Foundation</td>
<td>Charged Block Copolymer Assembly of Unique Nanoscale Objects</td>
<td>7/1/2009</td>
<td>6/30/2013</td>
<td>17,363</td>
<td>0</td>
<td>17,363</td>
</tr>
<tr>
<td>National Science Foundation</td>
<td>Nanoscale Engineering and Manufacture Effected Through Molecular Architecture and Structure</td>
<td>1/1/2005</td>
<td>6/30/2010</td>
<td>13,714</td>
<td>0</td>
<td>13,714</td>
</tr>
<tr>
<td>National Science Foundation</td>
<td>Scientific Methodology Development, Utilizing the Physical and Chemical Manipulation of Discrete Nanoscale Objects</td>
<td>1/1/2005</td>
<td>6/30/2010</td>
<td>13,714</td>
<td>0</td>
<td>13,714</td>
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SEC. 7. RESEARCH ACTIVITY 345
<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>Office of Naval Research</td>
<td>The Development of Non-toxic and Anti-fouling Coatings Based upon Nanoscopic Surface Complexities</td>
<td>1/15/2008</td>
<td>1/14/2011</td>
<td>31,827</td>
<td>0</td>
<td>31,827</td>
</tr>
<tr>
<td>Covidien, Inc.</td>
<td>The Development of Nanoparticulate Embedded Therapeutics</td>
<td>2/1/2010</td>
<td>1/31/2011</td>
<td>163,582</td>
<td>65,530</td>
<td>229,111</td>
</tr>
<tr>
<td>Dow Chemical Co.</td>
<td>Negative Active EUV Photoresists with Controlled Molecular Architecture</td>
<td>6/21/2010</td>
<td>5/31/2012</td>
<td>26,543</td>
<td>13,272</td>
<td>41,815</td>
</tr>
</tbody>
</table>

* Subtotal Wooley, K.L.                                                                                     | 1,888,705   | 104,397    | 1,993,102 |

* Yang, J.                                                                                                      |
| The Robert A. Welch Foundation | Synthesis of the Carbocyclic Core of Zoanthamines                                           | 6/1/2008    | 5/31/2010   | 30,864  | 0        | 30,864  |

* Subtotal Yang, J.                                                                                               | 30,864      | 0          | 30,864    |

* Yeager, D.L.                                                                                                    |

* Subtotal Yeager, D.L.                                                                                           | 63,333      | 0          | 63,333    |

* Yennello, S.J.                                                                                                  |
<p>| National Science Foundation | ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace, (with: K. Tran, S. Yennello) | 10/1/2010   | 9/30/2015   | 61,033  | 26,227   | 87,260  |
| National Science Foundation | Expanding Opportunities through the Science Scholars Program, (with: T. Scott, S. Yennello) | 1/1/2008    | 12/31/2012  | 59,967  | 0        | 59,967  |
| National Science Foundation | Professional Development Skills for Women                                                   | 2/1/2008    | 1/31/2011   | 100,000 | 0        | 100,000 |
| National Science Foundation | REU Site: Nuclear and Particle Science at Texas A&amp;M University                            | 3/1/2007    | 2/28/2010   | 15,096  | 636      | 15,732  |</p>
<table>
<thead>
<tr>
<th>Granting Agency</th>
<th>Title</th>
<th>Start Date</th>
<th>End Date</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Science Foundation</td>
<td>(REN) REU Site: Nuclear and Particle Science at Texas A&amp;M University</td>
<td>4/15/2010</td>
<td>3/31/2013</td>
<td>88,184</td>
<td>3,608</td>
<td>91,792</td>
</tr>
<tr>
<td>The Robert A. Welch Foundation</td>
<td>(REN) The Equation of State for a Two-Component Nuclear System</td>
<td>6/1/2008</td>
<td>5/31/2011</td>
<td>70,064</td>
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<td>70,064</td>
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**Subtotal Yennello, S.J.**

<p>| | | | | | |</p>
<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>National Science Foundation</td>
<td>Investigation of Urban and Regional Aerosol Formation and Transformation in China and Associated Climate Effects</td>
<td>7/1/2007</td>
<td>6/30/2010</td>
<td>65,753</td>
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**Subtotal Zhang, R.**

<p>| | | | | | |</p>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Energy</td>
<td>A Biomimetic Approach to New Adsorption Hydrogen Storage Metal–Organic Frameworks</td>
<td>10/1/2008</td>
<td>9/30/2012</td>
<td>177,973</td>
<td>7,593</td>
</tr>
<tr>
<td>National Science Foundation</td>
<td>Mash-Adjustable Molecular Sieve Membranes for Olefin/Paraffin Separations</td>
<td>1/10/2010</td>
<td>1/9/2013</td>
<td>52,752</td>
<td>20,261</td>
</tr>
<tr>
<td>University of California - Berkeley</td>
<td>The Center for Gas Separation Relevant to Clean Energy Technologies</td>
<td>9/1/2009</td>
<td>8/31/2014</td>
<td>187,811</td>
<td>12,189</td>
</tr>
<tr>
<td>The Robert A. Welch Foundation</td>
<td>The Discovery of Stable Metal–Organic Frameworks with Record- High Surface Areas</td>
<td>6/1/2009</td>
<td>5/31/2011</td>
<td>50,069</td>
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</table>

**Subtotal Zhou, N.**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
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SEC. 7. RESEARCH ACTIVITY
<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>*** Total: All Faculty</td>
<td></td>
<td>15,878,053</td>
<td>2,272,908</td>
<td>18,150,961</td>
<td>18,150,961</td>
<td></td>
</tr>
</tbody>
</table>
Contents

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   2.1 Statistical Abstract ............................................................... 354
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1. Foreword from the Department Head

The 2010 calendar year was full of many fine accomplishments for the Department of Mathematics. One new assistant professor, Lewis Bowen, joined our ranks and soon afterwards, he landed an NSF-CAREER grant. The faculty as a whole received over 7.6 million in federal funding as well as 12 million in funding from industrial, state, and foreign sources. Nearly three-quarters of our tenured and tenure-track faculty are receiving external funding which more than doubles the national average. Our faculty received many distinguished awards, including Yalchin Efendiev’s Fraunhofer-Bessel Award from the Humboldt Foundation, Peter Kuchment’s membership as a Fellow of the Institute of Physics, J. Pasciak’s Sigma Xi Award, and Harold Boas’ AFS Distinguished Achievement Award in Teaching at the University Level. In addition, Jay Walton received a College-level AFS Award in Teaching.

During 2010, our department graduated 11 Ph.D. students, 19 masters students and 56 bachelors degree students in 2010. Many of these masters recipients received their degrees through our popular on-line (distance) masters degree program.

Our National Science Foundation funded Research Experiences for Undergraduates and Undergraduate Mathematics Biology grants have funded over 25 undergraduates in research projects mentored by our faculty. Our NSF-funded MCTP grant provided summer opportunities for students to pursue mathematics at a variety of levels. Many of our undergraduate and graduate students have given presentations at professional conferences and workshops around the country. Overall, our department taught over 76,000 credit hours which is the largest of any department on campus. Our excellent staff help manage this enormous workload for the benefit of our students and faculty.

During the spring and fall of 2010, our department implemented some changes in our graduate breadth requirements and faculty governance as suggest by our external review. Overall this review praised our department’s progress. We are very proud of the fact that the latest NRC report ranked our department 25th in the nation (14th among public universities).
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 of Science Dean Database (Fall 2009) *FacultyList_FINAL*, Queried from the College of Science Dean Database (Fall 2010) *FacultyList_FINAL*.

**Non-Tenure-Track Faculty**
- Queried from the College of Science Dean Database (Fall 2009) *FacultyList_nonTTF*, Queried from the College of Science Dean Database (Fall 2010) *FacultyList_nonTTF2*.

**Postdoctoral Fellows**
- Provided by the Department

**Graduate Student/Undergraduate Majors**
- Office of Institutional Studies and Planning (OISP). (Fall 2009, Fall 2010) *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 2010) *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>Category</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Tenured and Tenure-Track Faculty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>43</td>
<td>44</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>27</td>
<td>25</td>
</tr>
<tr>
<td>Distinguished Professor</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>b. Non-Tenure-Track Faculty</strong></td>
<td>63</td>
<td>73</td>
</tr>
<tr>
<td>Visiting Professor</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Visiting Assistant Professor</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>Visiting Associate Professor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lecturer</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td><strong>c. Postdoctoral Fellows</strong></td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>d. Graduate Majors</strong></td>
<td>134</td>
<td>136</td>
</tr>
<tr>
<td><strong>e. Undergraduate Majors</strong></td>
<td>316</td>
<td>349</td>
</tr>
<tr>
<td><strong>f. Support Staff</strong></td>
<td>18</td>
<td>19</td>
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</table>

### II. Instructional Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Graduate Semester Credit Hours</strong></td>
<td>3,814</td>
<td>3,723</td>
</tr>
<tr>
<td><strong>b. Undergraduate Semester Credit Hours</strong></td>
<td>70,605</td>
<td>72,516</td>
</tr>
<tr>
<td><strong>c. PhD Degrees</strong></td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td><strong>d. Masters Degrees</strong></td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td><strong>e. Undergraduate Degrees</strong></td>
<td>60</td>
<td>56</td>
</tr>
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</table>

### III. Research Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Research Publications</strong></td>
<td>139</td>
<td>167</td>
</tr>
<tr>
<td><strong>b. Research Presentations</strong></td>
<td>344</td>
<td>384</td>
</tr>
<tr>
<td><strong>c. Federal</strong></td>
<td>5,969,882</td>
<td>7,636,365</td>
</tr>
<tr>
<td><strong>d. State</strong></td>
<td>595,001</td>
<td>852,412</td>
</tr>
<tr>
<td><strong>e. University</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>f. Private/Non-Profit</strong></td>
<td>428,821</td>
<td>536,133</td>
</tr>
<tr>
<td><strong>g. Industrial/Corporate</strong></td>
<td>36,823</td>
<td>53,850</td>
</tr>
<tr>
<td><strong>h. International</strong></td>
<td>10,435,627</td>
<td>10,462,832</td>
</tr>
<tr>
<td><strong>i. Other Govt</strong></td>
<td>58,786</td>
<td>45,915</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17,524,940</strong></td>
<td><strong>19,587,507</strong></td>
</tr>
</tbody>
</table>
3. Honors & Awards, 2010

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2010.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2010.
### 3.1 Honors & Awards Received by Faculty, 2010

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Boas</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>Y. Efendiev</td>
<td>Fraunhofer-Bessel Award, Humboldt Foundation</td>
</tr>
<tr>
<td>P. Howard</td>
<td>Partner in Learning Award, Department of Multicultural Services</td>
</tr>
<tr>
<td>J. Pasciak</td>
<td>Outstanding Science Communicator Award, Sigma Xi</td>
</tr>
<tr>
<td>N. Sivakumar</td>
<td>Service Award, Mathematics Department</td>
</tr>
<tr>
<td>J. Walton</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2010

Graduate

▷ GE Fellowship
  Kaitlyn Hellenbrand
  Casey Rodriguez
  Heather Williamson

▷ Graduate Assistance in Areas of National Need (GAANN) Fellowship
  Aaron Bailey
  Kaitlyn Hellenbrand
  James Hitchcock
  Roman Kogan
  Heather Williamson

▷ Houston A&M Mother’s Club Outstanding TA Awards
  Sanghyun Lee
  Travis Thompson
  John Paul Ward

▷ Integrative Graduate Education and Research Traineeship (IGERT)
  Yaniel Cabrera
  Craig Gin
  Maya Johnson
  Alexis Olson
  Tracy Weyand

▷ Kaust Fellowship
  Moritz Allmaras
  Donald Brown
  Abner Salgado Gonzalez
  Sunnie Joshi
  Linh Nguyen
  Jun Ren
  Vladimir Tomov

▷ L.F. Guseman Prize in Mathematics
  Mishko Mitkovski
  Korben Rusek

▷ Lechner Fellowship
  Zhi Zhou
  Tingyi Zhu

▷ Regents’ Fellowship
  Daniel Castanton Castanton
  Jing Voon Chen
  Ngoc Do
  Sourav Dutta
Dilber Kocak  
Rishika Rupan  
Sukhpreet Singh  
HyunHo Song  
Zhengyao Wu

▷ Walter E. Koss Endowed Fellowship in Mathematics  
Hao Nguyen

Undergraduate

▷ Best in Class Award for Math 409  
Anna Grimmer  
Michael Strong  
Kathryn Switzer  
Daniel Woelfel  
Andrew Young

▷ Best in Class Award for Math 409H  
Jacqueline Cromer  
Daniel Miller  
Tanner Wilson

▷ Best in Class Award for Math 411  
Shea Ling Lee  
Devin Light  
Alexander Waldrop

▷ Best in Class Award for Math 415/416  
Jeff Nolan

▷ Best in Class Award for Math 415/416H  
Derek Allums

▷ Best in Class Award for Math 425  
Alicia Israel

▷ Best in Class Award for Math 446/447  
Zach Darwin  
Keaton Hamm

▷ Best in Class Award for Math 467  
Bryan Dickson  
Emma Naden

▷ Bruce Treybig Scholarship  
Bernardo Cunha  
Kathryn Switzer

▷ Elizabeth A. Lepley Scholarship  
Laura Caflisch  
Tanner Wilson
Freshman Calclab Scholarship
Ashley Lecheler
Calvin Smith
Austin Taghavi
Katherine Turner

G. Alan Cannon Scholarship
Nell Kroeger
Seth Seidel
June Strange
Sandra Truong

James Boone Scholarship
Megan Eccell
Robyn Lake
Shea Ling Lee
Jennifer Wolffe

Koss/McGee/Hillman Scholarship
Justin Cantu
Kate Inman
Yongxin Jin
Shelby Lee
Daniella Leonard
Ryan Mattiza
Taylor Rust
Michael Strong

Mary & Robert N. Walker Endowed Scholarship
Anna Grimmer
Devin Light
Michael Strong
Sachin Subramanian
Isaac Velando

New Phi Beta Kappa Member
Luiz Faria
Shelby Lee
Amber Maciejjeski
Ryan Mattiza
Amanda Molsberry
Emma Nadden
Anthony Neumann
Jeffrey Nolan
Seth Seidel

New Pi Mu Epsilon Member
Jose Amaya
Joseph Bacica
Stephen Bird
Jason Blunk
Joshua Bulluck
Laura Caflisch
Brandon Cook
Chelsea Cope
Lexi Cronmgett
Bryant Cruz
Richard Emery
Myra Esquivel
Diana Fernandez
Rob Gravesmill
Anna Grimmer
David Haecker
Christopher Harris
Scott Henderson
Erik Katzen
Joshua Keneda
Brianna Koenig
Sonja Lam
Joseph Lazarine
Shelby Lee
Courtney MacArthur
Nicholas Mai
Michael Morstad
Mary Ann Moyer
Pristine Remolona
Erandi Rojo
Jennifer Rumpf
Omar Saucedo
Katherine Shoemaker
June Strange
Sachin Subramanian
Kathryn Switzer
Jennifer Than
Cynthia Trendafilova
Yaneira Vergara
Feng Wang
Aaron Yang
Hao Zeng
Rebekah Zimmermann

▷ Walter E. Koss/E.C. Klipple Endowed Scholarship in Mathematics
   Derek Allums
   Aaron Burkhard

▷ Watson Wyatt Actuarial Scholarship
   Shelby Lee
   Joseph Bacica
   Angelo Borges
Jonathan Burditt
Vincent Chan
Amanda Dailey
Rebecca Duvall
Myra Esquivel
William Klinsky
Shea Ling Lee
Daniel Lin
Scott McCarty
Joshua Meier
Thomas Mertink
Stephen Miller
Jeffrey Nolan
Chi On
Tammy Schmidt
Courtney Sears
Lindsay Urner
Anne Wiley
Ursula Zavala
Rebekah Zimmermann
April Zwernemann
4. Students, 2010

This section contains all degrees awarded, as reported by the department, during the calendar year 2010.
4.1 Graduate Degrees Awarded, 2010

Fall

▷ M.S.
  John Kyle Landrum  Advisor(s): Y. Efendiev
  Teo J Paoletti  Advisor(s): M. Rahe

▷ Ph.D.
  Rostyslav Kravchenko  Measure Theory of Self-similar Groups and Digit Tiles  Advisor(s): G. Pisier

Spring

▷ M.S.
  Kurt Michael Bruggeman  Advisor(s): G. Allen
  John Cathcart  Advisor(s): M. Pilant
  Evan Richard Fisher  Advisor(s): M. Rahe
  Daniel Godber  Advisor(s): H. Boas
  Bret Lockhart  Advisor(s): S. Geller
  Damon McDaniel  Advisor(s): M. Rahe
  Cara Montgomery  Advisor(s): J. Walton
  Michelle Moyer  Advisor(s): T. Schlumprecht
  Chad Evan Musick  Advisor(s): M. Pilant
  Jason Pfister  Advisor(s): D. Larson
  Sherry L. Wallin  Advisor(s): M. Rahe
  Jessica Marie Wendling  Advisor(s): G. Allen
Summer

▷ M.S.

William Chad Beaman  Advisor(s): G. Allen
Patrick Louis Beben  Advisor(s): S. Geller
Scott T Dickie  Advisor(s): G. Allen
William Aaron Seefeldt  Advisor(s): G. Allen
Anatolii Aleksandrovich Sianov  Advisor(s): C. Ward
Stephanie Noelle Tougas  Advisor(s): S. Witherspoon
Warren Alan Trotter  Advisor(s): G. Allen
Richard Uber  Advisor(s): G. Allen
Rodney Dale Wyrick  Advisor(s): G. Allen

▷ Ph.D.

Weronika Julia Buczynska  Phylogenetic Toric Varieties on Graphs
Advisor(s): F. Sottile
Yulia Nekova Georgieva-hristova  Mathematical Problems of Thermoacoustic and Compton Camera Imaging
Advisor(s): P. Kuchment
James Mitchell Hitchcock  Generic Properties of Actions of Fn
Advisor(s): D. Kerr
Brad Aubrey Lutes  Special Values of the Goss L-function and Special Polynomials
Advisor(s): M. Papanikolas
Mishko Mitkovski  Spaces of Analytic Functions and Their Applications
Advisor(s): A. Poltoratski
Linh Viet Nguyen  Mathematical Problems of Thermoacoustic Tomography
Advisor(s): P. Kuchment
Svetlana Poznanovikj  Research on Combinatorial Statistics - Crossings and Nestings in Discrete Structures
Advisor(s): C. Yan
Abner Jonatan Salgado Gonzalez  
Approximation Techniques for Incompressible Flows with Heterogeneous Properties  
Advisor(s): J. Guermond

Indranil Sen Gupta  
Analysis of the Three-dimensional Superradiance Problem and Some Generalizations  
Advisor(s): G. Chen

John Paul Ward  
$L^p$ Bernstein Inequalities and Radial Basis Function Approximation  
Advisor(s): J. Ward
4.2 Undergraduate Degrees Awarded, 2010

**Fall**

▷ **B.A.**

Jonathan Robert Brown  
Haeli Noelle Chapman  
Lauren Ashley Fortenberry  
Courtney Elaine Macarthur  
Brandice Mae Mc Dougule  
Stefan Keith San Miguel

▷ **B.S.**

Angelo Joseph Borges  
Westley Ryan Brenner  
Chi On Vincent Chan  
Bernardo Ildenfonso Cunha  
Amanda Nichole Dailey  
Zachary Shea Elewitz  
Edward Hwang  
William Zachary Klinsky  
Scott Schaefer Mccarty  
Matthew David Nolte  
James Aaron Resendez  
Lindsay Victoria Turner  
Rebekah Katherine Zimmermann  
April Marie Zwerneman

**Spring**

▷ **B.A.**

Erin Rose Cleveland  
Mark Donovan Collins  
Beth Erin Gardiner  
Michael Layne Kosler  
Amber Marie Maciejeski  
Amanda Leigh Molsberry  
Britni Rae Nelson  
Sara Elizabeth Patterson  
John Hudnall Robinett  
Amy Jean Schulz  
Tami Yvonne Spaulding  
Denise Lauren Trahan  
Jennifer Ann Wolff  
John Morgan Yeary

▷ **B.S.**

Zachary Keith Campbell  
Chelsea Colvett Cope  
Luiz Maltez Faria  
James David Garza

SEC. 4.2 UNDERGRADUATE DEGREES 367
Keaton Phillip Hamm  
Alicia Ann Israel  
Elizabeth Marie Jennings  
Louis Paul Mangiacapra  
Ryan Lee Mattiza  
Emma Marie Naden  
Anthony Michael Neumann  
Xochitlquetzal Rebeca Ordaz Castillo  
Omar Saucedo  
Nathan Bradly Torno  
Andrew Gordon Tyree  
Isaac William Velando  
Jennifer Lynn Williamson  
Kirsten Elizabeth Woikey  
William Arthur Yarberry

<table>
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<th>Summer</th>
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</table>
| ▶ B.A. | Justin Patrick Barry  
Jordan Laura Rogers |
| ▶ B.S. | Casey Paul Rodriguez |
5. Colloquium and Seminar Speakers, 2010

**Algebra and Combinatorics**

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1/29/2010</td>
<td>Richard Ng</td>
<td>Iowa State University</td>
<td>Modular Categories and Their Associated Representations</td>
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<tr>
<td>2/5/2010</td>
<td>Xingping Sun</td>
<td>Texas A&amp;M University</td>
<td>Approximation on the Voronoi Cells of the $A_d$ Lattice</td>
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<td>2/12/2010</td>
<td>Michael Anshelevich</td>
<td>Texas A&amp;M University</td>
<td>Distributions with linear Jacobi Parameters</td>
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<td>2/19/2010</td>
<td>Yorck Sommerhäuser</td>
<td>University of South Alabama</td>
<td>Equivariant Frobenius-Schur Indicators</td>
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<td>2/26/2010</td>
<td>Jonah Blasiak</td>
<td>University of Chicago</td>
<td>Nonstandard Hecke Algebra for the Kronecker Problem</td>
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<tr>
<td>3/5/2010</td>
<td>Deepak Naidu</td>
<td>Texas A&amp;M University</td>
<td>Drinfel’d Centers of Graded Fusion Categories</td>
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<td>3/26/2010</td>
<td>Laura Matusevich</td>
<td>Texas A&amp;M University</td>
<td>Quotients of A-Hypergeometric Systems</td>
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<tr>
<td>4/2/2010</td>
<td>David Haws</td>
<td>University of Kentucky</td>
<td>Ehrhart Polynomials, $h^*$-Vectors and Triangulations of Matroid Polytopes</td>
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<tr>
<td>4/9/2010</td>
<td>Bogdan Petrenko</td>
<td>State University of New York, Brockport</td>
<td>A Local-Global Approach to Calculating the Smallest Number of Generators of an Algebra</td>
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<td>4/16/2010</td>
<td>Christine Heitsch</td>
<td>Georgia Tech</td>
<td>RNA Configurations and Noncrossing Partitions</td>
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<td>4/30/2010</td>
<td>Andrea Jedwab</td>
<td>University of Southern California</td>
<td>On the Trace of the Antipode as an Invariant for Hopf Algebras</td>
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<tr>
<td>9/10/2010</td>
<td>Eric Rowell</td>
<td>Texas A&amp;M University</td>
<td>Localizing Unitary Braid Representations</td>
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</table>
9/17/2010  Sarah Witherspoon  
*Texas A&M University*  
Graded Hecke Algebras and Deformations

9/24/2010  Martin Avendano  
*Texas A&M University*  
Newton-Hensel Interpolation Lifting

10/1/2010  Frank Sottile  
*Texas A&M University*  
Constructing Cofree Compositional Coalgebras

10/8/2010  Paul Sobaje  
*University of Southern California*  
Blocks of Finite Group Schemes

10/15/2010  Matt Szczesny  
*Boston University*  
$F_1$-Linear Categories and Hall Algebras

10/22/2010  Gordon Heier  
*University of Houston*  
Essentially Large Divisors and Degeneracy of Integral Points

10/29/2010  Abraham Martin de Campo  
*Texas A&M University*  
Finiteness on Toric Markov Chain Models

11/5/2010  Chunwei Song  
*Peking University and University of Delaware*  
Perspectives of Combinatorial Statistics

11/12/2010  Viktor Levandovskyy  
*RWTH Aachen University*  
Groebner Technology in Non-Commutative Algebras: Implementation and Applications

12/3/2010  Dave Anderson  
*University of Washington*  
Okounkov Bodies and Toric Degenerations

12/3/2010  Nat Thiem  
*University of Colorado*  
Supercharacters and Combinatorial Hopf Algebras
Algebraic Geometry

1/25/2010  Aaron Lauve  
Texas A&M University

2/1/2010  Zach Teitler  
Texas A&M University
Ranks of Polynomials

2/8/2010  Frank Sottile  
Texas A&M University
Orbitopes

2/15/2010  Jarek Buczyński  
Texas A&M University
Ranks of Tensors and a Generalisation of Secant Varieties

2/22/2010  David Cox  
Amherst College
Rees Algebras and Singularities of Rational Plane Curves

3/1/2010  John Meth  
University of Texas, Austin
Rational Embeddings of the Severi-Brauer Variety

3/8/2010  David Jensen  
University of Texas, Austin
Moduli of Curves from the Perspective of Rational Maps

3/9/2010  Eric Katz  
University of Texas, Austin
Lifting Tropical Curves in Subvarieties

3/22/2010  Chungang Zhu  
Texas A&M University
Toric Degenerations of Bézier Patches

3/29/2010  Olivia Dumitrescu  
Colorado State University
Emptiness of Linear Systems with Ten Base Points

4/5/2010  David Jorgensen  
University of Texas, Arlington
Pinched Homological Algebra and Tate Cohomology

4/12/2010  Kristen Beck  
University of Texas, Arlington
On the Hilbert Series of $m^4 = 0$ Local Rings Admitting Non-Trivial Totally Acyclic Complexes

4/19/2010  Raman Sanyal  
University of California, Berkeley
Orbitopes
4/26/2010  Jon Hauenstein  
Texas A&M University  
Macaulay Dual Bases

5/3/2010  Philipp Rostalski  
University of California, Berkeley  
SDP Relaxations for the Grassmann Orbitope

5/5/2010  Martin Bendersky  
City University of New York  
Structure of Some Toric Spaces

5/6/2010  Charles Wampler  
General Motors R&D, Notre Dame  
Numerical Algebraic Geometry and Robot Kinematics

8/30/2010  Jon Hauenstein  
Texas A&M University  
Welcome to the Algebraic Geometry Seminar

9/3/2010  Hirotachi Abo  
University of Idaho  
On the Secant Defectivity of Segre-Veronese Varieties

9/6/2010  Ada Boralevi  
Texas A&M University  
Secants of Lagrangian Grassmannians

9/13/2010  Frank Sottile  
Texas A&M University  
Nearly Dense Fewnomials

9/20/2010  Mounir Nisse  
Texas A&M University  
Introduction to Phase-Tropical Curves (according to Mikhalkin)

9/27/2010  Eric Katz  
University of Texas, Austin  
Lifting Tropical Curves in Space and Linear Systems on Graphs

10/4/2010  Joseph Landsberg  
Texas A&M University  
On Eisenbud’s Conjecture on Secant Varieties

10/11/2010  Leonardo Mihalcea  
Baylor University  
How to Count Infinitely Many Curves, and Get a Finite Product in the Process

10/18/2010  Luchezar Avramov  
University of Nebraska, Lincoln  
Connected Sums of Gorenstein Rings

10/22/2010  Gordon Heier  
University of Houston  
Essentially Large Divisors and Degeneracy of Integral Points
10/25/2010  Martin Avendano  
*Texas A&M University*  
The Expected Number of Roots of Random Polynomials

11/1/2010  Corey Irving  
*Texas A&M University*  
Wachspress Varieties

11/8/2010  Paulo Lima-Filho  
*Texas A&M University*  
Explicit Regulator Formulas, from Voevodsky to Deligne

11/15/2010  Abraham Martin del Campo  
*Texas A&M University*  
Galois Groups of Schubert Problems

11/22/2010  Nickolas Hein  
*Texas A&M University*  
A Scheme-theoretic Littlewood-Richardson Rule

11/29/2010  Zekiye Sahin  
*Texas A&M University*  
Binomial Ideals
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<tr>
<td>1/19/2010</td>
<td>Alexander Komech</td>
<td>Vienna University</td>
<td>On Global Attractors of Nonlinear Hyperbolic PDEs</td>
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<td>2/9/2010</td>
<td>Misko Mitkovski</td>
<td>Texas A&amp;M University</td>
<td>Scattering for Schrodinger Operators</td>
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<td>2/23/2010</td>
<td>Misko Mitkovski</td>
<td>Texas A&amp;M University</td>
<td>Inverse Problem for Schrodinger Operators</td>
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<td>3/2/2010</td>
<td>Misko Mitkovski</td>
<td>Texas A&amp;M University</td>
<td>On deBranges’ Proof of the Paley-Wiener Theorem</td>
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<td>3/9/2010</td>
<td>Misko Mitkovski</td>
<td>Texas A&amp;M University</td>
<td>On de Branges’ Spaces and Schrodinger Operators</td>
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<tr>
<td>4/13/2010</td>
<td>Alexei Poltoratski</td>
<td>Texas A&amp;M University</td>
<td>Convergence and Distributions of Cauchy Integrals</td>
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<td>4/27/2010</td>
<td>Conni Liaw</td>
<td>Texas A&amp;M University</td>
<td>Deterministic Properties of the Spectrum of Generalized Anderson-Type Hamiltonians</td>
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<tr>
<td>5/4/2010</td>
<td>Conni Liaw</td>
<td>Texas A&amp;M University</td>
<td>Deterministic Properties of the Spectrum of Generalized Anderson-Type Hamiltonians II</td>
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<td>9/6/2010</td>
<td>Andrew Comech</td>
<td>Texas A&amp;M University</td>
<td>Spectral Stability of Solitary Waves I: Nonlinear Schrödinger Equation</td>
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<td>9/14/2010</td>
<td>Andrew Comech</td>
<td>Texas A&amp;M University</td>
<td>Spectral Stability of Solitary Waves II: Nonlinear Dirac Equation</td>
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<td>9/21/2010</td>
<td>Gregory Berkolaiko</td>
<td>Texas A&amp;M University</td>
<td>Nodal Domains and Spectral Critical Partitions on Graphs</td>
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<tr>
<td>10/5/2010</td>
<td>Gregory Berkolaiko</td>
<td>Texas A&amp;M University</td>
<td>Nodal Domains and Spectral Critical Partitions on Graphs</td>
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10/12/2010  Gregory Berkolaiko  
*Texas A&M University*  
Nodal Domains and Spectral Critical Partitions on Graphs (Continued)

10/15/2010  Michael Anshelevich  
*Texas A&M University*  
Transition Operator Semigroups, and Their Generators, in Classical and Free Probability

10/26/2010  Michael Anshelevich  
*Texas A&M University*  
Transition Operator Semigroups, and Their Generators, in Classical and Free Probability (Continued)

11/2/2010  Michael Anshelevich  
*Texas A&M University*  
Transition Operator Semigroups, and Their Generators, in Classical and Free Probability (Continued)

11/23/2010  Olena Ostapyuk  
*Kansas State University*  
Backward Iteration in the Unit Ball

12/2/2010  Mikhail Sodin  
*Tev Aviv University*  
Weighted Exponential Approximation and Non-classical Orthogonal Spectral Measures
<table>
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<tr>
<th>Date</th>
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<tr>
<td>2/2/2010</td>
<td>John Pearson</td>
<td>Los Alamos National Lab</td>
<td>Stochastic Theory of Early HIV Infection</td>
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<td>3/10/2010</td>
<td>Masahiro Suzuki</td>
<td>Tokyo Institute of Technology</td>
<td>Global Solvability and Hierarchy of Semiconductor Equations</td>
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<td>10/18/2010</td>
<td>Josef Malek</td>
<td>Charles University</td>
<td>On Steady and Unsteady Flows of Implicitly Constituted Incompressible Fluids</td>
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<td>11/1/2010</td>
<td>Sze-Bi Hsu</td>
<td>National Tsing Hua University</td>
<td>Competition and Coexistence in Flowing Habitats with a Hydraulic Storage Zone</td>
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Banach Spaces Seminar

11/12/2010  **Tomek Szankowski**  
*Hebrew University of Jerusalem*  
When Does a Random Banach Space Have the Approximation Property

11/19/2010  **Elisabeth Werner**  
*Case Western Reserve University*  
Non-additivity of Renyi Entropy and Dvoretzky’s Theorem

12/2/2010  **Yunus Zeytuncu**  
*Texas A&M University*  
Lp and Sobolev Regularity of Weighted Bergman Projections

12/10/2010  **Javier Chavez-Dominguez**  
*Texas A&M University*  
Ribe’s Program: A Morphic Point of View
<table>
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<th>Date</th>
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<th>Topic</th>
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<tr>
<td>2/5/2010</td>
<td>Przemyslaw Wojtaszczyk</td>
<td>University of Warsaw</td>
<td>1 – Minimization and Compressed Sensing</td>
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<td>2/8/2010</td>
<td>Peter Kuchment</td>
<td>Texas A&amp;M University</td>
<td>Restricted Spherical Mean Operators and Approximations by Radial Functions</td>
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<td>2/15/2010</td>
<td>Oksana Shatalov</td>
<td>Texas A&amp;M University</td>
<td>Isometric Embeddings Between Classical Banach Spaces and Cubature Formulas</td>
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<td>9/17/2010</td>
<td>A. Bailey</td>
<td>Texas A&amp;M University</td>
<td>Multivariate Polynomial Interpolation and Sampling in Paley-Wiener Spaces</td>
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<td>10/21/2010</td>
<td>Tamas Erdelyi</td>
<td>Texas A&amp;M University</td>
<td>A Surprisingly Simple Proof of the Ambrus-Ball Polarization Inequality</td>
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<td>1/20/2010</td>
<td>Jay Walton</td>
<td>Texas A&amp;M University</td>
<td>Professional Mathematical Societies</td>
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<td>2/3/2010</td>
<td>Guido Kanschat</td>
<td>Texas A&amp;M University</td>
<td>Numerical Analysis, Groups and Dynamics Seminars</td>
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<td>3/3/2010</td>
<td>Joel Zinn</td>
<td>Texas A&amp;M University</td>
<td>Probability Seminar; Ethics in the Profession</td>
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<td>4/28/2010</td>
<td>Harold Boas</td>
<td>Texas A&amp;M University</td>
<td>Several Complex Variables Seminar</td>
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<td>Texas A&amp;M University</td>
<td>Mathematical Physics, Harmonic Analysis, and Differential Equations Seminar</td>
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<td>9/29/2010</td>
<td>David Kerr</td>
<td>Texas A&amp;M University</td>
<td>Linear Analysis Seminar; Algebraic Geometry Seminar</td>
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<td>10/13/2010</td>
<td>David Larson</td>
<td>Texas A&amp;M University</td>
<td>Applying for Graduate Fellowships</td>
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<td>Texas A&amp;M University</td>
<td>Several Complex Variables Seminar; Algebra and Combinatorics Seminar</td>
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<td>12/1/2010</td>
<td>Paula Tretkoff</td>
<td>Texas A&amp;M University</td>
<td>Number Theory Seminar; Approximation Theory Seminar</td>
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Free Probability

10/25/2010  Yoann Dabrowski
University of California, Los Angeles
A Non-Commutative Path Space Approach to Stationary Free Stochastic Differential
Frontiers Lecture Series

2/1/2010  Alfio Quarteroni  
*EPFL, Lausanne, and Politecnico di Milano, Milan*  
Heterogeneous Boundary-Value Problems: Interface Conditions, Solution Algorithms, Applications (Lecture 1: Graduate)

2/3/2010  Alfio Quarteroni  
*EPFL, Lausanne, and Politecnico di Milano, Milan*  
Mathematical Models for the Cardiovascular System: Analysis, Numerical Simulation, Applications (Lecture 2: Frontiers/IAMCS Colloquium)

2/4/2010  Alfio Quarteroni  
*EPFL, Lausanne, and Politecnico di Milano, Milan*  
Mathematical Modeling and the Galileo Legacy (Lecture 3: Colloquium)

3/2/2010  Amos Ron  
*University of Wisconsin*  
Introduction and the Least Map (Graduate Talk)

3/3/2010  Amos Ron  
*University of Wisconsin*  
Introduction to Zonotopal Algebra (Colloquium)

3/4/2010  Amos Ron  
*University of Wisconsin*  
Modulation Splines and Their Root Representation (Colloquium)

3/8/2010  Frank Natterer  
*University of Münster*  
Imaging in Medicine, Science and Industry (Graduate talk)

3/9/2010  Frank Natterer  
*University of Münster*  
Acoustic Imaging: Nonlinear Algorithms in Frequency Domain (Colloquium)

3/11/2010  Frank Natterer  
*University of Münster*  
Acoustic Imaging: Nonlinear Algorithms in Time Domain (Colloquium)

3/22/2010  Michael Eastwood  
*Australian National University*  
Introduction to Conformal Geometry (Graduate talk)

3/23/2010  Michael Eastwood  
*Australian National University*  
Twistor Theory and the Harmonic Hull (Colloquium)

3/25/2010  Michael Eastwood  
*Australian National University*  
Higher Symmetries of the Laplacian (Colloquium)

11/8/2010  Jun-Muk Hwang  
*Korea Institute for Advanced Study*  
Equivalence Problem and Symmetry for Families of Lines (Graduate Lecture)
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<th>Speaker</th>
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<tr>
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<td>Jun-Muk Hwang</td>
<td>Korea Institute for Advanced Study</td>
<td>Injectivity Radius and Gonality of a Compact Riemann Surface</td>
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<td>Korea Institute for Advanced Study</td>
<td>Syzygies of Compact Complex Hyperbolic Manifolds</td>
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<td>11/15/2010</td>
<td>Chuu-Lian Terng</td>
<td>University of California, Irvine</td>
<td>Introduction to Soliton Equations</td>
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<td>11/16/2010</td>
<td>Chuu-Lian Terng</td>
<td>University of California, Irvine</td>
<td>Soliton Equations and Lie Algebras</td>
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<td>11/18/2010</td>
<td>Chuu-Lian Terng</td>
<td>University of California, Irvine</td>
<td>Soliton Equations in Differential Geometry</td>
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<td>1/7/2010</td>
<td>Damiano Fulghesu</td>
<td>University of Strasbourg</td>
<td>Equivariant Intersection Rings</td>
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<td>1/8/2010</td>
<td>Oksana Bihun</td>
<td>Concordia College</td>
<td>Minimal Distortion Morphs Generated by Time-Dependent Vector Fields</td>
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<td>1/22/2010</td>
<td>Jun-Muk Hwang</td>
<td>Korea Institute for Advanced Study</td>
<td>Deformation of the Space of Lines on the Five-Dimensional Hyperquadric</td>
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<td>2/5/2010</td>
<td>Saugata Basu</td>
<td>Purdue University</td>
<td>Toda’s Theorem – Real and Complex</td>
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<td>2/12/2010</td>
<td>Brent Doran</td>
<td>ETH Zurich</td>
<td>Fun with A1</td>
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<td>2/19/2010</td>
<td>Ronen Plesser</td>
<td>Duke University</td>
<td>Joint Geometry–String Theory Seminar: Towards Mirror Symmetry for (0,2) Models from the GLSM</td>
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<td>3/4/2010</td>
<td>Igor Dolgachev</td>
<td>University of Michigan</td>
<td>Configurations of Mutually Intersecting Planes, Enriques Surfaces and Hyper-Kahler</td>
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<td>4/2/2010</td>
<td>Michael Eastwood</td>
<td>Australian National University</td>
<td>Prolongation on Contact Manifolds III</td>
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<td>4/30/2010</td>
<td>Jim Lepowsky</td>
<td>Rutgers University</td>
<td>Logarithmic Tensor Category Theory for Modules for a Vertex Operator Algebra</td>
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<td>9/7/2010</td>
<td>Keizo Yamaguchi</td>
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Hokkaido University
Contact Geometry of Second Order

9/17/2010
Colleen Robles
Texas A&M University
Homological Rigidity in Compact Hermitian Symmetric Spaces

9/24/2010
Brendan Hassett
Rice University
Lagrangian Planes on Holomorphic Symplectic Varieties

10/1/2010
Vivek Shende
Princeton University
Hilbert Schemes of Points on Locally Planar Curves

10/8/2010
Sean Keel
University of Texas, Austin
Theta Functions for Log K3 Surfaces

10/15/2010
Abe Smith
McGill University
A Geometry for Studying Hyperbolic PDEs and Their Integrability

10/19/2010
Nicolas Ressayre
Université Montpellier
Geometric Invariant Theory via the Bott-Borel-Weil Theorem and Consequences

10/21/2010
Nicolas Ressayre
Université Montpellier
Branching Rules, Cones and Semigroups

11/5/2010
Andrew Snowden
Princeton University
Syzygies of Segre Embeddings

11/19/2010
Paulo Lima-Filho
Texas A&M University
Explicit Regulator Formulas, from Voevodsky to Deligne II

12/2/2010
Aaron Goldsmith
Texas A&M University
The Ham Sandwich Brotherhood

12/3/2010
Lek-Heng Lim
University of Chicago
On the Geometry of Cumulants
## Graduate Student Organization

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*Université Paris-Est Marne-la-Vallée*
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*Texas A&M University*  
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3/3/2010 Paula Tretkoff
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On Steady and Unsteady Flows of Implicitly Constituted Incompressible Fluids

10/18/2010  Josef Malek  
Charles University, Prague  
On Steady and Unsteady Flows of Implicitly Constituted Incompressible Fluids

10/20/2010  Bangti Jin  
Texas A&M University  
Inverse Problems with L1 Data Fitting: Algorithm and Parameter Choice

10/27/2010  Juan Galvis  
Texas A&M University  
Domain Decomposition for High-Contrast Problems

11/10/2010  Wolfgang Bangerth  
Texas A&M University  
Fully Adaptive Finite Element Algorithms on Thousands of Processors

11/15/2010  Wolfgang Dahmen  
RWTH Aachen University  
Convergence Rates for the Reduced Basis Method

11/17/2010  Thierry Coupez  
CEMEF, ENSMP  
Adaptive Anisotropic Meshing and Level Set for Free Surface and Interface Flow Problems

12/8/2010  Franky Luddens  
University of Paris XI  
Approximation of the MHD Equations in Heterogeneous Domains Using Lagrange Finite Elements

SEC. 5.  COLLOQUIUM AND SEMINAR SPEAKERS  401
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<tr>
<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
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<tr>
<td>2/10/2010</td>
<td>Christopher Hammond</td>
<td>Texas A&amp;M University</td>
<td>Schlicht Envelopes of Holomorphy and Topology</td>
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<td>3/10/2010</td>
<td>Anna Spice</td>
<td>Texas A&amp;M University</td>
<td>CR Functions on Real Hypersurfaces</td>
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<td>3/24/2010</td>
<td>Phil Harrington</td>
<td>University of Arkansas</td>
<td>Global Regularity for the Bergman Projection</td>
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<td>4/21/2010</td>
<td>Yunus Zeytuncu</td>
<td>Ohio State University</td>
<td>$L^p$ and Sobolev Regularity of Weighted Bergman Projections</td>
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<td>4/28/2010</td>
<td>Gordon Heier</td>
<td>University of Houston</td>
<td>Algebraic Geometric Methods for Effective Estimates on Weakly Pseudoconvex Domains of Finite Type</td>
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<tr>
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<td>Mounir Nisse</td>
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<td>Complex Varieties and Their Phase Limit Sets</td>
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<tr>
<td>10/8/2010</td>
<td>Harold Boas</td>
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<td>Historical Remarks on Slices of Power Series</td>
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<td>10/29/2010</td>
<td>Joe Perez</td>
<td>University of Vienna</td>
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<td>11/5/2010</td>
<td>Colleen Robles</td>
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<td>Projective Invariants of CR-Hypersurfaces</td>
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<td>11/19/2010</td>
<td>Emil Straube</td>
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<td>Compactness of the Complex Green Operator on CR Submanifolds of Hypersurface Type, I</td>
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<td>12/3/2010</td>
<td>Emil Straube</td>
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<td>Compactness of the Complex Green Operator on CR Submanifolds of Hypersurface Type, II</td>
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<td>1/7/2010</td>
<td>Ke Ye</td>
<td>Texas A&amp;M U</td>
<td>Samuelson Algorithm for the Determinant</td>
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<td>1/14/2010</td>
<td>Ming Yang</td>
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<td>Secant Varieties of Subspace Varieties</td>
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<td>Yang Qi</td>
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<td>Verma Modules and Quivers</td>
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<td>Verma Modules and Quivers III</td>
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<td>4/8/2010</td>
<td>Joseph Landsberg</td>
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<td>Friedland’s Solution of the Set-Theoretic Salmon Problem</td>
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<td>4/15/2010</td>
<td>Jaroslaw Buczynski</td>
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<td>Introduction to the Eisenbud Conjecture on Secant Varieties</td>
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<td>Ming Yang</td>
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<td>Texas A&amp;M U</td>
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<td>Kruskal’s Theorem and Weak Defectivity</td>
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<td>9/9/2010</td>
<td>Joseph Landsberg</td>
<td>Texas A&amp;M U</td>
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Texas A&M University
Symmetric Functions, Fast Evaluation of the Determinant and of an Immanent

9/23/2010 Ming Yang
Texas A&M University
Secant Varieties of Subspace Varieties

9/30/2010 Vivek Shende
Princeton University
What is the Hilbert Scheme of Points (and Why Should You Care)?

10/7/2010 Ke Ye
Texas A&M University
Linear Spaces of Matrices with Determinant Zero

10/14/2010 Yang Qi
Texas A&M University
Weak Defectivity and Uniqueness of Tensor Expressions

11/18/2010 Chuu-Lian Terng
University of California, Irvine
Questions and Answer Session on Tuesday’s Lecture

12/2/2010 Joseph Landsberg
Texas A&M University
On the Salmon Prize Problem

12/9/2010 Joseph Landsberg
Texas A&M University
On the Salmon Prize Problem II
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<tr>
<td>1/22/2010</td>
<td>Frank Sottile</td>
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<td>Introduction to Computational Algebra</td>
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<td>1/29/2010</td>
<td>Abraham Martin del Campo</td>
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<td>Groebner Basics</td>
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<td>Weronika Buczynska</td>
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<td>Buchberger’s Algorithm and the Ideal Membership Problem</td>
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<td>2/12/2010</td>
<td>Corey Irving</td>
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<td>Implicitization and Toric Ideals</td>
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<td>Groebner Basis Techniques for Fusion Categories</td>
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<td>2/26/2010</td>
<td>Nickolas Hein</td>
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<td>Buchberger’s Algorithm Improved</td>
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<td>Intersection of Ideals, Quotient Ideal and Difference of Varieties</td>
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<td>3/12/2010</td>
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<td>The Groebner Fan</td>
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<td>Sarah Witherspoon</td>
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<td>Poincare-Birkhoff-Witt Algebras</td>
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<td>Laura Matusevich</td>
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<td>Groebner Bases in the Weyl Algebra</td>
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<td>Sarah Witherspoon</td>
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<td>Groebner Bases in a Noncommutative Setting</td>
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<td>1/19/2010</td>
<td>Jun-Muk Hwang</td>
<td>Korea Institute for Advanced Study</td>
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<td>1/26/2010</td>
<td>Igor Zelenko</td>
<td>Texas A&amp;M University</td>
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<td>2/2/2010</td>
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<td>Texas A&amp;M University</td>
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<td>2/16/2010</td>
<td>Christopher Hammond</td>
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<td>Ada Boralevi</td>
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</table>
Colleen Robles  
*Texas A&M University*

Secants of Lagrangian Grassmannians  

9/14/2010

Colleen Robles  
*Texas A&M University*

Mumford-Tate Groups and Their Domains  

9/21/2010

Ada Boralevi  
*Texas A&M University*

Homogeneous Vector Bundles and Quivers  

9/28/2010

Colleen Robles  
*Texas A&M University*

Mumford-Tate Groups, 2  

10/5/2010

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*Texas A&M University*

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*Texas A&M University*

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*Texas A&M University*

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*Texas A&M University*

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*Texas A&M University*

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Colleen Robles  
*Texas A&M University*

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11/23/2010

Paula Tretkoff  
*Texas A&M University*

11/30/2010

Paula Tretkoff  
*Texas A&M University*
6. Faculty, 2010

Wael AbuShammala ......................................................... Lecturer
Marcelo Aguiar.............................................................. Professor
Angela Allen................................................................. Senior Lecturer
G. Donald Allen ............................................................ Professor
Michael Anshelevich ....................................................... Associate Professor
Ben Aurispa ................................................................. Lecturer
Amy L. Austin ............................................................... Senior Lecturer
Wolfgang Bangerth ......................................................... Associate Professor
Guy A. Battle ............................................................... Professor
Arthur P. Belmonte ......................................................... Senior Lecturer
Gregory Berkolaiko ........................................................ Associate Professor
G. Robert Blakley .......................................................... Professor
Harold P. Boas ............................................................. Professor
Albert Boggess ............................................................ Professor
May Boggess ............................................................... Senior Lecturer
Kathryn L. Bollinger ....................................................... Senior Lecturer
Andrea Bonito .............................................................. Assistant Professor
Itshak Borosh .............................................................. Professor
Lewis Bowen ............................................................... Assistant Professor
Goong Chen ................................................................. Professor
Chia-Rong Chen ........................................................... Lecturer
Andrew Comech .......................................................... Associate Professor
Lisa Cox .............................................................. Lecturer
Prabir Daripa ............................................................ Associate Professor
Richard D. DeBlasiie ...................................................... Associate Professor
Ronald A. DeVore ......................................................... Distinguished Professor
Ronald G. Douglas ...................................................... Distinguished Professor
Marcia L. Drost ........................................................... Senior Lecturer
Kenneth J. Dykema ....................................................... Professor
Yalchin R. Efendiev ........................................................ Professor
Janice L. Epstein .......................................................... Senior Lecturer
Tamas Erdelyi ............................................................. Professor
Ciprian I. Foias ............................................................ Distinguished Professor
Stephen A. Fulling ........................................................ Professor
Susan C. Geller ........................................................... Professor
Rostislav I. Grigorchuk .................................................. Distinguished Professor
Jean-Luc Guermond ....................................................... Professor
Robert A. Gustafson ....................................................... Associate Professor
Douglas A. Hensley ....................................................... Professor
Yvette C. Hester ......................................................... Senior Lecturer
Peter B. Howard .......................................................... Associate Professor
William B. Johnson ...................................................... Distinguished Professor
Joseph E. Kahlig ......................................................... Senior Lecturer
Guido Kanschat ........................................................ Associate Professor
David Kerr ............................................................. Associate Professor
Thomas R. Kiffe ........................................................ Associate Professor
Kendra Kilmer ........................................................... Senior Lecturer
Roger R. Smith ......................................................... Professor
Frank Sottili............................................................... Professor
Anna Spice ............................................................. Lecturer
Michael J. Stecher .................................................... Associate Professor
Peter F. Stiller .......................................................... Professor
Emil J Straube .......................................................... 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 .................................................. Senior Lecturer
Sarah Witherspoon .................................................... Professor
Catherine Huafei Yan .................................................. Professor
Philip B. Yasskin ......................................................... Associate Professor
Matthew P. Young ..................................................... Assistant Professor
Jill L. Zarestky .......................................................... Lecturer
Igor Zelenko ............................................................. Assistant Professor
Jianxin Zhou ............................................................ Professor
Joel Zinn ................................................................. Professor

*For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2010 (01/01/2010-12/31/2010).
6.1 Professional Activities, 2010

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2010.

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 2010.
- 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 2010.
- 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 2010**

  National

  Department
  ▶ Committee/Panel: Award Committee (Member)

- **TEACHING ASSIGNMENTS DURING 2010**

  Spring
  ▶ MATH 691. — Research (total enrollment: 1)

  Fall
  ▶ MATH 302. — Discrete Mathematics (total enrollment: 56)
  ▶ MATH 691. — Research (total enrollment: 1)

- **RESEARCH PROJECTS DURING 2010**

  Federal
  ▶ Algebra and Combinatorics of Free Structures, *National Science Foundation*
  ▶ Combinational Hopf Algebras and Algebraic Combinatorics, *National Science Foundation*

- **PRESENTATIONS DURING 2010**

  ▶ Combinatorics Seminar, University of Minnesota, MN, April, 2010. (Individual)
  ▶ Discrete Geometry and Combinatorics Seminar, Cornell University, Ithaca, NY, April, 2010. (Individual)
  ▶ Graduate Student Seminar, University of Minnesota, MN, April, 2010. (Individual)
  ▶ “Bialgebras in Free Probability,” Vienna, Austria, February, 2010. (Individual)
  ▶ Algebra/Geometry/Topology Seminar, University of Melbourne, Victoria, Australia, February, 2010. (Individual)
  ▶ Australian Category Seminar, Macquarie University, Sydney, Australia, February, 2010. (Individual)
  ▶ Math Department Colloquium, Chulalongkorn University, Bangkok, Thailand, February, 2010. (Individual)
  ▶ Math Department Colloquium, Indian Institute of Technology, Mumbai, Maharashtra India, February, 2010. (Individual)
  ▶ Math Department Colloquium, Macquarie University, Sydney, Australia, February, 2010. (Individual)
Graduate Student Seminar, San Francisco State University, San Francisco, CA, March, 2010. (Individual)

“Combinatorial Representation Theory,” American Mathematical Society Meeting #1058, Macalester College, St Paul, MN, April, 2010. (Individual)


“Mini-Symposium on Combinatorial Hopf Algebras,” Austin, TX, June, 2010. (Individual)

“SIAM Conference on Discrete Mathematics,” Austin, TX, June, 2010. (Individual)

Combinatorics Seminar, University of California, Berkeley, CA, October, 2010. (Individual)

Probabilistic Operator Algebra Seminar, University of California, Berkeley, CA, October, 2010. (Individual)

“Meeting Quasisymmetric Functions,” Banff International Research Station, Canada, November, 2010. (Poster Individual)

Free Probability Seminar, Texas A&M University, College Station, TX, November, 2010. (Individual)

**PUBLICATIONS DURING 2010**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ◦ Director, Center for Technology-Mediated Learning in Mathematics, Board of Regents, [2008]
  ◦ Associate Department Head, Mathematics, [2006]

• SERVICE DURING 2010

National
  ◦ Professional Affiliation: Mathematical Association of America, Society for Industrial and Applied Mathematics, Southwest Educational Research Association, Merlot-Multimedia Educational Resource for Learning and Online Teaching (Member)

College
  ◦ Committee/Panel: College Quality Enhancement Plan Council (Member), Institutional Effectiveness Working Group (Member)

Department
  ◦ Committee/Panel: Engineering Sequence Mathematics Committee (Chair), Executive Committee (Member), Honors Committee (Member), Texas Math Talent Search (Chair), Undergraduate Studies Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
  ◦ MATH 664. — Seminar in Applied Mathematics (total enrollment: 12)

Summer
  ◦ MATH 685. — Directed Studies (total enrollment: 1)

Fall
  ◦ MATH 629. — History of Mathematics (total enrollment: 17)

• RESEARCH PROJECTS DURING 2010

Federal
  ◦ Preservice Teachers Knowledge for Teaching Algebra, National Science Foundation
  ◦ Retention Through Remediation in Pre-Calculus Savings in the Thousands, National Science Foundation
(REN) TRACK1, GK-12: Fellows Integrate Science/Math In Rural Middle Schools, National Science Foundation

State

- Professional Development Activities for Teachers and Administrators: Mathematics College and Career Readiness Standards, Texas Education Agency
- Algebra I - II Focus on Alignment, Texas Higher Education Coordinating Board
- Design & Pilot of Framework & Tools for CCRS/ Texas Educator Preparation Demonstration Sites, Texas Higher Education Coordinating Board
- Functions in Algebra 1 & 2 with Vertical Alignment, Texas Higher Education Coordinating Board

• PRESENTATIONS DURING 2010

- “Mathematical Power Models,” University of Sao Paulo, Sao Paulo, Brazil, February, 2010.( Invited)
- “Texas A&M University Mathematics Placement Exam,” NSF Texas A&M University System Engineering Grant Meeting, College Station, TX, March, 2010.( Invited)
- “Aspects of the Texas A&M University Mathematics Placement Exam,” University of Turino, Turino, Italy, March, 2010.( Invited)
- “Integrating the CCRS into Academic Courses,” Texas A&M University Collaborative Summer Institute, College Station, TX, June, 2010.( Invited)
- Mathematics, Technology, and Mathematics Education, University of Nairobi, Kenya, August, 2010.( Invited)
- “Islamic Contributions to Mathematics,” MSC Jordan Institute for International Awareness, Texas A&M University, College Station, TX, November, 2010.( Individual)
MICHAEL ANSHELEVICH
ASSOCIATE PROFESSOR (979) 845-6679
MATH-Functional Analysis & Operator Theory manshel@math.tamu.edu

• SERVICE DURING 2010

International
▷ Event: Research in Teams on Subordination Problems Related to Free Probability (Organizer)

National
▷ Event: Free Probability Seminar (Co-Organizer)

Department
▷ Event: Concentration Week on Orthogonal Polynomials in Probability Theory, Annual Workshop in Analysis and Probability (Organizer), Noncommutative Functions Reading Seminar (Organizer)
▷ Committee/Panel: Honors Committee (Member), Scientific Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 423(H) — Linear Algebra II (total enrollment: 2)
▷ MATH 423. — Linear Algebra II (total enrollment: 15)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 151. — Engineering Mathematics I (total enrollment: 84)
▷ MATH 446(H) — Principles of Analysis I (total enrollment: 3)
▷ MATH 446. — Principles of Analysis I (total enrollment: 24)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Applications of Polynomial Families and Free Probability, National Science Foundation
▷ Seventh East Coast Operator Algebras Symposium, National Science Foundation

• PRESENTATIONS DURING 2010
▷ Louisiana State University, Baton Rouge, LA, 2010.( Individual)
▷ Massachusetts Institute of Technology, Cambridge, MA, 2010.( Individual)
▷ Rice University, Houston, TX, 2010.( Individual)

- PUBLICATIONS DURING 2010
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• **SERVICE DURING 2010**

  **International**
  ▶ Editorial/Board: Czech Science Foundation (Review: Proposals)

  **National**
  ▶ Committee/Panel: Science Steering Committee, Center for Computational Infrastructure in Geodynamics (Elected Member)

  **University**
  ▶ Ad Hoc Committee: Open Source Licensing (Member)
  ▶ Committee/Panel: Supercomputing Advisory Council (Member), Texas A&M University Council of Principal Investigators (Elected Member)

  **Department**
  ▶ Committee/Panel: Executive Committee (Member), Parallel/High-Performance Object-Oriented Scientific Computing Program Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**
  ▶ MATH 652. — *Optimization II* (total enrollment: 9)
  ▶ MATH 685. — *Directed Studies* (total enrollment: 1)
  ▶ MATH 691. — *Research* (total enrollment: 3)

  **Summer**
  ▶ MATH 691. — *Research* (total enrollment: 5)

  **Fall**
  ▶ MATH 442. — *Mathematical Modeling* (total enrollment: 23)
  ▶ MATH 691. — *Research* (total enrollment: 4)

• **RESEARCH PROJECTS DURING 2010**
Federal
▶ 3-D Deep Penetration Neutron Imaging of Thick Absorbing and Diffusive Heterogeneous Objects Using Transport Theory, Department of Energy
▶ A Framework for Developing Novel Detection Systems Focused on Interdicting Shielded, National Science Foundation
▶ Cluster Computing for Mathematical Sciences at Texas A&M University, National Science Foundation
▶ CMG Research: Exploiting Sparsity in Solving Geoscience Inverse Problems, National Science Foundation
▶ Geoinformatics Facility Support Computational Infrastructure in Geodynamics, National Science Foundation
▶ Mathematical Methods for Novel Modalities of Medical Imaging, National Science Foundation

Private
▶ Inverse Problems and Computational Science, Alfred P. Sloan Foundation
▶ A Suite of Simple Geodynamics Applications using Adaptive Finite Element Methods, California Institute of Technology

International
▶ Institute for Applied Mathematics and Computational Science (IAMCS) at Texas A&M University at The King Abdullah University of Science and Technology Global Research Partnership, King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2010
▶ University of Heidelberg, Germany, 2010.( Individual)
▶ “Parallel Processing,” SIAM Conference, Seattle, WA, February, 2010.( Invited)
▶ “Computational and Mathematical Challenges in Material Science and Engineering: Complex Fluid Dynamics; Thuwal,” IAMCS Workshop, Saudi Arabia, March, 2010.( Invited)
▶ Second Deal.II Users Meeting, Heidelberg, Germany, August, 2010.( Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

National
➢ Editorial/Board: *Applied and Computational Harmonic Analysis* (Member)

University
➢ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
➢ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 23)
➢ MATH 411. — *Mathematical Probability* (total enrollment: 40)

Summer
➢ MATH 423. — *Linear Algebra II* (total enrollment: 20)

Fall
➢ MATH 409. — *Advanced Calculus I* (total enrollment: 29)
• SERVICE DURING 2010
  National
  ▶ Editorial/Board: Analysis and PDE (Referee: Journals)
  College
  ▶ Committee/Panel: Faculty Advisory Council (Representative-at-Large)
  Department
  ▶ Service Position: Math Awareness Month Website (Developer), Mathematical Physics Seminar at First Year Graduate Student Seminar (Presenter)
  ▶ Event: Mathematical Physics Seminar (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ MATH 152. — Engineering Mathematics II (total enrollment: 74)
  ▶ MATH 412. — Theory of Partial Differential Equations (total enrollment: 24)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Graphs in Spectral Analysis of Complex Systems, National Science Foundation

• PRESENTATIONS DURING 2010
  ▶ Mathematical Physics Seminar, Texas A&M University, College Station, TX, 2010.( Individual)
  ▶ Mathematics Analysis and Dynamical Systems Seminar, Weizmann Institute of Science, Israel, February, 2010.( Individual)
  ▶ Physics Mathematics Seminar, Weizmann Institute of Science, Israel, February, 2010.( Individual)
  ▶ NTNU, Trondheim, Norway, March, 2010.( Individual)
  ▶ Theoretical Physics, University of Regensburg, Germany, March, 2010.( Individual)
  ▶ “Combinatorics of Semiclassical Evaluation in Quantum Chaos,” COMBINATEXAS: Combinatorics in the South-Central U.S., San Marcos, TX, April, 2010.( Individual)
  ▶ Bar-Ilan University, Israel, April, 2010.( Individual)
  ▶ Hebrew University, Jerusalem, Israel, April, 2010.( Individual)


Mathematics Colloquium, Baylor University, Waco, TX, November, 2010. (Individual)

- PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International

▷ Advisory Board: Springer-Verlag’s International Journal of Information Security (Member)

▷ Editorial/Board: Springer-Verlag’s International Journal of Information Security (Co-Founder)
• AWARDS DURING 2010

  University
  ▷ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2010

  National
  ▷ Committee/Panel: AAAS Electorate Nominating Committee (Member), Joseph L. Doob Prize Committee, American Mathematical Society (Member)

  Department
  ▷ Service Position: First-Year Graduate-Student Seminar (Co-Organizer)
  ▷ Committee/Panel: Lecturer Core Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▷ MATH 304. — Linear Algebra (total enrollment: 40)
  ▷ MATH 409(H) — Advanced Calculus I (total enrollment: 8)
  ▷ MATH 409. — Advanced Calculus I (total enrollment: 25)
  ▷ MATH 691. — Research (total enrollment: 1)

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

  Fall
  ▷ MATH 617. — Theory of Functions of a Complex Variable I (total enrollment: 22)
  ▷ MATH 691. — Research (total enrollment: 1)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Department Head, Mathematics, [2002]

• SERVICE DURING 2010

  International
  ▶ Editorial/Board: *Mathematische Annalen, Israel Journal of Mathematics* (Referee: Journals)

  National

  Regional
  ▶ Committee/Panel: High School Mathematics Competition Committee (Member)

  University
  ▶ Committee/Panel: ADVANCE Mini-grant Committee (Chair), Facilities Planning Sub-council for the Council on the Built Environment (Member), University Department Heads Council (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member)

  Department
  ▶ Service Position: Recruitment of Mathematics Faculty for Texas A&M University- Qatar (Manager)

• TEACHING ASSIGNMENTS DURING 2010

  Fall
  ▶ MATH 640. — *Linear Algebra for Applications* (total enrollment: 15)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Graduate Assistance in Areas of National Need, *Department of Education*
  ▶ MCTP: Transition Points for High School and Undergraduate Mathematics Students, *National Science Foundation*
  ▶ (REN) UBM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, *National Science Foundation*
  ▶ Workshop to Advise NSF on Proposed Program for Undergraduate Recruitment into Mathematics and Science, *National Science Foundation*
• PRESENTATIONS DURING 2010
• SERVICE DURING 2010

National

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 12)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 40)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 664. — Seminar in Applied Mathematics (total enrollment: 6)
▷ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Space and Time Adaptivity for Moving and Free Boundary Problems, National Science Foundation

• PRESENTATIONS DURING 2010

▷ Mathematics Institute of Computational Science and Engineering, École Polytechnique Fédérale de Lausanne, Switzerland, May, 2010.( Invited)
▷ Numerical Analysis Seminar, École Polytechnique Fédérale de Lausanne, Switzerland, June, 2010.( Invited)
▷ Modeling and Scientific Institute, Politecnico di Milano, Italy, July, 2010.( Invited)
▷ “Nonstandard Discretizations for Fluid Flows,” Banff International Research Station, Banff, Canada, November, 2010.( Invited)

• PUBLICATIONS DURING 2010

428 2010 Mathematics annual report


• SERVICE DURING 2010

National

Department
▷ Committee/Panel: Library Committee (Member), Talent Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 73)
▷ MATH 304. — Linear Algebra (total enrollment: 43)

Summer
▷ MATH 304. — Linear Algebra (total enrollment: 46)

Fall
▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 59)
• SERVICE DURING 2010
  International
  ▷ Editorial/Board: *Bulletins of the London Mathematical Society* (Referee: Journals)
  National
  Department
  ▷ Event: Groups and Dynamics Seminar (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ MATH 251. — *Engineering Mathematics III* (total enrollment: 8744)
  ▷ MATH 401. — *Advanced Engineering Mathematics* (total enrollment: 30)
  Fall
  ▷ MATH 251. — *Engineering Mathematics III* (total enrollment: 42)
  ▷ MATH 411. — *Mathematical Probability* (total enrollment: 47)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ CAREER: Ergodic Theory of Nonamenable Group Actions, *National Science Foundation*
  ▷ The Ergodic Theory of Namenable Group Actions, *National Science Foundation*
  Private
  ▷ Ergodic Theory Beyon Amenable Groups, *United States - Israel Binational Science Foundation*

• PRESENTATIONS DURING 2010
  ▷ “Workshop on Geometric, Asymptotic and Combinatorial Group Theory,” CRM, Montreal, Canada, April, 2010.( Individual)
  ▷ Group Theory International Webinar, May, 2010.( Invited)
  ▷ Texas A&M University, College Station, TX, October, 2010.( Individual)
  ▷ “Workshop on the Concentration Phenomenon Transformation Groups and Ramsey Theory,” Fields Institute, Toronto, Canada, October, 2010.( Individual)

• PUBLICATIONS DURING 2010

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PROFESSOR
MATH-Control Theory
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gchen@math.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Professor (J), Mathematics (Qatar), Texas A&M University - Qatar, [2010]

• SERVICE DURING 2010
  International
  ▶ Editorial/Board: International Journal of Quantum Information (Member)
  ▶ Committee/Panel: Conference on Mathematics of Date, University of Allahabad (Panel Member), Conference on Mathematics of Date, University of Allahabad (Session Chair)
  National
  ▶ Advisory Board: National Science Foundation (Panelist)
  ▶ Editorial/Board: Chapman & Hall/CRC Press Applied Mathematics and Nonlinear Sciences Series (Editor-in-Chief), Electronic Journal of Differential Equations (Editor-in-Chief), Journal of Mathematical Analysis and Applications (Editor-in-Chief), Various Journals (Referee: Journals)
  ▶ Committee/Panel: National Science Foundation (Panel Member), National Science Foundation (Session Chair)

   Department
  ▶ Research Group: Institute for Quantum Studies (Department Representative)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 685. — Directed Studies (total enrollment: 3)
  ▶ MATH 691. — Research (total enrollment: 2)
  Summer
  ▶ MATH 691. — Research (total enrollment: 2)
  ▶ PHYS 202. — College Physics (total enrollment: 2)
  Fall
  ▶ MATH 670. — Applied Mathematics I (total enrollment: 8)
  ▶ MATH 685. — Directed Studies (total enrollment: 2)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  State
  ▶ Mathematical Study of Wind Power Generation, Texas Higher Education Coordinating Board

  International
• **PRESENTATIONS DURING 2010**


  ▶ “The Dimensional Scaling Method in Chemical Physics,” University of Texas, El Paso, TX, September, 2010. (Invited)


• **PUBLICATIONS DURING 2010**


• SERVICE DURING 2010

Department
▷ Committee/Panel: Faculty Senate (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 612. — Partial Differential Equations (total enrollment: 4)

Summer
▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 7)

• PRESENTATIONS DURING 2010
▷ “Calderón-Zygmund Analysis Seminar,” University of Chicago, Chicago, IL, March, 2010.(Individual)
▷ “Lattice Seminar,” Institute for Theoretical and Experimental Physics, Moscow, March, 2010.(Individual)
▷ “Analysis Seminar,” University of Texas, Austin, TX, September, 2010.(Individual)
▷ “Analysis/PDE Reading Seminar,” Texas A&M University, College Station, TX, September, 2010.(Individual)
▷ “Lefschetz Center for Dynamical Systems Seminar,” Brown University, Providence, RI, September, 2010.(Individual)
▷ “Mathematical Physics Seminar,” Texas A&M University, College Station, TX, September, 2010.(Individual)
▷ “Mathematical Physics Seminar,” Rutgers University, New Brunswick, NJ, September, 2010.(Individual)
▷ “Stulken Geometry-Analysis Seminar,” Rice University, Houston, TX, September, 2010.(Individual)
▷ “Lattice Seminar,” Institute for Theoretical and Experimental Physics, Moscow, October, 2010.(Individual)
▷ Institute for Information Transmission Problems, October, 2010.(Individual)


“PDE Seminar,” Technische Universität Darmstadt, Darmstadt, Germany, November, 2010. (Individual)


- PUBLICATIONS DURING 2010
• SERVICE DURING 2010

International
▷ Event: Session on Alkaline Surfactant Polymer (ASP) Flooding and Other Water Flood Enhancements within Track 4: Chemical Enhanced Oil Recovery, BIT’s 1st Annual Congress on WSEOR (Chair)

National
▷ Event: Session on Fluids and Flow II, SIAM Annual Meeting (Chair), Session on Geosciences, SIAM Annual Meeting (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 685. — *Directed Studies* (total enrollment: 1)

Summer
▷ MATH 311. — *Topics in Applied Mathematics I* (total enrollment: 19)

Fall
▷ MATH 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

State
▷ Interdisciplinary Research on Complex Flows of Complex Fluids, *Texas A&M University*

Private
▷ Advanced Modeling of Enhanced Oil Recovery Methods, *Qatar National Research Fund*

• PRESENTATIONS DURING 2010

“Some Results on Multi-Layer Hele-Shaw Flows,” Mathematical Physics Seminar, Department of Mathematics, Texas A&M University, College Station, TX, March, 2010. (Invited)


“Issues and Directions of ASP-flooding in Enhanced Oil Recovery,” BIT’s 1st Annual Congress: Well Simulation and EOR, Chengdu, China, April, 2010. (Invited)

“Mathematical and Computational Modeling of Complex Fluid Flows in Porous Media for Enhanced Oil Recovery,” Applied Mathematics Seminar, Universidad Nacional Autónoma de México, Mexico City, Mexico, April, 2010. (Invited)


“Some Application Driven Fast Algorithms for PDEs,” Department of Mathematics, Texas A&M University, Qatar, Doha, May, 2010. (Invited)

“Some Fundamental Research Motivated by EOR (Enhanced Oil Recovery) Technology,” Texas A&M University, Qatar, Doha, May, 2010. (Invited)


“Thin Film Problems in Fluid Mechanics,” Applied Mathematics Seminar, Mathematics Department, Indian Institute of Technology, Kharagpur, India, August, 2010. (Invited)

**PUBLICATIONS DURING 2010**


Daripa, P.. (June 2010) Stability Enhanced Models of Chemical Enhanced Oil Recovery
Processes, Proceeding of 16th US National Congress of Theoretical and Applied Mechanics

• SERVICE DURING 2010

International
▷ Editorial/Board: European Series in Applied and Industrial Mathematics-Probability and Statistics (Referee: Journals)

National
▷ Committee/Panel: Who’s Who in American Universities and Colleges (Member)

Regional
▷ Event: High School Math Contest (Member)

University
▷ Committee/Panel: Undergraduate Studies Committee (Member)

College
▷ Committee/Panel: College Quality Enhancement Plan Council (Member)

Department
▷ Committee/Panel: Engineering Curriculum Committee (Member)

• RESEARCH PROJECTS DURING 2010

Federal
▷ MCTP: Transition Points for High School and Undergraduate Mathematics Students, National Science Foundation
• CHAIRS/PROFESSORSHIPS
  ▶ Walter E. Koss Endowed Professorship [2008]

• SERVICE DURING 2010
  International
  ▶ Editorial/Board: *Int. J. Wavelets Multiresolut. Inf. Process* (Associate Editor)

  National
  ▶ Advisory Board: *Found. Comput. Math* (Member)
  ▶ Committee/Panel: ICM 2010 Committee (Member)

  Department
  ▶ Event: Clay Conference (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 691. — Research (total enrollment: 1)
  Summer
  ▶ MATH 691. — Research (total enrollment: 1)
  Fall
  ▶ MATH 667. — Foundations and Methods of Approximation (total enrollment: 13)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Fast Computational Algorithms in High Dimensions, *Department of Defense*
  ▶ Fundamental Questions in Compressed Sensing, *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*

  Private
  ▶ Computational Duality, *Princeton University*

• PRESENTATIONS DURING 2010
• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

  International
  ▶ Editorial/Board: Bilateral Israeli/United States Foundation, Joint India-NSF (Review: Proposals)

  National
  ▶ Editorial/Board: City University of New York Research, 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: Workshop at BIRS, Banff (Co-Organizer)
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 08), Faculty Senate: The Legislative Affairs Committee (Member), Faculty Senate: The Planning Committee (Member)

Department
  ▶ Committee/Panel: Department Committee D (Chair), Distinguished Position Recruitment Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ MATH 410. — Advanced Calculus II (total enrollment: 10)

• PRESENTATIONS DURING 2010

  ▶ Mathematics Department, University of Texas, San Antonio, TX, February, 2010. (Individual)
  ▶ GPOTS, Denver, CO, June, 2010. (Invited)
  ▶ OT2, Timisoara, Romania, June, 2010. (Invited)
  ▶ Pure Mathematics Department, University of Waterloo, Waterloo, Canada, June, 2010. (Individual)
  ▶ IWOTA, Berlin, Germany, July, 2010. (Invited)
  ▶ Multivariate Operator Theory Workshop, Banff, Canada, August, 2010. (Invited)
  ▶ Helton Workshop, University of California, San Diego, CA, October, 2010. (Invited)
  ▶ Marburg University, Marburg, Germany, November, 2010. (Individual)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International

National

Department
▷ Committee/Panel: Subcommittee P (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 308. — Differential Equations (total enrollment: 53)
▷ MATH 656. — Functional Analysis II (total enrollment: 6)
▷ MATH 691. — Research (total enrollment: 2)

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

Fall
▷ MATH 304. — Linear Algebra (total enrollment: 41)
▷ MATH 407. — Complex Variables (total enrollment: 16)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Functions of Operators on Hilbert Spaces, National Science Foundation
▷ Seventh East Coast Operator Algebras Symposium, National Science Foundation
▷ Sums of Hermitian Operators and Connections to Connes’ Embedding Problem Hyperinvariant Subspaces, National Science Foundation

• PRESENTATIONS DURING 2010
“Matrices of Unitary Moments,” University of Ottawa, Ottawa, Canada, January, 2010. (Invited)
“On Approximation of Groups by Permutations and Operators by Matrices,” University of Münster, Germany, June, 2010. (Invited)
“On Approximation of Groups by Permutations and Operators by Matrices,” University of Konstanz, Germany, July, 2010. (Invited)

PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Interim Director, Institute for Scientific Computation, College of Science, [2008]
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• AWARDS DURING 2010

  International
  ▶ Fraunhofer-Bessel Award, Humboldt Foundation

• SERVICE DURING 2010

  International
  ▶ Event: Various International Conferences Organizing Committee (Participant)
  ▶ Editorial/Board: Georigian, Norwegian, UK Agencies (Review: Proposals), Norway Research Council, Swiss National Science Foundation (Reviewer)

  National
  ▶ Committee/Panel: Tera Grid Allocation Board (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ MATH 685. — Directed Studies (total enrollment: 3)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 4)

  Fall
  ▶ MATH 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010

  Federal
Bayesian Uncertainty Quantification in Predictions of Flows in Highly Heterogeneous Media and its Applications to the CO2 Sequestration, Department of Energy

Multiscale Analysis and Computation for Flows in Heterogenous Media, Department of Energy

Iterative Upscaling of Fluid Flows in Nonlinear Deformable Porous Media, National Science Foundation

Multiscale Data Integration Using Facies Based Hierarchical Bayesian Models, National Science Foundation

Industrial

Numerical Methods for Hyperbolic Equations, Chevron U.S.A.

Unconditionally Stable Time Stepping in Reservoir Simulation, Chevron U.S.A.

International

Development of a Computational Groundwater Model for Qatar, Qatar Foundation

• PRESENTATIONS DURING 2010


SIAM Annual Meeting, 2010. (Invited)

University of Frankfurt, Germany, 2010. (Individual)

University of Munster, Munster, Germany, 2010. (Individual)


“Pecemans Lecture on Numerical Mathematics,” Rice University, Houston, TX, February, 2010. (Invited)

Interpore Annual Meeting, Texas A&M University, College Station, TX, March, 2010. (Individual)


Felix Klein Summer School, Kaiserslautern, Germany, September, 2010. (Individual)

RACFD, India, September, 2010. (Individual)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

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: American Mathematical Society (Member), Janos Bolyai Mathematical Society (Member), Mathematical Association of America (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 152. — Engineering Mathematics II (total enrollment: 179)

Fall
▷ MATH 151. — Engineering Mathematics I (total enrollment: 78)

• PRESENTATIONS DURING 2010
▷ Indiana University, Bloomington, Indiana, December, 2010.( Individual)

• PUBLICATIONS DURING 2010
• **TEACHING ASSIGNMENTS DURING 2010**

  Spring
  
  ▶ MATH 685. — **Directed Studies** (total enrollment: 4)

• **PUBLICATIONS DURING 2010**

  
  
  
  
  
  
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  ▶ Professor (J), Physics and Astronomy, [2000]

• **SERVICE DURING 2010**

  National

  Department
  ▶ Committee/Panel: Executive Committee (Member), Subcommittee P (Member)

• **TEACHING ASSIGNMENTS DURING 2010**

  Spring
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 1)

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

  Fall
  ▶ MATH 467. — Modern Geometry (total enrollment: 28)
  ▶ MATH 491. — Research (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2010**

  Federal
  ▶ (REN) Collaborative Research: Quantum Vacuum Energy, *National Science Foundation*
  ▶ Collaborative Research: Quantum Vacuum Energy, *National Science Foundation*

• **PRESENTATIONS DURING 2010**
  ▶ “Vacuum Energy Density and Pressure near Boundaries,” MiltonFest on Nonperturbative Quantum Field Theory, University of Oklahoma, Norman, OK, April, 2010.(Invited)
  ▶ “Index Theorems for Quantum Graphs,” Analysis on Graphs and Its Applications - Follow-up Meeting, Isaac Newton Institute, University of Cambridge, Cambridge, United Kingdom, July, 2010.( Invited)
  ▶ “Index Theorems for Quantum Graphs,” International Conference on Spectral Geometry, Dartmouth University, Hanover, NH, July, 2010.( Individual)
• PUBLICATIONS DURING 2010
SUSAN C. GELLER

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MATH-Algebraic K-Theory

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Undergraduate Advisor, Mathematics Undergraduate Advising Office, [2004]
  ▶ Director, Mathematics Honors Program, Mathematics, [2003]
  ▶ Professor, Veterinary Integrative Biosciences, [1994]

• SERVICE DURING 2010

  National
  ▶ Event: Sessions of Talks, Nebraska Conference for Undergraduate Women in Mathematics (Moderator), What to do with Your Summer, Nebraska Conference for Undergraduate Women in Math (Moderator), Women In Mathematics (Speaker)
  ▶ Committee/Panel: AMS/MMA Joint Data Committee (Member), Employment Opportunities Joint Committee (Member), MAA Strategic Planning Committee on Meetings (Member), MAA Subcommittee on Science Policy (Member)

  Regional
  ▶ Committee/Panel: Teacher for Brazos Valley Dispute Resolution Center (Mediator)

  University
  ▶ Service Position: Dean of Faculties (Mediator), Junior Faculty (Mentor), Student Conflict Resolution Center (Mediator)
  ▶ Committee/Panel: Goldwater Scholarship Selection Committee (Member), Honorary Degree Committee (Member), Honors Program Advisory Board (Member), Tenure Mediation Committee (Vice Chair), Women’s Faculty Network (Mentor)

  Department
  ▶ Committee/Panel: Galveston General Academics Department Promotion and Tenure Committee (Member), Honors Programs (Director), Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ MATH 289. — Special Topics in (total enrollment: 19)
  ▶ MATH 646. — A Survey of Mathematical Problems II (total enrollment: 21)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▶ MATH 289. — Special Topics in (total enrollment: 11)
  ▶ MATH 415.(H) — Modern Algebra I (total enrollment: 15)
  ▶ MATH 645. — A Survey of Mathematical Problems I (total enrollment: 12)
MATH 685. — Directed Studies (total enrollment: 2)

- **RESEARCH PROJECTS DURING 2010**
  - **Federal**
    - Graduate Assistance in Areas of National Need, *Department of Education*
    - MCTP: Transition Points for High School and Undergraduate Mathematics Students, *National Science Foundation*
    - Undergraduate Student Travel to Conferences, *National Science Foundation*

- **PRESENTATIONS DURING 2010**
  - “Microarrays: What are They? How do They Work? What are They Good for? And What do You do with all the Data?,” Trinity University, San Antonio, TX, February, 2010.(Individual)
• SERVICE DURING 2010

International
▷ Event: Mathematics Competition for Young Mathematicians in Ukraine (Organizer), The First AMS-Math. Soc. Of Chile Meeting (Participant), The First AMS-Math. Soc. Of Chile Meeting, Special Section, Group Actions: Probability and Dynamics (Organizer)

National

Department
▷ Event: Groups and Dynamics Seminar (Head)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 416(H) — Modern Algebra II (total enrollment: 7)
▷ MATH 416. — Modern Algebra II (total enrollment: 13)
▷ MATH 685. — Directed Studies (total enrollment: 2)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 653. — Algebra I (total enrollment: 23)
▷ MATH 691. — Research (total enrollment: 2)
• PRESENTATIONS DURING 2010
  ▶ “Amenable Groups and Growth,” Indiana University Bloomington, Bloomington, IN, 2010.( Individual)
  ▶ “Torsion Images of Coxeter Groups,” Groups and Their Actions, Bedlewo, Poland, August, 2010. (Invited)
  ▶ “Wiegold Problem and Torsion Images of Coxeter Groups,” Actions and Invariants of Residually Finite Groups: Asymptotic Methods, Oberwolfach, Germany, September, 2010.(Invited)
  ▶ “Free vs. Nonfree Actions of Self-similar Groups,” Workshop on Group Actions and Dynamics, Montreal, Canada, October, 2010. (Invited)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT,

• SERVICE DURING 2010

International
  ▶ Editorial/Board: Fond National Suisse de la Recherche, Ministry of Foreign Affairs,
  FONDECYT Program (Review: Proposals), Euro. J. Fluid Mech., Int. J. Numer. (Referee:
  Journals), International Journal of Numerical Analysis and Modeling (Associate Editor)

National
  ▶ Editorial/Board: National Science Foundation and Department of Energy (Review: Proposals),
  Journal of Mathematical Analysis and Applications (Associate Editor), SIAM J.
  (Associate Editor)

Department
  ▶ Committee/Panel: Award Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

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

Fall
  ▶ MATH 601. — Methods of Applied Mathematics I (total enrollment: 32)
  ▶ MATH 602. — Methods and Applications of Partial Differential Equations (total
  enrollment: 42)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
  ▶ L 1-Based Approximations of PDEs and Applications, Department of Defense
  ▶ Support of Stockpile Stewardship Program, Lawrence Livermore National Laboratory
  ▶ A Framework for Developing Novel Detection Systems Focused on Interdicting Shielded,
  National Science Foundation
  ▶ Approximation Techniques for MHD Flows in Highly Heterogeneous Domains, National
  Science Foundation
Discontinuous Galerkin Methods for PDE’s with Heterogeneous Coefficients, National Science Foundation

IGERT: New Mathematical Tools for Next Generation Materials, National Science Foundation

L1-Based Approximation Techniques for PDEs, National Science Foundation

**PRESENTATIONS DURING 2010**
- CEMEF, Nice, France, April, 2010. (Individual)
- Rencontre de Mecanique des Fluides, Nice, France, April, 2010. (Individual)
- Workshop Sparsity and Computation, Bonn, Germany, June, 2010. (Invited)

**PUBLICATIONS DURING 2010**
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 86)

Summer
▷ MATH 367. — Basic Concepts of Geometry (total enrollment: 17)
▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 22)

Fall
▷ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 22)
▷ MATH 251. — Engineering Mathematics III (total enrollment: 89)
• SERVICE DURING 2010

National
▷ Editorial/Board: Acta Arithmetica (Referee: Journals), American Mathematical Monthly (Editor)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 24)

Fall
▷ MATH 152(H) — Engineering Mathematics II (total enrollment: 36)
▷ MATH 152. — Engineering Mathematics II (total enrollment: 87)
▷ MATH 490. — The Putnam Challenge (total enrollment: 11)

• PRESENTATIONS DURING 2010

• AWARDS DURING 2010
  
  University
  ▷ Partner in Learning Award, Department of Multicultural Services

• SERVICE DURING 2010
  
  National
  ▷ Editorial/Board: *Physica D, Journal of Mathematical Analysis and Applications* (Referee: Journals)

  Department
  ▷ Committee/Panel: Engineering Math Committee (Member), Executive Committee (Member), Outreach Activities Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▷ MATH 401. — *Advanced Engineering Mathematics* (total enrollment: 45)

  Summer
  ▷ MATH 491. — *Research* (total enrollment: 1)
  ▷ MATH 685. — *Directed Studies* (total enrollment: 1)

  Fall
  ▷ MATH 147. — *Calculus I for Biological Sciences* (total enrollment: 68)
  ▷ MATH 469. — *Introduction to Mathematical Biology* (total enrollment: 21)

• RESEARCH PROJECTS DURING 2010
  
  Federal
  ▷ Spectral Analysis and Stability for Wave Patterns and Multidimensional Waves, *National Science Foundation*

• PRESENTATIONS DURING 2010
  
  ▷ University of Kentucky, Lexington, KY, February, 2010. (Individual)
• CHAIRS/PROFESSORSHIPS
  ▶ Arthur George and Mary Emolene Owen Chair in Mathematics [1984]

• SERVICE DURING 2010
  International
  ▶ Editorial/Board: Mathematische Annalen, Extracta Mathematicae (Member)

  National
  ▶ Editorial/Board: Houston Journal of Mathematics (Member), Positivity (Member), Various Journals (Referee: Journals)
  ▶ Committee/Panel: Organizing Committee, SUMIRFAS (Chair)

  Department
  ▶ Event: Workshop in Linear Analysis and Probability (Director)
  ▶ Committee/Panel: Endowed Professorship Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 663. — Seminar in Analysis (total enrollment: 7)
  ▶ MATH 691. — Research (total enrollment: 1)

  Summer
  ▶ MATH 663. — Seminar in Analysis (total enrollment: 3)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 1)

  Fall
  ▶ MATH 607. — Real Variables I (total enrollment: 20)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Geometry of Banach Spaces and Metric Spaces, National Science Foundation
  ▶ (REN) Geometry of Banach Spaces and Operator Spaces, National Science Foundation
  ▶ SM Workshop in Analysis, National Science Foundation
  ▶ Workshop in Analysis and Probability, National Science Foundation

  Private
  ▶ Topics in the Geometry of Banach Spaces, U.S. Israel Binational Science Foundation
• PRESENTATIONS DURING 2010
  ▶ Beijing Normal University, Beijing, China, May, 2010. (Individual)
  ▶ “Perspectives in High Dimensions,” Cleveland, OH, August, 2010. (Invited)

• PUBLICATIONS DURING 2010
GUIDO KANSCHAT

ASSOCIATE PROFESSOR
MATH-Numerical Analysis & Scientific Computations

• SERVICE DURING 2010

International

National

University
▷ Event: Student Research Week (Judge)
▷ Committee/Panel: Faculty Senate (Faculty Senator - 09), Faculty Senate (Caucus Leader), Search Committee for the Faculty Ombudsperson (Member)

Department
▷ Event: Math Table at the Physics and Engineering Festival (Participant), Numerical Analysis Seminar (Organizer)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 308. — *Differential Equations* (total enrollment: 56)

Summer
▷ MATH 685. — *Directed Studies* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ A Framework for Developing Novel Detection Systems Focused on Interdicting Shielded, *National Science Foundation*
▷ Collaborative Research: Tuning-Free Adaptive Multilevel Discontinuous Galerkin Methods for Maxwell’s Equations, *National Science Foundation*
▷ Discontinuous Galerkin Methods for PDE’s with Heterogeneous Coefficients, *National Science Foundation*

Other
▷ Simulating our Complex World: Modeling, Computation and Analysis, *University of Minnesota*

• PRESENTATIONS DURING 2010

▷ IAMCS Annual Symposium, KAUST, Saudi Arabia, May, 2010. (Individual)
▷ PSPDEs, Barcelona, Spain, June, 2010. (Individual)
• PUBLICATIONS DURING 2010
DAVID KERR
ASSOCIATE PROFESSOR (979) 845-3458
MATH-Functional Analysis & Global Analysis kerr@math.tamu.edu

- SERVICE DURING 2010
  National
  ▶ Editorial/Board: Transactions of the American Mathematical Society, AMS Proceedings of Symposia in Pure Mathematics (Referee: Journals)
  Department
  ▶ Event: Concentration Week in Set Theory and Functional Analysis (Co-Organizer), Real Analysis Qualifying Exam Committee (Grader), Talks on Functional Analysis at the Texas A&M UniversityGraduate Student Recruitment Weekend (Speaker), Weekly Linear Analysis Seminar (Organizer), Texas A&M UniversityFunctional Analysis Group for First-Year Graduate Students (Speaker)
  ▶ Committee/Panel: Executive Committee (Member), Undergraduate Studies Committee (Member)

- TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 691. — Research (total enrollment: 1)
  Summer
  ▶ MATH 691. — Research (total enrollment: 1)
  Fall
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 201)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

- RESEARCH PROJECTS DURING 2010
  Federal
  ▶ CAREER: Operator Algebras, Dynamics, and Classification, National Science Foundation
  ▶ Seventh East Coast Operator Algebras Symposium, National Science Foundation

- PRESENTATIONS DURING 2010
  ▶ State University of New York, Buffalo, NY, February, 2010. (Individual)
  ▶ “Non-commutative Dynamics and Quantum Probability,” University of Regina, Regina, Canada, May, 2010. (Invited)
  ▶ “Traveling Waves and Spreading Speeds in Evolution Systems,” University of Science and Technology of China, Hefei, China, June, 2010. (Invited)
  ▶ 23rd Conference in Operator Theory, Timisoara, Romania, June, 2010. (Individual)
Groups and Group Actions in Operator Algebra Theory,” University of Ottawa, Ottawa, Canada, July, 2010. (Invited)

Concentration Week in Set Theory and Functional Analysis, Texas A&M University, College Station, TX, July, 2010. (Individual)

“C*-Algebras,” Midlands LMS Regional Meeting, Nottingham, United Kingdom, September, 2010. (Invited)

“Classification of Amenable C*-Algebras,” Banff International Research Station, Canada, September, 2010. (Invited)

Groups and Dynamics Seminar, Texas A&M University, College Station, TX, October, 2010. (Individual)

Wabash Miniconference, IUPUI, Indianapolis, IN, October, 2010. (Invited)

Pacific Institute for Mathematical Sciences Distinguished Lecture Series, Regina, Canada, November, 2010. (Individual)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010
  
  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 2010
  
  Spring
  ▷ MATH 308. — *Differential Equations* (total enrollment: 54)
  
  Summer
  ▷ MATH 311. — *Topics in Applied Mathematics I* (total enrollment: 27)
  ▷ MATH 366. — *Structure of Mathematics II* (total enrollment: 12)
  
  Fall
  ▷ MATH 171. — *Analytic Geometry and Calculus* (total enrollment: 26)
  ▷ MATH 609. — *Numerical Analysis* (total enrollment: 6)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2010

  International
  ▶ Event: Competition for Young Mathematicians in Ukraine (Judge)

  National

  Regional
  ▶ Event: High School Summer Math Camp SMaRT (Organizer)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ MATH 308.(H) — Differential Equations (total enrollment: 23)
  ▶ 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: 3)

• RESEARCH PROJECTS DURING 2010
Federal
▷ A Framework for Developing Novel Detection Systems Focused on Interdicting Shielded, *National Science Foundation*
▷ Collaborative Research: Mathematical Techniques for Emerging Methods in Biomedical Imaging, *National Science Foundation*
▷ Mathematical Methods for Novel Modalities of Medical Imaging, *National Science Foundation*
▷ MCTP: Transition Points for High School and Undergraduate Mathematics Students, *National Science Foundation*
▷ SM: Analysis on Graphs and it’s Applications, *National Science Foundation*

• PRESENTATIONS DURING 2010
▷ “Novel Hybrid Methods of Imaging,” MSRI, University of California, Berkeley, CA, August, 2010. (Invited)
▷ “2D and sD Reconstructions in Acousto-electric Tomography,” Joint Meeting of AMS and Chilean Mathematical Society, Pucon, Chile, December, 2010. (Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

International

National
▷ Committee/Panel: AMS Committee (Member)

Department
▷ Event: Geometry Seminar and the Working Geometry Seminar (Organizer)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 323(H) — Linear Algebra I (total enrollment: 11)
▷ MATH 323. — Linear Algebra I (total enrollment: 20)
▷ MATH 433. — Applied Algebra (total enrollment: 22)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 4)

Fall
▷ MATH 666. — Seminar in Geometry (total enrollment: 13)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) Analytic Geometry and Representation Theory, National Science Foundation
▷ Analytic Geometry and Representation Theory, National Science Foundation
▷ Texas Algebraic Geometry Seminar (TAGS) 2009, National Science Foundation
▷ (REN) Texas Geometry and Topology Conference, National Science Foundation
• PRESENTATIONS DURING 2010
  ▶ Rice University, Houston, TX, January, 2010. (Individual)
  ▶ University of Illinois, Chicago, IL, March, 2010. (Individual)
  ▶ “Mathematics and Physics on the Borderline between Algebraic and Differential Geometry,” Australian National University, Canberra, Australia, July, 2010. (Individual)
  ▶ Workshop on Tensor Decompositions and Applications, Bari, Italy, September, 2010. (Individual)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

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
▷ Event: AMS National Meeting (Co-Organizer)
▷ Committee/Panel: AMS Centennial Fellowship Selection Panel (Chair), AMS Centennial Fellowship Selection Panel (Member), Editorial Committee Operators and Matrices, Involve, Banach Journal of Mathematical Analysis (Member)

College
▷ Committee/Panel: Undergraduate Program Committee (Member)

Department
▷ Service Position: Undergraduate Studies (Director)
▷ Event: Workshop in Analysis and Probability (Co-Organizer)
▷ Committee/Panel: Honors Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 30)
▷ MATH 482.(H) — Research Seminar (total enrollment: 9)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)

Fall
▷ MATH 409.(H) — Advanced Calculus I (total enrollment: 10)
▷ MATH 482(H) — Research Seminar (total enrollment: 4)
▷ MATH 482. — Research Seminar (total enrollment: 6)
▷ MATH 491. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
Federal
▷ SM Workshop in Analysis, National Science Foundation
▷ Workshop in Analysis and Probability, National Science Foundation

• PRESENTATIONS DURING 2010
▷ University of Houston, Houston, TX, March, 2010. (Individual)
▷ University of Texas, San Antonio, TX, March, 2010. (Individual)
▷ Beijing Kadison Conference, Beijing, China, July, 2010. (Individual)
▷ State University of New York, Buffalo, NY, November, 2010. (Individual)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2010
  International
  ▶ Editorial/Board: *International Journal on Finite Volumes* (Associate Editor), *Zentralblatt fur Mathematik* (Referee: Journals)

  National

  Department
  ▶ Committee/Panel: Graduate Committee (Member), Undergraduate Curriculum Development Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Fall
  ▶ MATH 251. — *Engineering Mathematics III* (total enrollment: 95)
  ▶ MATH 610. — *Numerical Methods in Partial Differential Equations* (total enrollment: 10)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Discontinuous Galerkin Methods for PDE’s with Heterogeneous Coefficients, *National Science Foundation*
  ▶ Subgrid Discontinuous Galerkin Approximations of Brinkman Equation with Highly Heterogeneous Coefficients, *National Science Foundation*

• PRESENTATIONS DURING 2010
  ▶ Department of Mathematics, University of Pittsburgh, Pittsburgh, PA, April, 2010.( Individual)
  ▶ Pennsylvania State University, State College, PA, April, 2010.( Individual)


• PUBLICATIONS DURING 2010
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 221. — Several Variable Calculus (total enrollment: 52)
▷ MATH 409. — Advanced Calculus I (total enrollment: 29)

Fall
▷ MATH 221. — Several Variable Calculus (total enrollment: 40)
▷ MATH 325. — The Mathematics of Interest (total enrollment: 41)

• RESEARCH PROJECTS DURING 2010

Federal
▷ MCTP: Transition Points for High School and Undergraduate Mathematics Students,
*National Science Foundation*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Graduate Advisor, Mathematics Graduate Advising Office, Mathematics, [2006]

• SERVICE DURING 2010
  National
  ▷ Editorial/Board: Homology, Homotopy and Applications; Proceedings of AMS; Transactions of AMS; Houston Math. J. (Referee: Journals)

  University
  ▷ Committee/Panel: Faculty Advisory Committee for the Mexico City Center (Member), Faculty Senate (Faculty Senator - 09), Faculty Senate: International Programs (Member), Faculty Senate: The Legislative Affairs Committee (Member), Office of Latin American Programs Advisory Group (Member)

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

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ Graduate Assistance in Areas of National Need, Department of Education
  ▷ Texas Algebraic Geometry Seminar (TAGS) 2009, National Science Foundation

• PRESENTATIONS DURING 2010
  ▷ Arizona State University, Tempe, AZ, February, 2010. (Individual)
  ▷ Louisiana State University, Baton Rouge, LA, May, 2010. (Individual)
• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 172. — Calculus (total enrollment: 86)

Summer
▷ MATH 409. — Advanced Calculus I (total enrollment: 19)

Fall
▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 16)
▷ MATH 664. — Seminar in Applied Mathematics (total enrollment: 10)
• SERVICE DURING 2010

International

National

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 451 — Theory of Ordinary Differential Equations (total enrollment: 30)

Fall
▷ MATH 311 — Topics in Applied Mathematics I (total enrollment: 30)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Investigations on Heegner Points with Applications to L Functions, Elliptic Curves, and Combinatorics, *Department of Defense*

• PRESENTATIONS DURING 2010

▷ 24th Automorphic Forms Workshop, University of Hawaii, Honolulu, Hawaii, March, 2010. (Individual)
▷ University of Illinois, Champaign, IL, March, 2010. (Individual)
▷ University of Texas, Austin, TX, September, 2010. (Individual)
▷ Texas A&M University, College Station, TX, October, 2010. (Individual)

• PUBLICATIONS DURING 2010

• SERVICE DURING 2010

International
➤ Editorial/Board: Revista de la Unión Matemática Argentina, International Mathematics Research Notices (Referee: Journals)

National

• TEACHING ASSIGNMENTS DURING 2010

Spring
➤ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 8)

Summer
➤ MATH 685. — Directed Studies (total enrollment: 1)

Fall
➤ MATH 152. — Engineering Mathematics II (total enrollment: 82)
➤ MATH 630. — Graduate Combinatorics (total enrollment: 17)
➤ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
➤ Multivariate Hypergeometric Functions and Equations, National Science Foundation
➤ New Development in Hypergeometric Equations, National Science Foundation
➤ Texas Algebraic Geometry Seminar (TAGS) 2009, National Science Foundation

Private
➤ Alfred P. Sloan Research Fellowship in Mathematics, Alfred P. Sloan Foundation

• PRESENTATIONS DURING 2010

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, Center for Approximation Theory (CAT), Mathematics, 

• SERVICE DURING 2010

  International
  ▶ Editorial/Board: *SIAM Journal on Numerical Analysis* (Member)

  National

  Department
  ▶ Committee/Panel: Engineering Mathematics Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ MATH 414. — *Fourier Series and Wavelets* (total enrollment: 27)
  ▶ MATH 642. — *Analysis for Applications II* (total enrollment: 14)

  Summer
  ▶ MATH 304. — *Linear Algebra* (total enrollment: 18)
  ▶ MATH 691. — *Research* (total enrollment: 1)

  Fall
  ▶ MATH 641. — *Analysis for Applications I* (total enrollment: 24)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Analysis and Synthesis of Scattered Data on Surfaces via Radial and Related Basis Functions, *National Science Foundation*

• PRESENTATIONS DURING 2010
  ▶ “Bounded Lebesgue Constants for SBF Interpolation,” Seventh International Conference on Curves and Surfaces, Avignon, France, June, 2010.( Individual)

• PUBLICATIONS DURING 2010

• SERVICE DURING 2010

International

National
▷ Editorial/Board: Algebra and Discrete Mathematics (Editor), Groups, Geometry and Dynamics (Editor), *Journal of Mathematical Physics, Electronic Journal of Combinatorics, Communications in Algebra* (Referee: Journals)

Regional
▷ Service Position: High School Mathematics Contest (Grader), Summer Mathematics Research Training High School Camp (Speaker)

Department
▷ Committee/Panel: Committee T (Chair), Committee T (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 614. — *Dynamical Systems and Chaos* (total enrollment: 9)

Summer
▷ MATH 411. — *Mathematical Probability* (total enrollment: 30)
▷ MATH 685. — *Directed Studies* (total enrollment: 1)

Fall
▷ MATH 308. — *Differential Equations* (total enrollment: 112)
▷ MATH 685. — *Directed Studies* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Iterated Monodromy Groups, *National Science Foundation*

• PRESENTATIONS DURING 2010

▷ “Group Actions and Dynamics,” CRM, Montreal, Canada, October, 2010. (Individual)
• PUBLICATIONS DURING 2010
DMITRY PANCHENKO
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• SERVICE DURING 2010
  National
  ▶ Editorial/Board: Probability Theory and Related Fields (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 411. — Mathematical Probability (total enrollment: 12)
  Fall
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 98)
  ▶ MATH 619. — Applied Probability (total enrollment: 10)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) Mean-Field Spin Glass Models, National Science Foundation

• PRESENTATIONS DURING 2010
  ▶ Mathematics, University of California, Irvine, CA, May, 2010. (Individual)
  ▶ Physics, University of Rome, Rome, Italy, May, 2010. (Individual)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

International

National

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 251. — *Engineering Mathematics III* (total enrollment: 200)

Fall
▷ MATH 689. — *Special Topics in* (total enrollment: 7)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Measure-Theoretic Aspects of Convex Bodies, *National Science Foundation*

• PRESENTATIONS DURING 2010

▷ University of Tel-Aviv, Tel-Aviv, Israel, January, 2010. (Individual)
▷ Asymptotic Geometric Analysis, Saint-Petersburg, Russia, July, 2010. (Individual)
▷ Perspectives in High Dimensions, Cleveland, OH, August, 2010. (Individual)

• PUBLICATIONS DURING 2010

• SERVICE DURING 2010

International
▷ Editorial/Board: *International Mathematics Research Notices* (Referee: Journals)

National
▷ Event: Number Theory and Dynamics (Co-Organizer)

Department
▷ Committee/Panel: Department Head Search Committee (Member), Post-doctoral Hiring Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 172(H) — *Calculus* (total enrollment: 12)
▷ MATH 172. — *Calculus* (total enrollment: 38)
▷ MATH 662. — *Seminar in Algebra* (total enrollment: 7)
▷ MATH 691. — *Research* (total enrollment: 1)

Fall
▷ MATH 415. — *Modern Algebra I* (total enrollment: 25)

• RESEARCH PROJECTS DURING 2010

Federal
▷ 22nd Annual Workshop on Automorphic Forms and Related Topics, *National Science Foundation*
▷ (REN) Southwest Center for Arithmetic Geometry, *National Science Foundation*
▷ (REN) Special Functions and Transcendence, *National Science Foundation*

• PRESENTATIONS DURING 2010

▷ “Special Values of Goss L-functions for Dirichlet Characters,” Centre de Recerca Matemática, Barcelona, Spain, April, 2010. (Invited)
▷ “Special Values of Goss L-Functions in Positive Characteristic,” Wesleyan University, Middletown, CT, October, 2010. (Individual)
• PUBLICATIONS DURING 2010
• AWARDS DURING 2010
  University
  ▷ Outstanding Science Communicator Award, Sigma Xi

• SERVICE DURING 2010
  National
  ▷ Committee/Panel: Scientific Committee, Copper Mountain Multigrid Meetings (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ MATH 610. — Numerical Methods in Partial Differential Equations (total enrollment: 6)
  ▷ MATH 639. — Iterative Techniques (total enrollment: 5)
  Fall
  ▷ MATH 609. — Numerical Analysis (total enrollment: 17)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ (REN) A New Approximation Technique for Maxwell’s Equations, 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 2010
  ▷ “Analysis of a Cartesian PML Approximation to the Three Dimensional Maxwell Scattering Problem,” 10’th International Workshop on Finite Elements for Microwave Engineering, Meridith, NH, October, 2010. (Invited)
• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

National
▷ Editorial/Board: *Kyungpook Math. Journal* (Member), *Various Journals* (Referee: Journals)

University
▷ Advisory Board: Board of Trustees of the Development Foundation (Member)

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

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 311. — *Topics in Applied Mathematics I* (total enrollment: 22)

Fall
▷ MATH 409. — *Advanced Calculus I* (total enrollment: 23)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International
▷ Committee/Panel: Sparsity and Computation (Chair)

National

University
▷ Committee/Panel: Graduate Faculty Committee (Member)

Department
▷ Committee/Panel: Subcommittee T (Member), Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 691. — Research (total enrollment: 1)

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

Fall
▷ MATH 417. — Numerical Analysis I (total enrollment: 22)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Surface Reconstruction from Point Clouds Using Wavelets, Department of Defense
▷ Collaborative Research: An ADT Proposal: Fast Point Cloud Surface Reconstruction Algorithms, National Science Foundation
▷ Collaborative Research: An ADT Proposal: Fast Point Cloud Surface Reconstruction Algorithms, National Science Foundation
▷ Computational Challenges in Fluid Transport and Imaging, National Science Foundation

International
▷ Mathematical Methods and Algorithms for Computed Tomography, Ministry of Education and Science

Other
Model Classes, Approximation, and Metrics for Dynamic Processing of Urban Terrain Data, University of South Carolina

- **PRESENTATIONS DURING 2010**
  - Texas A&M University, College Station, TX, September, 2010. (Individual)
  - “First Year Graduate Student Seminar,” Texas A&M University, College Station, TX, December, 2010. (Individual)

- **PUBLICATIONS DURING 2010**
MICHAEL S. PILANT

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MATH-Partial Differential Equations mpilant@math.tamu.edu

• SERVICE DURING 2010

National
d> Professional Affiliation: Phi Beta Kappa, Local Chapter (Member)

University
d> Service Position: Qatar Research Interview and Academic Affairs Interview (Associate Dean)
d> Committee/Panel: Instructional Technology Council (Member), Math and Engineering Student Success Committee (Member), Qatar Tenure and Promotion Committee (Member)

College
d> Service Position: Information Technology Lab (Director)
d> Committee/Panel: Diversity Committee (Member), Grievance Committee (Elected Member), Information Technology Committee (Member), Qatar Advisory Committee (Member), Technology-Mediated Instruction Committee (Member)

Department
d> Committee/Panel: Computer Committee (Member), Engineering Mathematics Sequence (Chair), Mathematics and Science Education Advisory Council (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
d> MATH 609. — Numerical Analysis (total enrollment: 8)

Summer
d> MATH 696. — Mathematical Communication and Technology (total enrollment: 22)

Fall
d> MATH 308. — Differential Equations (total enrollment: 106)

• RESEARCH PROJECTS DURING 2010

Federal
d> Enhancing Calculus I Success, National Science Foundation
d> Retention Through Remediation in Pre-Calculus Savings in the Thousands, National Science Foundation

International
d> Development of a Computational Groundwater Model for Qatar, Qatar Foundation

• PRESENTATIONS DURING 2010


College of Engineering, April, 2010. (Individual)
• CHAIRS/PROFESSORSHIPS
  ▶ Arthur George and Mary Emolene Owen Chair in Mathematics [1985]

• SERVICE DURING 2010
  International
  ▶ Committee/Panel: Banff International Research Station (BIRS) External Review Board (Member)

  National
  ▶ Editorial/Board: Journal of Operator Theory (Editor)

  Department
  ▶ Event: Conference on Non-commutative $L_p$-Spaces Non-commutative $L_p$-spaces and Applications (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 691. — Research (total enrollment: 1)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▶ MATH 663. — Seminar in Analysis (total enrollment: 6)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) Geometry of Banach Spaces and Operator Spaces, National Science Foundation
  ▶ SM Workshop in Analysis, National Science Foundation
  ▶ Workshop in Analysis and Probability, National Science Foundation

• PRESENTATIONS DURING 2010
  ▶ “Remarks on the Non-commutative Khintchine Inequalities,” Conference in Honour of U. Haagerup, Copenhagen, Denmark, April, 2010. (Individual)
  ▶ “Martingale Inequalities and Operator Space Structures on $L_p$,” AMS Meeting, Special Session on Free Probability, University of California, Los Angeles, CA, October, 2010. (Individual)
“The Dixmier Unitarizability Problem,” Rice University, Houston, TX, October, 2010.

- PUBLICATIONS DURING 2010
• SERVICE DURING 2010

National
▷ Editorial/Board: Journal of Differential Geometry (Referee: Journals)

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

Department
▷ Service Position: Departmental of Mathematics (Mentor)
▷ Committee/Panel: Subcommittee P (Member), Teaching Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 20)
▷ MATH 470. — Communications and Cryptography (total enrollment: 44)

Summer
▷ MATH 666. — Seminar in Geometry (total enrollment: 18)

Fall
▷ MATH 636. — Topology I (total enrollment: 26)

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) Texas Geometry and Topology Conference, National Science Foundation
• SERVICE DURING 2010

National
▷ Editorial/Board: Various Journals (Referee: Journals)

Department
▷ Event: Analysis/PDE Working Seminar (Co-Organizer), Mathematical Physics and Harmonic Analysis Seminar (Organizer)
▷ Committee/Panel: Subcommittee T (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 618. — Theory of Functions of a Complex Variable II (total enrollment: 10)
▷ MATH 691. — Research (total enrollment: 1)

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

Fall
▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 78)
▷ MATH 251. — Engineering Mathematics III (total enrollment: 90)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Uniqueness and Convergence of Analytic Integrals in Harmonic and Spectral Analysis, National Science Foundation

• PRESENTATIONS DURING 2010

▷ AMS Regional Meeting, Albuquerque, NM, April, 2010.( Individual)
▷ 18th Annual Analysis Meeting, Euler Institute, St. Petersburg, Russia, June, 2010.( Individual)
▷ Summer School in Complex Analysis, Puerto de Santa Maria, Spain, June, 2010.( Individual)
▷ Complex Analysis and Differential Equations Conference, Trondheim, Norway, September, 2010.( Individual)
▷ Complex Analysis and Operator Theory Workshop, Oberwolfach, Germany, November, 2010.( Individual)

• PUBLICATIONS DURING 2010


BOJAN POPOV

ASSOCIATE PROFESSOR
MATH-Num. Analysis & Approximation Theory

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• SERVICE DURING 2010

International
- Editorial/Board: University of Cyprus, Greece (Review: Proposals)

National
- Committee/Panel: Numerical Methods and Applications Organization Committee (Member)

Regional
- Event: A&M High School Math. Contest (Organizer)

• TEACHING ASSIGNMENTS DURING 2010

Spring
- MATH 685. — Directed Studies (total enrollment: 1)

Summer
- MATH 685. — Directed Studies (total enrollment: 1)

Fall
- MATH 221. — Several Variable Calculus (total enrollment: 40)
- MATH 412(H) — Theory of Partial Differential Equations (total enrollment: 6)
- MATH 412. — Theory of Partial Differential Equations (total enrollment: 13)
- MATH 685. — Directed Studies (total enrollment: 1)
- MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
- L 1-Based Approximations of PDEs and Applications (AFSOR), Department of Defense
- Support of Stockpile Stewardship Program, Lawrence Livermore National Laboratory
- L1-Based Approximation Techniques for PDEs, National Science Foundation

• PRESENTATIONS DURING 2010

- 13th International Conference on Approximation Theory, San Antonio, TX, March, 2010. (Invited)
- “Sparsity and Computation,” Bonn, Germany, June, 2010. (Invited)

“Wavelets and Multiscale Methods,” Oberwolfach, Germany, August, 2010. (Invited)

- PUBLICATIONS DURING 2010
• SERVICE DURING 2010
  Department
  ▷ Committee/Panel: Teaching Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ MATH 470. — Communications and Cryptography (total enrollment: 36)
  ▷ MATH 673. — Information, Secrecy and Authentication I (total enrollment: 12)
  Summer
  ▷ MATH 308. — Differential Equations (total enrollment: 68)
  Fall
  ▷ MATH 308.(H) — Differential Equations (total enrollment: 24)
  ▷ MATH 470(H) — Communications and Cryptography (total enrollment: 9)
  ▷ MATH 470. — Communications and Cryptography (total enrollment: 34)
• SERVICE DURING 2010

International

National
▷ Editorial/Board: Journal of Geometry and Physics, Symmetry, Integrability and Geometry: Methods and Applications, Classical and Quantum Gravity, Proceedings of the American Mathematical Society (Referee: Journals)

Department
▷ Event: Physics Festival (Volunteer)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 622. — Differential Geometry I (total enrollment: 20)

Fall
▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 33)
▷ MATH 623. — Riemannian Geometry (total enrollment: 6)

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) Analytic Geometry and Representation Theory, National Science Foundation
▷ Analytic Geometry and Representation Theory, National Science Foundation

• PRESENTATIONS DURING 2010

▷ Università di Trieste Geometry Seminar, July, 2010. (Individual)
▷ “Differential Geometry and its Applications,” Masaryk University, Czech Republic, August, 2010. (Invited)

• PUBLICATIONS DURING 2010

• SERVICE DURING 2010

National

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 12), Faculty Senate: Legislative Affairs Committee (Member), Faculty Senate: The Research Committee (Member)

Department
▷ Editorial/Board: Spanish Language (Examiner)
▷ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 691. — Research (total enrollment: 1)

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

Fall
▷ MATH 220(H) — Fundamentals of Discrete Mathematics (total enrollment: 22)
▷ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 21)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Graduate Assistance in Areas of National Need, Department of Education
▷ Topology for Statistical Modeling of Petascale Data, Department of Energy
▷ MCS: Randomization in Algorithmic Fewnomial Theory over Complete Fields, National Science Foundation, coworkers: K. Rusek (G)
▷ (REN) REU Site Grant: Undergraduate Research in Mathematical Sciences and its Applications, National Science Foundation
▷ Texas Algebraic Geometry Seminar (TAGS) 2009, National Science Foundation

• PRESENTATIONS DURING 2010
▷ “Simple Homotopies for Just Real Roots,” Randomization, Complexity, and Relaxation, Banff International Research Station, Banff, Alberta, Canada, March, 2010.( Invited)
“Satellite Orbits and Solving Equations,” NSF Mathematics at Critical Transitions guest lecture, Texas A&M University, College Station, TX, July, 2010. (Invited)

“Satellite Orbits and Solving Equations,” SEEMath Program, College Station, TX, July, 2010. (Individual)

“Extreme Extremal Results for Sparse Systems,” Notre Dame University, Notre Dame, IN, August, 2010. (Invited)
• SERVICE DURING 2010

National

Department
▷ Event: Quantum Invariants of 3-Manifolds and Modular Categories, AMS Central Sectional Meeting (Organizer)
▷ Committee/Panel: Algebra Qualifying Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 654. — *Algebra II* (total enrollment: 18)

Fall
▷ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 18)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Algebraic Aspects of Topological Quantum Computing, *Department of Defense*
▷ Modular Categories and Braid Group Representations, *Department of Defense*

• PRESENTATIONS DURING 2010

▷ “Topological Phases and Emergent Phenomena in Physics,” Fudan University, Shanghai, China, July, 2010. (Invited)
▷ Texas A&M University, College Station, TX, October, 2010. (Invited)
▷ “Southern Regional Algebra Conference,” Louisiana State University, Lafayette, LA, October, 2010. (Individual)
▷ Iowa State University, Ames, IA, December, 2010. (Invited)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010
  National
  ▶ Committee/Panel: Imaging and Inverse Problems (Editoral Board), Initiative for Research Cooperation (Chair), Inverse Problems (Editoral Board)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 308. — Differential Equations (total enrollment: 55)
  ▶ MATH 664. — Seminar in Applied Mathematics (total enrollment: 16)
  Fall
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Reconstruction Algorithms for Inverse Obstacle Problems, National Science Foundation
  ▶ US-China Collaborations in Inverse Problems, National Science Foundation

• PRESENTATIONS DURING 2010
  ▶ “International Conference on Inverse Problems,” Wuhan, China, April, 2010.(Invited)
  ▶ “Inverse Problems and Shape Optimization,” Cartagena, Spain, April, 2010.( Invited)
  ▶ “Workshop on Inverse Problems,” Hong Kong, China, April, 2010.( Individual)
  ▶ “Workshop on Computational and Applied Mathematical Sciences,” King Abdullah University of Science and Technology, Saudi Arabia, May, 2010.( Individual)
  ▶ Universität Göttingen, Germany, September, 2010.( Individual)
  ▶ Fudan University, Shanghai, China, November, 2010.( Individual)
  ▶ Zhejiang University, Hangzhou, China, November, 2010.( Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Associate Dean for Assessment and PreK-12 Education, Office of Assessment and PreK-12 Education, College of Science, [2006]
  ▶ Co-Director, Center for Mathematics and Science Education (CMSE), College of Science, [2006]

• SERVICE DURING 2010

  National
  ▶ Editorial/Board: CAREER Awards, National Science Foundation (Review Panel), School Science and Mathematics Journal (Associate Editor)
  ▶ Committee/Panel: NCTM Connection to the Common Core Standards Committee (Member)

  State
  ▶ Service Position: Geometry End of Course Success PD Development Team, Region VII Education Service Center (Advisor)
  ▶ Committee/Panel: Project Share Advisory Committee, Texas Education Agency (Member), Texas Essential Knowledge and Skills in Mathematics Review/Advisory Committee (Member), Universal Screener Development/Review Teams, Texas Education Agency (Member)

  University
  ▶ Committee/Panel: General Education Team, American Association of Colleges and Universities (Member), Institutional Assessment Advisory Committee (Member), MidCareer Math/Science Recruitment Grant Advisory Council (Member), University Council on Teacher Education (Member)

  College
  ▶ Event: Regional Junior Science Bowl (Judge), Regional Science Bowl (Judge), Science Ed Policy Position Search Committee (Chair), Texas Junior Academy of Science Competition (Judge)
  ▶ Committee/Panel: Executive Committee (Member), Technology-Mediated Instruction Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

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

• RESEARCH PROJECTS DURING 2010

  Federal
Engaging Middle School Students in Student-Directed Inquiry Through Virtual Environments for Learning, National Science Foundation

Virtual Ecological Inquiry (VEI) - A Virtual Environment for Inquiry-Based Learning and Education Research, National Science Foundation

State

Interagency Agreement with Region XIII, Austin, Texas, Region XIII

PRESENTATIONS DURING 2010

“A Grant is Not Just Something You Get,” CIRTL Post-doctoral Seminar, College Station, TX, May, 2010.( Individual)


PUBLICATIONS DURING 2010


• SERVICE DURING 2010

National
▷ Event: U.S. Department of Energy National Middle School Science Bowl (Official)
▷ Advisory Board: Advisory Committee, U.S. Department of Energy National Middle School
  Science Bowl (Member), Advisory Committee, U.S. Department of Energy National Science
  Bowl (Member)
▷ 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)

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 2010

Spring
▷ EDCI 691. — Research (total enrollment: 2)
▷ MATH 366. — Structure of Mathematics II (total enrollment: 36)
▷ MATH 376. — Intermediate Abstract Algebra (total enrollment: 6)
▷ MATH 403. — Mathematics and Technology (total enrollment: 16)

Summer
▷ MATH 366. — Structure of Mathematics II (total enrollment: 9)

Fall
▷ EDCI 691. — Research (total enrollment: 2)
▷ MATH 366. — Structure of Mathematics II (total enrollment: 20)
▷ MATH 375. — Intermediate Real Analysis (total enrollment: 7)
▷ MATH 403. — Mathematics and Technology (total enrollment: 17)
• PRESENTATIONS DURING 2010
  ▶ “Fermi Questions: An Exercise in Estimation,” Texas Section MAA Meeting, Abilene, TX, April, 2010. (Individual)
THOMAS B. SCHLUMPRECHT

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- SERVICE DURING 2010

International
  ▶ Editorial/Board: Natural Sciences and Engineering Research Council of Canada, Banff
  International Research Station (Review: Proposals), Glasgow Mathematical Journal (As-
  sociate Editor), Studia Mathematica (Referee: Journals)

National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), Proceedings of the
  American Mathematical Society (Associate Editor), Acta Mathematica, IEEE Transac-
  tions on Information Theory, Proceedings of the AMS, Studia Mathematica, Transaction
  of the AMS, Journal of Functional Analysis, Illinois Journal of Mathematics, Combinator-
  (Referee: Journals)

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

Department
  ▶ Event: Banach Space Seminar (Organizer)

- TEACHING ASSIGNMENTS DURING 2010

Spring
  ▶ MATH 608. — Real Variables II (total enrollment: 21)
  ▶ MATH 691. — Research (total enrollment: 1)

Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 2)
  ▶ MATH 691. — Research (total enrollment: 1)

Fall
  ▶ MATH 172. — Calculus (total enrollment: 83)
  ▶ MATH 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2010

Federal
  ▶ Banach Spaces: Theory and Application, National Science Foundation
  ▶ (REN) Banach Spaces: Theory and Applications, National Science Foundation

- PRESENTATIONS DURING 2010
  ▶ Virginia Commonwealth University, Richmond, VA, January, 2010.( Individual)
▷ “From Banach Spaces to Frame,” University of Maryland, College Park, MD, May, 2010. (Invited)
▷ University of Granada, Spain, June, 2010. (Individual)
▷ “Banach Spaces and Application,” Regional Meeting of the American Mathematical Society, Richmond, VA, November, 2010. (Invited)

* PUBLICATIONS DURING 2010
• AWARDS DURING 2010
  Department
  ▶ Service Award, Mathematics Department

• SERVICE DURING 2010
  Department
  ▶ Service Position: Undergraduate Students (Mentor)
  ▶ Committee/Panel: Awards Committee (Member), Library Committee (Member), Speakers Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 171. — Analytic Geometry and Calculus (total enrollment: 36)
  ▶ MATH 407. — Complex Variables (total enrollment: 21)
  ▶ MATH 695. — Frontiers in Mathematical Research (total enrollment: 1)
  Fall
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 171)
  ▶ MATH 615. — Introduction to Classical Analysis (total enrollment: 22)
  ▶ MATH 695. — Frontiers in Mathematical Research (total enrollment: 1)
• SERVICE DURING 2010

International

National

Department
▷ Committee/Panel: Committee T (Chair), Executive Committee (Member), Frontiers Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 447(H) — Topics in Analysis (total enrollment: 1)
▷ MATH 447. — Topics in Analysis (total enrollment: 27)
▷ MATH 485. — Directed Studies (total enrollment: 1)
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 695. — Frontiers in Mathematical Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 323. — Linear Algebra I (total enrollment: 70)
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 695. — Frontiers in Mathematical Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Seventh East Coast Operator Algebras Symposium, National Science Foundation

• PRESENTATIONS DURING 2010
▷ Great Plains Operator Theory Symposium, Denver CO, June, 2010.( Contributed)

• PUBLICATIONS DURING 2010


FRANK SOTTILE

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• SERVICE DURING 2010

International

National
▷ Event: AMS Special Session on Combinatorial Algebraic Geometry (Co-Organizer), SIAM Minisymposium on Combinatorial Hopf Algebras (Organizer)
▷ Committee/Panel: American Institute of Mathematics Open-Source Textbook Initiative (Editorial Board), SIAM Activity Group on Algebraic Geometry (Chair), SIAM Conference on Discrete Mathematics Program Committee (Member)

College
▷ Service Position: College of Science Junior Faculty Success Program (Mentor)

Department
▷ Committee/Panel: Honors Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 666. — *Seminar in Geometry* (total enrollment: 12)
▷ MATH 685. — *Directed Studies* (total enrollment: 1)
▷ MATH 691. — *Research* (total enrollment: 3)

Summer
▷ MATH 685. — *Directed Studies* (total enrollment: 1)
▷ MATH 691. — *Research* (total enrollment: 4)

Fall
▷ MATH 151(H) — *Engineering Mathematics I* (total enrollment: 42)
▷ MATH 151. — *Engineering Mathematics I* (total enrollment: 97)
▷ MATH 685. — *Directed Studies* (total enrollment: 1)
▷ MATH 691. — *Research* (total enrollment: 3)
• RESEARCH PROJECTS DURING 2010

Federal
▷ Applicable Algebraic Geometry: Real Solutions, Applications, and Combinatorics, National Science Foundation
▷ Applications and Combinatorics in Algebraic Geometry, National Science Foundation
▷ Cluster Computing for Mathematical Sciences at Texas A&M University, National Science Foundation
▷ Numerical Real Algebraic Geometry, National Science Foundation
▷ Texas Algebraic Geometry Seminar (TAGS) 2009, National Science Foundation

State
▷ Applications of Algebraic Geometry to Algebraic Statistics and Geometric Modeling, Texas Higher Education Coordinating Board

• PRESENTATIONS DURING 2010

▷ Louisiana State University, Baton Rouge, LA, January, 2010. (Individual)
▷ CRM-ISM Colloquium, Université Montréal, Montreal, QC, Canada, February, 2010. (Individual)
▷ Baylor University, Waco, TX, March, 2010. (Invited)
▷ Colorado State University, Fort Collins, CO, March, 2010. (Individual)
▷ “Friends of Mathematics Lecture,” Kansas State University, Manhattan, KS, April, 2010. (Individual)
▷ Georgia Institute of Technology, Atlanta, GA, April, 2010. (Individual)
▷ University of Kansas, Lawrence, KS, April, 2010. (Individual)
▷ Mathfest, Pittsburgh, PA, August, 2010. (Invited)
▷ Texas A&M University, College Station, TX, September, 2010. (Individual)
▷ “Southeast Texas, Discrete Math and its Applications Workshop,” Sam Houston State University, Huntsville, TX, October, 2010. (Invited)
▷ AIM Workshop, October, 2010. (Invited)
▷ Texas A&M University, College Station, TX, October, 2010. (Individual)
▷ AMS Sectional Meeting, University of Notre Dame, Notre Dame, IN, November, 2010. (Invited)

• PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Undergraduate Advisor, Mathematics Undergraduate Advising Office, Mathematics, 1990

• SERVICE DURING 2010
  Regional
  ▶ Event: A Conference for Public Middle and High School Teachers (Assisted), Annual High School Mathematics Contest (Supervisor)

  Department
  ▶ Service Position: Maple (Ambassador)
  ▶ Committee/Panel: Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 170. — Freshman Mathematics Laboratory (total enrollment: 44)
  ▶ MATH 304. — Linear Algebra (total enrollment: 54)

  Fall
  ▶ MATH 170. — Freshman Mathematics Laboratory (total enrollment: 66)
  ▶ MATH 221. — Several Variable Calculus (total enrollment: 40)
  ▶ MATH 409. — Advanced Calculus I (total enrollment: 12)
  ▶ MATH 491. — Research (total enrollment: 2)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Associate Director, Institute for Scientific Computation, Vice President for Research, [1999]
  ▶ Professor (J), Computer Science, [1993]

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: Air Force Office of Scientific Research (Reviewer)
  Department
  ▶ Committee/Panel: Post-Doctoral Hiring Committee (Member), Promotion Committee (P) (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 467. — Modern Geometry (total enrollment: 34)
  Summer
  ▶ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 13)
  ▶ MATH 685. — Directed Studies (total enrollment: 2)
  Fall
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 201)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Geometric Methods for ATR Shape Analysis, Object/image Metrics, Shape Reconstruction, and Shape Statistics, Air Force Office of Scientific Research
  ▶ Development of Spatially Immersive Visualization Facilities, National Science Foundation

• PRESENTATIONS DURING 2010
  ▶ “Mathematics of Data/Image Coding, Compression, and Encryption with Application,” Object/Image Relations in Full and Weak Perspective and 3D Reconstruction, San Diego, CA, August, 2010.( Invited)

• PUBLICATIONS DURING 2010
  ▶ Stiller, P.F. (2010) Object/Image Relations in Full and Weak Perspective and 3D Reconstruction, Mathematics of Data/Image Coding, Compression, and Encryption with
Applications XII, Proceedings of SPIE.
• SERVICE DURING 2010

International
▷ Editorial/Board: University degli Studi di Padova, Austrian Science Fund, Deutsche Forschungsgemeinschaft, International Congress of Mathematicians (Reviewer), International Mathematical Research Notices, Canadian Journal of Mathematics (Referee: Journals)

National
▷ Committee/Panel: Several Complex Variables (Panel)

University
▷ Committee/Panel: Council of Principal Investigators (Member)

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

Department
▷ Event: ESI Vienna (Organizer)
▷ Committee/Panel: Awards Committee (Chair), Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 323. — Linear Algebra I (total enrollment: 40)
▷ MATH 685. — Directed Studies (total enrollment: 3)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 611. — Ordinary Differential Equations (total enrollment: 14)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010
Federal
▷ (REN) Research and Education in Several Complex Variables, National Science Foundation

- PRESENTATIONS DURING 2010
  ▷ “Workshop on PDEs in Real and Complex Spaces,” University of Padua, Italy, February, 2010. (Invited)

- PUBLICATIONS DURING 2010
• SERVICE DURING 2010
  National
  ▶ Committee/Panel: MAA Advisory Panel on American Mathematical Competitions (Member), MAA Sub-Committee on USA Mathematics Olympiad (Member)

  Department
  ▶ Event: Groups and Dynamics Seminar (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ MATH 311. — *Topics in Applied Mathematics I* (total enrollment: 40)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Finiteness Properties of Groups Acting on Rooted Trees, *National Science Foundation*

• PRESENTATIONS DURING 2010
  ▶ University of South Florida, Tampa, FL, January, 2010. (Individual)
  ▶ Mathematical Conference, Ohrid, Macedonia, September, 2010. (Invited)
  ▶ “Workshop on Dynamics and Group Actions,” CRM, Montreal, Canada, October, 2010. (Invited)
  ▶ City University of New York, New York, NY, October, 2010. (Individual)
  ▶ Cornell University, Ithaca, NY, October, 2010. (Individual)
  ▶ State University of New York, Binghamton, NY, October, 2010. (Individual)
  ▶ Trinity University, San Antonio, TX, November, 2010. (Individual)
  ▶ University of Nebraska, Lincoln, NE, November, 2010. (Individual)

• PUBLICATIONS DURING 2010
SERVICE DURING 2010

International
▷ Editorial/Board: *Annales de L’Institut Fourier* (Referee: Journals)

National

Department
▷ Committee/Panel: Awards Committee (Member)

TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 308. — Differential Equations (total enrollment: 56)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 101)

PRESENTATIONS DURING 2010
• SERVICE DURING 2010

International

National

University
▷ Committee/Panel: Committee for Academic Freedom, Responsibility and Tenure (Member)

Department
▷ Committee/Panel: Subcommittee P (Member), Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 152. — Engineering Mathematics II (total enrollment: 94)
▷ MATH 302. — Discrete Mathematics (total enrollment: 31)

Fall
▷ MATH 304. — Linear Algebra (total enrollment: 25)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Transcendence on Varieties in Families, *National Science Foundation*

• PRESENTATIONS DURING 2010
• SERVICE DURING 2010

National

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 03)

College
▷ Committee/Panel: Undergraduate Curriculum Committee (Member)

Department
▷ Event: MathCounts Contest (Volunteer)
▷ Committee/Panel: Academic Affairs Committee (Member), Diversity Committee (Member), Faculty Senate Executive Committee (Member), Task Force for Campus Arts Programs (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 442. — Mathematical Modeling (total enrollment: 22)

Fall
▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 75)
• SERVICE DURING 2010
  National
  ▷ Editorial/Board: *Journal of Modern Dynamics, Sbornik: Math.* (Referee: Journals)
  Department
  ▷ Committee/Panel: Award Committee of the Mathematics Competition for Young Mathematicians (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ MATH 304. — *Linear Algebra* (total enrollment: 24)
  Summer
  ▷ MATH 433. — *Applied Algebra* (total enrollment: 14)
  Fall
  ▷ MATH 304. — *Linear Algebra* (total enrollment: 49)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ Periodic Orbits of Billiards and Closed Geodesics on Flat Surfaces, *National Science Foundation*

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• AWARDS DURING 2010
  College
  ▶ Distinguished Achievement Award - Teaching, Association of Former Students

• SERVICE DURING 2010
  International

  National

  ▶ Committee/Panel: Board of Directors, Society of Engineering Science (Member), National Science Foundation Proposal Review Panel (Member), SIAM Forward Looking Panel on Education at the Interface of Mathematics and Materials Science (Member)

  University
  ▶ Committee/Panel: ABCS Steering Committee (Member), AMSCS Executive Committee (Member), Recruiting Committee for AMSCS Applied Mathematics Senior Position (Chair)

  Department
  ▶ Event: Applied Mathematics Seminar (Organizer), IAMCS-KAUST Seminar (Organizer)
  ▶ Committee/Panel: Graduate Programs Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Ecological and Evolutionary Biology (Member)
• **TEACHING ASSIGNMENTS DURING 2010**

**Spring**
- BIOL 285. — Directed Studies (total enrollment: 9)
- MATH 285. — Directed Studies (total enrollment: 31)
- MATH 604. — Mathematical Foundations of Continuum Mechanics (total enrollment: 5)
- MATH 685. — Directed Studies (total enrollment: 2)
- MATH 691 — Research (total enrollment: 4)

**Summer**
- MATH 491. — Research (total enrollment: 1)
- MATH 685. — Directed Studies (total enrollment: 3)
- MATH 691. — Research (total enrollment: 4)

**Fall**
- MATH 691. — Research (total enrollment: 5)

• **RESEARCH PROJECTS DURING 2010**

**Federal**
- (REN) Modeling Interfaces Through an Extension of Continuum Mechanics to the Nanoscale with Application to Fracture, Debonding, and Composites, *Air Force Office of Scientific Research*
- IGERT: New Mathematical Tools for Next Generation Materials, *National Science Foundation*
- (REN) UBM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, *National Science Foundation*
- URM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, *National Science Foundation*

• **PRESENTATIONS DURING 2010**

- Department of Mathematics, University of Strathclyde, Glasgow, Scotland, September, 2010. (Individual)
- Oxford Center for Collaborative and Applied Mathematics, University of Oxford, United Kingdom, September, 2010. (Individual)
- Department of Mathematics, University of Houston, Houston, TX, October, 2010. (Individual)

• **PUBLICATIONS DURING 2010**
JOSEPH D. WARD

PROFESSOR (979) 845-1169
MATH-Approximation Theory jward@math.tamu.edu

• SERVICE DURING 2010

National

Department
▷ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 141. — Business Mathematics I (total enrollment: 99)
▷ MATH 308. — Differential Equations (total enrollment: 56)
▷ MATH 414. — Fourier Series and Wavelets (total enrollment: 11)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 166. — Topics in Contemporary Mathematics II (total enrollment: 93)
▷ MATH 658. — Applied Harmonic Analysis (total enrollment: 7)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Analysis and Synthesis of Scattered Data on Surfaces via Radial and Related Basis Functions, National Science Foundation

• PRESENTATIONS DURING 2010

▷ “Lp Approximation and Interpolation by SBFs on Sd,” City University of Hong Kong, Hong Kong, China, January, 2010. (Individual)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

National
▷ Professional Affiliation: AMS Working Group on the Nominee Program (Appointed)
▷ Committee/Panel: Advisory Panel for the NSA Mathematical Sciences Program (Member), AMS Committee on Education (Member), AMS Council (Elected Member)

Department
▷ Event: First Year Graduate Student Seminar (Co-Organizer), Working Algebra Seminar (Co-Organizer)
▷ Committee/Panel: Mentoring Subcommittee of the Graduate Committee (Member), Subcommittee T (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 366. — Structure of Mathematics II (total enrollment: 46)
▷ MATH 662. — Seminar in Algebra (total enrollment: 12)
▷ MATH 685. — Directed Studies (total enrollment: 2)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 4)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 365. — Structure of Mathematics I (total enrollment: 50)
▷ MATH 367. — Basic Concepts of Geometry (total enrollment: 65)
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Collaborative Research: Cohomology, Deformations, and Invariants, *National Science Foundation*

State
▷ Graded Hecke Algebras and Deformations, *Texas Higher Education Coordinating Board*

• PRESENTATIONS DURING 2010

“Working Algebra Seminar,” Texas A&M University, College Station, TX, March, 2010. (Individual)

Southwest Local Algebra Meeting, Arlington, TX, March, 2010. (Invited)

“Hecke Algebras and Deformations in Geometry and Topology,” American Mathematical Society Special Session, St Paul, MN, April, 2010. (Individual)

“Working Algebraic Topology Seminar,” Texas A&M University, College Station, TX, April, 2010. (Individual)


“Student Homological Algebra Seminar,” University of Buenos Aires, Argentina, May, 2010. (Individual)


• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International
▷ Event: 21st International Conference in Formal Power Series and Algebraic Combinatorics (Program Committee Member)
▷ Editorial/Board: European Journal of Combinatorics (Referee: Journals)

National

Department
▷ Committee/Panel: Department Head Search Advisory Committee (Member), Executive Committee (Member), Powell Chair Searching Committee (Member)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Combinatorial Patterns and Structures, National Science Foundation

• PRESENTATIONS DURING 2010
▷ “Mixed Statistics on 01-Fillings of Moon Polyominoes,” University of Texas at San Marcos, TX, April, 2010. (Individual)

• PUBLICATIONS DURING 2010

542 2010 Mathematics Annual Report


• SERVICE DURING 2010

National
  ▶ Committee/Panel: MAA Student Chapter (Faculty Advisor)

University
  ▶ Service Position: Pi Mu Epsilon (Faculty Advisor)

Department
  ▶ Event: Physics Festival (Participant)
  ▶ Committee/Panel: Outreach Committee (Member), Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
  ▶ MATH 251(H) — Engineering Mathematics III (total enrollment: 6)
  ▶ MATH 251. — Engineering Mathematics III (total enrollment: 34)
  ▶ MATH 311. — Topics in Applied Mathematics I (total enrollment: 45)

• RESEARCH PROJECTS DURING 2010

Federal
  ▶ Collaborative Proposal: Maplets for Calculus, National Science Foundation
  ▶ (REN) TRACK1, GK-12: Fellows Integrate Science/Math In Rural Middle Schools, National Science Foundation

• PRESENTATIONS DURING 2010

  ▶ “Polygon Differencing Games,” University of Texas, Austin, TX, Feb, 2010.(Individual)
  ▶ “Proofs without Words,” Brazos Valley Math Teachers’ Circle, College Station, TX, April, 2010.(Individual)
  ▶ “Eleusis,” Brazos Valley Math Teachers’ Circle, College Station, TX, June, 2010.(Individual)
  ▶ “King Arthur Problem,” Brazos Valley Math Teachers' Circle, College Station, TX, June, 2010.(Individual)
  ▶ “Platonic Solids,” Brazos Valley Math Teachers’ Circle, College Station, TX, June, 2010.(Individual)

“Enrichment Activities For Middle School Students,” Conference for the Advancement of Mathematics Teaching, San Antonio, TX, July, 2010. (Contributed)


“Euler Characteristic using Polydrons,” Summer Immersion Workshop, University of Texas, Austin, TX, August, 2010. (Invited)

“Platonic Solids using Polydrons,” Summer Immersion Workshop, University of Texas, Austin, TX, August, 2010. (Invited)

“Texas A&M Summer Educational Enrichment (SEE-Math) for Middle School Students: The Use of Technology,” Pittsburgh PA, August, 2010. (Contributed)

“Conway’s Rational Tangles,” Villanova University, Villanova, PA, November, 2010. (Individual)

“Enrichment for Middle School Teachers: The Use of Technology,” University of South Carolina, Columbia, SC, November, 2010. (Individual)
• SERVICE DURING 2010

International

National

Department
▷ Event: Number Theory Seminar (Participant), Working Seminar in Number Theory (Organizer)

• TEACHING ASSIGNMENTS DURING 2010

Fall
▷ MATH 470. — Communications and Cryptography (total enrollment: 50)
▷ MATH 626. — Analytic Number Theory (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Mean Values of L-functions, National Science Foundation

• PRESENTATIONS DURING 2010

▷ Canadian Number Theory Association, July, 2010.( Invited)
▷ Stanford University, Stanford, CA, November, 2010.( Invited)

• PUBLICATIONS DURING 2010

• SERVICE DURING 2010

International
▷ Editorial/Board: Izvestija RAN. Seriya Matematicheskaya (Referee: Journals)

National

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 15)

Fall
▷ MATH 439. — Differential Geometry of Curves and Surfaces (total enrollment: 12)

• PRESENTATIONS DURING 2010

▷ “Combinatorics and Control,” International Conference, Universidad Autonoma de Madrid, Miraflores de la Sierra, Madrid, Spain, June, 2010. (Invited)
▷ “New Trends in Harmonic and Complex Analysis,” Jacobs University, Bremen, Germany, June, 2010. (Individual)
▷ Texas A&M University, College Station, TX, July, 2010. (Individual)
▷ “Geometry and Topology,” Haifa University, Israel, July, 2010. (Individual)
▷ Notre Dame University, South Bend, IN, November, 2010. (Individual)
• SERVICE DURING 2010

National
▷ Editorial/Board: Various Journals (Referee: Journals)

University
▷ Service Position: Texas A&M University Chinese Student and Scholar Association (Advisor)
▷ Professional Affiliation: China Faculty Association (Director)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ MATH 308. — Differential Equations (total enrollment: 108)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 151. — Engineering Mathematics I (total enrollment: 28)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ BIOL 111. — Introductory Biology I (total enrollment: 12)
▷ MATH 304. — Linear Algebra (total enrollment: 55)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Computational Theory and Methods for Finding Multiple Solutions to Differential Systems, National Science Foundation
▷ US-China Collaboration in Mathematical Research Program, National Science Foundation

• PRESENTATIONS DURING 2010

▷ “Solving Non-Variational Eigen Problems,” 33rd Texas PDE Conference, Austin, TX, April, 2010. (Individual)
▷ “Solving Multiple Solution Problems: Theory and Methods,” Central South University, Changsha, China, June, 2010. (Individual)
▷ “Solving Non-Variational Eigen Solutions Problems,” Hunan Normal University, Changsha, China, June, 2010. (Individual)
2010. (Invited)

- **PUBLICATIONS DURING 2010**
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  ▶ Professor (J), Statistics, [1988]

• **SERVICE DURING 2010**

  **International**
  ▶ Editorial/Board: Bernoulli, ALEA *(Latin American Journal Of Probability And Mathematical Statistics)* (Referee: Journals)

  **National**

  **University**
  ▶ Committee/Panel: Promotion Committee for Galveston (Member)

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

  **Department**
  ▶ Event: Workshop in Linear Analysis and Probability (Co-Organizer)

• **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**
  ▶ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 25)
  ▶ MATH 691. — *Research* (total enrollment: 1)

  **Summer**
  ▶ MATH 304. — *Linear Algebra* (total enrollment: 34)
  ▶ MATH 685. — *Directed Studies* (total enrollment: 1)
  ▶ MATH 691. — *Research* (total enrollment: 1)

  **Fall**
  ▶ MATH 304. — *Linear Algebra* (total enrollment: 46)
  ▶ MATH 691. — *Research* (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2010**

  **Federal**
  ▶ Inequalities and Limit Theorems in Probability with Applications, *Department of Defense*
  ▶ Graduate Assistance in Areas of National Need, *Department of Education*
- SM Workshop in Analysis, *National Science Foundation*
- Workshop in Analysis and Probability, *National Science Foundation*
7. Research Activity, 2010

This section contains information on all funded research activity for the calendar year 2010. 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 2010 = # Days 2010 × Daily Grant Award
## 7.1 Summary of Research Support, 2010

### Federal Agencies

- **Air Force Office of Scientific Research**

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
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<th>Indirect</th>
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</thead>
<tbody>
<tr>
<td>Stiller, P.F.</td>
<td>Geometric Methods for ATR Shape Analysis, Object/image Metrics, Shape Reconstruction, and Shape Statistics</td>
<td>3/1/2008</td>
<td>5/31/2011</td>
<td>64,226</td>
<td>5,235</td>
<td>69,461</td>
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</table>

- **Subtotal: Air Force Office of Scientific Research**

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<td></td>
<td>102,829</td>
<td>21,629</td>
<td>124,459</td>
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- **Department of Defense**

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<th>Total</th>
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<tbody>
<tr>
<td>Guermond, J.</td>
<td>L 1-Based Approximations of PDEs and Applications (AFSOR), (with: J. Guermond, B. Popov)</td>
<td>6/15/2009</td>
<td>11/30/2011</td>
<td>63,724</td>
<td>6,387</td>
<td>70,111</td>
</tr>
<tr>
<td>Masri, R.M.</td>
<td>Investigations on Heegner Points with Applications to L Functions, Elliptic Curves, and Combinatorics</td>
<td>5/1/2010</td>
<td>4/30/2012</td>
<td>9,373</td>
<td>654</td>
<td>10,027</td>
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<tr>
<td>Petrova, G.P.</td>
<td>Surface Reconstruction from Point Clouds Using Wavelets</td>
<td>5/1/2009</td>
<td>4/30/2011</td>
<td>250,216</td>
<td>0</td>
<td>250,216</td>
</tr>
<tr>
<td>Popov, B.</td>
<td>L 1-Based Approximations of PDEs and Applications (AFSOR), (with: J. Guermond, B. Popov)</td>
<td>6/15/2009</td>
<td>11/30/2011</td>
<td>63,724</td>
<td>6,387</td>
<td>70,111</td>
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<tr>
<td>Zinn, J.</td>
<td>Inequalities and Limit Theorems in Probability with Applications</td>
<td>12/1/2007</td>
<td>10/15/2010</td>
<td>11,915</td>
<td>2,176</td>
<td>14,091</td>
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- **Subtotal: Department of Defense**

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<td>729,945</td>
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- **Department of Education**

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554  
2010 Mathematics annual report
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<th>Grantee</th>
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- **Subtotal:** Department of Education 96,060 0 96,060

- **Department of Energy**

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<tbody>
<tr>
<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>
<td>8/31/2013</td>
<td>38,423</td>
<td>3,945</td>
<td>42,368</td>
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<tr>
<td>Rojas, J.</td>
<td>Topology for Statistical Modeling of Petascale Data</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>70,211</td>
<td>1,388</td>
<td>71,598</td>
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- **Subtotal:** Department of Energy 134,981 9,751 144,732

- **Fund for the Improvement of Postsecondary Education**

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<tr>
<td>Efendiev, Y.R.</td>
<td>Improving Research and Educational Activities in Multifunctional Nanomaterials, (with: A. Belyanin, Y. Efendiev, K. Rajagopal, A. Sokolov)</td>
<td>10/1/2010</td>
<td>9/30/2013</td>
<td>3,730</td>
<td>0</td>
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SEC. 7. RESEARCH ACTIVITY 555
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<th>Total</th>
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<tr>
<td>Rajagopal, K.</td>
<td>Improving Research and Educational Activities in Multifunctional</td>
<td>10/1/2010</td>
<td>9/30/2013</td>
<td>3,730</td>
<td>0</td>
<td>3,730</td>
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<td></td>
<td>Nanomaterials, (with: A. Belyanin, Y. Efendiev, K. Rajagopal, A. Sokolov)</td>
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<td></td>
<td><strong>Subtotal:</strong> Fund for the Improvement of Postsecondary Education</td>
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<td>7,461</td>
<td>0</td>
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<td>Guermond, J.</td>
<td>Support of Stockpile Stewardship Program, (with: J. Guermond, B. Mallick, B. Popov)</td>
<td>9/1/2008</td>
<td>6/30/2011</td>
<td>103,865</td>
<td>0</td>
<td>103,865</td>
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<tr>
<td>Popov, B.</td>
<td>Support of Stockpile Stewardship Program, (with: J. Guermond, B. Mallick, B. Popov)</td>
<td>9/1/2008</td>
<td>6/30/2011</td>
<td>103,865</td>
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<td><strong>Subtotal:</strong> Lawrence Livermore National Laboratory</td>
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<td>207,730</td>
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<td>Aguiar, M.</td>
<td>Combinational Hopf Algebras and Algebraic Combinatorics</td>
<td>6/1/2010</td>
<td>5/31/2013</td>
<td>34,695</td>
<td>0</td>
<td>34,695</td>
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<td>Allen, G.</td>
<td>Preservice Teachers Knowledge for Teaching Algebra</td>
<td>9/1/2010</td>
<td>8/31/2015</td>
<td>58,966</td>
<td>0</td>
<td>58,966</td>
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<tr>
<td>Allen, G.</td>
<td>(REN) TRACK1, GK-12: Fellows Integrate Science/Math In Rural Middle Schools, (with: G. Allen, V. Cassone, P. Yasskin)</td>
<td>1/1/2007</td>
<td>12/31/2010</td>
<td>27,147</td>
<td>2,193</td>
<td>29,341</td>
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<td>Anshelevich, M.</td>
<td>Applications of Polynomial Families and Free Probability</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>26,252</td>
<td>9,748</td>
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<td>Bangerth, W.</td>
<td>Geoinformatics Facility Support Computational Infrastructure in Geodynamics</td>
<td>7/1/2010</td>
<td>6/30/2015</td>
<td>409,870</td>
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<td>Boggess, A.</td>
<td>Workshop to Advise NSF on Proposed Program for Undergraduate Recruitment into Mathematics and Science</td>
<td>6/1/2008</td>
<td>5/31/2010</td>
<td>17,127</td>
<td>711</td>
<td>17,838</td>
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<td>Bonito, A.</td>
<td>Space and Time Adaptivity for Moving and Free Boundary Problems</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>31,636</td>
<td>14,063</td>
<td>45,699</td>
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<tr>
<td>Bowen, L.</td>
<td>CAREER: Ergodic Theory of Nonamenable Group Actions</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>134,814</td>
<td>31,850</td>
<td>166,664</td>
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<tr>
<td>Bowen, L.</td>
<td>The Ergodic Theory of Namenable Group Actions</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>0</td>
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<td>Dykema, K.J.</td>
<td>Functions of Operators on Hilbert Spaces</td>
<td>9/26/2008</td>
<td>5/31/2012</td>
<td>17,093</td>
<td>7,948</td>
<td>25,042</td>
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<td>Dykema, K.J.</td>
<td>Sums of Hermitian Operators and Connections to Connes' Embedding Problem Hyperinvariant Subspaces</td>
<td>7/1/2009</td>
<td>6/30/2012</td>
<td>73,767</td>
<td>7,978</td>
<td>81,744</td>
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<tr>
<td>Efendiev, Y.R.</td>
<td>Multiscale Data Integration Using Facies Based Hierarchical Bayesian Models, (with: Y. Efendiev, B. Mallick)</td>
<td>9/1/2007</td>
<td>8/31/2011</td>
<td>40,589</td>
<td>15,244</td>
<td>55,833</td>
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<td>Geller, S.C.</td>
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**SEC. 7. RESEARCH ACTIVITY**

563
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* Subtotal: National Science Foundation

5,461,163 795,206 6,256,368

* Subtotal: Federal Agencies

6,740,169 896,196 7,636,365

Industrial/Corporate Agencies

* Chevron U.S.A.

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* Subtotal: Chevron U.S.A.

47,308 6,541 53,850

* Subtotal: Industrial/Corporate Agencies

47,308 6,541 53,850

International Agencies

* King Abdullah University of Science and Technology

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<td>Bangerth, W.</td>
<td>Institute for Applied Mathematics and Computational Science (IAMCS) at Texas A&amp;M University at The King Abdullah University of Science and Technology Global Research Partnership, (with: W. Bangerth, R. Ewing)</td>
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564 2010 Mathematics Annual Report
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**Subtotal: King Abdullah University of Science and Technology**

9,941,393

**Ministry of Education and Science**

2,484

**Qatar Foundation**

28,740

**Qatar Foundation**

446,241

**Subtotal: Other Government**

10,390,119

**Subtotal: International Agencies**

10,462,832

**Other Government**

**University of Minnesota**

Kanschat, G.  
Simulating our Complex World: Modeling, Computation and Analysis  
9/1/2010 12/20/2013  
2,107 0 2,107

**University of Minnesota**

2,107 0 2,107

**University of South Carolina**

Petrova, G.P.  
Model Classes, Approximation, and Metrics for Dynamic Processing of Urban Terrain Data  
5/1/2007 9/30/2010  
30,370 13,438 43,808

**University of South Carolina**

30,370 13,438 43,808

**Subtotal: Other Government**

32,477 13,438 45,915

**Private/Non-Profit Agencies**

**Alfred P. Sloan Foundation**

SEC. 7. RESEARCH ACTIVITY 565
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**State Agencies**

- **Region XIII**
  - Schielack, J.F. | Interagency Agreement with Region XIII, Austin, Texas |
  - **Subtotal: Region XIII** | 18,221 | 0 | 18,221 |

- **Texas A&M University**
  - Daripa, P. | Interdisciplinary Research on Complex Flows of Complex Fluids |
  - **Subtotal: Texas A&M University** | 1,944 | 0 | 1,944 |
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**Subtotal: Texas Education Agency**

| Allen, G.        | *Subtotal: Texas Education Agency*                                   | 9/1/2009 | 8/31/2011 | 250,343 | 0        | 250,343 |

**Texas Higher Education Coordinating Board**

| Allen, G.        | Algebra I - II Focus on Alignment                                    | 5/1/2009 | 5/31/2011 | 105,130 | 0        | 105,130 |
| Chen, G.         | Mathematical Study of Wind Power Generation                         | 7/1/2010 | 8/31/2012 | 17,699  | 0        | 17,699  |
| Sottile, F.      | Applications of Algebraic Geometry to Algebraic Statistics and Geometric Modeling | 5/15/2008 | 5/14/2010 | 26,272  | 0        | 26,272  |
| Witherspoon, S.  | Graded Hecke Algebras and Deformations                              | 5/15/2008 | 5/14/2010 | 9,136   | 0        | 9,136   |

**Subtotal: Texas Higher Education Coordinating Board**

| *Subtotal: Texas Higher Education Coordinating Board* | 581,904 | 0 | 581,904 |

*Subtotal: State Agencies*

|  | 852,412 | 0 | 852,412 |

***Total: All Grantees***

|  | 18,596,766 | 990,740 | 19,587,507 |
### 7.2 Summary of Individual Support, 2010

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| National Science Foundation | Applications of Polynomial Families and Free Probability             | 9/1/2009    | 8/31/2012   | 25,252 | 9,748    | 35,000  |

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SEC. 7. RESEARCH ACTIVITY 573
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|                        | **Subtotal Landsberg, J.M.**                                         |             |             |         |          | 50,729 |


|                        | **Subtotal Larson, D.A.**                                            |             |             |         |          | 33,659 |

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| National Science       | Subgrid Discontinuous Galerkin Approximations of Brinkman Equation with Highly Heterogeneous Coefficients, (with: R. Lazarov, J. Willems) | 8/15/2010   | 7/31/2013   | 19,609  | 2,042    | 21,651 |

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*** Total: All Faculty

|                         |                                                                      | 18,596,766 | 990,740   | 19,587,507 |
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   7.2 By Faculty Member ............................................................... 788
1. Foreword from the Department Head

The Department of Physics and Astronomy has vigorous research programs in physics and astronomy. We offer BA and BS undergraduate physics degrees and MS and PhD graduate degrees in physics and PhD degrees in applied physics and materials science and engineering. We have a large number of students enrolled in our service courses. We participate in a number of outreach and service activities, such as the Saturday Morning Physics program at the Cyclotron Institute and the annual Physics Festival of hands-on physics demonstrations that also includes a public lecture by a notable physicist.

Beginning with the spring 2010 semester all of our physics and astronomy classes are now being taught in our new George P. Mitchell ’40 Physics Building. Our other new building, the George P. and Cynthia Woods Mitchell Institute, has faculty offices, the Hawking Auditorium, meeting rooms and discussion areas.

In 2010, Dr. Aleksey Zheltikov joined our faculty as a tenured Professor. His hire is part of the Research Academic Master Plan. Dr. Zheltikov is an international leader in experimental quantum optics, laser physics, and photonics.

The endowments in the department continued to grow and now have a market value of about seventeen million dollars. They produce a monthly income into the department of over $65,000. In 2010 the William A. Robba Endowment for Graduate Study in Physics was added. Assistant Professors Ricardo Eusebi and Lucas Macri were jointly appointed to the Munnerlyn-Mitchell-Heep Chair for untenured faculty and Suhail Zubaír was awarded the Munnerlyn-Heep Chair in Quantum Optics. Also, an endowment for a Cynthia Woods Mitchell Undergraduate Scholarship for Women in Physics at Texas A&M was established.

The department continues to excel in research, teaching, and service. New research grants for 2010 totaled $14,480,164, which is an increase of 81% compared to 2002. Assistant Professor Rupak Mahapatra received an Early Career Research Award from the Department of Energy, Distinguished Professor Marlan Scully received the Distinguished Scientist Award from the A&M Chapter of Sigma Xi and Professor Aleksei Zheltokov shared in the 2010 Willis E. Lamb Award for Laser Science and Quantum Optics. Professor Jairo Sinova became a Fellow of the American Physical Society. Professor and Head Ed Fry was promoted to Distinguished Professor. In teaching, Helmut Katzgraber, Tatiana Erulkhimova, Casey Papovich and David Toback each received a student-let Teaching Excellence Award. Kim-Vy Tran was the College of Science Montague-Center for Teaching Excellence Scholar. In service, Nick Suntzeff was Vice President of the American Astronomical Society and was a Jefferson Science Fellow at the U.S. State Department.

The Department of Physics and Astronomy thanks everyone who contributed to an outstanding year for the department!
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 of Science Dean Database (Fall 2009) FacultyList_FINAL, Queried from the College of Science Dean Database (Fall 2010) FacultyList_FINAL.

Non-Tenure-Track Faculty

▷ Queried from the College of Science Dean Database (Fall 2009) FacultyList_nonTTF, Queried from the College of Science Dean Database (Fall 2010) FacultyList_nonTTF2.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2009, Fall 2010) 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 2010) 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>Category</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Tenured and Tenure-Track Faculty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>38</td>
<td>42</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Associate Professor</td>
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<td>7</td>
</tr>
<tr>
<td>Distinguished Professor</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td><strong>b. Non-Tenure-Track Faculty</strong></td>
<td>5</td>
<td>6</td>
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<tr>
<td>Visiting Professor</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Visiting Assistant Professor</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Visiting Associate Professor</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Lecturer</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>0</td>
<td>1</td>
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<tr>
<td><strong>c. Postdoctoral Fellows</strong></td>
<td>35</td>
<td>42</td>
</tr>
<tr>
<td><strong>d. Graduate Majors</strong></td>
<td>152</td>
<td>177</td>
</tr>
<tr>
<td><strong>e. Undergraduate Majors</strong></td>
<td>127</td>
<td>148</td>
</tr>
<tr>
<td><strong>f. Support Staff</strong></td>
<td>24</td>
<td>20</td>
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#### II. Instructional Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
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<tbody>
<tr>
<td><strong>a. Graduate Semester Credit Hours</strong></td>
<td>2,908</td>
<td>3,349</td>
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<tr>
<td><strong>b. Undergraduate Semester Credit Hours</strong></td>
<td>28,915</td>
<td>30,876</td>
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<tr>
<td><strong>c. PhD Degrees</strong></td>
<td>10</td>
<td>13</td>
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<tr>
<td><strong>d. Masters Degrees</strong></td>
<td>5</td>
<td>11</td>
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<tr>
<td><strong>e. Undergraduate Degrees</strong></td>
<td>25</td>
<td>20</td>
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#### III. Research Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
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<tbody>
<tr>
<td><strong>a. Research Publications</strong></td>
<td>430</td>
<td>407</td>
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<tr>
<td><strong>b. Research Presentations</strong></td>
<td>431</td>
<td>443</td>
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<tr>
<td><strong>c. Federal</strong></td>
<td>6,993,642</td>
<td>10,315,575</td>
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<tr>
<td><strong>d. State</strong></td>
<td>0</td>
<td>412,693</td>
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<td><strong>e. University</strong></td>
<td>8,310</td>
<td>12,517</td>
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<td><strong>f. Private/Non-Profit</strong></td>
<td>1,093,642</td>
<td>1,530,862</td>
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<tr>
<td><strong>g. Industrial/Corporate</strong></td>
<td>103,198</td>
<td>43,750</td>
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<tr>
<td><strong>h. International</strong></td>
<td>836,976</td>
<td>859,638</td>
</tr>
<tr>
<td><strong>i. Other Govt</strong></td>
<td>184,467</td>
<td>226,910</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10,350,565</strong></td>
<td><strong>13,401,946</strong></td>
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</tbody>
</table>
3. Honors & Awards, 2010

By Faculty

➢ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2010.

By Students

➢ This section contains all honors and awards, as reported by the department, during the calendar year 2010.
### 3.1 Honors & Awards Received by Faculty, 2010

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>K. Krisciunas</td>
<td>Distinguished New Faculty Award for Teaching, International Academy for the Scholarship of Learning Technology</td>
</tr>
<tr>
<td>R. Mahapatra</td>
<td>Early Career Research Award, Department of Energy</td>
</tr>
<tr>
<td>M. Scully</td>
<td>Distinguished Scientist Award, Texas A&amp;M University Chapter of Sigma Xi</td>
</tr>
<tr>
<td>J. Sinova</td>
<td>Fellow, American Physical Society</td>
</tr>
<tr>
<td>N. Suntzeff</td>
<td>Jefferson Science Fellow, United States Department of State</td>
</tr>
<tr>
<td>D. Toback</td>
<td>Teaching Excellence Award, Texas A&amp;M University</td>
</tr>
<tr>
<td>K. Tran</td>
<td>Montague Scholar, Center for Teaching Excellence</td>
</tr>
<tr>
<td>A. Zheltikov</td>
<td>Willis E. Lamb Award for Laser Science and Quantum Optics, Physics of Quantum Electronics Conference</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2010

Graduate

▷ Graduate Student Research and Presentation Grant
  Pankaj K. Jha

▷ Texas Section of the American Physical Society Student Presentation Award
  Eddie Holik
  Nathaniel Pogue

▷ The Ethel Ashworth-Tsutsui Memorial Award for Research
  Xi Wang

Undergraduate

▷ Barry M. Goldwater Scholarship, Texas A&M University
  Tyler William Behm

▷ Coleman Loyd Scholarship-Physics
  Deepak Bastola
  Kamal Lamichhane

▷ Jack McIntyre Scholarship in Physics
  Puspa Kunwor
  Siying Peng
  Krishna Thapa

▷ Marianne E. '76 & Robert W. '77 Hamm Endowed Scholarships in Physics
  Benjamin Becker
  Sean Grant
  Austin Massad
  Shannon Pearsall
  Catherine Spohnheimer
  Cynthia Trendafilova

▷ Matthew P. Hodges '00 Memorial Scholarship
  James C. Perkins

▷ Physics Undergraduate Scholarship Fund
  Kyle Pichler

▷ Texas Section of the American Physical Society Student Presentation Award
  Christopher Benson
4. Students, 2010

This section contains all degrees awarded, as reported by the department, during the calendar year 2010.
4.1 Graduate Degrees Awarded, 2010

Fall

▷ M.S.

Karie Elizabeth Badgley                        Advisor(s): I. Roshchin
Kelley Thomas Beaves                           Advisor(s): W. Teizer
Samantha Leigh Hoffmann                       Advisor(s): L. Macri
Zhaokai Meng                                   Light Scattering Problem and its Application in Atmospheric Science
                                                Advisor(s): G. Kattawar
Alexandra Elena Spiridon                       Advisor(s): R. Tribble

▷ Ph.D.

Hun Gil Lee                                    Fabrication and Characterization of Nano-Sized Magnetic Structures and Their Flux-Pinning Effects on Superconducting Thin Films
                                                Advisor(s): R. Rapp
Xingbo Zhao                                   Charmonium in Hot Medium
                                                Advisor(s): R. Rapp
Feng Zhu                                      Ion Crystals Produced by Laser and Sympathetic Cooling in a Linear Rf Ion Trap
                                                Advisor(s): H. Schuessler

Spring

▷ M.S.

John Reid Saathoff                            Advisor(s): R. Tribble

▷ Ph.D.

Arlene Celeste Ford                           An Alternate Mechanism for Creating Functional Sub-micrometer Superconducting Quantum Interference Devices
                                                Advisor(s): W. Teizer
Moochan Kim                                   Problems on Non-equilibrium Statistical Physics
                                                Advisor(s): M. Scully
Eun Sin Lee                                   Search for Supersymmetry Using Diphoton Events in Proton-antiproton Collisions at a Center of Mass Energy Of 1.96 Tev
                                                Advisor(s): D. Toback
Hebin Li Coherent Control of Laser Field and Spectroscopy in Dense Atomic Vapor  
Advisor(s): M. Scully

Qingqing Sun A Study on the Coherent Atomic Effects and Their Applications  
Advisor(s): M. Zubairy

Masaki Watabe Using Quasi-elastic Events to Measure Neutrino Oscillations with Minos Detectors in the Numi Neutrino Beam  
Advisor(s): R. Webb

Summer

▷ M.S.

Paul Joseph Bruillard  
Advisor(s): B. Dutta

Xia Hua Adaptive Control of Third Harmonic Generation Via Genetic Algorithm  
Advisor(s): A. Sokolov

Amy Michelle Jones  
Advisor(s): L. Wang

Jinseon Park Characterization of the Local Electrical Environment in an Electrically-guided Protein Patterning System Incorporating Antifouling Self-assembled Monolayer  
Advisor(s): W. Teizer, Hwang, Wonmuk

Michael David Van Dyke  
Advisor(s): W. Bassichis

▷ Ph.D.

Chi Chen Design and Construction of a Low Temperature Scanning Tunneling Microscope  
Advisor(s): G. Agnolet

David Haubrich Instrumentation to Measure the Backscattering Coefficient Bb for Arbitrary Phase Functions  
Advisor(s): E. Fry

James A. Maxin String Phenomenology in the Era of Lhc.  
Advisor(s): D. Nanopoulos

Jianwei Mei Black Holes and Their Entropy  
Advisor(s): C. Pope
# Undergraduate Degrees Awarded, 2010

## Fall

<table>
<thead>
<tr>
<th>Degree</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.S.</td>
<td>Robert Carlton Bassett</td>
</tr>
</tbody>
</table>

## Spring

<table>
<thead>
<tr>
<th>Degree</th>
<th>Name</th>
</tr>
</thead>
</table>
| B.A.   | Christoph Emmanuel Bracher  
Kenric Mckenzie Davies  
Rene Elise Mai |
| B.S.   | William Calder Buck  
Duc Minh Cao  
John Paul Cesar  
Bradley David Charanza  
Thomas Alan Crockett  
Roberto De Alba  
Juana Gomez  
Jacob Demoye Gonzales  
Kyle Stuart Huggins  
Salma Mahzooni  
David Gabriel Rahmani  
Andrew Rodionov  
Angela Rueychi Sung |

## Summer

<table>
<thead>
<tr>
<th>Degree</th>
<th>Name</th>
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</thead>
</table>
| B.A.   | Marco Antonio Tzorin  
William Arthur Yarberry |
| B.S.   | Gordon Neal Blackman |
## 5. Colloquium and Seminar Speakers, 2010

### Atomic and Molecular Optics Seminar

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1/25/2010</td>
<td>Hong Guo</td>
<td>School of Electronics Engineering and Computer Science Peking University</td>
<td>Passive Scheme for Monitoring Quantum Key Distribution Source</td>
</tr>
<tr>
<td>1/28/2010</td>
<td>Girish Saran Agarwa</td>
<td>Oklahoma State University</td>
<td>Electromagnetically Induced Transparency and Nonlinear Optical Effects in Mechanical Effects of Light</td>
</tr>
<tr>
<td>3/11/2010</td>
<td>Roger Penrose</td>
<td>University of Oxford</td>
<td>Conformal Cyclic Cosmology</td>
</tr>
<tr>
<td>4/7/2010</td>
<td>Ludger Wöste</td>
<td>Freie Universität Berlin</td>
<td>Remote Laser Analysis of Air and Soil and the Control of Lightning and Hail</td>
</tr>
<tr>
<td>9/15/2010</td>
<td>Igor Lyuksyutov</td>
<td>Texas A&amp;M University</td>
<td>Cold Molecules for Physics and Chemistry</td>
</tr>
<tr>
<td>10/4/2010</td>
<td>Michael Duff</td>
<td>Imperial College, London</td>
<td>Hawking and Unruh Radiation</td>
</tr>
<tr>
<td>10/4/2010</td>
<td>Jörg Evers</td>
<td>Max-Planck-Institut für Kernphysik</td>
<td>Coherent Control of Cooperative Light Scattering</td>
</tr>
<tr>
<td>10/4/2010</td>
<td>Hang Zheng</td>
<td>Shanghai Jiao Tong University</td>
<td>Effect of Counter-Rotating Terms</td>
</tr>
<tr>
<td>10/4/2010</td>
<td>Shi-Yao Zhu</td>
<td>Hong Kong Baptist University</td>
<td>Doppler Free High Efficiency Coherent Emission in an EIT Gas</td>
</tr>
<tr>
<td>10/5/2010</td>
<td>Michael Duff</td>
<td>Imperial College, London</td>
<td>General Relativity</td>
</tr>
<tr>
<td>10/5/2010</td>
<td>Marlan Scully</td>
<td>Texas A&amp;M University</td>
<td>Quantum Optics</td>
</tr>
</tbody>
</table>
Svetlana Malinovskaya
Stevens Institute of Technology
Ultrafast Control of Raman Transitions: From CARS Microscopy to Molecular Cooling
Colloquia

1/28/2010  Dante Amidei  
*University of Michigan*  
Mirrors, Anti-Matter, and the Top Quark

2/4/2010  Randy Hulet  
*Rice University*  
Widely Tunable Interactions in a Bose Gas: From Anderson Localization to Beyond Mean

2/11/2010  J. Murray Gibson  
*Argonne National Lab*  
The Physics of the Blues

2/18/2010  James Bullock  
*University of California, Irvine*  
Dwarf Galaxies, Dark Matter, and the Threshold of Galaxy Formation

2/25/2010  Ulrich Heinz  
*Ohio State University*  
Quark Soup - The Perfect Liquid?

3/4/2010  Nandini Trivedi  
*The Ohio State University*  
Cold Atoms in Optical Lattices: What are the Challenges to Mapping out Quantum Phase Transitions?

3/11/2010  Shoucheng Zhang  
*Stanford University*  
Topological Insulators and Topological Superconductors

3/25/2010  Tony Tyson  
*University of California, Davis*  
LSST: The Physics of the Dark Universe

4/1/2010  Robert Lucht  
*Purdue University*  
Femtosecond Coherent Anti-Stokes Raman Scattering (CARS) Spectroscopy for Single-Pulse Gas-Phase Measurements

4/8/2010  Robert Dynes  
*University of California, San Diego*  
A Josephson Scanning Tunneling Microscope: A New Probe of Superconductivity

4/15/2010  Daniel Eisenstein  
*University of Arizona*  
Dark Energy and Cosmic Sound

4/22/2010  Thomas Ullrich  
*Brookhaven National Laboratory*  
The Glue that Binds us all: Probing Gluonic Matter with the World’s First Electron-Ion

9/2/2010  Artem Abanov  

SEC. 5.  
COLLOQUIUM AND SEMINAR SPEAKERS  

603
Texas A&M University
How to Manipulate Magnetization by Current
9/9/2010  Rainer Fries
Texas A&M University
Hot Quark and Gluon Matter

9/16/2010  David Gross
University of California, Santa Barbara
The Coming Revolutions in Fundamental Physics

9/23/2010  Jenny Thomas
University College London
Neutrinos have mass. So what now?

9/30/2010  Sarah Eno
University of Maryland
The LHC: Results from the Energy Frontier

10/7/2010  Charles Falco
The University of Arizona
The Science of Optics; The History of Art

10/14/2010  Debra Fischer
Yale University
Towards Centimeter per Second Doppler Precision

10/21/2010  John Carlstrom
The University of Chicago
The Universe Revealed by Cosmic Microwave Background Measurements

10/28/2010  John Reppy
Cornell University
Is Supersolid Superfluid?

11/4/2010  Steve Harris
Stanford University
Modulation of Single Photons

12/2/2010  Zheng-Tian Lu
Argonne National Laboratory & The University of Chicago
Simple Atom, Extreme Nucleus: Laser Trapping and Probing of Helium-8
1/22/2010  Igor Lyuksyutov  
*Texas A&M University*  
Nanostructured Magnet-Superconductor Hybrids

1/29/2010  Oleg Tretiakov  
*Texas A&M University*  
Current-Driven Magnetization Dynamics in Ferromagnetic Nanowires with Dzyaloshinskii-Moriya Interaction

2/5/2010  Maxim Tsoi  
*University of Texas, Austin*  
Spin-transfer-torque Effects in Ferromagnets and Antiferromagnets

2/12/2010  Valery Pokrovsky  
*Texas A&M University*  
Phase Diagram of a Disordered System in the Vicinity of a Superconductor-insulator Phase Transition

2/26/2010  Thomas Nattermann  
*Eidgenössische Technische Hochschule*  
Dissipation and Spin Dependent Transport in Luttinger Liquids

3/5/2010  Nandini Trivedi  
*Ohio State University*  
Disorder and Field Driven Superconductor Insulator Transition

3/12/2010  Alexander Hartmann  
*University of Gottingen*  
Negative-Weight Percolation

3/31/2010  Jun Kono  
*Rice University*  
Dynamics of 1-D Electrons, Phonons, and Excitons in Carbon Nanotubes

4/2/2010  Mohit Randeria  
Viscosity of Strongly Interacting Quantum Fluids

4/9/2010  Philip Adams  
*Louisiana State University*  
Saturation of the Anomalous Hall Effect in Critically Disordered, Ultra-thin CNi3 Films

4/9/2010  Alex de Lozanne  
*University of Texas, Austin*  
Bilayer Manganites: A Playground for Magnetoresistance, Charge Density Waves and Spin Reorientation Transitions

4/16/2010  Maxim Vavilov  
*University of Wisconsin*  
Coexistence of Superconductivity and Spin-Density-Waves in multi-band metals

4/23/2010  Philippe Jacquod
University of Arizona
The Quantum Mechanics of Spintronics

4/28/2010  Rusty Harris

Nano Scale Device Physics. New Architectures for Energy, Optical and RF Applications

4/30/2010  Danilo Pescia
Eidgenössische Technische Hochschule
Vertical and Lateral Spatial Resolution of Near Field Emission Scanning Electron Microscope

5/7/2010  Natalia Perkins
University of Wisconsin
Spin and Orbital Physics in Vanadates

9/10/2010  Ilya Krivorotov
University of California, Irvine
Strongly Nonlinear Magnetization Dynamics Excited by Spin-polarized Current

9/17/2010  M. Salamon
University of Dallas
Singlet-Triplet Admixture in Non-centrosymmetric Superconductors

9/24/2010  Maxim Khodas
University of Iowa
Effect of Order Parameter Fluctuations on the Spectral Density in d-Wave Superconductors

10/1/2010  David Venus
McMaster University
Hierarchy of Domain Wall Dynamical Processes in Perpendicularly-Magnetized Ultrathin

10/8/2010  Arthur Hebard
University of Florida
Disorder-Tuned Approach to Critical Behavior in Thin-Film Ferromagnets

10/13/2010  Igor Lyuksyutov
Texas A&M University
Controlling Vortices and Cold Molecules with Magnetic Nanostructures

10/15/2010  Gruzberg
University of Chicago
Quantum Hall Transitions and Conformal Restriction

10/19/2010  Barry Zink
University of Denver
Thermoelectric Effects and Thermal Spin Currents in Magnetic Nanostructures

10/22/2010  Sebastian Huber
Weizmann Institute of Science
Condensation of Bosons in Flat Bands: From Frustrated Magnets to Cold Atoms

10/27/2010  Aldo Romero
CINVESTAV-Unidad Queretaro, Mexico
An Overview of Magnetic Systems from First Principles: Problems and Successes

10/29/2010  Bill Atkinson
Trent University
Understanding Disorder in Strongly Correlated Systems

11/5/2010  Andreas Ruegg
University of Texas, Austin
Chiral Gauge Theory and Confinement of Topological Defects in the Charge-Ordered Kagome Lattice

11/12/2010  Chia-Ren Hu
Texas A&M University

11/19/2010  Zohar Nussinov

Orbital Orders and Orbital Order Driven Quantum Criticality

12/3/2010  Jan Jacob
University Hamburg
High Energy Physics

1/25/2010  Rouven Essig  
Stanford University  
Probing GeV-scale Dark Forces with New Particle Experiments and Astrophysics

2/1/2010  Xi Yin  
Harvard University  
Higher Spin Gauge Theory and Holography

2/15/2010  Olaf Hohm  
Massachusetts Institute of Technology  
Massive (Quantum) Gravity in Three Dimensions

2/19/2010  Ronen Plesser  
Duke University  
Towards Mirror Symmetry for (0,2) Models from the GLSM

2/22/2010  Konstantin Bobkov  
Ohio State University  
Kahler Independent G2 Vacua and their Phenomenology

3/1/2010  Scott Watson  
University of Michigan  
A Unified Approach to Cosmic Acceleration

3/8/2010  Brian Wecht  
Institute for Advanced Study  
Recursion Relations in String Theory

3/29/2010  Geoffrey Compere  
University of California, Santa Barbara

4/6/2010  Daniel Baumann

D3-brane Potentials from Fluxes in AdS/CFT

4/19/2010  Brooks Thomas  
University of Arizona  
Semper FI? Supercurrents, R-symmetries and the Status of Fayet-Iliopoulos Terms in Supergravity

9/6/2010  Linus Wulff  
Texas A&M University  
The Superstring in AdS4xCP3 and It’s Integrability

9/16/2010  David Gross  
Kavli Institute for Theoretical Physics

9/24/2010  Krysztof Turzynski  
Warsaw University  
Cosmological Density Perturbations in Multi-field Inflation
9/27/2010  Malcolm Perry  
*Cambridge University*
D-brane Geometry as Open String Loop Effect: A Strategy for Deriving AdS/CFT

10/1/2010  Inyong Park  
*Philander Smith College*
Towards a String Theoretic Alternative to Inflation

10/4/2010  Scott Watson  
*Syracuse University*
Lunch HEP Informal Seminar

10/8/2010  Michael Duff

Non-Gaussian Signatures of High Energy Physics in the CMB

10/11/2010  Amjad Ashoorian  
*Uppsala*
Lunch HEP Informal Seminar

10/15/2010  Kuver Sinha

Spinning Particles and Hidden Symmetries

10/22/2010  David Kubiznak  
*Cambridge University*

10/25/2010  Andy Neitzke

Lunch HEP Informal Seminar

10/29/2010  Abram Krislock

Methods in Supersymmetric Field Theory and Supergravity

11/1/2010  Zohar Komargodski  
*Institute for Advanced Study, Princeton University*
Affine Symmetries in Supergravity

11/5/2010  Henning Samtleben

D-Branes and Doubled Geometry

11/8/2010  Eric Bergshoeff  
*University of Groningen*
Lunch HEP Informal Seminar

11/12/2010  Tianjun Li

Gravitational Waves and Cosmic Phase Transitions

11/15/2010  James Dent  
*Arizona State University*
Lunch HEP Informal Seminar

SEC. 5.  COLLOQUIUM AND SEMINAR SPEAKERS  609
11/19/2010  Linus Wulff  
Lunch HEP Informal Seminar  

11/22/2010  Shufang Su  
University of Arizona  
Dark Matter-Motivated Searches for Exotic 4th Generation Mirror Quarks in Tevatron and Early LHC Data  

11/29/2010  Daniel Feldman  
Naturally New Physics at the LHC and our Theories of Dark Matter  

12/3/2010  Sheldon Campbell  
Lunch HEP Informal Seminar  

12/6/2010  Thomas Faulkner  
Kavli Institute, University of California, Santa Barbara  

12/10/2010  Sera Cremonini  
Lunch HEP Informal Seminar
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/5/2010</td>
<td>Ricardo Rodriguez</td>
<td>Texas A&amp;M University</td>
<td>Effects of Fluctuations in the Fireball on Jet Quenching Observables at RHIC</td>
</tr>
<tr>
<td>2/19/2010</td>
<td>Michel Gonin</td>
<td>Ecole Polytechnique</td>
<td>The Tokai to Kamioka Long Baseline Neutrino Oscillation Experiment</td>
</tr>
<tr>
<td>2/26/2010</td>
<td>Taesoo Song</td>
<td>Texas A&amp;M University</td>
<td>RAA of J/Psi Near Mid-Rapidity in Heavy Ion Collisions at $\sqrt{s} = 200$ GeV</td>
</tr>
<tr>
<td>4/30/2010</td>
<td>Felix Reik</td>
<td>Texas A&amp;M University</td>
<td>Quarkonia and Heavy-Quark Relaxation Times in the Quark-Gluon Plasma</td>
</tr>
<tr>
<td>5/7/2010</td>
<td>Julian Hofmann</td>
<td></td>
<td>Dynamical Generation of Hadronic Resonances: An Overview</td>
</tr>
<tr>
<td>10/22/2010</td>
<td>Jinfeng Liao</td>
<td>BNL</td>
<td>The Many Facets of sQGP: E-M Duality, Fluidity</td>
</tr>
<tr>
<td>11/12/2010</td>
<td>Chiho Nonaka</td>
<td>University of Nagoya</td>
<td>Charmonium Spectral Functions in Quark-Gluon Plasma from Lattice QCD</td>
</tr>
<tr>
<td>11/19/2010</td>
<td>Nuray Er</td>
<td>Abant Izzet Baysal University</td>
<td>Spinodal Instabilities in Nuclear Matter in a Stochastic Relativistic Mean-Field Approach</td>
</tr>
</tbody>
</table>
6. Faculty, 2010

Artem G. Abanov ........................................... Assistant 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
Ronald A. Bryan ................................................ Professor
Siu Ah Chin ...................................................... Professor
David A. Church ................................................ Professor
Darren L. DePoy ................................................ Professor
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 .................................................... Assistant 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 Herschbach .............................................. Professor
Chia-Ren Hu ..................................................... Professor
Dave Hyland ...................................................... Professor (J)
Teruki Kamon ..................................................... Professor
George W. Kattawar ............................................ Professor
Helmut G Katzgraber .......................................... Assistant Professor
Leonid V. Keldysh .............................................. Professor
Che-Ming Ko ..................................................... Professor
Olga A. Kocharovskaya ......................................... Distinguished Professor
Vitaly V. Kocharovsky .......................................... Professor
Kevin Krischiunas ............................................. Lecturer
Jaan Laane ....................................................... Professor (J)
David M. Lee ..................................................... Professor
Igor F. Lyuksyutov ............................................. Associate Professor
Lucas Macri ....................................................... Assistant Professor
Rupak Mahapatra .............................................. Assistant Professor
Jennifer L. Marshall .......................................... Lecturer
Peter M. McIntyre ............................................. Professor
Dan G. Melconian .............................................. Assistant Professor
Saskia Mirowszewska ........................................ Associate Professor
Dimitri V. Nanopoulos ........................................ Distinguished Professor
Donald G. Naugle .............................................. Professor

SEC. 6. FACULTY 613
Casey Papovich ........................................... Assistant Professor
Gerhard G. Paulus ........................................ Associate Professor
Valery L. Pokrovsky ...................................... Distinguished Professor
Christopher N. Pope .................................... Distinguished Professor
Ralf Rapp .................................................... Professor
John F. Reading ........................................... 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
Torsten Siebert .......................................... Assistant Professor
Jairo Sinova .............................................. Professor
Alexei V. Sokolov ....................................... Professor
Nicholas B. Suntzeff .................................... Professor
Winfried Teizer .......................................... Associate Professor
David Toback ............................................ Professor
Kim-Vy Tran .............................................. Assistant 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
Ping Yang .................................................. Professor (J)
Dave H. Youngblood .................................... Professor
Aleksei M. Zheltikov .................................. Professor
M. Suhail Zubairy ....................................... Professor

*For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2010 (01/01/2010-12/31/2010).
6.1 Professional Activities, 2010

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2010.

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 2010.
▷ 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 2010.
▷ 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 2010

International
▷ Event: Finkel’stein Seminar (Organizer)
▷ Editorial/Board: Various International Journals (Referee: Journals)

National

University
▷ Event: Student Research Week (Judge)

Department
▷ Event: Condensed Matter Lunch (Organizer), Condensed Matter Seminar (Organizer), Physics Festival (Contributor)
▷ Committee/Panel: Qualifing Exam (Member)

• TEACHING ASSIGNMENTS DURING 2010

Fall
▷ PHYS 218. — Mechanics (total enrollment: 90)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Laplacian Growth, Stochastisity, and Selection, National Science Foundation

Private
▷ Quantum Coherent Synthesis and Decomposition, The Robert A. Welch Foundation, coworkers: O. Tretiakov (P), Y. Liu (G)

• PRESENTATIONS DURING 2010

▷ “How to Manipulate Magnetization with Current,” Texas A&M University, College Sation, TX, 2010.( Postdoc)
▷ “Current Driven Magnetization Dynamics in Ferromagnetic Nanowires with Dzyaloshinskii-Moriya Interaction,” Condensed Matter Physics Seminar Series; Texas A&M University, College Station, TX, January, 2010. (Postdoc)
▷ “Current Driven Magnetization Dynamics in Ferromagnetic Nanowires with Dzyaloshinskii-Moriya Interaction,” APS March Meeting, Portland, OR, March, 2010.(Postdoc)
“Magnetization Dynamics in Ferromagnetic Nanowires with Dzyaloshinskii-Moriya Interaction and Minimization of Ohmic Losses,” Condensed Matter Seminar; University of Texas at Austin, Austin, TX, March, 2010.(Postdoc)

“Minimization of Ohmic Losses for Domain-wall Motion in Ferromagnetic Nanowires,” Condensed Matter Seminar; University of South Carolina, Columbia, SC, June, 2010.(Postdoc)

“Domain-wall Dynamics in Ferromagnetic Nanowires with Spiral Order and Minimization of Ohmic Losses,” Center for Nanoscale Materials Seminar; Argonne National Laboratory, Argonne, IL, July, 2010.(Postdoc)

“Current Induced Domain-wall Motion in Ferromagnetic Wires,” DMSE Seminar, Massachusetts Institute of Technology, Cambridge, MA, August, 2010.(Postdoc)

“Domain Wall Dynamics and Minimization of Ohmic Losses in Magnetic Nanowires,” New York University, Physics Department, New York, NY, August, 2010.(Poster Postdoc)

“Spin Spiral order and Magnetization Dynamics in Magnetic Nanowires,” Joint Fall 2010 Meeting of the Texas APS, AAPT, SPS, and NSHP, San Antonio, TX, October, 2010.(Postdoc)

“Voltage Induced by Domain Wall Motion in a Ferromagnetic Nanowire,” Zone 13 of SPS and the National Society of Hispanic Physicists, San Antonio, TX, October, 2010.(Graduate, W. Liu)

“Minimization of Ohmic Losses for Domain Wall Motion in a Ferromagnetic Nanowire,” 55th Magnetism and Magnetic Materials Conference, Atlanta, GA, November, 2010.(Postdoc)

“How to Manipulate Magnetic Domain Walls by Current,” MINT Seminar; The University of Alabama, Tuscaloosa, AL, December, 2010.(Postdoc)

“Stokes Regularization of Laplacian Growth,” Complex Analysis and Mathematical Physics International Conference, Chillán, Chile, December, 2010.(Individual)


**PUBLICATIONS DURING 2010**


Matter, vol. 81, 021508.
• SERVICE DURING 2010

National
▷ Professional Affiliation: NCAA Faculty (Athletic Representative)
▷ Committee/Panel: NCAA Academic/Eligibility/Compliance Cabinet (Member)

University
▷ Service Position: Texas A&M University President on Intercollegiate Athletics (Advisor)
▷ Committee/Panel: Athletic Compliance Committee (Member), Athletic Council (Member), Athletic Department Senior Administration Committee (Member), Big 12 Faculty (Athletic Representative), NCAA, Continuing Eligibility Subcommittee of Cabinet (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 153)

Fall
▷ PHYS 208. — Electricity and Optics (total enrollment: 87)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2010
  Department
  ▷ Event: Low Temperature Demonstration for Aggieland Saturday (Presenter), Low Temperature Demonstration for Chemistry Open House (Presenter), Low Temperature Demonstrations for Physics Festival (Presenter)
  ▷ Committee/Panel: Undergraduate Curriculum Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ PHYS 412. — Quantum Mechanics I (total enrollment: 22)
  ▷ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▷ PHYS 691. — Research (total enrollment: 2)
  Fall
  ▷ PHYS 414. — Quantum Mechanics II (total enrollment: 12)

2009 correction publication omitted in error.
▷ Belevtsev, B.I.; Krasovitsky, V.B.; Naugle, D.G.; Rathnayaka, K.D.D; Agnolet, G.; Felner, I. (2009) Characteristic Crossing Point ($T^*_c \approx 2.7K$) in Specific Heat Curves of Samples $\text{RuSr}_2\text{Gd}_1.5\text{Ce}_{0.5}\text{Cu}_2\text{O}_10-\delta$ Taken for Different Values of Magnetic Field Journal of Physics: Condensed Matter , vol. 21, 455602.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▸ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]/

• SERVICE DURING 2010
  College
  ▸ Committee/Panel: Tenure and Promotion Advisory Committee (Member)
  Department
  ▸ Event: Physics and Astronomy Library (Representative), Physics Festival (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▸ PHYS 201. — College Physics (total enrollment: 95)
  Summer
  ▸ PHYS 201. — College Physics (total enrollment: 51)
  ▸ PHYS 202. — College Physics (total enrollment: 42)
  Fall
  ▸ PHYS 408. — Thermodynamics and Statistical Mechanics (total enrollment: 17)
  ▸ PHYS 607. — Statistical Mechanics (total enrollment: 28)

• PRESENTATIONS DURING 2010
  ▸ “Origin of the Lorentzian Metric, Standard Supersymmetry, and an Effective Higgs Field,”
    Conference on Beyond the Standard Models of Particle Physics, Cosmology, and Astrophysics,
    Cape Town, South Africa, February, 2010.( Invited)
  ▸ “Control of Specific Vibrational Modes in Carbon Nanotubes and Fullerenes Responding
    to Fast Intense Laser Pulses,” APS, Portland, OR, March, 2010.( Individual)

• PUBLICATIONS DURING 2010
  ▸ Allen, R.E. (2010) Supersymmetric SO(N) from a Planck-scale Statistical Picture; Pro-
    Excitation of a Specific Vibrational Mode via Optimum Laser-Pulse Duration Physical
    Review B: Condensed Matter , vol. 82, 075433.
• SERVICE DURING 2010

National

Event: Ettore Majorana Erice Science for Peace Prize (Participant)

No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ▶ Presidential Professor for Teaching Excellence [2003]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Undergraduate Advisor, Physics Undergraduate Advising Office, Physics and Astronomy, [2007]

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ PHYS 101. — Topics in Contemporary Physics (total enrollment: 33)
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 180)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)

  Fall
  ▶ PHYS 101. — Topics in Contemporary Physics (total enrollment: 80)
  ▶ PHYS 218. — Mechanics (total enrollment: 180)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)
• SERVICE DURING 2010

International
▷ Committee/Panel: International Advisory Committee of the String-Math Conference (Member)

Department
▷ Event: Applications of AdS/CFT Workshop (Organizer), Generalized Geometries and String Theory (Organizer), Strings 2010 (Organizer)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 615. — Methods of Theoretical Physics I (total enrollment: 16)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 3)

Fall
▷ PHYS 615. — Methods of Theoretical Physics I (total enrollment: 28)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Strings 2010, National Science Foundation
▷ (REN) Strings, Branes, and the Search for Unification, National Science Foundation
▷ Strings, Branes, and the Search for Unification, National Science Foundation

• PRESENTATIONS DURING 2010

▷ “(0,2) Mirror Symmetry and Heterotic Gromov-Witten Invariants,” Banff International Research Station, March, 2010. (Individual)
▷ “Brandeis Workshop on Generalized Geometries and String Theory,” Brandeis University, Waltham, MA, March, 2010. (Postdoc)
▷ “Strings at the LHC and in the Early Universe,” KITP, Santa Barbara, CA, May, 2010. (Individual)

• PUBLICATIONS DURING 2010

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Professor (J), Physics (Qatar), Texas A&M University - Qatar, [2010]/

• SERVICE DURING 2010

  International
  ▶ Committee/Panel: International Advisory Committee of the String-Math Conference
    (Member)

  National
  ▶ Editorial/Board: Radcliffe Fellowships at Harvard (Reviewer), The Shape on Inner Space
    (Book Reviewer), Major Physics Journals, JHEP and Nuclear Physics (Referee: Journals)
  ▶ Committee/Panel: National Science Foundation (Panelist)

  University
  ▶ Event: AdS/CFT Workshop (Organizer)

  Department
  ▶ Event: Strings 2010 (Co-Organizer)
  ▶ Committee/Panel: Exam Committee (Member), Qualifier Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ PHYS 202. — College Physics (total enrollment: 200)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ FRG: Collaborative Research: Generalized Geometries in String, National Science Founda-
    tion
  ▶ (REN) Strings, Branes, and the Search for Unification, National Science Foundation
  ▶ Strings, Branes, and the Search for Unification, National Science Foundation

• PRESENTATIONS DURING 2010

  ▶ “Extremal Correlation Functions in Kerr/CFT,” Workshop on Three-Dimensional Grav-
    ity, Valdivia, Chile, January, 2010.( Invited)


**PUBLICATIONS DURING 2010**


• SERVICE DURING 2010

International
▷ Event: Annual International Conferences Novel In-Plane Semiconductor Lasers (Organizer)
▷ Editorial/Board: Novel In-Plane Semiconductor Lasers IX (Editor)
▷ Committee/Panel: Annual International Conferences Novel In-Plane Semiconductor Lasers (Chair)

National
▷ Service Position: Society of Physics Students (Advisor)

Regional
▷ Event: Brazos Valley Children Museum (Presenter)

Department
▷ Event: Big Physics Day (Presenter), MIRTHE Summer Workshop (Organizer), Physics Festival (Presenter)
▷ Committee/Panel: AMO Search Theory Committee (Member), Department Head Search Committee (Member), PTA (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ ASTR 314. — Survey of Astronomy (total enrollment: 39)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 218. — Mechanics (total enrollment: 18)
▷ PHYS 691. — Research (total enrollment: 4)

Fall
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Improving Research and Educational Activities in Multifunctional Nanomaterials, Fund for the Improvement of Postsecondary Education
▷ CAREER: Active Integrated Nanostructure Devices for Infrared Photonics and Femtosecond Pulse Generation, National Science Foundation, coworkers: A. Wojcik (P), Y. Cho (G), D. Smith (G), F. Xie (G)
Collaborative Research: Room-Temperature Terahertz Semiconductor Raman Lasers, National Science Foundation

Engineering Research Center: Mid-Infrared Technologies for Health and the Environment, National Science Foundation, coworkers: F. Xie (G)

PIRE: US-Japan Cooperative Research and Education: Ultrafast and Nonlinear Optics in 6.1-Angstrom Semiconductors, National Science Foundation, coworkers: V. Chaganti (G)

State

Room-Temperature Electrically-Pumped Semiconductor Sources of THz Radiation, Texas Higher Education Coordinating Board

Presentations during 2010

- “Interference-induced THz Transparency in Semiconductor Magnetoplasma,” Texas A&M University- PQE Workshop, College Station, TX, January, 2010. (Invited)
- “Quantum Well Subbands in High Conduction Band Offset Heterostructures,” APS Meeting, March, 2010. (Contributed)
- “Four-wave Mixing in Active and Passive Mid-infrared Devices,” MIRTHE Summer Workshop, Houston, TX, August, 2010. (Contributed)
- “Nonlinear Mid-Infrared Sources and Detectors Utilizing Third Order Nonlinearity,” MIRTHE Summer Workshop, Houston, TX, August, 2010. (Contributed)
- “Cooperative Recombination (Superfluorescence) of a Dense Electron-hole Plasma in a High Magnetic Field,” Rice University, Houston, TX, September, 2010. (Individual)
- “Nonlinear Optical Interactions in Quantum Cascade Lasers,” Physics Department Seminar, University of Sheffield, United Kingdom, November, 2010. (Individual)

Publications during 2010


• SERVICE DURING 2010
  Department
  ▶ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 309. — Modern Physics (total enrollment: 41)

• PRESENTATIONS DURING 2010
  ▶ Colorado Seth Conference, Denver, CO, September, 2010. (Individual)
  ▶ Cosmos and Consciousness VIII, Rangeley, ME, September, 2010. (Individual)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Undergraduate Advisor, Physics and Astronomy, //

• SERVICE DURING 2010
  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 2010
  Spring
  ▶ PHYS 218. — Mechanics (total enrollment: 69)
  ▶ PHYS 691. — Research (total enrollment: 2)

  Summer
  ▶ PHYS 222. — Modern Physics for Engineers (total enrollment: 13)
  ▶ PHYS 222. — Modern Physics for Engineers (total enrollment: 13)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Fall
  ▶ PHYS 601. — Analytical Mechanics (total enrollment: 24)
  ▶ PHYS 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2010
  ▶ “Higher Order Forward Algorithms for Solving Time-irreversible Equations,” Department of Mathematics Colloquium, University of Innsbruck, Austria, June, 2010. (Individual)
  ▶ “The Instability of Splitting Algorithms in Solving Complex and Non-linear Equations,” International Conference, a Symposium on Splitting Methods for Differential Equations,

- PUBLICATIONS DURING 2010
• SERVICE DURING 2010

National

Department
▷ Committee/Panel: Awards Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 201. — College Physics (total enrollment: 69)

Fall
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 47)
• CHAIRS/PROFESSORSHIPS
  ▷ Rachal/Mitchell/Heep Endowed Professorship in Physics [2008]

• SERVICE DURING 2010
  International
  ▷ Editorial/Board: Research Proposals for the Chile and Korea (Review: Proposals)
  National
  ▷ Advisory Board: National Science Foundation and NASA (Member)
  Department
  ▷ Committee/Panel: Graduate Admissions Committee (Member), Performance/Evaluation Committee (Member), Promotion, Tenure, and Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ ASTR 101 — Basic Astronomy (total enrollment: 150)
  ▷ PHYS 485. — Directed Studies (total enrollment: 2)
  Summer
  ▷ PHYS 491. — Research (total enrollment: 1)
  Fall
  ▷ ASTR 314. — Survey of Astronomy (total enrollment: 50)
  ▷ ASTR 489. — Special Topics in (total enrollment: 1)
  ▷ ASTR 685. — Directed Studies (total enrollment: 4)
  ▷ ASTR 689. — Special Topics in (total enrollment: 15)
  ▷ ASTR 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ Spectrophotometric Calibration System for the Dark Energy Survey Camera, FERMI National Accelerator Laboratory, coworkers: J. Marshall (Research Scientist), J. Rheault (Research Associate), T. Li (G), R. Allen (Staff), T. Prochaska (Staff), S. Truelove (Administrative Assistant)
  ▷ 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 Assistant)
• PUBLICATIONS DURING 2010


Camera (DECam) Project 7735.


tometric Calibration System for DECam 7735.

No report received from faculty member.
• SERVICE DURING 2010
  National
  
  Department
  ▶ Event: Workshop on Phenomenology (Organizer)
  ▶ Committee/Panel: Graduate Admission Committee (Member), Promotion and Tenure Committee (Member), Subcommittee in the Undergraduate Curriculum Committee (Chair), Undergraduate Curriculum Committee (Member)
  ▶ Advisory Board: Mitchell Institute (Member)

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ PHYS 634. — *Relativistic Quantum Field Theory* (total enrollment: 10)
  ▶ PHYS 691. — *Research* (total enrollment: 5)
  
  Summer
  ▶ PHYS 491. — *Research* (total enrollment: 1)
  ▶ PHYS 691. — *Research* (total enrollment: 4)
  
  Fall
  ▶ PHYS 491. — *Research* (total enrollment: 2)
  ▶ PHYS 638. — *Quantum Field Theory II* (total enrollment: 9)
  ▶ PHYS 691. — *Research* (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010
  
  Federal
  ▶ (REN) High Energy Physics at Texas A&M, *Department of Energy*
  ▶ (REN) High Energy Physics at Texas A&M, *Department of Energy*, coworkers: Y. Mimura (P), S. Campbell (G), A. Krislock (G)

• PRESENTATIONS DURING 2010
  ▶ “Cladogenesis,” Physics Department, Cornell University, 2010. (Postdoc)
  ▶ “String Moduli: Inflation, Supersymmetry Breaking, and Baryogenesis,” Cook’s Branch Meeting, Houston, TX, April, 2010. (Postdoc)
> Arizona State University, Tempe, AZ, April, 2010. (Individual)
> “Baryogenesis and Late-Decaying Moduli,” PHENO, Madison, WI, May, 2010. (Postdoc)
> “Determination of Non-Universal SUGRA Models at the Large Hadron Collider,” PHENO, Madison, WI, May, 2010. (Graduate, A. Krislock)
> “SUGRA Models at the Large Hadron Collider,” Erice Summer School, Italy, May, 2010. (Individual)
> “Dark Matter Connection of Particle Physics Models: Where do we Stand?,” Baylor University, Waco, TX, September, 2010. (Individual)
> “Modulus Decay at the MeV Scale: From Problem to Progress,” Non-Thermal Cosmological Histories of the Universe Workshop, University of Michigan, Ann Arbor, MI, October, 2010. (Postdoc)
> “Texas Institute for Cosmology and Particle Physics,” Building Astronomy in Texas, Austin, TX, October, 2010. (Invited)
> “Theory Summary,” Building Astronomy in Texas, Austin, TX, October, 2010. (Invited)
> Building Astronomy, Austin, TX, October, 2010. (Invited)

- **PUBLICATIONS DURING 2010**

• SERVICE DURING 2010
  
  Regional
  ▶ Event: Brazos Valley Children Museum (Demonstration Coordinator), Physics Camp for the Youth Adventure Program (Organizer)

  Department
  ▶ Event: 26 Physics Shows (Demonstration Coordinator), Big Physics Day (Organizer), Physics Festival (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 74)

  Summer
  ▶ ENGR 289. — Special Topics in (total enrollment: 22)

  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 67)
• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell-Heep-Munnerlyn Endowed Career Enhancement Professorship in Physics or Astronomy [2010]

• SERVICE DURING 2010
  Department
  ▶ Event: High Energy Physics (Representative), High Energy Physics Seminar (Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 218. — Mechanics (total enrollment: 89)
  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 80)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ US CMS HCAL Subsystem, FERMI National Accelerator Laboratory

• PUBLICATIONS DURING 2010
ALEXANDER M. FINKELŠTEIN

PROFESSOR

PHYS-Condensed Matter Physics

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• SERVICE DURING 2010

  International
  ▶ Editorial/Board: Various International Journals (Referee: Journals)

  Department
  ▶ Event: Condensed Matter Seminars (Co-Organizer)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ PHYS 208 — Electricity and Optics (total enrollment: 100)

  Fall
  ▶ PHYS 208 — Electricity and Optics (total enrollment: 200)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Thermoelectric and Thermal Transport in Disordered and Strongly Correlated Electron Systems, National Science Foundation

  State
  ▶ Room Temperature Spin-Field Effect Transistor for Post-CMOS Technologies: A New Spin to Moore’s Law, Texas Higher Education Coordinating Board

• PRESENTATIONS DURING 2010

  ▶ “An Effective Theory of Pulse Propagation in a Nonlinear and Disordered Medium in Two Dimensions,” University of Texas, Austin, TX, May, 2010. (Individual)


- **PUBLICATIONS DURING 2010**
A. LEWIS FORD

PROFESSOR

PHYS-Atomic

(979) 458-7908

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- ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  - Associate Department Head, Physics and Astronomy, [1993]

- SERVICE DURING 2010

  College
  - Event: Science Bowl (Reviewer), Texas Junior Science and Humanities Symposium (Judge)
  - Ad Hoc Committee: COS Institutional Effectiveness Committee (Member)
  - Committee/Panel: College Quality Enhancement Plan Council (Member), Qatar Advisory Committee (Member), Teaching Lab Safety Committee (Member)

  Department
  - Event: Physics Festivals (Participant)
  - Committee/Panel: Graduate Credentials and Records Committee (Chair)

- TEACHING ASSIGNMENTS DURING 2010

  Spring
  - PHYS 202. — College Physics (total enrollment: 100)
  - PHYS 285. — Directed Studies (total enrollment: 1)

  Summer
  - PHYS 285. — Directed Studies (total enrollment: 1)

  Fall
  - PHYS 201. — College Physics (total enrollment: 240)
  - PHYS 285. — Directed Studies (total enrollment: 12)
• SERVICE DURING 2010

  International
  ▶ Event: Hot Quarks Conference and RHIC Paradigms (Co-Organizer)

  National

  Department
  ▶ Event: Physics Festival (Developer), Physics Festival (Supervisor), REU Cyclotron Science Fair (Organizer), REU Cyclotron Science Fair (Supervisor), Saturday Morning Physics (Speaker)
  ▶ Committee/Panel: Cyclotron Institute Space Allocation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 90)
  ▶ PHYS 691. — Research (total enrollment: 1)

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

  Fall
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

  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

• PRESENTATIONS DURING 2010

  ▶ “Effects of Fluctuations in the Fireball on Jet Quenching Observables at RHIC,” APS April Meeting, Washington, DC, 2010.( Postdoc)
  ▶ APS Division of Nuclear Physics Meeting, Santa Fe, NM, 2010.(Poster Postdoc)
  ▶ “Recombination of Quarks,” STAR Collaboration Meeting, University of Texas, Austin, TX, January, 2010.( Invited)
“Quark Recombination in Heavy Ion Collisions,” Workshop on RHIC Paradigms, University of Texas, Austin, TX, April, 2010. (Invited)

“Quark Recombination in Heavy Ion Collisions,” JET Collaboration Meeting, Lawrence Berkeley National Lab, Berkeley, CA, June, 2010. (Invited)


“Hot Quark and Gluon Matter,” Texas A&M University, College Station, TX, September, 2010. (Individual)


“Recombination and Quark Scaling Still Puzzling?,” From Strong Fields to Colorful Matter, Asheville, NC, October, 2010. (Invited)

“Event-by-Event Jet Quenching and Fourier Moments,” APS Division of Nuclear Physics Meeting, Santa Fe, NM, November, 2010. (Contributed)

“Some Challenges and Opportunities for Hard Probes,” McGill University, Montreal, QC Canada, November, 2010. (Individual)

**PUBLICATIONS DURING 2010**


• CHAIRS/PROFESSORSHIPS
  ▶ George P. Mitchell ’40 Chair in Experimental Physics [2005]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Department Head, Physics and Astronomy, [2002]

• SERVICE DURING 2010
  National
  ▶ Editorial/Board: *Applied Physics B, Applied Optics* (Referee: Journals)
  ▶ Committee/Panel: Navy Ocean Optics Program ONR Review Panel (Member)
  College
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 2)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 2)
  Fall
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Devices for Effective Sampling of Bioaerosol, *U.S. Army*, coworkers: M. Cone (G), J. Gomez (U)

  Private
  ▶ Mercury Dimer Spectroscopy and a New Integrating Cavity Spectroscopic Tool, *The Robert A. Welch Foundation*, coworkers: D. Haubrich (G), X. Qu (G), J. Gomez (U)
  ▶ The Integrating Cavity: A Powerful New Approach to Ring-Down Spectroscopy, *The Robert A. Welch Foundation*, coworkers: X. Qu (P), D. Haubrich (G), J. Gomez (U)

• PRESENTATIONS DURING 2010
“Do Experimental Violations of Bell Inequalities Require a Non-Local Interpretation of Quantum Mechanics,” University of Ulm, Germany, February, 2010. (Invited)


“Instrumentation to Measure the Backscattering Coefficient for Arbitrary Phase Functions,” Ocean Optics XX, Anchorage, Alaska, September, 2010. (Contributed)


**PUBLICATIONS DURING 2010**

• SERVICE DURING 2010

National
▷ Editorial/Board: Department of Energy, National Science Foundation (Review: Proposals)
▷ Committee/Panel: APS Group on Hadronic Physics Fellowship Selection Committee (Member), BNL/DOE Annual Review of the PHENIX Forward Silicon Vertex Tracker (Panel Member), Brookhaven National Laboratory Nuclear and Particle Physics Program Advisory Committee (Panel Member), DOE Review of the MIT Laboratory for Nuclear Science (Member), DOE/NSF Nuclear Science Advisory Committee (Member), RHIC and AGS Thesis Prize Selection Committee (Member), RHIC & AGS Users Group Executive Committee (Chair), RHIC & AGS Users Group Executive Committee (Member), RHIC & AGS Users Group Executive Committee (Past Chair), STAR Decadal Plan Committee (Chair), STAR Tigger Board, Spring (Member)

University
▷ Committee/Panel: Abilene Christian University Physics Department External Review Committee (Member)

College
▷ Committee/Panel: Information Technology Committee (Member)

Department
▷ Ad Hoc Committee: Nuclear Solutions Institute By-laws Committee (Member)
▷ Committee/Panel: Cyclotron Institute Computer Committee (Chair), Cyclotron Institute Safety Committee (Member), Promotion, Tenure, and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 606. — Quantum Mechanics (total enrollment: 14)
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 218. — Mechanics (total enrollment: 110)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
Cyclotron-Based Nuclear Science, Department of Energy

(REN) Fundamental Studies in Nuclear Science, Department of Energy, coworkers: P. Djawotho (P), J. Drachenberg (G), L. Huo (G)

Private

(REN) Asymptotic Normalization Co-Efficients in Nuclear Astrophysics, The Robert A. Welch Foundation, coworkers: E. Simmons (G)

PRESENTATIONS DURING 2010

“Final Results on Muon Decay from TWIST,” April Meeting of the American Physical Society, Washington, DC, February, 2010. (Invited)

“From Nuclei to Stars: Indirect Experimental Methods and Techniques in Nuclear Astrophysics,” Physics Department, James Madison University, Harrisonburg, VA, February, 2010. (Postdoc)

“Upsilon Production in STAR,” International Workshop on Heavy Quarkonium, Batavia, IL, May, 2010. (Postdoc)


“Gluon Polarization and Jet Production at STAR,” 19th International Spin Physics Symposium, Juelich, Germany, September, 2010. (Postdoc)

“New Trigger Logic for the Forward Meson Spectrometer,” University of Texas, San Antonio, TX, October, 2010. (Contributed)

“π₀-Charged Particle Correlations at 2.5 < β < 4.0 from p+p Collisions at √s = 200 GeV,” Annual Meeting APS Division of Nuclear Physics, Santa Fe, NM, November, 2010. (Contributed)

“New Trigger Logic for the Forward Meson Spectrometer,” Annual Meeting APS Division of Nuclear Physics, Santa Fe, NM, November, 2010. (Poster Individual)

PUBLICATIONS DURING 2010


Abelev, B.I.; et al. (2010) Observation of π⁺π⁻π⁺π⁻ Photoproduction in Ultra-Peripheral Heavy Ion Collisions at √sNN = 200 GeV at the STAR Detector Physical Review C: Nuclear Physics, vol. 81, 044901.


Abelev, B.I.; et al. (2010) Observation of Charge-Dependent Azimuthal Correlations and Possible Local Strong Parity Violation in Heavy Ion Collisions *Physical Review C: Nuclear Physics*, vol. 81, 054908.


Al-Abdullah, T.; Carstoiu, F.; Chen, X.; Clark, H.L.; Fu, C.; Gagliardi, C.A.; Lui, Y.W.; Mukhamedzhanov, A.; Tabacaru, G.; Tokimoto, Y.; Trache, L.; Tribble, R.E. (2010) Stellar Reaction Rate for $^{22}$Mg+p $\rightarrow$ $^{23}$Al from the Asymptotic Normalization Coefficient in the Mirror Nuclear System $^{22}$Ne+n $\rightarrow$ $^{23}$Ne *Physical Review C: Nuclear Physics*, vol. 81, 035802.
• SERVICE DURING 2010

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)
▷ Committee/Panel: International Advisory Committee for the XXXII Mazurian Lakes Conference on Physics (Member)

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: Local Organizing Committee, Nucleus-Nucleus Collisions Conference (Member), Science Policy Committee, Hollifield Lab, Oak Ridge National Lab (Member)

Regional

▷ Committee/Panel: Jefferson Science Associates Programs Committee (Member)

University

▷ Committee/Panel: Ad hoc Committees (Member), Reactor Safety Board (Member)

Department

▷ Committee/Panel: Distinguished Professor Committee (Member), Senior Nuclear Physicist Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring

▷ PHYS 208.506-510 — Electricity and Optics (total enrollment: 125)
▷ PHYS 208.516-520 — Electricity and Optics (total enrollment: 125)
▷ PHYS 691. — Research (total enrollment: 1)

Summer

▷ PHYS 691. — Research (total enrollment: 1)

Fall
• RESEARCH PROJECTS DURING 2010

Federal
▷ Cyclotron-Based Nuclear Science, Department of Energy, coworkers: L. Chen (P), V. Horvath (P), V. Iacob (P), N. Nica (P), M. Bencomo (G), J. Goodwin (G), H. Park (G), V. Siller (U)

Private
▷ (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), V. Siller (U)
▷ (REN) Nuclear Decay Studies, The Robert A. Welch Foundation, coworkers: L. Chen (P), V. Horvath (P), V. Iacob (P), N. Nica (P), I. Towner (P), M. Bencomo (G), J. Goodwin (G), H. Park (G), V. Siller (U)

• PRESENTATIONS DURING 2010

▷ “Nuclear Physics,” Texas A&M University, College Station, TX, 2010. (Individual)
▷ “$\beta$-Decay of $^{23}Al$ and Nova Nucleosynthesis,” Carpathian Summer School of Physics, Sinaia, Romania, June, 2010. (Contributed)
▷ “Further Test of Internal-Conversion with a Measurement in $^{197}Pt$,” Third Workshop for Radioactive Decay Data Evaluators at LMRI-CIEMAT, Madrid, Spain, June, 2010. (Contributed)
▷ “How Idiosyncratic is the Weak Force,” Cyclotron Institute, College Station, TX, June, 2010. (Individual)
▷ “Precise Superallowed $\beta$-decay Measurements (the Cases of $^{26}Si$, and $^{34}Ar$),” Carpathian Summer School of Physics, Sinaia, Romania, June, 2010. (Invited)
▷ “Testing CVC and CKM Unitarity via Superallowed Nuclear Beta Decay,” LX International Conference on Nuclear Physics, St Petersburg, Russia, July, 2010. (Invited)
▷ “$V_{ud}$ from Nuclear Decays,” 6th International Workshop on the CKM Unitarity Triangle, Warwick, United Kingdom, September, 2010. (Invited)
▷ “Do Radioactive Half-Lives Depend on the Earth-Sun Distance?,” APS Meeting, Santa Fe, NM, November, 2010. (Contributed)
▷ “Further Test of Internal-Conversion with a Measurement in $^{119}Sn$,” Nuclear Data Week, Santa Fe, NM, November, 2010. (Contributed)
▷ “Precise Half-Life Measurement of $^{46}V$,” APS Meeting, Santa Fe, NM, November, 2010. (Contributed)
• PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Professor (J), Chemistry, [2006]

• SERVICE DURING 2010
  National
  ▶ Professional Affiliation: National Academy of Sciences (Member)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Chemical Dynamics of Hox Free Radicals and Slow H Atoms, *National Science Foundation*
  State
  ▶ Toward Matterwave Chemistry, *Texas Higher Education Coordinating Board*

• PUBLICATIONS DURING 2010

*No report received from faculty member.*
• SERVICE DURING 2010

International

National
▷ Editorial/Board: Physics Graduate Textbook for Elsevier by Pathria (Reviewed)

Department
▷ Committee/Panel: Graduate Admission Committee (Member), Graduate Curriculum Committee (Member), Graduate Student Admissions and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 631. — Quantum Theory of Solids (total enrollment: 10)

Fall
▷ PHYS 221. — Optics and Thermal Physics (total enrollment: 31)
• SERVICE DURING 2010

International
▷ Event: SUSY and New Physics at Terascale Session, International Linear Collider Workshop (Co-Organizer)
▷ Committee/Panel: 17th International Conference on Supersymmetry and the Unification of Fundamental Interactions (SUSY 2009) (Member), 4th International Workshop on the Interconnection between Particle Physics and Cosmology (PPC2010) (Member), International Scientific Advisory Committee, 3rd International Workshop on the Interconnection between Particle Physics and Cosmology (Member)

National
▷ Event: CMS Missing $E_T$ Group (Co-convener)
▷ Editorial/Board: Physical Review Letters (Referee: Journals)

University
▷ Committee/Panel: Texas A&M Reactor Safety Board (Member)

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

Department
▷ Event: Chemistry Open House (Presenter), Physics Open House (Presenter)
▷ Committee/Panel: Graduate Credentials and Records Committee (Member), Graduate Curriculum Committee (Member), HEP Exp. Faculty Search IV (Member), Promotions, Tenure, and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 691. — Research (total enrollment: 4)

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

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) High Energy Physics at Texas A&M, Department of Energy
▷ (REN) High Energy Physics at Texas A&M, Department of Energy, coworkers: D. Goldin (P), M. Weinberger (P), J. Asaadi (G), A. Aurisano (G), A. Gurrola (G), A. Marotta (G),
R. Motalvo (G)
▷ Development of Physics Analysis Tool for Inclusive Jets+Missing FT+TAUS Events at CMS, *FERMI National Accelerator Laboratory*
▷ Travel Funds for LPC Conveners, *FERMI National Accelerator Laboratory*
▷ US CMS Upgrade R and D M and O, *FERMI National Accelerator Laboratory*

*On leave.*
• SERVICE DURING 2010

National
▷ Event: Postdoc Roundtable Discussion at the NSF-ERC MIRTHE Summer Workshop (Host)


Department
▷ Event: Chemistry Open House (Participant), Physics Festival (Participant)

▷ Committee/Panel: Astronomy Committee (Member), Computer Committee (Member), Graduate Student Admissions and Appointments Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 221. — Optics and Thermal Physics (total enrollment: 41)
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 5)

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

Fall
▷ PHYS 218(H) — Mechanics (total enrollment: 76)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Three-Dimensional Polarized Radiative Transfer in a Dynamic Atmosphere-Ocean System, Department of Defense

▷ Ultrashort Laser Pulse Propagation in Water, Department of Defense, coworkers: M. Springer (G), Y. Wang (G), W. Yang (G)

▷ Study Dust Optical and Radiative Properties Using Optimal Morphological Sets, National Science Foundation, coworkers: X. Huang (G), Z. Meng (G)

→ Graduate Research Fellowship, *Sandia National Laboratories*, coworkers: B. Strycker (G)

**State**

→ Biological Response to the Dynamic Spectral-Polarized Underwater Light Field, *University of Texas*, coworkers: S. Dagach (G), M. Gao (G)

**PRESENTATIONS DURING 2010**

→ “Optical Precursor in Hot Rubidium Vapor,” 41st Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics, Houston, TX, 2010.(Poster Individual)

→ “Optical Precursor Investigation in an Organic Dye Solution,” 41st Annual Meeting of the APS Division of Atomic, Molecular, and Optical Physics, Houston, TX, 2010. (Individual)

→ “Genesis and Evolution on the Use of Polarization in Remote Sensing,” Texas A&M University of Quantum Electronics Workshop, College Station, TX, January, 2010. (Invited)

→ “Modeling of Wave-Induced Irradiance Fluctuations at Near-Surface Depths in the Ocean,” Ocean Sciences, Portland, OR, February, 2010.(Poster Individual)


→ “Polarized Light in Nature,” Physics Festival at Texas A&M University, College Station, TX, March, 2010.(Invited)

→ “Modeling Temporal Underwater Polarized Radiance Using IOPs and Wave Slopes from RaDyO Field Measurements,” Radiation in a Dynamic Ocean Workshop, Santa Barbara, CA, June, 2010.(Invited)


→ “Radiative Transfer Simulation of Dust-like Aerosols: Uncertainties from Particle Shape, Refractive Index and Distribution,” 13th Conference on Atmospheric Radiation and 13th Conference on Cloud Physics, Portland, OR, June, 2010.(Poster Individual)

→ “Study Ice Clouds and Aerosols Using Satellite Observations and Modeling Capabilities,” 3rd Asia Pacific Radiation Symposium, Seoul, Korea, August, 2010.(Individual)

→ “Ocean Optics in the Near Future 5-10 Years Out, where we’re Headed and Current Challenges,” Ocean Optics XX, Anchorage, Alaska, September, 2010.(Invited)


→ “Atmospheric Optics and Radiation: History, Application, and Inspiration,” Department of Atmospheric Sciences, University of Wyoming, Laramie, WY, November, 2010.(Individual)

→ “Atmospheric Optics and Radiation: History, Application, and Inspiration, Department of Atmospheric, Oceanic and Space Sciences,” University of Michigan, Ann Arbor, MI,
December, 2010. (Individual)

**PUBLICATIONS DURING 2010**


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**SEC. 6.1 PROFESSIONAL ACTIVITIES 663**
• SERVICE DURING 2010
  
  National

  University
  ▶ Committee/Panel: Supercomputing Steering Committee (Member)

  Department
  ▶ Event: Big Physics Day (Presenter), Physics Festival (Presenter)
  ▶ Committee/Panel: Colloquium Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 491. — Research (total enrollment: 2)

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

  Fall
  ▶ PHYS 202. — College Physics (total enrollment: 136)
  ▶ PHYS 681. — Seminar (total enrollment: 12)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  
  Federal
  ▶ The Physics of Complex Systems: From Glasses to Quantum Computing, Department of Energy
  ▶ Brutus Cluster Expansion, ETH Zurich

  International
  ▶ The Physics of Complex Systems: From Glasses to Quantum Computing, Swiss National Foundation for Scientific Research, coworkers: J. Andresen (G), R. Andrist (G)

• PRESENTATIONS DURING 2010
  ▶ “Do Spin Glasses Order in a Field?,” Ben-Gurion University, Israel, February, 2010. (Individual)


“Error Threshold for Topological Color Codes on Union Jack Lattices,” March Meeting of the American Physical Society, Portland, OR, March, 2010. (Contributed)


“Do Spin Glasses Order in a Field?,” City University of New York Graduate Center, New York, NY, April, 2010. (Individual)

“Do Spin Glasses Order in a Field?,” National High Magnetic Field Laboratory, Tallahassee, FL, April, 2010. (Individual)

“Do Spin Glasses Order in a Field?,” University of Massachusetts, Amherst, MA, April, 2010. (Individual)

“A One-Dimensional Approach to Spin Glasses,” Seventh International Conference on Computational Physics, Beijing, China, May, 2010. (Invited)


• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

  International
  ▷ Committee/Panel: Strongly Correlated Electrons, Institute for Physics at High Pressures of the Russian Academy of Sciences Organizing Committee (Chairman)

  National
  ▷ Editorial/Board: Journal Solid State Communications (Referee: Journals), Physics-Uspekhi (Editor)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▷ PHYS 689. — Special Topics in (total enrollment: 5)
CHE-MING KO

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PHYS-Nuclear Theory  ko@comp.tamu.edu

• SERVICE DURING 2010

International
▷ Editorial/Board: International Journal of Modern Physics (Referee: Journals), Chinese Journal of Physics (Associate Editor)

National

Department
▷ Event: Nuclear Physics Program (Presenter)
▷ Committee/Panel: Graduate Student Admissions and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 607. — Statistical Mechanics (total enrollment: 31)
▷ PHYS 625. — Nuclear Physics (total enrollment: 8)
▷ PHYS 691. — Research (total enrollment: 1)

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

Fall
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ A Topical Collaboration on Quantitative Jet and Electromagnetic Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions, Department of Energy
▷ (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: J. Xu (P), K. Han (G), F. Li (G)

• PRESENTATIONS DURING 2010

“Strings, Jets and Quark Coalescence in Transport Models,” International Workshop on Critical Examination of RHIC Paradigms, Austin, TX, April, 2010. (Invited)


“Jet Conversions in Quark-Gluon Plasma,” International Workshop on Jets in Proton-Proton and Heavy Ion Collisions, Prague, Czech Republic, August, 2010. (Contributed)

“Jet Conversion and Quark Coalescence in Relativistic Heavy Ion Collisions,” International Workshop on Interplay between Soft and Hard Interactions in Particle Production at Ultra-Relativistic Energies, Catania, Italy, September, 2010. (Invited)

“Particle Production in Heavy Ion Collision,” Institute of Theoretical Physics, University of Frankfurt, Frankfurt, Germany, October, 2010. (Individual)

**PUBLICATIONS DURING 2010**


• SERVICE DURING 2010

International
▷ Committee/Panel: European Research Council Panels (Member)

National
▷ Event: Modern Trends in Laser Physics (Co-Chair), Quantum Coherence Effects, 40th Winter Colloquium Physics of Quantum Electronics (Organizer), Symposium on Nonlinear and Quantum Optics (Chair)

Department
▷ Committee/Panel: AMO Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 208. — Electricity and Optics (total enrollment: 230)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Control of Atoms-Light and Nuclei-X-ray Photons Interactions in Solids via Quantum Interference, National Science Foundation

• PRESENTATIONS DURING 2010

▷ “Coherent Control of Fluorescence Channels in Three-Level System,” 40th Winter Colloquium Physics of Quantum Electronics, January, 2010.(Poster Individual)
▷ “EIT for Studies of Ions Interactions in Solids,” Texas A&M University Physics of Quantum Electronics Workshop, College Station, TX, January, 2010.( Invited)


“Resonant Enhancement and Periodic Modulation of Refractive Index via its Coherent Control in Rare-Earth Doped Crystals,” 19th International Laser Physics Workshop, Iguazu Falls, Brazil, July, 2010. (Individual)

“Extremely Short Pulses via Periodic-Resonance Excitation of Quantum System,” ICONO/LAT, Kazan, Russia, August, 2010. (Individual)

PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International
▷ Committee/Panel: Scientific Advisory Committee of the IV International Conference Frontiers of Nonlinear Physics (Member)

National

Department
▷ Committee/Panel: Institute for Quantum Studies Advisory Committee (Member), Promotion, Tenure, and Appointments Committee (Member), Theoretical AMO Search Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 218. — Mechanics (total enrollment: 207)

• PRESENTATIONS DURING 2010

▷ “On the Analytical Solution for BEC Critical Phenomena,” Quantum Optics, Texas A&M University, College Station, TX, January, 2010. (Invited)
▷ “Mid/far-Infrared Efficiency of Grating-Out-Coupled Nonlinear-Mixing Dual-Wavelength Diode Lasers. Inhomogeneous Broadening,” International Conference on Coherent and
Nonlinear Optics, Kazan, Russia, August, 2010. (Individual)

- “Modelling Polariton Mode Lasing Induced by Bose-Condensation of Indirect Excitons,” International Conference on Lasers, Applications, and Technologies, Kazan, Russia, August, 2010. (Individual)

- “Photonic Crystals Capable to Restore Collective Spontaneous Emission in Active Media with Strong Inhomogeneous Broadening,” International Conference on Coherent and Nonlinear Optics, Kazan, Russia, August, 2010. (Individual)


- “Superradiant Heterolasers,” 5th International Conference on Advanced Optoelectronics and Lasers, Sevastopol, Ukraine, September, 2010. (Invited)


**PUBLICATIONS DURING 2010**


- Kalinin, P.A.; Kocharovsky, V.V.; Kocharovsky, V.V. (September 2010) Polariton Mode Lasing in Quantum-Well Traps for Bose-Condensation of Dipolar Excitons; Proceedings of the 10th International Conference of Laser & Fiber-Optical Networks Modelling 183-185.


Lasers, ed. Sukhoivanov, I.A.; Shulika, O.V. 43-45.


• AWARDS DURING 2010
  
  International
  ▶ Distinguished New Faculty Award for Teaching, International Academy for the Scholarship of Learning Technology

• SERVICE DURING 2010
  
  National
  ▶ Event: Mastering Astronomy Workshop (Participant), Supernova Properties and Observational Cosmology Workshop (Participant)

  Department
  ▶ Event: Musical Concert for a Cook’s Branch Barbecue during Stephen Hawking’s Annual Visit (Organizer)
  ▶ Committee/Panel: Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 165)

  Summer
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 29)

  Fall
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 157)

• RESEARCH PROJECTS DURING 2010
  
  Federal
  ▶ Collaborative Research: Three-Dimensional Simulations of Type la Supernovae Constraining Models with Observations, National Science Foundation

• PRESENTATIONS DURING 2010
  
  ▶ “Teaching Science to College Students in the YouTube Era,” 21st International Conference on College Teaching and Learning, Ponte Vedra Beach, FL, April, 2010.( Invited)
  ▶ “The Constellations,” Camp Quality, Tyler, TX, July, 2010.( Invited)
“The First Director of McDonald Observatory and his Astronomical Family Dynasty,” Board of Visitors Meeting, McDonald Observatory, July, 2010.( Invited)

“Highlights of Islamic Astronomy,” Texas A&M University, College Station, TX, November, 2010.( Invited)

- **PUBLICATIONS DURING 2010**
DAVID M. LEE

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• SERVICE DURING 2010
  State
  ▶ Committee/Panel: Academy of Medicine, Engineering, and Science (Elected Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 208(H) — Electricity and Optics (total enrollment: 34)

• RESEARCH PROJECTS DURING 2010
  State
  ▶ Atomic Free Radicals in Nanoclusters Immersed in Superfluid Helium, Texas Higher Education Coordinating Board

• PRESENTATIONS DURING 2010
  ▶ “Lecture for Davidson Scholars,” Texas A&M UniversityPhysics Festival, College Station, TX, March, 2010. (Individual)
  ▶ “Spin Waves and Moving Domain Walls in Spin Polarized Atomic Hydrogen Gas and Helium 3-4 Liquid Mixtures,” University of Texas, Austin, TX, December, 2010. (Invited)

• PUBLICATIONS DURING 2010

SEC. 6.1 PROFESSIONAL ACTIVITIES 679

Boltnev, R.E.; Khmelenko, V.V.; Kiryukhin, V.; Lee, D.M.; Nesvizhevsky, V.V. (July 2010) Oxygen-Helium Condensates as Medium for very Cold Neutron Reflectors; 8th Conference on Cryocrystals and Quantum Crystals 88.


• SERVICE DURING 2010
  
  International
  ▶ Editorial/Board: *European Physical Society* (Referee: Journals)
  
  National
  ▶ Editorial/Board: *American Institute of Physics and Institute of Physics* (Referee: Journals)
  
  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 03), Faculty Senate: International Programs (Member), Faculty Senate: The Budget Information Committee (Member)

  Department
  ▶ Event: Chemistry Show (Participant), Physics Show (Participant)
  ▶ Committee/Panel: Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ PHYS 202. — *College Physics* (total enrollment: 88)
  ▶ PHYS 685. — *Directed Studies* (total enrollment: 1)

  Summer
  ▶ PHYS 208. — *Electricity and Optics* (total enrollment: 53)
  ▶ PHYS 685. — *Directed Studies* (total enrollment: 1)

  Fall
  ▶ PHYS 685. — *Directed Studies* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ (REN) Emergent Behavior in Magnet-Superconductor Hybrids, *Department of Energy*, coworkers: D. Rathnayaka (P), H. Lee (G), K. Kim (P)
  ▶ Emergent Behavior in Magnet-Superconductor Hybrids, *Department of Energy*, coworkers: K. Kim (P), D. Rathnayaka (P), H. Lee (G), Z. Ye (P)
  ▶ Chemical Dynamics of Hox Free Radicals and Slow H Atoms, *National Science Foundation*, coworkers: D. Rathnayaka (P), L. Sheffield (G), V. Krasovitskiy (Staff)

  State
  ▶ Toward Matterwave Chemistry, *Texas Higher Education Coordinating Board*, coworkers: D. Rathnayaka (P), L. Sheffield (G), V. Krasovitskiy (Staff)

  Private

SEC. 6.1 PROFESSIONAL ACTIVITIES 681
• PRESENTATIONS DURING 2010
  ▶ “Nanostructured Magnet - Superconductor Hybrids,” Condensed Matter Seminar, Texas A&M University, College Station, TX, January, 2010. (Individual)
  ▶ “Cold Molecules for Physics and Chemistry,” Quantum Optics Seminar, Texas A&M University, College Station, TX, September, 2010. (Individual)
  ▶ “Magnet - Superconductor Hybrids,” Laboratory of Solid State Physics, ETH, Zuerich, Switzerland, September, 2010. (Invited)
  ▶ “Cold Molecules for Physics and Chemistry,” Physikalisches Institut, Universitaet Freiburg, Freiburg im Breisgau, Germany, October, 2010. (Individual)
  ▶ “Controlling Vortices and Cold Molecules with Magnetic Nanostructures,” Super Seminar, Texas A&M University, College Station, TX, October, 2010. (Individual)
  ▶ “Superconductor Hybrids, Colloquium,” SFB 608, University of Cologne, Cologne, Germany, October, 2010. (Individual)

• PUBLICATIONS DURING 2010
• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell-Heep-Munnerlyn Endowed Career Enhancement Professorship in Physics or Astronomy [2010]

• SERVICE DURING 2010
  International
  ▶ Event: Instituto San Román High School, Buenos Aires, Argentina (Speaker), Rotary Club del Pilar Recoleta, Buenos Aires, Argentina (Speaker)

  National
  ▶ Editorial/Board: Astrophysical Journal (Referee: Journals)
  ▶ Committee/Panel: NSF/NOAO ReSTAR Committee (Member)

  Regional
  ▶ Event: Bryan/College Station Science Café (Speaker), ElDorado Star Party (Speaker)

  University
  ▶ Event: Texas High-School Counselors Visiting Texas A&M University (Speaker)

  Department
  ▶ Event: Physics Open House (Participant), USA Science & Engineering Festival, Mitchell Physics Buildings (Demonstration Coordinator)
  ▶ Committee/Panel: Astronomy Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 146)
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 685. — Directed Studies (total enrollment: 2)

  Summer
  ▶ ASTR 685. — Directed Studies (total enrollment: 2)

  Fall
  ▶ ASTR 681. — Astronomy Seminar (total enrollment: 11)
  ▶ ASTR 685. — Directed Studies (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010
  Federal
A Cepheid Distance to the Coma Cluster, *Space Telescope Science Institute*, coworkers: J. Chavez (G), A. Bradshaw (U)

Narrowing in on the Hubble Constant and Dark Energy, *Space Telescope Science Institute*, coworkers: S. Hoffmann (G)


**PRESENTATIONS DURING 2010**

- “Constraining Dark Energy with an Improved Measurement of the Hubble Constant,” Baylor University, Physics Department, Waco, TX, March, 2010.(Individual)
- “Cepheid Variables, the Hubble Constant, and Dark Energy,” 99th Spring Meeting of the Association of Variable Star Observers, Valde Grand, Argentina, April, 2010.(Invited)
- “Near-infrared Observations of Cepheids in the Large Magellanic Cloud,” 99th Spring Meeting of the Association of Variable Star Observers, Valde Grand, Argentina, April, 2010.(Contributed)
- “The SH0ES Project, M33, and more,” Araucaria Distance Scale Workshop, Potsdam, Germany, June, 2010.( Individual)
- “Building Astronomy in Texas,” University of Texas, Astronomy Department, Austin, TX, October, 2010.(Individual)
PUBLICATIONS DURING 2010

- Macri, L. (2010) Recent Progress on the Cepheid Distance Scale with HST; Astrophysics and Space Science Proceedings, ed. Macchetto, F.D.
• AWARDS DURING 2010
  National
  ▶ Early Career Research Award, Department of Energy

• SERVICE DURING 2010
  International
  ▶ Editorial/Board: Canadian Foundation (Review: Proposals)
  Department
  ▶ Committee/Panel: Colloquium Committee (Member), PAC Seminar Series (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 3)
  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 180)
  ▶ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Memorandum of Understanding Between Texas A&M University and Fermi National Accelerator Laboratory for the Super CDMS Soudan Project, Department of Energy
  ▶ Ton Scale Germanium: Beyond Zeptobarn WIMP Cross-Section, Department of Energy
  ▶ CAREER: Ton Scale Germanium Beyond Zeptobarn WIMP Cross-section, National Science Foundation, coworkers: J. Sander (P)
  Private
  ▶ Tonne-Scale Germanium Dark Matter Search, California Institute of Technology

• PRESENTATIONS DURING 2010
  ▶ “Reviews of Dark Matter Direct Detection,” University of Tokyo, Tokyo, Japan, September, 2010. (Invited)

• PUBLICATIONS DURING 2010

686 2010 Physics and Astronomy Annual Report

• TEACHING ASSIGNMENTS DURING 2010

Fall
  ▷ ASTR 111. — Overview of Modern Astronomy (total enrollment: 46)

Hired 09/01/2010.

No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell/Heep Chair in Experimental High Energy Physics [2004]

• SERVICE DURING 2010
  College
  ▶ Committee/Panel: International Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ PHYS 225. — Electronic Circuits and Applications (total enrollment: 33)
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 491.(H) — Research (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 4)

  Fall
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ (REN) High Energy Physics at Texas A&M, Department of Energy
  ▶ (REN) New Technology for Future Colliders, Department of Energy, coworkers: R. Blackburn (Technician), N. Diaczenko (Technician), T. Elliott (Technician), A. Jaisle (Technician), F. Lu (P), A. McInturff (P), A. Sattarov (P), K. Damborsky (G), E. Holik (G), C. Benson (U)
  ▶ Test Cavity to Test SRE Materials to and Beyond the BSC Limit, Department of Energy, coworkers: K. Stiff (Technician), A. McInturff (P)

• PRESENTATIONS DURING 2010
  ▶ “Accelerator-Driven Subcritical Fission: Green Nuclear Power for the New Millennium,” University of Texas, Austin, TX, April, 2010.( Individual)
  ▶ “Accelerator-Driven Subcritical Fission: Green Nuclear Power for the New Millennium,” Brookhaven National Lab, September, 2010.( Individual)
• PUBLICATIONS DURING 2010
  ▶ Aaltonen, T.; et al. (2010) Measurement of the Top Pair Production Cross Section in the Dilepton Decay Channel in \( p\bar{p} \) Collisions at \( \sqrt{s} = 1.96 \text{ TeV} \) Physical Review D: Particles and Fields, vol. 82, 052002.
  ▶ Aaltonen, T.; et al. (2010) Measurement of \( Z + \gamma \) Production in \( p\bar{p} \) Collisions at \( \sqrt{s} = 1.96 \text{ TeV} \) Physical Review D: Particles and Fields, vol. 82, 031103.
  ▶ Aaltonen, T.; et al. (2010) Measurement of \( t\bar{t} \) Production Cross Section in \( p\bar{p} \) Collisions at \( \sqrt{s} = 1.96 \text{ TeV} \) Using Soft Electron b-tagging Physical Review D: Particles and Fields, vol. 81, 092002.
  ▶ Aaltonen, T.; et al. (2010) Measurement of the Top Quark Mass and \( p\bar{p} \rightarrow t\bar{t} \) Cross Section in the all-Hadronic Mode with the CDF II Detector Physical Review D: Particles and Fields, vol. 81, 052011.

Aaltonen, T.; et al. (2010) Measurement of the Ratio $\sigma(t\bar{t})/\sigma(Z/γ\to\ell\ell)$ and Precise Extraction of the $t\bar{t}$ Cross Section. Physical Review Letters, vol. 104, 251801.

Aaltonen, T.; et al. (2010) Search for Pair Production of Supersymmetric Top Quarks in Dilepton Events from $p\bar{p}$ Collisions at $\sqrt{s}=1.96$ TeV. Physical Review Letters, vol. 104, 241801.

Aaltonen, T.; et al. (2010) Measurement of the $W+W^-\text{ Production Cross Section and Search for Anomalous WWγ and WWZ Couplings in } p\bar{p} \text{ Collisions at } \sqrt{s}=1.96 \text{ TeV. Physical Review Letters, vol. 104, 201801.}$


• SERVICE DURING 2010
  
  International
  ▷ Committee/Panel: TRIUMF Users Executive Committee (Member)

  National
  ▷ Editorial/Board: Physical Review C (Referee: Journals)

  University
  ▷ Committee/Panel: Cyclotron Institute Space Allocation Committee (Member)

  Department
  ▷ Committee/Panel: Colloquium Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  
  Summer
  ▷ PHYS 691. — Research (total enrollment: 1)

  Fall
  ▷ PHYS 218. — Mechanics (total enrollment: 192)
  ▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  
  Federal
  ▷ Laser Trapping and Cooling Facility for Weak Interaction Experiments with Francium Isotopes at TRIUMF, Department of Energy

• PRESENTATIONS DURING 2010
  
  ▷ “Precision $\beta$-decay Studies using Neutral Atom Traps,” The LX International Conference on Nuclear Physics, Saint-Petersburg, Russia, July, 2010. (Invited)
  ▷ 6th International Workshop on the CKM Unitarity Triangle, Warwick, United Kingdom, September, 2010. (Invited)
  ▷ “Production of Short-lived $^{37}K$,” The 2010 Fall Meeting of the Division of Nuclear Physics of the American Physical Society, Santa Fe, NM, November, 2010. (Invited)

• PUBLICATIONS DURING 2010
SASKIA MIODUSZEWSKI
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PHYS-Experimental Nuclear mio@comp.tamu.edu

• SERVICE DURING 2010

National
▷ Committee/Panel: APS DNP Program Committee (Member), APS-DNP 2010 Thesis Award Selection Committee (Member), STAR Committee for a Particular Conflict Resolution (Member), STAR Talks Committee (Member)

Department
▷ Event: Saturday Morning Physics Program (Participant)
▷ Committee/Panel: Performance Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 601. — Analytical Mechanics (total enrollment: 18)
▷ PHYS 691. — Research (total enrollment: 1)

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

Fall
▷ PHYS 201. — College Physics (total enrollment: 49)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) Toward Understanding the QGP with the STAR Experiment at RHIC, Department of Energy, coworkers: A. Hamed (P), M. Cervantes (G), M. Codrington (G)
▷ Toward Understanding the QGP with the STAR Experiment at RHIC, Department of Energy, coworkers: R. Clarke (P), A. Hamed (P), M. Cervantes (G), M. Codrington (G)

• PRESENTATIONS DURING 2010

▷ “In-Medium Fragmentation Functions via Direct $\gamma$ Measurements at STAR Experiment,” The Winter Workshop on Nuclear Dynamics, Jamaica, January, 2010. (Postdoc)
▷ “Bottomonium Measurements at Midrapidity at the STAR Experiment,” The Lake Louise Winter Institute, Canada, February, 2010. (Graduate, M. Cervantes)
▷ “Upsilon + Hadron Correlations at the Relativistic Heavy-Ion Collider,” APS Meeting, Washington, DC, February, 2010. (Graduate, M. Cervantes)
▷ “$\gamma$-Hadron Correlations with STAR,” NOBCChE Conference, Atlanta, GA, March, 2010. (Graduate, M. Codrington)
▷ “Experimental Review of High-$p_T$ Phenomena at Mid-rapidity at RHIC,” Workshop on Critical Examination of RHIC Paradigms, Austin, TX, April, 2010. (Postdoc)
“Azimuthal Correlation of Direct $\gamma$ and $\pi^0$ with Charged Hadrons at STAR,” RHIC/AGS Annual Users’ Meeting, Upton, NY, June, 2010. (Postdoc)

“Azimuthal Distributions of High-$p_T$ $\pi^0$ and $\gamma$ with Respect to the Reaction Plane,” Hot Quarks 2010 Workshop, France, June, 2010. (Postdoc)
• **CHAIRS/PROFESSORSHIPS**
  ▶ Mitchell-Heep Chair in High Energy Physics [2002]

• **SERVICE DURING 2010**
  **International**
  ▶ Committee/Panel: High Power Laser Energy Research (HiPER) European Consortium (Member), Onassis International Foundation (Member)
  **National**
  ▶ Event: Greek Delegation at the CERN Counci (Head), Greek Delegation at the CERN Counci (Representative), Journals, Newspapers, Radio and TV Channels, World ERT/NET, SKY TV, Alpha TV, Antenna TV (Speaker)

• **TEACHING ASSIGNMENTS DURING 2010**
  **Spring**
  ▶ PHYS 689. — **Special Topics in** (total enrollment: 10)
  ▶ PHYS 691. — **Research** (total enrollment: 4)
  **Summer**
  ▶ PHYS 691. — **Research** (total enrollment: 4)
  **Fall**
  ▶ PHYS 689. — **Special Topics in** (total enrollment: 10)
  ▶ PHYS 691. — **Research** (total enrollment: 3)

• **RESEARCH PROJECTS DURING 2010**
  **Federal**
  ▶ (REN) High Energy Physics at Texas A&M, Department of Energy
  ▶ (REN) High Energy Physics at Texas A&M, Department of Energy, coworkers: T. Li (P), S. Hu (G), T. Leggett (G), J. Maxin (G), D. Xie (G)

• **PRESENTATIONS DURING 2010**

“F-theory and Gaugino Masses,” Hawking Meeting, Cook’s Branch, TX, April, 2010. (Invited)

“Quantum Myth of Sisyphus,” International Meeting, at the Onassis Foundation Headquarters, New York, NY, April, 2010. (Invited)


“Modern Cosmogony and the LHC,” University of Athens, Athens, Greece, May, 2010. (Individual)


“Physics Discussions,” Nobel Prize Laureates in Physics, Chemistry and Biology Meeting, Lindau, Germany, June, 2010. (Individual)


“From Cosmogony to Glossogony,” The Athens Concert Hall, Athens, Greece, December, 2010. (Individual)


**PUBLICATIONS DURING 2010**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ◦ Member, Interdisciplinary Faculty, Materials Science and Engineering,

• SERVICE DURING 2010
  International
  ◦ Editorial/Board: New Zealand Science Foundation (Marsden Foundation) (Review: Proposals)

  National
  ◦ Advisory Board: Advances in Condensed Matter Physics (Member)

  College
  ◦ Committee/Panel: Research Advisory Committee (Member)

  Department
  ◦ Committee/Panel: Head Search Committee (Member), Long Range Planning Committee (Member)

  Interdisciplinary/Intercollegiate
  ◦ Committee/Panel: Executive Committee of Materials Science & Engineering (Member), Nominations Committee for MSEN Program (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ◦ MSEN 602. — Advanced Materials Science and Engineering (total enrollment: 22)
  ◦ MSEN 685. — Directed Studies (total enrollment: 1)
  ◦ PHYS 491. — Research (total enrollment: 1)
  ◦ PHYS 691. — Research (total enrollment: 4)

  Summer
  ◦ MSEN 691 — Research (total enrollment: 1)
  ◦ PHYS 691. — Research (total enrollment: 3)

  Fall
  ◦ PHYS 485. — Directed Studies (total enrollment: 1)
  ◦ PHYS 689. — Special Topics in (total enrollment: 34)
- PHYS 691. — Research (total enrollment: 3)

- **RESEARCH PROJECTS DURING 2010**

  **Federal**
  - RFQ-Army Research Laboratory, *Department of Defense*, coworkers: V. Vasquez (G), S. Grant (U)
  - (REN) Emergent Behavior in Magnet-Superconductor Hybrids, *Department of Energy*, coworkers: K. Kim (P), S. Grant (U), H. Lee (G)
  - Emergent Behavior in Magnet-Superconductor Hybrids, *Department of Energy*, coworkers: K. Kim (P), S. Grant (U), H. Lee (G)

  **Private**
  - (REN) The Influence of Surfaces, Reduced Dimensionally and Disorder on the Properties of Solids, *The Robert A. Welch Foundation*, coworkers: H. Lee (G), T. Morrison (G), L. Smith (G)

- **PUBLICATIONS DURING 2010**
CASEY PAPOVICH

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• SERVICE DURING 2010

National
▷ Committee/Panel: Multimission Archive at the Space Telescope Science Institute (MAST) Users Group Committee (Member), NASA’s Spitzer Space Telescope (Chair)

Department
▷ Event: Astronomy-Particle Physics Seminar (Organizer), Various Particle, Astrophysics and Cosmology Seminar (Organizer)
▷ Committee/Panel: Astronomy Committee (Member), Colloquium Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ ASTR 489. — Special Topics in (total enrollment: 3)
▷ ASTR 681. — Astronomy Seminar (total enrollment: 6)
▷ ASTR 689. — Special Topics in (total enrollment: 7)
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 685. — Directed Studies (total enrollment: 2)

Summer
▷ ASTR 685. — Directed Studies (total enrollment: 1)
▷ ASTR 691. — Research (total enrollment: 1)

Fall
▷ ASTR 101. — Basic Astronomy (total enrollment: 289)
▷ ASTR 685. — Directed Studies (total enrollment: 2)
▷ ASTR 691. — Research (total enrollment: 1)
▷ PHYS 485. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Stellar Populations and Large Scale Outflows in GALEX Discovered Lyman Alpha Galaxies, National Aeronautics and Space Administration
▷ The Four Star Galaxy Evolution Survey: Opening a New Window into Galaxy Formation, National Science Foundation
▷ 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

Private

A Spitzer Public Legacy Survey of the UKIDSS Ultra Deep Survey, California Institute of Technology

Directly Probing the Star-Forming and Gas Properties of High Redshift Lyman Alpha Galaxies, California Institute of Technology

IRS Observations of a Strongly Lensed L1 RG Behind the Bullety Cluster and the Spitzer Lyman Alpha Survey, California Institute of Technology

Survey of Paschen Alpha in High Redshift Galaxies, California Institute of Technology

The Great Observatories Origins Deep Survey: Far-Infrared Imaging with Herschel, California Institute of Technology

The Spitzer Extended Deep Survey, California Institute of Technology

Ultra-Deep MIPS Imaging of the Locksman Hole, California Institute of Technology

**PRESENTATIONS DURING 2010**


“Extragalactic Science with the Spitzer Space Telescope,” NASA Senior Review, Washington, DC, April, 2010.(Invited)

“High-z Galaxies and the Giant Magellan Telescope,” Giant Magellan Telescope Workshop, Swinburne, Australillia, June, 2010.(Postdoc)


“On the Star Formation Histories of Galaxies at High Redshifts,” Science Coffee Seminar, Space Telescope Science Center, Baltiomre, MD, July, 2010.(Invited)
“Directly Probing LAEs at z=2-3,” HETDEX Workshop, College Station, TX, October, 2010. (Postdoc)


“Subprime Science with HETDEX,” Texas A&M University, College Station, TX, October, 2010. (Invited)


• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

International
▷ Editorial/Board: Optics Communications (Member), Various Scientific Journals (Referee: Journals)
▷ Committee/Panel: CLEO/QES (Co-Chair), The Conference on Lasers and Electro-Optics (Member)

Department
▷ Event: Physics Festival (Organizer)
▷ Committee/Panel: AMO Physics/Quantum Optics Search Committee (Member), Building Committee (Member), Nano Science Search Committee I (Member), Nano Science Search Committee II (Member)

• TEACHING ASSIGNMENTS DURING 2010

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

Fall
▷ PHYS 689. — Special Topics in (total enrollment: 7)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Development of a Phase-Coherent Laser System for Attosecond Science and Precision Spectroscopy, National Science Foundation, coworkers: A. Kolomenskii (Research Scientist)

Other
▷ Attosecond Optical Technology Based on Recollision and Gating, Kansas State University, coworkers: L. Arissian (Research Associate), E. Frunker (P)

On leave.

No report received from faculty member.
- **SERVICE DURING 2010**

  **International**
  - Committee/Panel: Program Committee of the Statistical Physics Congress StatPhys24 (Member)

  **National**

  **Department**
  - Committee/Panel: Advisory Committee (Member), Distinguished Professors Committee (Member)

- **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**
  - PHYS 624. — Quantum Mechanics (total enrollment: 6)

  **Summer**
  - PHYS 691. — Research (total enrollment: 2)

  **Fall**
  - PHYS 606. — Quantum Mechanics (total enrollment: 25)
  - PHYS 691. — Research (total enrollment: 2)

- **RESEARCH PROJECTS DURING 2010**

  **Federal**
  - (REN) Theory of Magnetic Heterostructures on the Nanometer Scale, *Department of Energy*

- **PRESENTATIONS DURING 2010**

  - “Phase Diagram of Electronic System Near Superconductor-Insulator Transition,” Argonne National Laboratory in the framework of the Joint Theory Institute ANL, University of Chicago, Chicago, IL, January, 2010. (Invited)
  - “Weakly Interacting Bose Gas in a Random Environment,” James Frank Institute, University of Chicago, Chicago, IL, January, 2010. (Invited)

- **PUBLICATIONS DURING 2010**

• CHAIRS/PROFESSORSHIPS
  ▶ Stephen Hawking Chair in Fundamental Physics [2002]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, George P. & Cynthia Woods Mitchell Institute for Fundamental Physics & Astronomy, Physics and Astronomy, [2002]

• SERVICE DURING 2010
  International
  ▶ Editorial/Board: EPSERC (Review: Proposals), Oxford and Cambridge College Research Fellowships (Referee)
  National
  Department
  ▶ Event: Spring Workshop on String Theory and Cosmology (Organizer)
  ▶ Committee/Panel: Computer Committee (Member), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 603. — Electromagnetic Theory (total enrollment: 47)
  ▶ PHYS 691. — Research (total enrollment: 3)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 3)
  Fall
  ▶ PHYS 611. — Electromagnetic Theory (total enrollment: 31)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) High Energy Physics at Texas A&M, Department of Energy
  ▶ (REN) High Energy Physics at Texas A&M, Department of Energy

• PRESENTATIONS DURING 2010
• PUBLICATIONS DURING 2010


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• SERVICE DURING 2010

International
▷ Event: 11th International Conference on Nucleus-Nucleus Collisions Organizing Committee (Member), ECT Workshop on Electromagnetic Probes of Strongly Interacting Matter (Co-Organizer)
▷ Advisory Board: Advisory Committee for 6th International Workshop on Chiral Dynamics in Hadron Physics (Member)

National
▷ Event: Heavy-Quark Production in Heavy-Ion Collisions (Co-Organizer)

Department
▷ Event: Saturday Morning Physics (Director), Saturday Morning Physics (Organizer)
▷ Committee/Panel: Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 401. — Computational Physics (total enrollment: 18)
▷ PHYS 691. — Research (total enrollment: 1)

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

Fall
▷ PHYS 201. — College Physics (total enrollment: 113)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ CAREER: Spectral Properties of Hot and Dense QCD Matter, National Science Foundation, coworkers: M. He (P), F. Riek (P), X. Zhao (G)
▷ Electromagnetic and Heavy-Quark Probes of QCD Matter, National Science Foundation, coworkers: M. He (P), F. Riek (P), K. Huggins (G), X. Zhao (G)

• PRESENTATIONS DURING 2010
“Charmonium in Hot Medium,” Texas A&M University, College Station, TX, 2010. (Graduate, X. Zhao)
“Charmonium Production in Heavy-Ion Collisions,” Iowa State University, Ames, IA, 2010. (Graduate, X. Zhao)
“Charmonium Production in Heavy-Ion Collisions,” Lawrence Berkeley National Laboratory, Berkeley, CA, 2010. (Graduate, X. Zhao)
“Heavy Quarkonium in Medium and in Heavy-Ion Collisions,” 2010. (Invited)
“Heavy-Quark Probes of the Quark-Gluon Plasma,” Physics Division Seminar, Argonne National Laboratory, Argonne, IL, 2010. (Invited)
“Quark Equilibrium Recombination and Elliptic Flow Scaling,” Annual Fall Meeting of the Division of Nuclear Physics of the American Physical Society, Santa Fe, NM, 2010. (Contributed)
“Quarkonium and Deconfined Matter in the LHC Era,” EMMI Workshop, Franca, Italy, 2010. (Individual)
“Resonances in Medium,” STAR Collaboration/Analysis Meeting, Austin, TX, 2010. (Invited)
“Spektrale Analysis von QCD Materie,” Giessen University, Germany, 2010. (Individual)

**PUBLICATIONS DURING 2010**


• SERVICE DURING 2010
  University
  ▷ Committee/Panel: Academic Appeals Panel (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ PHYS 205. — Concepts of Physics (total enrollment: 20)
  ▷ PHYS 420. — Concepts Connections (total enrollment: 10)
  Summer
  ▷ PHYS 201. — College Physics (total enrollment: 50)
  ▷ PHYS 202. — College Physics (total enrollment: 40)
  Fall
  ▷ PHYS 201. — College Physics (total enrollment: 100)
  ▷ PHYS 205. — Concepts of Physics (total enrollment: 20)
• SERVICE DURING 2010

International
▶ Editorial/Board: Hercules Foundation (Review: Proposals)

National

University
▶ Event: Aggie Swing Cats Classes/Workshop (Organizer)
▶ Editorial/Board: IRTAG Program (Review: Proposals)

Department
▶ Event: MSEN Program (Participant), Physics Day (Demonstration Coordinator), Saturday Morning Physics (Presenter)
▶ Committee/Panel: IT Committee (Member), MSEN Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▶ PHYS 485. — Directed Studies (total enrollment: 1)
▶ PHYS 491. — Research (total enrollment: 1)
▶ PHYS 685. — Directed Studies (total enrollment: 1)

Summer
▶ PHYS 685. — Directed Studies (total enrollment: 1)

Fall
▶ PHYS 218. — Mechanics (total enrollment: 85)
▶ PHYS 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

State
▶ Origin and Role in Exchange Bias of Uncompensated Magnetization in Antiferromagnets, Texas A&M University, coworkers: K. Badgley (G), D. Kaya (G)

International
▶ Size-Dependent Electronic and Magnetic Properties of Antiferromagnets and Ferromagnets with Reduced Dimensionality, Consejo Nacional de Ciencia y Tecnología- (CONACYT), coworkers: K. Badgley (G), H. Ponce (G), J. Gonzales (U), A. King (U)
PRESENTATIONS DURING 2010

- “Calculation of Exchange Coupling and Magnetoanisotropy in Antiferromagnetic Materials from First Principles,” Second Chile-Mexico Workshop, Morelos, Mexico, January, 2010.(Poster Individual)
- “Frustrations from Technologies - Is It Worth the Effort?,” Conference Teaching With Technologies, College Station, TX, February, 2010.(Individual)
- “The Art and Science of Magnetism at Nanoscale,” Saturday Morning Physics, Texas A&M University, College Station, TX, February, 2010.(Individual)
- “Uncompensated Magnetization in FeF$_2$,” Meeting of the Texas Sections of the APS, AAPT, Zone 13 of SPS and the National Society of Hispanic Physicists, San Antonio, TX, October, 2010.(Individual)
- “Uncompensated Magnetization in FeF$_2$ and Intrinsic Exchange Bias,” 55th MMM Meeting, Atlanta, GA, November, 2010.(Individual)

PUBLICATIONS DURING 2010

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Graduate Advisor, Physics Graduate Advising Office, Physics and Astronomy, [2009]
  ▶ Chair, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Chair, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2010

National

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

Department
  ▶ Event: Physics Festival (Organizer)
  ▶ Committee/Panel: Graduate Credentials Committee (Member)

Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Materials Science and Engineering Curriculum Committee (Member), Materials Science and Engineering Executive Committee (Member), Materials Science and Engineering Qualifier Committees (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
  ▶ MSEN 691. — Research (total enrollment: 1)
  ▶ PHYS 305. — Advanced Electricity and Magnetism II (total enrollment: 16)
  ▶ PHYS 691. — Research (total enrollment: 6)

Summer
  ▶ MSEN 691. — Research (total enrollment: 1)
  ▶ PHYS 218. — Mechanics (total enrollment: 50)
  ▶ PHYS 222. — Modern Physics for Engineers (total enrollment: 25)
  ▶ PHYS 691. — Research (total enrollment: 6)

Fall
  ▶ MSEN 691. — Research (total enrollment: 1)
  ▶ PHYS 304. — Advanced Electricity and Magnetism I (total enrollment: 35)
  ▶ PHYS 681. — Seminar (total enrollment: 15)
• PHYS 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010

Federal
▷ IGERT: New Mathematical Tools for Next Generation Materials, National Science Foundation, coworkers: A. Nandyala (G), E. Sooby (G)

Private
▷ Magnetism in Silicon Clathrates: New Nanostructured Magnetic Materials, The Robert A. Welch Foundation, coworkers: S. Rodriguez (G), L. Sarybaev (G), X. Zheng (G), H. Tsai (U)

• PRESENTATIONS DURING 2010
▷ "Ba₈Ga₁₆Sn₃₀ Type-I Clathrate NMR Lineshape Simulations," Texas Section APS Meeting, Austin, TX, March, 2010. (Individual)
▷ "Magnetic and Electronic Properties of Materials," Texas A&M University, College Station, TX, December, 2010. (Graduate)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

National
▷ Editorial/Board: US Department of Energy (Review: Proposals)
▷ Committee/Panel: CMS Collaboration Board (Member), US CMS Collaboration Board (Member), US CMS EMU Institutional Board (Representative), US CMS Elections Committee (Co-Chair)

University
▷ Committee/Panel: TAMU CMS Team Leader (Member)

Department
▷ Committee/Panel: Graduate Admissions Committee (Member), Qualification Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 218. — Mechanics (total enrollment: 120)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) High Energy Physics at Texas A&M, Department of Energy
▷ (REN) High Energy Physics at Texas A&M, Department of Energy
▷ Outstanding Junior Investigator Award, Department of Energy, coworkers: P. Nguyen (P), A. Elagin (G)
▷ US CMS HCAL Subsystem, FERMI National Accelerator Laboratory
▷ US CMS Upgrade Endcap Muon M&O Subsystem, FERMI National Accelerator Laboratory
▷ US CMS Upgrade R and D M and O, FERMI National Accelerator Laboratory

Private
▷ LHC Physics Center at Fermilab as the Global Headquarters of the CMS MUON Alignment Project, Universities Research Association, Inc.

• PRESENTATIONS DURING 2010
• PUBLICATIONS DURING 2010
  ▶ Belyaev, A.; Pivarski, J.; Safonov, A.; Senkin, S.; Tatarinov, A. (2010) LHC Discovery Potential of the Lightest NMSSM Higgs Boson in $h_1 \rightarrow a_1 a_1 \rightarrow \mu\mu\mu\mu$ Channel *Physical Review D: Particles and Fields*, vol. 81, 075021.
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  - Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2010**
  **National**

  **College**
  - Committee/Panel: Undergraduate Program Committee (Member)

  **Department**
  - Event: Physics Festival (Participant)
  - Committee/Panel: Undergraduate Curriculum Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2010**
  **Spring**
  - PHYS 303. — **Advanced Mechanics II** (total enrollment: 20)
  - PHYS 691. — **Research** (total enrollment: 1)

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

  **Fall**
  - PHYS 302. — **Advanced Mechanics** (total enrollment: 35)
  - PHYS 691. — **Research** (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2010**
  **Federal**
  - (REN) Theory of Magnetic Heterostructures on the Nanometer Scale, *Department of Energy*

• **PRESENTATIONS DURING 2010**
• PUBLICATIONS DURING 2010
• **CHAIRS/PROFESSORSHIPS**
  ▶ Schuessler/Mitchell/Heep Chair in Experimental Optical and Biomedical Physics [2004]

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  ▶ Professor (J), Physics (Qatar), Texas A&M University - Qatar, [2009]

• **SERVICE DURING 2010**

  **International**
  ▶ Event: Petroleum Engineering Paper Competition, Doha (Judge), Physics Festival of TAMUQ (Participant)

  **National**

  **Department**
  ▶ Committee/Panel: Texas A&M University, Qatar Tenure and Promotion Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**
  ▶ PHYS 222 — Modern Physics for Engineers (total enrollment: 29)
  ▶ PHYS 691 — Research (total enrollment: 2)

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

  **Fall**
  ▶ PHYS 201. — College Physics (total enrollment: 125)
  ▶ PHYS 691. — Research (total enrollment: 5)

• **RESEARCH PROJECTS DURING 2010**

  **Federal**
  ▶ Atomic and Molecular Ions in Ultraintense Ultrashort Laser Fields, *Department of Energy*, coworkers: A. Kolomenski (Research Scientist)
  ▶ 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)
▷ Quantum Optics with Single Optical Cycles, National Science Foundation

Private
▷ Precision Spectroscopy for Trace Detection and Analysis of Hydrocarbon Well Gases, Qatar National Research Fund, coworkers: H. Enhasi (P), G. Kaya (G), C. Perkins (G)
▷ Utilizing Laser Spectroscopy of Noble Gas Traces for Mapping Oil and Gas Deposits, Qatar National Research Fund, coworkers: T. Hassan (P), F. Zhu (G), R. Nava (U)
▷ (REN) Preparation of Ultracold Molecular Ions and Their Optical Studies Using Femtosecond Laser Pulses and High Harmonic Generation, The Robert A. Welch Foundation, coworkers: J. Strohaber (P), M. Poudel (G)

• PRESENTATIONS DURING 2010
  ▷ “Collinear Fast Beam Laser Spectroscopy with Noble Gas Tracers for Exploring Reservoir Structure,” RAS GAS Headquarters, Doha, Qatar, April, 2010. (Individual)
  ▷ “Lasers in the Biosciences and Medicine,” Weill Cornell University, Medical Department, Qatar, April, 2010. (Individual)
  ▷ “Laser in the Biosciences and Medicine,” University of Texas, Arlington, TX, June, 2010. (Individual)
  ▷ “Lasers in the Biosciences and Medicine,” South Western Medical Center, Dallas, TX, June, 2010. (Individual)
  ▷ “Observation of a Ring Coulomb Crystal of Ca+ Ions in a Linear Hexapole rf Ion Trap,” ICAP Conference at Cairns, Australia, July, 2010. (Poster Individual)
  ▷ “Laser Spectroscopy of Rare Isotopes and Tracer Analysis in Reservoirs,” K85 Workshop, ZNF University of Hamburg, Hamburg, Germany, August, 2010. (Invited)

• PUBLICATIONS DURING 2010


• CHAIRS/PROFESSORSHIPS
  ▶ Distinguished Research Chair (TEES) [2000]
  ▶ Hershel E. Burgess Chair in Physics (Non-High Energy Physics) [1997]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Professor (J), Chemistry, [2007]
  ▶ Associate Dean for External Relations, Office of External Relations, 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]

• AWARDS DURING 2010
  University
    ▶ Distinguished Scientist Award, Texas A&M UniversityChapter of Sigma Xi

• SERVICE DURING 2010
  National
    ▶ Professional Affiliation: American Physical Society (Fellow), Optical Society of America (Fellow)
    ▶ Committee/Panel: NAS Review Panels (Member), NIH Review Committees (Member)
  University
    ▶ Committee/Panel: Academicians Executive Committee (Member)
  College
    ▶ Committee/Panel: Distinguished Professors Executive Committee (Member), Executive Committee (Member), Trotter Prize, Steering 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), Lamb Medal Committee (Member), O’Donnell Award Committee (Member), AMO Search Committee (Member), Thesis/Dissertation Committees (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
PHYS 691. — Research (total enrollment: 6)

Summer
PHYS 691. — Research (total enrollment: 8)

Fall
PHYS 624. — Quantum Mechanics (total enrollment: 17)
PHYS 689. — Special Topics in (total enrollment: 20)
PHYS 691. — Research (total enrollment: 9)

• RESEARCH PROJECTS DURING 2010

Federal
Engineering Research Center (ERC) on Mid-Infrared Technologies for Health and Environment (MIRTHE), National Science Foundation
Engineering Research Center: Mid-Infrared Technologies for Health and the Environment, National Science Foundation, coworkers: K. Dorfman (P), A. Wojcik (P), H. Xia (P), Y. Cho (G)
Detection of Biochemical Pathogens, Laser Stand-off Spectroscopy, Quantum Coherence, and Many Body Quantum Optics, Office of Naval Research, coworkers: S. Das (P), K. Dorfman (P), V. Khmelenko (P), M. Kim (P), V. Sinyukov (P), H. Xia (P), J. Zou (P), M. Kim (G), A. Svidzinsky (G), L. Yuan (G), G. Zhang (G), A. Niemeyer (U), T. Sandison (U)
Single Molecule Spectroscopy and Microscopy via Quantum Coherent Raman Spectroscopy, Office of Naval Research
Laser and Stand-off Spectroscopy, Quantum and Statistical Optics, Office of Sponsored Research, U.S. Navy, coworkers: H. Eleuch (P), V. Sautenkov (P), A. Svidzinsky (P), H. Xia (P), A. Gombojav (G), P. Jha (G), E. Sete (G), Q. Sun (G)

Private
(REN) Quantum Coherence and Decoherence in Atomic Molecular and Solid State Systems: Continuation and Extensions, The Robert A. Welch Foundation, coworkers: K. Dorfman (P), A. Gombojav (G), P. Jha (G), M. Kim (G), H. Li (G), E. Sete (G), D. Sun (G), A. Traverso (G), Z. Yi (G)

• PRESENTATIONS DURING 2010
Physics of Quantum Electronics, Snowbird, UT, January, 2010. (Individual)
Texas A&M UniversityPhysics of Quantum Electronics, College Station, TX, January, 2010. (Individual)
“The Laser-BEC Analogy,” Auksberg University, Auksberg, Germany, February, 2010. (Individual)


“The Laser-BEC Analogy,” Berlin Free University, Berlin, Germany, June, 2010. (Individual)

Casper College Summer School, Casper, WY, July, 2010. (Individual)


Coherent Raman Microscopy Symposium, Cambridge, MA, August, 2010. (Individual)

“Gauge Invariance is a Powerful Tool,” Texas A&M University, IQSE, College Station, TX, September, 2010. (Individual)

“Stimulated and Spontaneous Emission,” Texas A&M University, IQSE, College Station, TX, September, 2010. (Individual)


“From Weisskopf-Wigner Theory of Spontaneous Emission to Collective Dicke Superradiance,” Texas A&M University, IQSE, College Station, TX, October, 2010. (Individual)

“Noise Induced Coherence and Quantum Searching in Biosystems,” Quantum Mechanics & Cancer Biology Workshop, Tempe, AZ, October, 2010. (Individual)

“Unruh Radiation as a Problem in Quantum Optics,” Texas A&M University, IQSE, College Station, TX, October, 2010. (Individual)

“Quantum Coherence from LWI to the Quantum Solar Cell,” Texas A&M University, IQSE, College Station, TX, November, 2010. (Individual)

“Solving Quantum Mysteries: An Aggie Tradition,” Sigma Xi Distinguished Scientist Lecture, Texas A&M University, College Station, TX, November, 2010. (Individual)


- PUBLICATIONS DURING 2010

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• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Co-Director, George P. & Cynthia Woods Mitchell Institute for Fundamental Physics & Astronomy, Physics and Astronomy, [2002]

• SERVICE DURING 2010
  National
  Department
  ▶ Event: Strings 2010 Conference (Co-Organizer)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 331. — Theoretical Methods for Physicists I (total enrollment: 34)
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ PHYS 332. — Theoretical Methods for Physicists II (total enrollment: 28)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Strings, Branes, and the Search for Unification, *National Science Foundation*, coworkers: K. Sinha (P)

• PRESENTATIONS DURING 2010
  ▶ “One Loop Beta Functions in Topologically Massive Gravity,” Texas A&M University, College Station, TX, February, 2010. (Individual)

• PUBLICATIONS DURING 2010


Hired 02/20/2010.

No report received from faculty member.
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2010**
  > Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT,

• **AWARDS DURING 2010**
  National
  > Fellow, American Physical Society

• **SERVICE DURING 2010**
  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)

  Department
  > Event: Chemistry Open House (Volunteer), Condensed Matter Seminar (Organizer), Physics Open House (Volunteer)

  > Committee/Panel: Promotion, Tenure, and Appointment Committee (Member), Qualifying Examination Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2010**
  Spring
  > PHYS 218. — Mechanics (total enrollment: 210)

  > PHYS 691. — Research (total enrollment: 3)

  Summer
  > PHYS 691. — Research (total enrollment: 4)

  Fall
  > PHYS 691. — Research (total enrollment: 6)

• **RESEARCH PROJECTS DURING 2010**
  Federal
CAREER: Spin Dependent Phenomena in Semiconductors, *National Science Foundation*, coworkers: A. Kovalev (P), M. Borunda (G), X. Liu (G)

**State**

- Room Temperature Spin-Field Effect Transistor for Post-CMOS Technologies: A New Spin to Moore’s Law, *Texas Higher Education Coordinating Board*
- Southwest Academy for Nanoelectronics (SWAN), *University of Texas*

**Private**


**Other**

- Towards Spin-reserving Heterogeneous Spin Networks, *Ohio State University*

**PRESENTATIONS DURING 2010**

- “New Paradigms in Spin-Charge Coupled Physics,” Free University, Berlin, Germany, April, 2010. (Individual)
- “Anomalous Hall Effect in Multiband Disordered Systems: From the Metallic to the Hopping Regime,” Fudan University, Shanghai, China, June, 2010. (Individual)
- “Spin-Dependent Hall Effects and other Thoughts on Recent Progress and Future Challenges in Spintronics,” KITPC, Beijing, China, June, 2010. (Individual)
- “Spin Hall Effect Transistors and Topological Thermoelectrics,” Autonoma University, Madrid, Spain, November, 2010. (Individual)

**PUBLICATIONS DURING 2010**


ALEXEI V. SOKOLOV

• CHAIRS/PROFESSORSHIPS
  ▶ Stephen E. Harris Professorship in Quantum Optics [2006]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2010

  National
  ▶ Event: Division of Atomic, Molecular and Optical Physics American Physical Society Conference (Participant)
  ▶ Advisory Board: Journal of Raman Spectroscopy (Member)

  College
  ▶ Event: Texas Junior Science and Humanities Symposium (Judge)

  Department
  ▶ Event: 40th Physics of Quantum Electronics (Co-Organizer), Physics Festival (Organizer), Workshop on Quantum Science and Engineering/ Townes Fest (Co-Organizer)
  ▶ Committee/Panel: AMO Search Committee (Chair), Colloquium Committee (Member), Graduate Admissions Committee (Member), The Shop Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 9)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 4)

  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 112)
  ▶ PHYS 426. — Physics Laboratory (total enrollment: 14)
  ▶ PHYS 691. — Research (total enrollment: 8)

• RESEARCH PROJECTS DURING 2010

  Federal
Ultrashort Laser Pulse Propagation in Water, *Department of Defense*, coworkers: M. Springer (G), W. Yang (G)

Improving Research and Educational Activities in Multifunctional Nanomaterials, *Fund for the Improvement of Postsecondary Education*


Sub-Cycle Optical Pulse Shaping by Parametric Beating with Adiabatically Prepared Raman Coherence, *National Science Foundation*

Subfemtosecond Laser Pulse Compression by Coherent Oscillations in Raman-Active Crystals, *Texas Higher Education Coordinating Board*, coworkers: M. Zhi (P), X. Hua (G), J. Peng (G)

Applications of Molecular Coherence in Ultrafast Optics, *The Robert A. Welch Foundation*, coworkers: M. Zhi (P), X. Wang (G), K. Wang (G)

Attosecond Optical Technology Based on Recollision and Gating, *Kansas State University*, coworkers: L. Arissian (Research Associate), E. Frumker (P), K. Lee (P), C. Zhang (P)

**PRESENTATIONS DURING 2010**


“Glucose Concentration Measured by Hybrid CARS,” 40th Winter Colloquium on the Physics of Quantum Electronics, Snowbird, UT, January, 2010. (Poster Invited)


“Broadband Light Generation in CVD Single Crystal Diamond,” The 41st Annual Meeting of the Division of Atomic Molecular and Optical Physics, American Physical Society, Houston, TX, May, 2010. (Contributed)

“Controlled, i.e. Negative, Peak Velocity of Light in Ordinary Dispersive Media,” The
41st Annual Meeting of the Division of Atomic Molecular and Optical Physics, American Physical Society, Houston, TX, May, 2010. (Contributed)


“Heterodyne Coherent Anti-Stokes Raman Scattering for Spectral Phase Retrieval and Signal Amplification,” The 41st Annual Meeting of the Division of Atomic Molecular and Optical Physics, American Physical Society, Houston, TX, May, 2010. (Contributed)


“Optical Precursor Investigation in an Organic Dye Solution,” The 41st Annual Meeting of the Division of Atomic Molecular and Optical Physics, American Physical Society, Houston, TX, May, 2010. (Contributed)

“Optical Precursors in Hot Rubidium Vapor,” The 41st Annual Meeting of the Division of Atomic Molecular and Optical Physics, American Physical Society, Houston, TX, May, 2010. (Poster Graduate, W. Yang)

“Resonant Dispersive Wave Produced in Photonic Crystal Fiber,” The 41st Annual Meeting of the Division of Atomic Molecular and Optical Physics, American Physical Society, Houston, TX, May, 2010. (Poster Graduate, K. Wang)


“Molecular Orientation with Short Pulses,” Workshop on Quantum Science and Engineering Townes Fest, Casper, WY, July, 2010. (Invited)


“Beam Coupling Between Filament-Forming Beams in Methanol,” European Optical Society Annual Meeting, October, 2010. (Graduate, B. Strycker)

“Low-Concentration Chemical Sensing Using Surface-Enhanced Coherent Anti-Stokes Raman Spectroscopy,” Joint Fall 2010 Meeting of the Texas Sections of the APS, AAPT, and Zone 13 of the SPS, San Antonio, TX, October, 2010. (Contributed)

“Optimizing Coherent Anti-Stokes Raman Scattering by Genetic Algorithm Controlled
Pulse Shaping,” Joint Fall 2010 Meeting of the Texas Sections of the APS, AAPT, and Zone 13 of the SPS, San Antonio, TX, October, 2010. (Contributed)

“Resonant Dispersive Wave Produced in Photonic Crystal Fiber,” Joint Fall 2010 Meeting of the Texas Sections of the APS, AAPT, and Zone 13 of the SPS, San Antonio, TX, October, 2010. (Contributed)


**PUBLICATIONS DURING 2010**


• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell-Heep-Munnerlyn Endowed Chair in Observational Astronomy [2006]

• AWARDS DURING 2010
  National
  ▶ Jefferson Science Fellow, United States Department of State

• SERVICE DURING 2010
  National
  ▶ Event: American Astronomical Society Retreat (Attendee), SOC, Supernovae Workshop, Aspen Center for Physics (Participant)
  ▶ Committee/Panel: AdventGX Inc. (Board Member), American Astronomical Society (Vice President), Astronomy and Public Policy, American Astronomical Society (Member), Astrophysics Subcommittee Panel, NASA Advisory Committee on Science (Member), Hubble Space Telescope Time Assignment Committee (Member), Las Cumbres Observatory Global Telescope (Board Member)

  Regional
  ▶ Committee/Panel: Brazos Country Museum of Natural History (Board Member)

  University
  ▶ Event: Giant Magellan Project (Representative)

  Department
  ▶ Committee/Panel: AMO Faculty Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 150)
  ▶ PHYS 691. — Research (total enrollment: 2)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 2)
  Fall
  ▶ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, National Science Foundation
The Infrared and Bolometric Properties of Type Ia Supernovae: Improving the Standard Candle, *Texas Higher Education Coordinating Board*

- **PUBLICATIONS DURING 2010**

*No report received from faculty member.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2010
  International
  ▶ Editorial/Board: Various International Journals (Referee: Journals)

  National
  ▶ Editorial/Board: American Physical Society (Review: Proposals), National Science Foundation (Review: Proposals)

  University
  ▶ Committee/Panel: Council of Principal Investigators (Member), Faculty Senate (Faculty Senator - 02), Faculty Senate (Faculty Senator - 02), Faculty Senate: International Programs (Member), Faculty Senate: The Research Committee (Chair), University Research Council (Member)

  Department
  ▶ Committee/Panel: Faculty Search Committee (Member), Head Search Committee (Member), Several Thesis Committees (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 218. — Mechanics (total enrollment: 90)
  ▶ PHYS 425. — Physics Laboratory (total enrollment: 16)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 4)

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

  Fall
  ▶ PHYS 491. — Research (total enrollment: 1)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010
  Federal
> NUE: Infusing Nanomaterials into Undergraduate Science and Engineering Curricula, National Science Foundation

**University**
> (REN) Center for Nanoscale Science and Technology, College of Science, coworkers: W. Bang (G), S. Woo (G)

**Private**
> (REN) Enhanced Anisotropy of Molecular Nanomagnets, The Robert A. Welch Foundation, coworkers: A. Ford (G), S. Woo (G)

**International**
> Biomolecular Motility Studies, WPI Research Initiative Advanced Institute for Materials Research, coworkers: D. Oliveira (P)
> Equipment for Biomolecular Motility Studies, WPI Research Initiative Advanced Institute for Materials Research
> Seed funds for Fusion-Research Project:., WPI Research Initiative Advanced Institute for Materials Research, coworkers: D. Oliveira (P)

• **PRESENTATIONS DURING 2010**
> “Construction of Molecular Shuttles Based on Kinesin Motor Proteins and Microtubules,” MRS Fall Meeting, 2010.( Individual)
> “Lab-on-a-Chip Molecular Sorting Machines - An Interdisciplinary Project with International Integration,,,” World Premier Institute, Sendai, Japan, 2010.( Invited)
• AWARDS DURING 2010
University
▶ Teaching Excellence Award, Texas A&M University

• SERVICE DURING 2010
National
▶ Committee/Panel: MIT Undergraduate Admissions Committee, Education Council (Member)

Department
▶ Service Position: eLearning Courses for Physics 109, 201, 202, 208, 208 honors, 218 and 218 honors, and ASTR 314 (Course Coordinator), Physics 218 Mechanics Scholar Program (Administrator)
▶ Editorial/Board: Search for Heavy Bottom-Like Quarks Decaying to an Electron or Muon and Jets (Chair), Search for Scalar Top Quarks, CDF (Chair)
▶ Committee/Panel: High Energy Representative to the Advisory Committee (Member), Long Range Planning Committee (Member), Nuclear Solutions Institute Faculty Search Committee (Member), REU Admissions Committee (Member), Thesis Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
Spring
▶ ASTR 109. — Big Bang and Black Holes (total enrollment: 52)
▶ PHYS 109(H) — Big Bang and Black Holes (total enrollment: 3)
▶ PHYS 109. — Big Bang and Black Holes (total enrollment: 10)
▶ PHYS 691. — Research (total enrollment: 6)

Summer
▶ PHYS 685. — Directed Studies (total enrollment: 1)
▶ PHYS 691. — Research (total enrollment: 4)

Fall
▶ ASTR 109(H) — Big Bang and Black Holes (total enrollment: 10)
▶ ASTR 109. — Big Bang and Black Holes (total enrollment: 60)
▶ ASTR 289. — Special Topics in (total enrollment: 22)
▶ PHYS 109(H) — Big Bang and Black Holes (total enrollment: 3)
▶ PHYS 109. — Big Bang and Black Holes (total enrollment: 16)
▶ PHYS 289. — Special Topics in (total enrollment: 2)
▶ PHYS 685. — Directed Studies (total enrollment: 1)
PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) High Energy Physics at Texas A&M, Department of Energy
  ▶ (REN) High Energy Physics at Texas A&M, Department of Energy
  ▶ (REN) Supporting the CDF Run II Operation by the Texas A&M University, FERMI National Accelerator Laboratory

  State
  ▶ Discovery of the Dark Matter Using High Performance Computing and LHC Data at Texas A&M, Texas Higher Education Coordinating Board

• PRESENTATIONS DURING 2010
  ▶ “Searching for the Particles of the Early Universe,” Sam Houston State University, Huntsville, TX, January, 2010.( Individual)
  ▶ “Search for Supersymmetry Using Diphoton Events in ppbar Collision at \( \sqrt{s} = 1.96 \text{ TeV} \),” High Energy Physics Seminar, University of Texas, Austin, TX, February, 2010.( Individual)
  ▶ “The Search for Supersymmetry at CDF in the LHC Era,” Harvard University, Cambridge, MA, April, 2010.( Individual)
  ▶ “Astronomy Symposium: Particle Physics and Cosmology,” Texas A&M University, College Station, TX, August, 2010.( Individual)

• PUBLICATIONS DURING 2010
  ▶ Aaltonen, T.; et al. (2010) Search for Pair Production of Supersymmetric Top Quarks in Dilepton Events from p\( \bar{p} \) Collisions at \( \sqrt{s} = 1.96\text{??TeV} \) Physical Review Letters , vol. 104, 251801.
• AWARDS DURING 2010

  University
  ▷ Montague Scholar, Center for Teaching Excellence

• SERVICE DURING 2010

  International
  ▷ Event: Allison-Levick Lecture at Questacon, Australia (Lecturer), Astronomical Society of New South Wales, Australia (Presenter)

  National
  ▷ Editorial/Board: The Astrophysical Journal (Referee: Journals)

  Regional
  ▷ Event: Aspen High School (Presenter)

  University
  ▷ Committee/Panel: ADVANCE Leadership Committee (Member)

  College
  ▷ Event: Texas Science Olympiad (Participant)

  Department
  ▷ Event: Big Physics Day (Participant), Physics Festival (Participant), Saturday Morning Physics (Presenter)
  ▷ Committee/Panel: Building Astronomy in Texas Workshop (Co-Chair)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)

  Summer
  ▷ ASTR 685. — Directed Studies (total enrollment: 1)

  Fall
  ▷ ASTR 111. — Overview of Modern Astronomy (total enrollment: 141)
  ▷ ASTR 685. — Directed Studies (total enrollment: 1)
  ▷ ASTR 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal

744  2010 PHYSICS AND ASTRONOMY ANNUAL REPORT
ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace, *National Science Foundation*

The Four Star Galaxy Evolution Survey: Opening a New Window into Galaxy Formation, *National Science Foundation*

Stellar Assembly & Galaxy Evolution in the Distant Universe, *Swiss National Science Foundation*, coworkers: A. Saintonge (P), L. Giordano (G), W. Kranz (G)

**PRESENTATIONS DURING 2010**

- “How to Form the Most Massive Galaxies in the Universe,” Saturday Morning Physics, Texas A&M University, College Station, TX, February, 2010. (Individual)
- “Spitzer/MIPS Infra-Red Cluster Survey (SMIRCS),” Institute for Astronomy, University of Hawaii, Honolulu, Hawaii, March, 2010. (Individual)
- “A Spectroscopically Confirmed Excess of Dusty Star Formation in a Super Galaxy Group at $z \sim 0.37,” From Stars to Galaxies, Gainesville, FL, April, 2010. (Poster Individual)
- “Intergalactic Gas in Groups of Galaxies,” Department of Astronomy, University of Texas, Austin, TX, May, 2010. (Postdoc)
- “Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Astrophysics Group, School of Physics, University of Melbourne, Melbourne, Australia, July, 2010. (Individual)
- “Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Centre for Astrophysics & Supercomputing, Swinburne University, Melbourne, Australia, July, 2010. (Individual)
- “Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Mount Stromlo Observatory, Canberra, Australia, July, 2010. (Individual)
- “Galaxies Research at Texas A&M,” Building Astronomy in Texas Workshop, University of Texas, Austin, TX, October, 2010. (Contributed)
- “How Do Galaxies in Massive Clusters Form Their Stars?,” Department of Physics, University of Alberta, Canada, December, 2010. (Graduate, L. Giordano)

**PUBLICATIONS DURING 2010**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, Nuclear Solutions Institute, [2010]
  ▶ Director, Cyclotron Institute, College of Science, [2003]

• SERVICE DURING 2010

  International
  ▶ Editorial/Board: Review of Progress in Physics (Member)
  ▶ Committee/Panel: Experiments Evaluation Committee, TRIUMF, Vancouver, British Columbia (Chair), International Union of Pure and Applied Physics WG9 (IUPAP) (Member), KoRlA, South Korea Advisory Committee (Chair), Radioactive Ion Beam Facility Program Advisory Committee, Tokyo, Japan (Chair), RIKEN Nishina Center for Accelerator-Based Science Advisory Council, Japan (Member)

  National
  ▶ Committee/Panel: APS Division of Nuclear Physics (Elected Chairman), DNP Education Committee (Member), DNP Program Committee (Chair), Facility for Rare Isotope Beams Science Advisory Committee (Member), JLAB Science Council (Member), Joint Institute for Nuclear Astrophysics Advisory Board (Chair), National Research Council Decadal Study for Nuclear Physics (Member), Nuclear Diagnostics at the National Ignition Facility, Lawrence Livermore National Laboratory Committee (Member), Program Advisory Committee, National Superconducting Cyclotron Laboratory, Michigan State University (Member), Program Review and Advisory Committee for Fundamental Neutron Physics Beamline at the SNS (Chair)

  University
  ▶ Committee/Panel: IPECC (Member), Study Abroad Program Policy Committee (Member), Visiting Committee, Colorado School of Mines (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member)

  Department
  ▶ Committee/Panel: Long Range Planning Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 4)
Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 2)

Fall
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Breakup of Loosely Bound Nuclei at Intermediate Energies for Nuclear Astrophysics and the Development of a Position Sensitive Microstrip Detector System and it’s Readout Electronics using ASIC’s Technologies, Department of Energy
  ▶ Cyclotron-Based Nuclear Science, Department of Energy, coworkers: V. Goldberg (Visiting Scientist), L. Trache (Research Scientist), A. Zhanov (Research Scientist), A. Banu (P), B. Roeder (P), M. McCleskey (G), E. Simmons (G), A. Spiridon (G)
  ▶ (REN) Fundamental Studies in Nuclear Science, Department of Energy, coworkers: P. Djawotho (P)
  ▶ (REN) Development of New Techniques to Determine Neutron and Charged-Particle Induced Reaction Rates, National Nuclear Security Administration, coworkers: B. Roeder (P), L. Trache (P), A. Zhanov (P), M. McCluskey (G)

  • PRESENTATIONS DURING 2010
    ▶ “Recent Results on Astrophysical Reaction Rates,” International Symposium, Niigata, Japan, March, 2010.( Invited)
    ▶ “Science and Technology to Strengthen National Competitiveness,” Carpathian Summer School, Sinaia, Romania, June, 2010. (Individual)
    ▶ “Connections Between Stellar Evolution and Nuclear Physics,” Texas A&M Commerce, College Station, TX, September, 2010. (Individual)
    ▶ “Connections Between Stellar Evolution and Nuclear Physics,” Ohio University, Athens, OH, October, 2010. (Individual)

  • PUBLICATIONS DURING 2010
    ▶ Abelev, B.I.; et al. (2010) Identified Particle Production, Azimuthal Anisotropy, and Interferometry Measurements in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV Physical Review
Abelev, B.I.; et al. (2010) Observation of $\pi^+\pi^-\pi^+\pi^-$ Photoproduction in Ultra-Peripheral Heavy Ion Collisions at STAR Physical Review C: Nuclear Physics, vol. 81, 044901.


Abelev, B.I.; et al. (2010) Observation of Charge-Dependent Azimuthal Correlations and Possible Local Strong Parity Violation in Heavy Ion Collisions Physical Review C: Nuclear Physics, vol. 81, 054908.

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• SERVICE DURING 2010

  International
  ▶ Editorial/Board: Chinese National Science Foundation (Review: Proposals)

  National
  ▶ Committee/Panel: Astronomy & Astrophysics from Antarctica (Member), Scientific Committee on Antarctic Research (Member), Scientific Research Program Planning Group (Member)

  College
  ▶ Committee/Panel: Grievance Committee (Elected Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 69)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Summer
  ▶ ASTR 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Fall
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▶ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, National Science Foundation, coworkers: A. Wagers (G)

• PRESENTATIONS DURING 2010
  ▶ “Cosmic Surveys in the New Decade,” August, 2010.( Invited)

• PUBLICATIONS DURING 2010
Ashley, M.C.B.; et al. (2010) PLATO-a Robotic Observatory for the Antarctic Plateau, EAS 79.


• CHAIRS/PROFESSORSHIPS
  ➢ Ed Rachal Chair in High Energy Physics [2007]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ➢ Interim Dean, Office of Graduate Studies, [2007]
  ➢ Associate Dean for Undergraduate Research, Vice President for Research, [2005]

• SERVICE DURING 2010
  National
  ➢ Editorial/Board: National Science Foundation, Department of Energy (Review: Proposals)
  State
  ➢ Committee/Panel: Graduate Education Advisory Committee of THECB (Member)
  University
  ➢ Committee/Panel: Graduate Operations Committee (Chair), Provost Administrative Team Committee (Member)
  College
  ➢ Committee/Panel: Diversity Committee (Member)
  Department
  ➢ Committee/Panel: Graduate Council Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ➢ PHYS 685. — Directed Studies (total enrollment: 1)
  ➢ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ➢ (REN) High Energy Physics at Texas A&M, Department of Energy
  ➢ (REN) High Energy Physics at Texas A&M, Department of Energy
  ➢ Center for the Integration of Research, Teaching and Learning (CIRTL) Network: Lead Institution, University of Wisconsin, National Science Foundation, coworkers: M. Sagaram (G), M. Simms (G), B. Herbert (Staff)
  Other
  ➢ The CIRTL Network-Shaping, Connecting, and Supporting the Future National STEM Faculty, University of Wisconsin, coworkers: B. Rathore (G), M. Sagaram (G)
• **PUBLICATIONS DURING 2010**
- **SERVICE DURING 2010**
  
  **University**
  - Committee/Panel: Council of Principal Investigators (Executive Committee), Texas A&M Research Foundation Advisory Committee (Member), Conflict of Interest Policy Review Committee (Member)

  **Department**
  - Service Position: Phys 201 Course College Physics (Coordinator)
  - Committee/Panel: Graduate Curriculum Committee (Chair)

- **TEACHING ASSIGNMENTS DURING 2010**

  **Spring**
  - PHYS 201. — **College Physics** (total enrollment: 103)
  - PHYS 691. — **Research** (total enrollment: 4)

  **Summer**
  - PHYS 691. — **Research** (total enrollment: 4)

  **Fall**
  - PHYS 691. — **Research** (total enrollment: 4)

- **RESEARCH PROJECTS DURING 2010**

  **Federal**
  - (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)
  - Nanoscale Characterization of Type II Strained Layer Superlattice Defects, *Sandia National Laboratories*, coworkers: K. Kanedy (G), F. Lopez (G)
GEORGE R. WELCH

PROFESSOR (979) 845-1571
PHYS-Quantum Optics, Appl. Phys., At. Phys. grw@tamu.edu

• SERVICE DURING 2010
  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)
  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 2010
  Spring
  ▶ PHYS 327. — Experimental Physics (total enrollment: 20)
  Fall
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 71)

• PRESENTATIONS DURING 2010
  ▶ “CARS and FAST-CARS Detection of Biological Molecules such as Glucose and Cholesterol,” Atomic Physics Seminar, University of Sao Paolo, Brazil, July, 2010. (Individual)
  ▶ “LWI Experiments (tutorial),” Texas A&M University-IQSE Workshop on Quantum Optics, Casper, WY, July, 2010. (Individual)

• PUBLICATIONS DURING 2010
Atomic Vapor Pumped by 100-fs Laser Pulses Physical Review A: Atomic Molecular and Optical Physics, vol. 82, 043421.


• SERVICE DURING 2010

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 2010

Spring
▷ PHYS 485. — Directed Studies (total enrollment: 2)
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 4)

Summer
▷ PHYS 666 — Scientific Instrument Making (total enrollment: 18)
▷ PHYS 691. — Research (total enrollment: 3)

Fall
▷ PHYS 218. — Mechanics (total enrollment: 224)
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 666. — Scientific Instrument Making (total enrollment: 9)
▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Development of Quartz Structures for Ultralow Background High Pressure Phototubes, Department of Energy
▷ (REN) High Energy Physics at Texas A&M, Department of Energy, coworkers: R. Mannino (G), C. Sofka (G), T. Stiegler (G), T. Crockett (U), P. Roberts (U)
▷ (REN) High Energy Physics at Texas A&M, Department of Energy, coworkers: R. Mannino (G), C. Sofka (G), T. Stiegler (G), T. Crockett (U), P. Roberts (U)
▷ DUSEL R&D: New WIMP Detector Technique Based on High Pressure Xenon Gas, National Science Foundation, coworkers: C. Sofka (G), T. Stiegler (G), D. Hrcicir (U), Z. Marquez (U), P. Roberts (U)

Private
Construction of the LUX Dark Matter Experiment at the Sanford Underground Science and Engineering Laboratory, Brown University, coworkers: R. Mannino (G), C. Sofka (G), T. Stiegler (G), Z. Marquez (U), P. Roberts (U)

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)

Industrial

Multichamber Gas Proportional Counter for Screening Ultra-Low Background and Materials and Identifying Radioactive Contaminants, Phase II, Reeves and Sons LLC, coworkers: C. Sofka (G), T. Stiegler (G), D. Hrncir (U), R. Mannino (U), Z. Marquez (U), P. Roberts (U)

• PRESENTATIONS DURING 2010


• SERVICE DURING 2010

International
▷ Editorial/Board: Israel Science Foundation, United States-Israel Binational Science Foundation (Review: Proposals)

National

Department
▷ Committee/Panel: Graduate Admissions Committee (Member)

Interdisciplinary/Intercollegiate
▷ Committee/Panel: MSEN Committee on Qualification Procedures (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ PHYS 202. — College Physics (total enrollment: 92)
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ (REN) Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: Z. Ye (P)
▷ Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: Z. Ye (P)
▷ Probing Superconducting Fluctuations on Mesoscopic Scales: Conductance Fluctuations and Oscillations, and Electron Tunneling, National Science Foundation, coworkers: Z. Ye (P), I. Schultz (G), Z. Wei (G)

• PRESENTATIONS DURING 2010


**PUBLICATIONS DURING 2010**


• SERVICE DURING 2010
  National
  ▷ Editorial/Board: Various Journals (Referee: Journals), Various Proposals (Review: Proposals)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ PHYS 208. — Electricity and Optics (total enrollment: 112)
  ▷ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▷ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▷ PHYS 218. — Mechanics (total enrollment: 112)
  ▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ Cyclotron-Based Nuclear Science, Department of Energy, coworkers: Y. Lui (Research Scientist), F. Krishichayan (P), J. Button (G), R. Oliver (U)

• PRESENTATIONS DURING 2010
  ▷ “Mysteries of GMR Strengths in A ~90 Region,” Annual Fall Meeting of the Division of Nuclear Physics, Santa Fe, NM, November, 2010.(Poster Contributed)

• PUBLICATIONS DURING 2010
• AWARDS DURING 2010
  National
  ▶ Willis E. Lamb Award for Laser Science and Quantum Optics, Physics of Quantum Electronics Conference

• SERVICE DURING 2010
  International

• TEACHING ASSIGNMENTS DURING 2010
  Fall
  ▶ PHYS 624 — Quantum Mechanics (total enrollment: 18)

• PRESENTATIONS DURING 2010
  ▶ “The Raman Effect in Attosecond Physics,” Physics Institute, Russian Academy of Sciences, Moscow, Russia, March, 2010. (Individual)
  ▶ “Ionization Penalty in Nonlinear-Optical Bioimaging,” The 9th European Conference on Nonlinear Optical Spectroscopy, 29th European CARS Workshop, Bremen, Germany, June, 2010. (Contributed)
  ▶ “Soliton Self-Frequency Shift for Fiber-Based CARS,” The 9th European Conference on Nonlinear Optical Spectroscopy, 29th European CARS Workshop, Bremen, Germany, June, 2010. (Contributed)
Technologies, Kazan, Russia, August, 2010. (Contributed)


• PUBLICATIONS DURING 2010


  - Gordienko, V.M.; Panchenko, V.Y.; Platonenko, V.T.; Podshivalov, A.A.; Zheltikov, A.M.


- Voronin, A.A.; Gordienko, V.M.; Platonenko, V.T.; Panchenko, V.Y.; Zheltikov, A.M. (August 2010) Ionization-Assisted Guided-Wave Pulse Compression to Extreme Peak Pow-


Hired 07/01/2010.
• CHAIRS/PROFESSORSHIPS
  ▶ Munnerlyn-Heep Endowed Chair in Quantum Optics [2010]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Associate Director, Institute for Quantum Science and Engineering (IQSE), [2001]

• SERVICE DURING 2010
  International
  ▶ Service Position: Centre for Quantum Physics, CIIT Institute for Information Technology (Consultant), King Abdulaziz City for Science and Technology (Consultant)
  ▶ Event: 4th International Symposium on Quantum Optics and Lasers (Chair)

  National

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

  Department
  ▶ Committee/Panel: Graduate Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ PHYS 648. — Quantum Optics and Laser Physics (total enrollment: 12)
  ▶ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▶ PHYS 691. — Research (total enrollment: 4)

  Fall
  ▶ PHYS 221. — Optics and Thermal Physics (total enrollment: 40)
  ▶ PHYS 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2010
  Private
  ▶ Applications of Quantum Interferometry and Coherence to Precision Sensing, Microscopy and Lithography, Qatar National Research Fund

  International
  ▶ Quantum Entanglement for Secure Communication, Qatar Foundation
• PRESENTATIONS DURING 2010
  ▶ “Beyond the Rayleigh Limit in Optical Lithography,” Cozumel, Mexico, November, 2010. (Invited)
  ▶ “Sub-wavelength Optical Lithography,” Ottawa University, Ottawa, Canada, November, 2010. (Individual)

• PUBLICATIONS DURING 2010

7. Research Activity, 2010

This section contains information on all funded research activity for the calendar year 2010. 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 2010 = # Days 2010 × Daily Grant Award
### 7.1 Summary of Research Support, 2010

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<thead>
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<th>Grantee</th>
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<tr>
<td>Kattawar, G.W.</td>
<td>Three-Dimensional Polarized Radiative Transfer in a Dynamic Atmosphere-Ocean System</td>
<td>10/1/2010</td>
<td>9/30/2012</td>
<td>12,466</td>
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<td><strong>Subtotal: Department of Defense</strong></td>
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<td>111,603</td>
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<td>Fries, R.J.</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>
<td>6/1/2010</td>
<td>5/31/2013</td>
<td>12,486</td>
<td>1,131</td>
<td>13,616</td>
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<td>Grantee</td>
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<tr>
<td>Ko, C.</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>
<td>6/1/2010</td>
<td>5/31/2013</td>
<td>12,486</td>
<td>1,131</td>
<td>13,616</td>
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<td>Mahapatra, R.</td>
<td>Ton Scale Germanium: Beyond Zeptobarn WIMP Cross-Section</td>
<td>4/15/2010</td>
<td>4/14/2015</td>
<td>71,837</td>
<td>13,643</td>
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<td>McIntyre, P.M.</td>
<td>(RENE) New Technology for Future Colliders</td>
<td>12/1/2009</td>
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<td>1,702,062</td>
<td>252,500</td>
<td>1,954,562</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>6/14/2013</td>
<td>72,260</td>
<td>12,974</td>
<td>85,234</td>
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<td>Melconian, D.G.</td>
<td>Laser Trapping and Cooling Facility for Weak Interaction Experiments with Francium Isotopes at TRIUMF</td>
<td>9/1/2010</td>
<td>8/31/2014</td>
<td>33,979</td>
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<td>Mioduszewski, S.</td>
<td>Toward Understanding the QGP with the STAR Experiment at RHIC</td>
<td>7/1/2007</td>
<td>6/30/2010</td>
<td>67,133</td>
<td>5,031</td>
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<td>Mioduszewski, S.</td>
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<td>Safonov, A.N.</td>
<td>Outstanding Junior Investigator Award</td>
<td>9/1/2007</td>
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<td>White, J.T.</td>
<td>Development of Quartz Structures for Ultralow Background High Pressure Phototubes</td>
<td>9/1/2010</td>
<td>8/31/2011</td>
<td>11,345</td>
<td>5,275</td>
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SEC. 7. RESEARCH ACTIVITY 775
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**Subtotal:** Department of Energy  
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**ETH Zurich**

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**Subtotal:** ETH Zurich  
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**Fermi National Accelerator Laboratory**

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<td>Kamon, T.</td>
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<td>9/30/2010</td>
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**Subtotal:** Fermi National Accelerator Laboratory  
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**Fund for the Improvement of Postsecondary Education**

776 2010 Physics and Astronomy Annual Report
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<tr>
<td>Belyanin, A.A.</td>
<td>Improving Research and Educational Activities in Multifunctional Nanomaterials, (with: A. Belyanin, Y. Efendiev, K. Rajagopal, A. Sokolov)</td>
<td>10/1/2010</td>
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<td>Sokolov, A.V.</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>9/30/2013</td>
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<td>Becker, M.</td>
<td>FRG: Collaborative Research: Generalized Geometries in String</td>
<td>7/1/2009</td>
<td>6/30/2012</td>
<td>16,800</td>
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<td>Becker, K.</td>
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<td>Belyanin, A.A.</td>
<td>CAREER: Active Integrated Nanostructure Devices for Infrared Photonics and Femtosecond Pulse Generation</td>
<td>2/1/2006</td>
<td>1/31/2011</td>
<td>57,054</td>
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* **Subtotal:** Fund for the Improvement of Postsecondary Education 7,461 0 7,461

* **National Aeronautics and Space Administration**

* **Subtotal:** National Aeronautics and Space Administration 1,631 759 2,390

* **National Nuclear Security Administration**

* **Subtotal:** National Nuclear Security Administration 128,065 46,356 174,421

* **National Science Foundation**

- Abanov, A.G.
- Becker, M.
- Becker, K.
- Becker, M.
- Becker, K.
- Belyanin, A.A.

**SEC. 7.**

RESEARCH ACTIVITY 777
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<td>Belyanin, A.A.</td>
<td>Collaborative Research: Room-Temperature Terahertz Semiconductor Raman Lasers</td>
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<td>8/31/2012</td>
<td>21,112</td>
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<td>Belyanin, A.A.</td>
<td>Engineering Research Center: Mid-Infrared Technologies for Health and the Environment, (with: A. Belyanin, M. Scully)</td>
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<td>4/30/2011</td>
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<td>Krisicinas, K.</td>
<td>Collaborative Research: Three-Dimensional Simulations of Type la Supernovae Constraining Models with Observations, (with: K. Krisicinas, N. Suntzeff, L. Wang)</td>
<td>7/1/2007</td>
<td>6/30/2012</td>
<td>41,984</td>
<td>2,348</td>
<td>44,332</td>
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<td>Mahapatra, R.</td>
<td>CAREER: Ton Scale Germanium Beyond Zeptobarn WIMP Cross- section</td>
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<td>Rapp, R.</td>
<td>Electromagnetic and Heavy-Quark Probes of QCD Matter</td>
<td>4/1/2010</td>
<td>3/31/2013</td>
<td>77,622</td>
<td>34,980</td>
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<td>Scully, M.O.</td>
<td>Engineering Research Center (ERC) on Mid-Infrared Technologies for Health and Environment (MIRTHE)</td>
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<td>Scully, M.O.</td>
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**SEC. 7.**  
**RESEARCH ACTIVITY**  
779
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<tr>
<td>Sokolov, A.V.</td>
<td>Sub-Cycle Optical Pulse Shaping by Parametric Beating with Adiabatically Prepared Raman Coherence</td>
<td>9/1/2004</td>
<td>8/31/2010</td>
<td>39,228</td>
<td>10,498</td>
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<td>Suntzeff, N.B.</td>
<td>Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, (with: K. Krisciunas, N. Suntzeff, L. Wang)</td>
<td>7/1/2007</td>
<td>6/30/2012</td>
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<tr>
<td>Tran, K.</td>
<td>ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace, (with: K. Tran, S. Yennello)</td>
<td>10/1/2010</td>
<td>9/30/2015</td>
<td>61,033</td>
<td>26,227</td>
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<td>Tran, K.</td>
<td>The Four Star Galaxy Evolution Survey: Opening a New Window into Galaxy Formation, (with: C. Papovich, K. Tran)</td>
<td>10/1/2010</td>
<td>9/30/2013</td>
<td>9,250</td>
<td>3,811</td>
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<td>Wang, L.</td>
<td>Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, (with: K. Krisciunas, N. Suntzeff, L. Wang)</td>
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<td>Webb, R.C.</td>
<td>Center for the Integration of Research, Teaching and Learning (CIRTL) Network; Lead Institution, University of Wisconsin</td>
<td>1/1/2008</td>
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<td>White, J.T.</td>
<td>DUSEL R&amp;D: New WIMP Detector Technique Based on High Pressure Xenon Gas</td>
<td>6/1/2008</td>
<td>5/31/2010</td>
<td>29,480</td>
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<td>Wu, W.</td>
<td>Probing Superconducting Fluctuations on Mesoscopic Scales: Conductance Fluctuations and Oscillations, and Electron Tunneling</td>
<td>7/1/2006</td>
<td>6/30/2011</td>
<td>62,223</td>
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**Subtotal:** National Science Foundation 2,876,296 503,417 3,379,713

**Office of Naval Research**

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<td>Kattawar, G.W.</td>
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<td>Weimer, M.B.</td>
<td>Nanoscale Characterization of Type II Strained Layer Superlattice Defects</td>
<td>1/15/2010</td>
<td>7/15/2010</td>
<td>21,454</td>
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<td>Macri, L.</td>
<td>A Cepheid Distance to the Coma Cluster</td>
<td>6/1/2008</td>
<td>5/31/2010</td>
<td>1,886</td>
<td>877</td>
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<td>Macri, L.</td>
<td>The Role of Stellar Feedback in Galaxy Evolution</td>
<td>10/1/2008</td>
<td>1/31/2010</td>
<td>414</td>
<td>193</td>
<td>607</td>
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<td>Papovich, C.</td>
<td>A Detailed Analysis of the Stellar Populations in Galaxies During Reionization, (with: S. Finkelstein, C. Papovich)</td>
<td>11/1/2010</td>
<td>10/31/2013</td>
<td>1,335</td>
<td>621</td>
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<td>Papovich, C.</td>
<td>Cosmic Assembly Near-IR Deep Extragalactic Survey (CANDELS) - I</td>
<td>11/1/2010</td>
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<td>987</td>
<td>459</td>
<td>1,446</td>
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<td>Tran, K.</td>
<td>Stellar Assembly &amp; Galaxy Evolution in the Distant Universe</td>
<td>1/1/2009</td>
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<td>169,401</td>
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<td>Fry, E.S.</td>
<td>Devices for Effective Sampling of Bioaerosol</td>
<td>4/10/2008</td>
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**Subtotal:**  
- **Office of Naval Research**: 781,787 220,366 1,002,152  
- **Sandia National Laboratories**: 48,047 8,546 56,593  
- **Space Telescope Science Institute**: 41,802 11,902 53,704  
- **Swiss National Science Foundation**: 169,401 0 169,401  
- **U.S. Army**: 10,245 0 10,245  
- **U.S. Navy - Office of Sponsored Research**: 46,118 40,083 86,201

SEC. 7. RESEARCH ACTIVITY 781
### Grantee Title Start End Direct Indirect Total

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* Subtotal: Federal Agencies 8,666,734 1,648,841 10,315,575

**Industrial/Corporate Agencies**

- **Reeves and Sons LLC**

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<th>White, J.T. Multichamber Gas Proportional Counter for Screening Ultra-Low Background and Materials and Identifying Radioactive Contaminants, Phase II</th>
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<td>8/8/2007 8/7/2011 38,068 5,682 43,750</td>
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* Subtotal: Reeves and Sons LLC 38,068 5,682 43,750

* Subtotal: Industrial/Corporate Agencies 38,068 5,682 43,750

**International Agencies**

- **Consejo Nacional de Ciencia y Tecnología (CONACyT)**

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<th>Roshchin, I.V. Size-Dependent Electronic and Magnetic Properties of Antiferromagnets and Ferromagnets with Reduced Dimensionality</th>
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* Subtotal: Consejo Nacional de Ciencia y Tecnología (CONACyT) 1,937 0 1,937

- **Qatar Foundation**

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<th>Zubairy, M. Quantum Entanglement for Secure Communication</th>
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* Subtotal: Qatar Foundation 77,450 33,425 110,874

- **Swiss National Foundation for Scientific Research**

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<th>Katzgraber, H.G. The Physics of Complex Systems: From Glasses to Quantum Computing</th>
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* Subtotal: Swiss National Foundation for Scientific Research 311,037 0 311,037

- **WPI Research Initiative Advanced Institute for Materials Research**

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<th>Teizer, W. Equipment for Biomolecular Motility Studies</th>
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* Subtotal: WPI Research Initiative Advanced Institute for Materials Research 435,790 0 435,790

* Subtotal: International Agencies 826,214 33,425 859,638
OTHER GOVERNMENT

• Kansas State University

Paulus, G.G.  Attosecond Optical Technology Based on Recollision and Gating, (with: G. Paulus, A. Sokolov)  5/1/2007  4/30/2012  77,646  0  77,646

Sokolov, A.V.  Attosecond Optical Technology Based on Recollision and Gating, (with: G. Paulus, A. Sokolov)  5/1/2007  4/30/2012  77,646  0  77,646

• Subtotal: Kansas State University  155,293  0  155,293

• Ohio State University

Sinova, J.  Towards Spin-reserving Heterogeneous Spin Networks  5/1/2010  8/31/2014  27,245  11,676  38,921

• Subtotal: Ohio State University  27,245  11,676  38,921

• University of Wisconsin

Webb, R.C.  The CIRTL Network-Shaping, Connecting, and Supporting the Future National STEM Faculty  1/1/2008  12/31/2011  32,697  0  32,697

• Subtotal: University of Wisconsin  32,697  0  32,697

• Subtotal: Other Government  215,234  11,676  226,910

PRIVATE/NON-PROFIT AGENCIES

• Brown University

White, J.T.  Construction of the LUX Dark Matter Experiment at the Sanford Underground Science and Engineering Laboratory  6/30/2008  6/30/2011  100,000  0  100,000

• Subtotal: Brown University  100,000  0  100,000

• California Institute of Technology

Mahapatra, R.  Tonne-Scale Germanium Dark Matter Search  10/1/2009  9/30/2012  166,181  9,292  175,473


Papovich, C.  Directly Probing the Star-Forming and Gas Properties of High Redshift Lyman Alpha Galaxies  1/22/2010  1/21/2012  4,336  2,016  6,352

SEC. 7. RESEARCH ACTIVITY  783
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<td>Papovich, C.</td>
<td>IRS Observations of a Strongly Lensed L1 RG Behind the Bullety Cluster and the Spitzer Lyman Alpha Survey</td>
<td>6/16/2009</td>
<td>9/30/2012</td>
<td>12,302</td>
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<td>Papovich, C.</td>
<td>The Spitzer Extended Deep Survey</td>
<td>2/2/2009</td>
<td>9/30/2012</td>
<td>6,738</td>
<td>2,879</td>
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* Subtotal: California Institute of Technology 301,913 53,565 355,478


* Subtotal: Case Western Reserve University 108,582 9,045 117,627

| Zubairy, M.      | Applications of Quantum Interferometry and Coherence to Precision Sensing, Microscopy and Lithography | 9/1/2009    | 8/31/2012   | 171,072 | 0        | 171,072   |

* Subtotal: Qatar National Research Fund 307,693 2,877 310,570


* Subtotal: Research Corporation 19,677 0 19,677


* Subtotal: Rice University 2,373 136 2,509

* The Robert A. Welch Foundation
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<td>Abanov, A.G.</td>
<td>Quantum Coherent Synthesis and Decomposition</td>
<td>6/1/2008</td>
<td>5/31/2011</td>
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<td>The Integrating Cavity: A Powerful New Approach to Ring-Down Spectroscopy</td>
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* Subsubtotal: The Robert A. Welch Foundation 614,795 0 614,795

** Universities Research Association, Inc. **

| Safonov, A.N. | LHC Physics Center at Fermilab as the Global Headquarters of the CMS MUON Alignment Project | 5/1/2009 | 4/30/2010 | 10,207 | 0 | 10,207 |

* Subsubtotal: Universities Research Association, Inc. 10,207 0 10,207

* Subtotal: Private/Non-Profit Agencies 1,465,239 65,623 1,530,862
## State Agencies

**Texas A&M University**

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**Texas Higher Education Coordinating Board**

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**University of Texas**

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*Subtotal: University of Texas* 194,451 7,344 201,796

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**UNIVERSITY AGENCIES**

- **College of Science**

Teizer, W. (REN) Center for Nanoscale Science and Technology

- **Subtotal: College of Science**

- **Subtotal: University Agencies**

- **Total: All Grantees**

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# Summary of Individual Support, 2010

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SEC. 7.  RESEARCH ACTIVITY  789
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* Paulus, G.G.  

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* Pokrovsky, V.L.  

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* Pope, C.E.  

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* Rapp, R.  

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<td>LHC Physics Center at Fermilab as the Global Headquarters of the CMS MUON Alignment Project</td>
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| **Subtotal Saslow, W.M.**               |                                                                        |            |            |        |          | 71,251  |

| **Subtotal Schnuessler, H.A.**          |                                                                        |            |            |        |          | 55,744  |
| Qatar National Research Fund             | Precision Spectroscopy for Trace Detection and Analysis of Hydrocarbon Well Gases | 12/1/2010  | 11/30/2013 | 11,507 | 2,877    | 14,384  |

SEC. 7. 
RESEARCH ACTIVITY
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<td>Ohio State University Research Corporation</td>
<td>Towards Spin-reserving Heterogeneous Spin Networks</td>
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<td>gies: A New Spin to Moore’s Law, (with: A. Finkel’stein, J. Sinova)</td>
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<td>Southwest Academy for Nanoelectronics (SWAN)</td>
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* Subtotal Sinova, J. 114,318 32,692 147,010

### Sokolov, A.V.

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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>Kansas State University</td>
<td>Attosecond Optical Technology Based on Recollision and Gating, (with: G. Paulus, A. Sokolov)</td>
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<td>The Robert A. Welch Foundation</td>
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* Subtotal Sokolov, A.V. 317,597 26,672 344,269

### Sumteff, E.B.

SEC. 7. RESEARCH ACTIVITY 801
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<td>National Science Foundation</td>
<td>Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, (with: K. Krisciunas, N. Suntzeff, L. Wang)</td>
<td>7/1/2007</td>
<td>6/30/2012</td>
<td>41,984</td>
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<td>The Infrared and Bolometric Properties of Type Ia Supernovae: Improving the Standard Candle</td>
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<td>ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace, (with: K. Tran, S. Yennello)</td>
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<td>The Four Star Galaxy Evolution Survey: Opening a New Window into Galaxy Formation, (with: C. Papovich, K. Tran)</td>
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<td>Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, (with: K. Krisciunas, N. Suntzeff, L. Wang)</td>
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<td>6/30/2012</td>
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<td>Nanoscale Characterization of Type II Strained Layer Superlattice Defects</td>
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<td>Reeves and Sons LLC</td>
<td>Multichamber Gas Proportional Counter for Screening Ultra-Low Background and Materials and Identifying Radioactive Contaminants, Phase II</td>
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<td>Qatar National Research Fund</td>
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1. Foreword from the Department Head

This annual report summarizes the activities during 2010 of the Statistics faculty in their teaching, research, and service.

Honors and Awards

*The faculty of the Department of Statistics was recognized with numerous honors and awards.*

▷ Ellen Toby was awarded a 2010 Association of Former Students Distinguished Achievement College Level Teaching Award.

▷ Raymond J. Carroll was selected to present the 2010 Charles L. Odoroff Memorial Lecture.

▷ Marc Genton was named 2010 IMS Fellow and was also awarded the TIES Abdel El Shaarawi Young Researcher’s Award for Excellence. In addition, Marc Genton received the 2010 ENVR Distinguished Achievement Award.

▷ Yanyuan Ma was named a 2010 Elected Member of the International Statistical Institute.

▷ Suojin Wang was recognized for 20 years of service to Texas A&M.

▷ Anant Kshirsagar Endowed Fellowship in Statistics was established by Ersen Arseven ’74 and Luisa Sia ’74 to provide one or more fellowships to full-time students in good standing pursuing a degree in statistics.

▷ The Margaret Sheather Memorial Award in Statistics was established by Simon Sheather, Department Head, in memory of his mother. This award was designed to recognize and reward a graduate student(s) for the most outstanding master’s project in the department completed in the previous academic year.


▷ Industrial Affiliates Program - The Department of Statistics Industrial Affiliates Program was established this year. Our aim is to promote partnerships through collaborative research, in turn, benefitting both academia and the industrial community. To date, we four companies who have joined or have agreed to join. They are STATA, DOW Chemical, SAS and Ersen Arseven.

Current Student Awards

*The graduate students of the department were recognized with numerous honors and awards.*

▷ Souparno Ghosh - Awarded a Laha Travel Award from the Institute of Mathematical Statistics (IMS).

▷ Tanya Garcia - 2010 William S. Connor Memorial Award. This award is presented by the Statistics faculty to the outstanding Ph.D candidate that will complete their preliminary exam in the former year, Philanthropic Educational Organization Scholar Award- and the National GEM (Graduate Education for Minorities) Consortium Fellowship which promotes the success of students in engineering and sciences.

▷ Ying Sun - won an ASA Student Competition for her paper entitled "Functional Boxplots for Complex Data Visualization.

▷ Saijuan Zhang- recognized for her work completed with Jianhua Huang, Ying Li of Mays Business School and Dr. Reginald Baugh of the University of Toledo, College of Medicine in
the February issue of IIE Transactions. Editor and Chief, Susan Albin, Selected the paper as the feature article.

▷ Soutir Bandyopadhyay received the 2010 Emanuel Parzen Graduate Research Fellowship This award recognizes graduate students whose research is above and beyond what is normally expected for graduation.

▷ Elizabeth Young Kolodziej- selected to receive a 2010 Association of Former Students Distinguished Graduate Student Award for Excellence in Teaching.

Former Student Awards

▷ Dr. James W. Hardin - was the recipient of the 2009 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. Hardin received his master’s and Ph.D in statistics from Texas A&M University under the direction of Larry Ringer and H. Joseph Newton. He is currently a Research Associate Professor with the Center for Health Services and Policy Research at the University of South Carolina, as well as Director of the Biostatistics Collaborative Unit. James has written several textbooks and maintains an active research agenda. He has co-authored manuscripts on diet, nutrition, cognitive psychology, HIV, sexual behavior, cancer and health services.

▷ Iryna Lobach- Former student of Raymond Carroll received the best paper published in the Biometrics Journal in 2008. Iryna is currently an Assistant Professor of Biostatistics at New York University, School of Medicine. She will be presented the award at the Biennial Biometric International Conference held in December.

▷ Qinli LillyYue- former student and TAMU Statistics Alumni Board Member, was promoted to Deputy Division Director of Biostatistics at the FDA’s Center for Devices and Radiological Health. Lilly received her Ph.D. in 1997 under the direction of Michael Longnecker.

Departmental Events

▷ Statistics Bootstrap Conference - The department hosted a conference dedicated to celebrating 30 years of the bootstrap March 25-26, 2010 at the Hilton Hotel. The plenary speakers for the conference were Peter Bickel (University of California, Berkeley), Jianqing Fan (Princeton University), Peter Hall (University of Melbourne), and Bin Yu (University of California, Berkeley). A special thanks to these speakers as well as Soumen Lahiri, who along with several others from the department, organized this successful event.

▷ 2010 Parzen Prize for Statistical Innovation - The department proudly awarded the Emanuel & Carol Parzen Prize for Statistical Innovation to Roger Koenker (McKinley Professor of Economics and Professor of Statistics at the University of Illinois) in honor of his significant innovations in statistical theory that have transformed the practice. Dr. Koenker presented a lecture entitled "Beyond the Average Man: Additive Models for Conditional Quantiles" on March 24, 2010.

▷ 2010 Hartley Memorial Lectures - The Department hosted the 2010 H. O. Hartley Memorial Lecture Series April 5-7, 2010. We were honored to have Regina Liu (Chair of Statistics & Biostatistics, Rutgers University) present these lectures.

▷ The Department hosted the 15th Annual Advanced Placement Statistics Workshop July 19-23, 2010. The instructor was Josh Tabor from Canyon del Oro High School in Oro Valley, AZ. Mr. Tabor has been a grader of the AP Statistics exam since 1999.

▷ The 2010 Aggie Reunion was held at the Joint Statistical Meetings (JSM) in Vancouver, British
Columbia, Canada. Also at the JSM, the department hosted a Distance Education Reception that showcased the most recent updates and information on our department’s successful online programs. In addition, at this invitation only reception, the launch of our new distance video was released.

▷ The 7th Annual New Graduate Student Orientation was held on August 25th in Blocker. We welcomed 12 new students to our program.

▷ The 2010 Faculty Retreat was held on Friday, August 27th at the Pebble Creek Country Club.

▷ The faculty heard presentations and participated in a team-building exercise while enjoying a day away from the office.

Faculty Updates

▷ David Dahl, Samiran Sinha and Suhasini Subba Rao were all promoted to Associate Professor.
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 of Science Dean Database (Fall 2009) FacultyList_FINAL, Queried from the College of Science Dean Database (Fall 2010) FacultyList_FINAL.

Non-Tenure-Track Faculty

▷ Queried from the College of Science Dean Database (Fall 2009) FacultyList_nonTTF, Queried from the College of Science Dean Database (Fall 2010) FacultyList_nonTTF.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2009, Fall 2010) 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 2010) 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>Category</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Tenured and Tenure-Track Faculty</td>
<td>34</td>
<td>33</td>
</tr>
<tr>
<td>Professor</td>
<td>19</td>
<td>18</td>
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<tr>
<td>Assistant Professor</td>
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</tr>
<tr>
<td>Associate Professor</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Distinguished Professor</td>
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<td>2</td>
</tr>
<tr>
<td>b. Non-Tenure-Track Faculty</td>
<td>8</td>
<td>6</td>
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<tr>
<td>Visiting Professor</td>
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<td>1</td>
</tr>
<tr>
<td>Visiting Assistant Professor</td>
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<td>0</td>
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<tr>
<td>Visiting Associate Professor</td>
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<tr>
<td>Lecturer</td>
<td>2</td>
<td>1</td>
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<tr>
<td>Senior Lecturer</td>
<td>5</td>
<td>4</td>
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<tr>
<td>c. Postdoctoral Fellows</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>d. Graduate Majors</td>
<td>170</td>
<td>170</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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<td>18</td>
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#### II. Instructional Activities

<table>
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<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
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<td>a. Graduate Semester Credit Hours</td>
<td>5,814</td>
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<td>b. Undergraduate Semester Credit Hours</td>
<td>14,300</td>
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<td>c. PhD Degrees</td>
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<td>6</td>
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<tr>
<td>d. Masters Degrees</td>
<td>19</td>
<td>16</td>
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<tr>
<td>e. Undergraduate Degrees</td>
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#### III. Research Activities

<table>
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<th>Category</th>
<th>2009</th>
<th>2010</th>
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<td>a. Research Publications</td>
<td>90</td>
<td>99</td>
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<tr>
<td>b. Research Presentations</td>
<td>143</td>
<td>129</td>
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<td>c. Federal</td>
<td>3,724,360</td>
<td>3,726,479</td>
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<td>d. State</td>
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<td>0</td>
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<tr>
<td>e. University</td>
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<td>0</td>
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<tr>
<td>f. Private/Non-Profit</td>
<td>195,926</td>
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<tr>
<td>g. Industrial/Corporate</td>
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<tr>
<td>h. International</td>
<td>3,468,746</td>
<td>4,533,333</td>
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<td>i. Other Govt</td>
<td>95,198</td>
<td>42,445</td>
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<td><strong>Total</strong></td>
<td><strong>7,484,230</strong></td>
<td><strong>8,487,281</strong></td>
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</table>
3. Honors & Awards, 2010

By Faculty

▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2010.

By Students

▷ This section contains all honors and awards, as reported by the department, during the calendar year 2010.
### 3.1 Honors & Awards Received by Faculty, 2010

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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<tbody>
<tr>
<td>R. Carroll</td>
<td>Oderoff Lecture, University of Rochester</td>
</tr>
<tr>
<td>M. Genton</td>
<td>Distinguished Achievement Award, American Statistical Association</td>
</tr>
<tr>
<td></td>
<td>El-Shaarawi Award for Excellence, International Environmetrics</td>
</tr>
<tr>
<td></td>
<td>Society</td>
</tr>
<tr>
<td></td>
<td>Fellow, Institute of Mathematical Statistics</td>
</tr>
<tr>
<td>J. Perrett</td>
<td>Fellow, Wakonse South Teaching Conference</td>
</tr>
<tr>
<td>E. Toby</td>
<td>Distinguished Achievement Award - Teaching, Association of Former</td>
</tr>
<tr>
<td></td>
<td>Students</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2010

Graduate

- ASA Travel Award, SRCOS
  Ying Sun

- Connor Award
  Tanya Garcia

- Laha Travel Award from IMS

- Margaret Sheather Memorial Award in Statistics
  Xiaolei Xun

- Parzen Graduate Research Fellowship
  Soutir Bandyopadhyay

- Philanthropic Educational Organization (PEO) Scholar Award
  Tanya Garcia

- Student Award - Teaching Excellence
  Elizabeth Young Kolodziej
4. Students, 2010

This section contains all degrees awarded, as reported by the department, during the calendar year 2010.
4.1 Graduate Degrees Awarded, 2010

Fall

▷ M.S.

Clarissa My Ackerman
Advisor(s): S. Sheather

Thomas Clifton Bankston
Advisor(s): F.M. Speed

Sammy J Bussell
Advisor(s): F.M. Speed

Ashley Jean Hopp
Advisor(s): F.M. Speed

Kelley Leigh Hughes
Advisor(s): F.M. Speed

David Edward Lane
Advisor(s): M. Longnecker

Katherine Demetra Riester
Advisor(s): J. Perrett

Seung Yoon Yoo
Advisor(s): S. Sinha

▷ Ph.D.

Soma Sekhar Dhavala
Bayesian Semiparametric and Models for Heterogeneous, Cross- Platform Differential Gene Expression
Advisor(s): B. Mallick

Yulia Marchenko
Multivariate Skew-t Distributions in Econometrics and Environmetrics
Advisor(s): M. Genton

Krista Dianne Rister
Resampling Methodology in Spatial Prediction and Repeated Measure Time Series
Advisor(s): S. Lahiri

Mingqi Wu
Population SAMC, ChIP - Chip Data Analysis and Beyond
Advisor(s): F. Liang

Saijuan Zhang
Bayesian Methods in Nutrition Epidemiology and Regression-based Predictive Models in Healthcare
Advisor(s): R. Carroll

Spring

▷ M.S.

Michael David Byers

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Matthew Steven Cefalu
Advisor(s): M. Longnecker

Dai Chen
Advisor(s): J. Huang

Brent Thomas Christensen
Advisor(s): M. Longnecker

Randall Gill
Advisor(s): R. Carroll

Hei Joung Kim
Advisor(s): S. Subba Rao

Ming Lu
Advisor(s): S. Wang

Yiwei Zhang
Advisor(s): R. Fan

Summer

▷ M.S.

Rebecca Anne Black
Advisor(s): F.M. Speed

Thomas Virgil Decker
Advisor(s): M. Longnecker

Jennifer Ann Rolfes
Advisor(s): F.M. Speed

▷ Ph.D.

Soutir Bandyopadhyay
On Parametric and Nonparametric Methods for Dependent Data
Advisor(s): S. Lahiri

Brian Matthew Hartman
Bayesian Hierarchical, Semiparametric, and Nonparametric Methods for International New Product Diffusion
Advisor(s): B. Mallick

Elizabeth Young Kolodziej
Nonparametric Methods for Point Processes and Geostatistical Data
Advisor(s): M. Sherman

Kristin Patricia Lennox
Bayesian Nonparametric Methods for Protein Structure Prediction
Advisor(s): D. Dahl

Andrew Middleton Redd
An Additive Bivariate Hierarchical Model for Functional Data and Related Computations
Advisor(s): R. Carroll
Xiuzhen Sun  
Bias Reduction and Goodness-of-Fit Tests in Conditional Logistic Regression Models  
**Advisor(s): S. Wang**

Jiawei Wei  
Secondary Analysis of Case-Control Studies in Genomic Contexts  
**Advisor(s): R. Carroll**
5. Colloquium and Seminar Speakers, 2010

Colloquium and Seminar Speakers

1/14/2010  **Brian Hartman**  
*Texas A&M University*  
From Argentina to Zimbabwe: Where Should I See My Widgets?

1/21/2010  **David Tyler**  
*State University of New Jersey*  
Invariant Coordinate Selection: A New Method for Exploring Multivariate Data

1/28/2010  **James Scott**  
*University of Texas, Austin*  
The Horseshoe Prior and Its Connection With Bayesian Nonparametrics

2/4/2010  **Wei-Biao Wu**  
*University of Chicago*  
Simultaneous Inference of Time-Varying Linear Models

2/9/2010  **Adarsh Joshi**  
*Texas A&M University*  
Objective Bayesian Model Selection for High-Dimensional High-Throughput Data

2/11/2010  **Ori Rosen**  
*University of Texas, El Paso*  
Bayesian Mixtures of Autoregressive Models

2/18/2010  **Ingrid Van Keilegom**  
*Université catholique de Louvain*  
Univariate Frontier Estimation in the Presence of Measurement Error

2/25/2010  **Arka Ghosh**  
*Iowa State University*  
Optimal Control of a Stochastic Network Driven by a Fractional Brownian Motion Input

3/2/2010  **Jeffrey Hart**  
*Texas A&M University*  
Recent Research

3/4/2010  **T. Siva Tian**  
*University of Houston*  
FUNER: A Novel Approach for the EEG/MEG Inverse Problem

3/11/2010  **Hira Koul**  
*Michigan State University*  
Model Diagnostics via Khmaladze’s Martingale Transform

3/24/2010  **Roger Koenker**  
*University of Illinois*  
Beyond the Average Man: Additive Models for Conditional Quantiles

4/1/2010  **Michael Smith**  
*University of Melbourne, Australia*  
Bayesian Skew Selection for Multivariate Models
4/5/2010  Regina Liu  
*Rutgers University*  
Statistics is a Many-Splendored Thing: Mining Massive Text Data and Beyond

4/6/2010  Regina Liu  
*Rutgers University*  
Data Depth for Multivariate Spacings, Ordering, Tolerance Regions, etc.

4/7/2010  Faming Liang  
*Texas A&M University*  
An Overview of Markov Chain Monte Carlo Methods

4/7/2010  Regina Liu  
*Rutgers University*  
DD-Classifiers: New Nonparametric Classification Procedures

4/8/2010  Li-Ping Zhou  
*East China Normal University*  
Model-Free Dimension-Reduction for Ultrahigh Dimensional Data

4/15/2010  Piotr Fryzlewicz  
*London Sch of Econ & Political Science*  
Thick-Pen Transformation for Time Series

4/22/2010  Ying Nian Wu  
*University of California, Los Angeles*  
From Wavelet Sparse Coding to Visual Pattern Modeling

4/29/2010  Jeremy Taylor  
*University of Michigan*  
Joint Longitudinal-Survival Models and their Application in Prostate Cancer

9/9/2010  Tao Shi  
*Ohio State University*  
Statistical Modeling of Airs Level 3 Quantization Data

9/15/2010  Dan Glab  
*Texas A&M University*  
Testing Lack-of-Fit of Generalized Linear Models via Laplace Approximation

9/16/2010  Michael Stein  
*University of Chicago*  
An Extension of Power Law Generalized Covariance Functions to the Space-Time Setting

9/21/2010  Marc Genton  
*Texas A&M University*  
A Sample of Current Research in Spatial Statistics

9/23/2010  Li Gan  
*Texas A&M University*  
A Simple Test of Private Information in the Insurance Markets with Heterogeneous Insurance Demand

9/30/2010  Evarist Giné  
*University of Connecticut*
Some Aspects of Density Estimation: Sup-Norm Loss, Adaptivity to Smoothness, Spatial Adaptivity

10/7/2010 Genevera Allen
Baylor University/Rice University
Modeling Transposable Data

10/14/2010 Huaiqing Wu
Iowa State University
A Prediction-Based Model Selection Approach

10/21/2010 Dale Zimmerman
University of Iowa
The Joys of Geocoding (from a Spatial Statistician’s Perspective)

10/27/2010 Yanyuan Ma
Texas A&M University
Semiparametrics in Generalized Linear Latent Variable Model and More

10/28/2010 Ji Zhu
University of Michigan
Extracting Communities from Networks

11/4/2010 Byungtae Seo
Texas Tech University
Inconsistent MLE with Incomplete Data

11/11/2010 Carlos Carvalho
University of Texas
Dynamic Stock Selection Strategies: A Structured Factor Model Framework

11/18/2010 Bo Li
Purdue University
The Value of Multiproxy Reconstruction of Past Climate

12/2/2010 Wolfgang Polonik
University of California, Davis
Testing for Modality, Residual Empirical Process and Weighted Sums for Time Varying Processes
6. Faculty*, 2010

Derya G. Akleman ................................................. Senior Lecturer
James A. Calvin....................................................... Professor
Julie H. Carroll ....................................................... Senior Lecturer
Raymond J. Carroll ................................................. Distinguished Professor
Willa W. Chen ......................................................... Associate Professor
Daren B. H Cline ...................................................... Professor
Alan R. Dabney ....................................................... Assistant Professor
David B. Dahl ......................................................... Associate Professor
P. Fred Dahm ......................................................... Professor
Ruzong Fan .......................................................... Associate Professor
Marc G. Genton ....................................................... Professor
Jeffrey D. Hart ....................................................... Professor
Keith L. Hatfield .................................................... Lecturer
Jianhua Z. Huang .................................................. Professor
Edward Jones ......................................................... Executive Professor
Mikyoung Jun ......................................................... Assistant Professor
Soumendra N. Lahiri ............................................... Professor
Erning Li .......................................................... Assistant Professor
Faming Liang ......................................................... Professor
Michael T. Longnecker ........................................... Professor
Yanyuan Ma ......................................................... Associate Professor
Bani K. Mallick ....................................................... Professor
Ursula U. Mueller-Harknett .................................... Associate Professor
H. Joseph Newton ................................................ Professor
Jamis J. Perrett ....................................................... Assistant 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
F. Michael Speed .................................................. Professor
Clifford H. Spiegelman ......................................... Distinguished Professor
Suhasini Subba Rao ............................................... Associate Professor
Ellen H. Toby ....................................................... Senior Lecturer
Suojin Wang ......................................................... Professor
Thomas E. Wehrly ................................................ Professor
R. Webster West .................................................... Professor
Lan Zhou .......................................................... Assistant Professor
Li Zhu .......................................................... Assistant Professor (J)
Joel Zinn .......................................................... Professor (J)

*For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2010 (01/01/2010-12/31/2010).
6.1 Professional Activities, 2010

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2010.

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 2010.
▷ 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 2010.
▷ 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 2010

University
▷ Committee/Panel: Faculty Senate (Caucus Leader), Faculty Senate (Faculty Senator - 07), Faculty Senate: Diversity Committee (Member), Faculty Senate: The Academic Affairs Committee (Member)

College
▷ Committee/Panel: Diversity Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 651. — Statistics in Research I (total enrollment: 81)
▷ STAT 652. — Statistics in Research II (total enrollment: 54)

Fall
▷ STAT 651. — Statistics in Research I (total enrollment: 79)
▷ STAT 652. — Statistics in Research II (total enrollment: 57)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, Institute for Applied Mathematics and Computational Science (IAMCS), College of Science, [2009]
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2010

  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)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▶ STAT 302.(H) — Statistical Methods (total enrollment: 30)

*On leave.*
• SERVICE DURING 2010
  
  University
  ▶ Service Position: Corps of Cadets Academic Advisor F-2 (Mentor)
  
  Department
  ▶ Committee/Panel: Undergraduate Service Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ STAT 303. — Statistical Methods (total enrollment: 140)
  
  Fall
  ▶ STAT 303. — Statistical Methods (total enrollment: 130)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Director, Center for Statistical Bioinformatics, Statistics, [2007]
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▶ Member, Interdisciplinary Faculty, Nutrition, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• AWARDS DURING 2010
  National
  ▶ Oderoff Lecture, University of Rochester

• SERVICE DURING 2010
  International
  ▶ Committee/Panel: Ukraine Thyroid Screening Study for the Chernobyl Accident (Member)
  National
  ▶ Editorial/Board: Oxford Statistical Science Series (Co-Editor), Journal of the American Statistical Association (Associate Editor)
  College
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member)

Spring
  ▶ STAT 651. — Statistics in Research I (total enrollment: 35)
  ▶ STAT 681. — Seminar (total enrollment: 10)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 691. — Research (total enrollment: 3)

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

Fall
  ▶ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ (REN) Measurement Error, Nutrition and Breast/Colon Cancer, National Cancer Institute
  ▶ (REN) Training Program in Biostatistics, Bioinformatics, and Nutrition, National Institutes of Health
ATD: Bayesian Data Missing Approaches for Biological Threat Detection, National Science Foundation
Cluster Computing for Mathematical Sciences at Texas A&M University, National Science Foundation

International
Institute for Applied Mathematics and Computational Science (IAMCS) at Texas A&M University at The King Abdullah University of Science and Technology Global Research Partnership, King Abdullah University of Science and Technology

Other
Genome-Wide Structured Association Testing and Regional Admixture Mapping, University of Alabama-Birmingham

• PRESENTATIONS DURING 2010
“ENAR,” 2010. (Invited)
Israeli Statistical Association, 2010. (Invited)
Joint Statistical Meetings, 2010. (Invited)
Michigan State University, East Lansing, MI, 2010. (Invited)
SAMSI Workshop, 2010. (Invited)
University of Melbourne, Victoria, Australia, 2010. (Invited)
University of Rochester, Rochester, NY, 2010. (Invited)
Yale University, New Haven, CT, 2010. (Invited)

• PUBLICATIONS DURING 2010


• SERVICE DURING 2010

National

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

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 651. — *Statistics in Research I* (total enrollment: 30)

Fall
▷ STAT 651. — *Statistics in Research I* (total enrollment: 72)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Long Memory Time Series Modelling: Computational and Statistical Efficiency, Nonstationarity/Noninvertibility and Goodness of Fit, *National Science Foundation*
▷ Restriction Likelihood in Time Series: Applications to Moderate and Near Integrated Autoregressions, Conintegration, Panel Data and Nonlinear Time Series, *National Science Foundation*

• PRESENTATIONS DURING 2010

▷ University of Heidelberg, Heidelberg, Germany, 2010. (Invited)

• PUBLICATIONS DURING 2010

• SERVICE DURING 2010

National

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 621. — *Advanced Stochastic Processes* (total enrollment: 11)
▷ STAT 630. — *Overview of Mathematical Statistics* (total enrollment: 39)

Fall
▷ STAT 601. — *Statistical Analysis* (total enrollment: 51)
▷ STAT 615. — *Stochastic Processes* (total enrollment: 8)

• PUBLICATIONS DURING 2010


836 2010 Statistics annual report
ALAN R. DABNEY

ASSISTANT PROFESSOR  
STAT-Bioinformatics, Applied Statistics  
adabney@stat.tamu.edu

- SERVICE DURING 2010
  National

- TEACHING ASSIGNMENTS DURING 2010
  Spring
  - STAT 211.(H) — Principles of Statistics I (total enrollment: 10)
  - STAT 685. — Directed Studies (total enrollment: 2)
  - STAT 689. — Special Topics in (total enrollment: 4)
  - STAT 691. — Research (total enrollment: 2)
  Summer
  - STAT 642. — The Methods of Statistics II (total enrollment: 23)
  - STAT 685. — Directed Studies (total enrollment: 1)
  - STAT 691. — Research (total enrollment: 6)
  Fall
  - STAT 211.(H) — Principles of Statistics I (total enrollment: 26)
  - STAT 685. — Directed Studies (total enrollment: 1)
  - STAT 689. — Special Topics in (total enrollment: 20)
  - STAT 691. — Research (total enrollment: 4)

- RESEARCH PROJECTS DURING 2010
  Federal
  - Quantifying Protein Abundance from Mass Spectrometry Experiments Using the AMT Tag Pipeline, Battelle -Pacific Northwest National Laboratory
  - Mechanisms of Eicosapentanoic Acid and Estrogen Effects in Colon Cancer, Department of Health and Human Services
  - Statistical Methods for Protein Identification and Quantitation in Protein Mass Spectrometry, Pacific Northwest National Laboratory

  Private
  - Ability of n-3 Fatty Acids to Influence Colon Tumor Formation by Modulating Estrogen Action, American Institute for Cancer Research

- PRESENTATIONS DURING 2010
  - Joint Statistical Meetings, 2010.( Graduate)
  - Human Proteome (HUPO) Conference, March, 2010.( Contributed)
DAVID B. DAHL
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STAT-Bayesian Nonparametrics Methods dahl@stat.tamu.edu

• SERVICE DURING 2010

International
▷ Editorial/Board: The Thirteenth International Conference on Artificial Intelligence and Statistics, and The Fourteenth International Conference on Artificial Intelligence and Statistics (Referee: Journals)

National
▷ Editorial/Board: Journal of the American Statistical Association, Bayesian Analysis, Journal of Computational and Graphical Statistics, Statistics in Medicine (Referee: Journals), Bayesian Analysis (Associate Editor)
▷ Committee/Panel: Institute of Mathematical Statistics Committee on New Researchers (Member)

Regional
▷ Committee/Panel: Southeast Texas Chapter of the American Statistical Association (Vice President)

Department
▷ Committee/Panel: Bioinformatics Faculty Committee (Member), Computing Committee (Member), Publicity Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 302. — Statistical Methods (total enrollment: 100)
▷ STAT 605. — Advanced Topics in Computational Statistics (total enrollment: 19)
▷ STAT 691. — Research (total enrollment: 2)

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

Fall
▷ STAT 302. — Statistical Methods (total enrollment: 196)
▷ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Side Chain Driven Refinement of Protein Structure, National Institutes of Health

• PRESENTATIONS DURING 2010
▷ “Distance-Based Probability Distributions on Set Partitions for Bayesian Nonparametric Models,” Frontiers of Statistical Decision Making and Bayesian Analysis, San Antonio,
TX, March, 2010. (Contributed)

▷ “Distance-Based Probability Distributions on Set Partitions for Bayesian Nonparametric Models,” Valencia / ISBA Ninth International Meeting on Bayesian Statistics, Benidorm, Spain, June, 2010. (Contributed)


▷ “Distance-Based Probability Distributions on Set Partitions for Bayesian Nonparametric Models,” Joint Statistical Meetings, Vancouver, BC, August, 2010. (Invited)

• PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Graduate Advisor, Statistics Graduate Advising Office, Statistics, [1989]

• SERVICE DURING 2010

National
  ▷ Editorial/Board: Various Journals (Referee: Journals)

University
  ▷ Committee/Panel: AFS Awards Selection 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), MS Examination Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
  ▷ STAT 644. — Biostatistics II (total enrollment: 5)
  ▷ STAT 691. — Research (total enrollment: 1)

Summer
  ▷ STAT 651. — Statistics in Research I (total enrollment: 41)

Fall
  ▷ STAT 212. — Principles of Statistics II (total enrollment: 42)
  ▷ STAT 643. — Biostatistics I (total enrollment: 5)
  ▷ STAT 685. — Directed Studies (total enrollment: 1)
  ▷ STAT 691. — Research (total enrollment: 1)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2010
  National
  ▶ 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)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ STAT 652. — *Statistics in Research II* (total enrollment: 50)
  ▶ STAT 685. — *Directed Studies* (total enrollment: 2)
  ▶ STAT 691. — *Research* (total enrollment: 1)

  Summer
  ▶ STAT 685. — *Directed Studies* (total enrollment: 2)

  Fall
  ▶ STAT 652. — *Statistics in Research II* (total enrollment: 44)
  ▶ STAT 661. — *Statistical Genetics* (total enrollment: 7)
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)
  ▶ STAT 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Genetic Basis for Exercise Training Responses, *National Institutes of Health*
  ▶ Research and Travel Support from the Intergovernmental Personnel Act (IPA), *National Institutes of Health*

• PRESENTATIONS DURING 2010
  ▶ Child Psychiatry Branch, National Institute of Mental Health, May, 2010. (Invited)
  ▶ Division of Intramural Research Programs, National Institute of Mental Health, June, 2010. (Invited)
PUBLICATIONS DURING 2010


• AWARDS DURING 2010
  International
  ▷ El-Shaarawi Award for Excellence, International Environmetrics Society

  National
  ▷ Distinguished Achievement Award, American Statistical Association
  ▷ Fellow, Institute of Mathematical Statistics

• SERVICE DURING 2010
  International
  ▷ Editorial/Board: Chilean Journal of Statistics (Associate Editor)

  National
  ▷ Editorial/Board: Various Grant Proposals (Review: Proposals), Journal of Multivariate Analysis (Associate Editor), Journal of the American Statistical Association (Associate Editor), Various Journals (Referee: Journals)

  College
  ▷ Event: Research in the IAMCS (Deputy Director)

  Department
  ▷ Event: Program in Spatial Statistics (Director)
  ▷ Committee/Panel: Environmetrics Organizing Committee (Member), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ STAT 616. — Multivariate Analysis (total enrollment: 8)
  ▷ STAT 691. — Research (total enrollment: 3)

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

  Fall
  ▷ STAT 211. — Principles of Statistics I (total enrollment: 75)
  ▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▷ CMG Research: Statistical Analysis of Large Non-Gaussian Datasets in Climate Science, National Science Foundation
Space-Time Statistics for Wind Power Forecasting, National Science Foundation

- **PRESENTATIONS DURING 2010**
  - “A Sample of Current Research in Spatial Statistics,” Brown Bag Seminar, College Station, TX, 2010. (Contributed)
  - “Correcting for Signal Attenuation from Noisy Proxy Data in Climate Reconstructions,” CMG Meeting, College Station, TX, 2010. (Contributed)
  - “Correcting for Signal Attenuation from Noise: Sharpening the Focus on Past Climate,” Climate Change Workshop at SAMSI, 2010. (Contributed)
  - “Functional Boxplots for Complex Data Visualization,” ICORS, Prague, Czech Republic, 2010. (Invited)
  - “Functional Boxplots for Complex Data Visualization,” METMA 5, Santiago de Compostela, Spain, 2010. (Invited)
  - “Functional Boxplots for Complex Data Visualization,” Pontificia Universidad Catolica de Chile, Santiago, Chile, 2010. (Invited)
  - “Functional Boxplots for Complex Data Visualization,” University of Concepcion, Concepcion, Chile, 2010. (Invited)
  - “Functional Boxplots for Complex Data Visualization,” University of Heidelberg, Heidelberg, Germany, 2010. (Invited)
“Multivariate Random Fields,” Advances and Challenges in Space-time Modelling of Natural Events, Toledo, Spain, 2010. (Invited)

“Powering up with Space-Time Wind Forecasting,” Advances and Challenges in Space-time Modelling of Natural Events, Toledo, Spain, 2010. (Invited)

“Powering up with Space-Time Wind Forecasting,” Shanghai University of Finance and Economics, Shanghai, China, 2010. (Invited)

“Powering up with Space-Time Wind Forecasting,” The University of Tokyo, Tokyo, Japan, 2010. (Invited)

“Powering up with Space-Time Wind Forecasting,” University of Heidelberg, Heidelberg, Germany, 2010. (Invited)

“Powering up with Space-Time Wind Forecasting,” Xiamen University, Xiamen, China, 2010. (Invited)

“Robustness and Influential Observations in Spatial Statistics,” Advances and Challenges in Space-time Modelling of Natural Events, Toledo, Spain, 2010. (Invited)


- PUBLICATIONS DURING 2010

Ammann, C.M.; Genton, M.G.; Li, B. (2010) Technical Note: Correcting for Signal Attenuation from Noisy Proxy Data in Climate Reconstructions *Climate of the Past*, vol. 6, 273-279.


• SERVICE DURING 2010

National
  ▶ Editorial/Board: *Journal of the American Statistical Association* (Associate Editor),
  *Metron* (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2010

Spring
  ▶ STAT 212. — *Principles of Statistics II* (total enrollment: 29)
  ▶ STAT 691. — *Research* (total enrollment: 3)

Summer
  ▶ STAT 626. — *Methods in Time Series Analysis* (total enrollment: 22)
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)
  ▶ STAT 691. — *Research* (total enrollment: 1)

Fall
  ▶ STAT 632. — *Statistical Decision Theory* (total enrollment: 27)
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)
  ▶ STAT 691. — *Research* (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
  ▶ Cluster-Based Bootstrapping in Multiple Hypothesize Testing, *National Science Foundation*

• PUBLICATIONS DURING 2010


• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 211 — Principles of Statistics I (total enrollment: 240)

Fall
▷ STAT 211 — Principles of Statistics I (total enrollment: 225)
• SERVICE DURING 2010

National

Department
▷ Committee/Panel: Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 211. — Principles of Statistics I (total enrollment: 57)
▷ 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: 8)

• RESEARCH PROJECTS DURING 2010

Federal
▷ A New Approach of Statistical Modeling and Analysis of Massive Spatial Data Sets, National Science Foundation
▷ Conference on Resampling Methods and High Dimensional Data, National Science Foundation
▷ Conference on Statistical Methods for Complex Data, National Science Foundation

• PRESENTATIONS DURING 2010
▷ Simon Fraser University, Burnaby, Canada, July, 2010. (Invited)

• PUBLICATIONS DURING 2010


MIKYOUNG JUN
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STAT-Spatial-Temporal Covariance Models mjun@stat.tamu.edu

• SERVICE DURING 2010

International
▷ Event: ENAR 2011 & IMS-APRM 2011 (Organizer), ENVR at JSM 2010 (Organizer), Topics Contributed Session by ENVR at JSM 2010 (Organizer)
▷ Editorial/Board: Journal of the Korean Statistical Society (Associate Editor)

National
▷ Editorial/Board: Mathematical Geosciences, Statistical Analysis and Data Mining (Referee: Journals)

Department
▷ Event: Program in Spatial Modeling (Associate Director)
▷ Committee/Panel: Graduate Student Admissions Committee (Member)

Spring
▷ STAT 211. — Principles of Statistics I (total enrollment: 118)

Fall
▷ STAT 211. — Principles of Statistics I (total enrollment: 72)
▷ STAT 647. — Spatial Statistics (total enrollment: 19)

• RESEARCH PROJECTS DURING 2010

Federal
▷ CMG Research: Statistical Analysis of Large Non-Gaussian Datasets in Climate Science, National Science Foundation
▷ Nonstationary Spatial-Temporal Covariance Models for Multivariate Processes on a Globe, National Science Foundation

• PRESENTATIONS DURING 2010

▷ “Local Eigenvalue Analysis of CMIP3 Climate Model Errors,” Climate Change Workshop for the Program on Space-Time Analysis for Environmental Mapping, Epidemiology, and Climate Change SAMSI, RTP, February, 2010.(Poster Contributed)
▷ “A Test for Stationarity of Spatio-Temporal Random Fields on Planar and Spherical Domains,” Resampling Methods and High Dimensional Data Texas A&M University, College Station, TX, March, 2010.( Invited)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Professor (J), Mathematics, [2010]

• SERVICE DURING 2010
  International
  ▷ Committee/Panel: International Society for Nonparametric Statistics, Executive
    Committee (Member), Publication Committee, International Indian Statistical
    Association (Chair)

  National
  ▷ Editorial/Board: Annals of Statistics (Associate Editor)
  ▷ Committee/Panel: Memorial Committee, Institute of Mathematical Statistics (Member)

  State
  ▷ Editorial/Board: Sankhya, Series A (Editor), Statistical Methodology (Associate Editor)

  University
  ▷ Committee/Panel: Program Committee, Conference of Resampling Methods and High
    Dimensional Data (Chair)

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

  Department
  ▷ Committee/Panel: Awards Committee (Member), Curriculum Committee (Member), Pro-
    motion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▷ STAT 685. — Directed Studies (total enrollment: 1)
  ▷ STAT 689. — Special Topics in (total enrollment: 5)
  ▷ STAT 691. — Research (total enrollment: 3)

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

  Fall
  ▷ STAT 610. — Theory of Statistics I (total enrollment: 44)
  ▷ STAT 614. — Probability for Statistics (total enrollment: 13)
  ▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010
Federal

- Conference on Resampling Methods and High Dimensional Data, National Science Foundation
- Long Range Dependence and Resampling Methodology for Spatial Data, National Science Foundation
- Resampling Methods for Temporal and Spatial Processes and Their Higher Order Accuracy, National Science Foundation

• PRESENTATIONS DURING 2010

• PUBLICATIONS DURING 2010
ERNING LI

ASSISTANT PROFESSOR (979) 862-7556
STAT-Longitudinal Data Analysis eli@stat.tamu.edu

• SERVICE DURING 2010

National
  ▶ Event: Conference on Resampling Methods and High Dimensional Data (Chair)
  ▶ Editorial/Board: South East Chapter of the American Statistical Association (Chapter Representative), Metrika and Test (Referee: Journals)

Department
  ▶ Committee/Panel: Grant Opportunities Committee, EEO Officer (Member)

• PRESENTATIONS DURING 2010
  ▶ “Resampling Methods and High Dimensional Data,” College Station, TX, 2010. (Invited)
  ▶ ENAR Spring Meeting, New Orleans, LA, 2010. (Contributed)
  ▶ First Joint Biostatistics Symposium, Beijing, China, 2010. (Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

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 2010

Spring
▷ STAT 689. — *Special Topics in* (total enrollment: 10)
▷ STAT 691. — *Research* (total enrollment: 3)

Summer
▷ STAT 685. — *Directed Studies* (total enrollment: 3)
▷ STAT 691. — *Research* (total enrollment: 3)

Fall
▷ STAT 414. — *Mathematical Statistics I* (total enrollment: 35)
▷ STAT 652. — *Statistics in Research II* (total enrollment: 5)
▷ STAT 691. — *Research* (total enrollment: 6)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Collaborative Research: Effective Probabilistic Approach Using Order Reduction and Hybrid Models - A New Paradigm for Structural Dynamic Analysis, *National Science Foundation*
▷ (REN) Development of Stochastic Approximation Monte Carlo Methods, *National Science Foundation*
▷ Sampling from Distributions with Intractable Integrals, *National Science Foundation*
• PRESENTATIONS DURING 2010
  ▶ “Annealing Evolutionary Stochastic Approximation for Global Optimization,” INFORM 2010, Austin, TX, November, 2010.( Invited)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Associate Department Head, Statistics, [2005]/

• SERVICE DURING 2010

National
▷ Committee/Panel: American Statistical Association Academic Representative (Member), American Statistical Association Committee on Recruitment and Retention of Membership (Member)

College
▷ Committee/Panel: College Quality Enhancement Plan Council (Member)

Department
▷ Service Position: Assistantship Duties (Chairman), Departmental Consulting Service (Chairman), Internship Program (Coordinator), Teaching Assignments (Chairman)
▷ Committee/Panel: Departmental Examinations Committee (Chair), Graduate Program Committee (Member), Graduate Service Committee (Member), Hartley Award Committee (Member), Institutional Effectiveness Committee (Member), Methods Examination Committee (Chairman), Undergraduate Service Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 642. — The Methods of Statistics II (total enrollment: 72)
▷ STAT 684. — Professional Internship (total enrollment: 13)
▷ STAT 685. — Directed Studies (total enrollment: 1)
▷ STAT 691. — Research (total enrollment: 1)

Summer
▷ STAT 684. — Professional Internship (total enrollment: 15)
▷ STAT 685. — Directed Studies (total enrollment: 1)
▷ STAT 691. — Research (total enrollment: 3)

Fall
▷ STAT 641. — The Methods of Statistics I (total enrollment: 48)
▷ STAT 684. — Professional Internship (total enrollment: 13)
▷ STAT 685. — Directed Studies (total enrollment: 1)
▷ STAT 691. — Research (total enrollment: 1)

• PUBLICATIONS DURING 2010

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• SERVICE DURING 2010

International
▷ Editorial/Board: *J. of Korean Statistical Association* (Referee: Journals)

National
▷ Committee/Panel: Zhijian Chen, University of Waterloo, External Committee (Member)

Department
▷ Committee/Panel: Award Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 691. — Research (total enrollment: 2)

Summer
▷ STAT 685. — Directed Studies (total enrollment: 1)
▷ STAT 691. — Research (total enrollment: 1)

Fall
▷ STAT 211. — *Principles of Statistics I* (total enrollment: 145)
▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Studies in Measurement Error Problems, *National Science Foundation*

• PRESENTATIONS DURING 2010

▷ “Efficient Semiparametric Distribution Estimation in Mixed Samples,” Catholic University of Chile, Santiago, Chile, August, 2010. (Invited)
▷ “Efficient Semiparametric Distribution Estimation in Mixed Samples,” Federal University of Minas Gerais, Belo Horizonte, Brazil, August, 2010. (Invited)
“Efficient Semiparametric Distribution Estimation in Mixed Samples,” University of Concepcion, Chile, August, 2010. (Invited)


“Explicit Estimating Equations for Semiparametric Generalized Linear Latent Variable Models and More,” Texas A&M University, College Station, TX, October, 2010. (Invited)

“Efficient Semiparametric Distribution Estimation in Mixed Samples,” Temple University, Temple, TX, November, 2010. (Invited)


“Efficient Semiparametric Distribution Estimation in Mixed Samples,” Xiamen University, China, December, 2010. (Invited)


PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  › Director, Center for Statistical Bioinformatics, Statistics, [2010]
  › Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  › Director, Bayesian Bioinformatics Lab, Statistics, []

• SERVICE DURING 2010
  National
  › Editorial/Board: Biostatistics (Associate Editor), Journal of Computational and Graphical Statistics (Associate Editor)
  State
  › Advisory Board: Wiley (Member)
  Department
  › Research Group: Bioinformatics Committee (Chair)
  › Committee/Panel: Hiring Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  › STAT 691. — Research (total enrollment: 8)
  Summer
  › STAT 685. — Directed Studies (total enrollment: 1)
  › STAT 691. — Research (total enrollment: 8)
  Fall
  › STAT 691. — Research (total enrollment: 9)

• RESEARCH PROJECTS DURING 2010
  Federal
  › Bayesian Uncertainty Quantification in Predictions of Flows in Highly Heterogeneous Media and its Applications to the CO2 Sequestration, Department of Energy
  › Support of Stockpile Stewardship Program, Lawrence Livermore National Laboratory
  › (REN) Measurement Error, Nutrition and Breast/Colon Cancer, National Institutes of Health
  › ATD: Bayesian Data Missing Approaches for Biological Threat Detection, National Science Foundation
  › CMG Research: Statistical Analysis of Large Non-Gaussian Datasets in Climate Science, National Science Foundation
- Multiscale Data Integration Using Facies Based Hierarchical Bayesian Models, *National Science Foundation*

- **PRESENTATIONS DURING 2010**
  - Joint Statistical Meeting, 2010. (Invited)
  - “Frontier of Statistical Decision Making and Bayesian Analysis,” San Antonio, TX, 2010. (Invited)
  - “Workshop on Statistical Issues in Analyzing Data from Diverse Sources,” Rutgers University, Camden, NJ, 2010. (Invited)
  - IISA, India, 2010. (Invited)

- **PUBLICATIONS DURING 2010**
• SERVICE DURING 2010
  
  International
  ▶ Editorial/Board: *Journal of the Korean Statistical Society* (Referee: Journals)

  National

  University
  ▶ Committee/Panel: Koldus Award Selection Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  
  Spring
  ▶ STAT 620. — *Statistical Large Sample Theory* (total enrollment: 13)
  ▶ STAT 681. — *Seminar* (total enrollment: 29)
  ▶ STAT 691. — *Research* (total enrollment: 1)

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

  Fall
  ▶ STAT 630. — *Overview of Mathematical Statistics* (total enrollment: 22)
  ▶ STAT 681. — *Seminar* (total enrollment: 33)
  ▶ STAT 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010
  
  Federal
  ▶ Efficient Estimation in Semiparametric Regression with Possibly Incomplete Data, *National Science Foundation*

• PRESENTATIONS DURING 2010
  ▶ “Estimating the Density of a Possibly Missing Response Variable in Nonlinear Regression,” 8th International Indian Statistical Association Joint Meeting, Visakhapatnam, India,
January, 2010. (Invited)
▷ "Nonlinear Regression with Missing Responses," Université Catholique de Louvain, Louvain-la-Neuve, Belgium, May, 2010. (Invited)

**PUBLICATIONS DURING 2010**
• **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 2010**
  ▶ Dean, Main Office, College of Science, [2002]

• **SERVICE DURING 2010**

  **International**
  ▶ Committee/Panel: Mexican Academy Of Sciences (Member)

  **University**
  ▶ Committee/Panel: Council on the Research Environment (Chair), Development Strategy Council (Co-Chair), Intellectual Property Constituent Committee (Member), Transportation Services Advisory Committee (Member)

  **College**
  ▶ Committee/Panel: Executive Committee (Chair)

No report received from faculty member.
• AWARDS DURING 2010

National
▷ Fellow, Wakonse South Teaching Conference

• SERVICE DURING 2010

National
▷ Event: AP Statistics Exam (Reader), AP Statistics High School Teachers (Director), AP Statistics High School Teachers (Host), AP Statistics National Listserv (Contributor), ASA- NCTM K-12 Project Competition (Judge)
▷ Editorial/Board: Adapted Physical Activity Quarterly (Reviewer), Computational Statistics and Data Analysis, Elsevier, Concepts and Controversies, Freeman, A Life Scientist’s Guide to Linear Models, CRC Press (Reviewer), Introduction to the Practice of Statistics (Reviewer), The Practice of Statistics (Reviewer)

University
▷ Event: Secondary Faculty Advisor for the LDSSA University Student Organization (Advisor)

Department
▷ Service Position: STAT 201 (Coordinator)
▷ Event: AP Statistics Summer Institute (Director), NCTM, CAMT, TI3 Conferences (Departmental Representative)

• TEACHING ASSIGNMENTS DURING 2010

Fall
▷ STAT 201. — Elementary Statistical Inference (total enrollment: 107)

• PRESENTATIONS DURING 2010

▷ “Developing and Offering Online Courses/Degree Programs,” Wakonse South Teaching Conference, Burnet, TX, April, 2010.( Invited)
▷ “Developing and Offering Online Courses/Degree Programs,” Conference for the Advancement of Mathematics Teaching, July, 2010.( Contributed)
▷ “Designing a Course for Online Instruction,” Joint Statistical Meetings, Vancouver, BC Canada, August, 2010.( Invited)
▷ “Statistics and Statisticians,” A&M Consolidated High School, College Station, TX, October, 2010.( Invited)
• PUBLICATIONS DURING 2010
MOHSEN POURAHMADI

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• SERVICE DURING 2010

National

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

Department
▷ Service Position: Young Faculty (Mentor)
▷ Committee/Panel: Faculty Recruiting (Chair), Graduate Service (Chair), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 685. — *Directed Studies* (total enrollment: 1)
▷ STAT 689. — *Special Topics in* (total enrollment: 3)
▷ STAT 691. — *Research* (total enrollment: 2)

Summer
▷ STAT 685. — *Directed Studies* (total enrollment: 1)
▷ STAT 691. — *Research* (total enrollment: 1)

Fall
▷ STAT 612. — *Theory of Linear Models* (total enrollment: 16)
▷ STAT 673. — *Time Series Analysis I* (total enrollment: 16)
▷ STAT 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Generalized Linear Models for Large Correlation Matrices via Partial Autocorrelations, *National Science Foundation*

• PRESENTATIONS DURING 2010
▷ “Generalized Linear Models for the Covariance Matrix of Correlated Data,” University of Munich, Germany, May, 2010. (Invited)

• PUBLICATIONS DURING 2010

868

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**SERVICE DURING 2010**

National

- Editorial/Board: Joint Statistical Meetings (Chair), Research Council for Natural Sciences and Engineering at the Academy of Finland (Review: Proposals), *JABES, JASA, JKSS, SAM, Environmetrics* (Referee: Journals)

**TEACHING ASSIGNMENTS DURING 2010**

Spring

- STAT 211. — Principles of Statistics I (total enrollment: 75)

Fall

- STAT 610. — Theory of Statistics I (total enrollment: 48)

**RESEARCH PROJECTS DURING 2010**

Federal

- A New Approach of Statistical Modeling and Analysis of Massive Spatial Data Sets, *National Science Foundation*

**PRESENTATIONS DURING 2010**


**PUBLICATIONS DURING 2010**

• SERVICE DURING 2010

University
  ▶ Committee/Panel: Information Policy Committee (Member), ITAC Password Sub-Committee (Chair), ITAC Virtualization Sub-Committee (Member)

College
  ▶ Committee/Panel: Systems Administrators Committee (Chair)

Department
  ▶ Committee/Panel: Computing Committee (Member), TAC Virtualization Sub-Committee (Member)
SIMON J. SHEATHER

PROFESSOR (979) 862-2043
STAT-Robust and Flexible Regression Methods sheather@stat.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  - Department Head, Statistics, [2005/]

- SERVICE DURING 2010
  National
  - Committee/Panel: ASA Task Force on Membership Growth (Member), Interface 2010
  - Program Committee (Member)

  University
  - Committee/Panel: Faculty Salary Study for the Dean of Faculties (Member), Statistical
  - Analyses of Applications, Admissions and Enrollments (Member), Head Council (Member), Presidents Task Force on Faculty Evaluations (Member)

  College
  - Committee/Panel: Executive Committee (Member)

  Department
  - Committee/Panel: State Employee Charitable Campaign(Representative)

- TEACHING ASSIGNMENTS DURING 2010
  Spring
  - STAT 691. — Research (total enrollment: 2)

  Summer
  - STAT 691. — Research (total enrollment: 2)

  Fall
  - STAT 302. — Statistical Methods (total enrollment: 147)
  - STAT 685. — Directed Studies (total enrollment: 1)
  - STAT 691. — Research (total enrollment: 2)

- RESEARCH PROJECTS DURING 2010
  Federal
  - (REN) Lipoprotein Density Profiling for Clinical Studies, National Institutes of Health

- PRESENTATIONS DURING 2010
  - “Online Delivery and the Use of Technology in the Classroom,” AMA Joint Mathematics
  - “Choosing between Logistic Regression and Classification Trees in Data Mining,” M2010
  Data Mining Conference, Las Vegas, NV, October, 2010. (Invited)
• PUBLICATIONS DURING 2010


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▷ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2010

  National
  ▷ Editorial/Board: Journal of the American Statistical Association and American Statistician (Associate Editor), Journal of the American Statistical Association and TAS (Reviewed)

  College
  ▷ Committee/Panel: Grievance Committee (Vice Chair), Grievance Committee (Elected Member)

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

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▷ STAT 601. — Statistical Analysis (total enrollment: 34)
  ▷ STAT 685. — Directed Studies (total enrollment: 1)
  ▷ STAT 691. — Research (total enrollment: 1)

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

  Fall
  ▷ STAT 407. — Principles of Sample Surveys (total enrollment: 10)
  ▷ STAT 607. — Sampling (total enrollment: 23)
  ▷ STAT 648. — Applied Statistics and Data Analysis (total enrollment: 19)

• RESEARCH PROJECTS DURING 2010

  Federal
  ▷ (REN) Fetal Alcohol Exposure and Neurodevelopment, National Institutes of Health
• SERVICE DURING 2010

National
▷ Event: ENAR Meeting 2010 (Organizer)
▷ Committee/Panel: New Researcher Conference in Statistics and Probability (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 302. — Statistical Methods (total enrollment: 84)
▷ STAT 611. — Theory of Statistics II (total enrollment: 17)
▷ STAT 685. — Directed Studies (total enrollment: 1)

Fall
▷ STAT 211. — Principles of Statistics I (total enrollment: 75)
▷ STAT 685. — Directed Studies (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Thirteenth North American Meeting of New Researchers in Statistics and Probability, Department of Defense
▷ North American Meeting of New Researchers in Statistics and Probability, National Institutes of Health
▷ Collaborative Research: Statistical Methods Based on Parametric and Semiparametric Hierarchical Models to Solve Problems Related to Socio-Economic-Demographic Deprivation Measures, National Science Foundation

• PUBLICATIONS DURING 2010

• SERVICE DURING 2010

  National
  ▷ Committee/Panel: ASA Advisory Groups (Member)

• TEACHING ASSIGNMENTS DURING 2010

  Spring
  ▷ STAT 641. — The Methods of Statistics I (total enrollment: 30)

  Fall
  ▷ STAT 636. — Methods in Multivariate Analysis (total enrollment: 40)

• PRESENTATIONS DURING 2010

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Associate Dean for Technology Mediated Instruction and Distance Education, Technology Office, College of Science, [2006]

• SERVICE DURING 2010
  National
  ▶ Committee/Panel: ASA Committee on Energy (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member), Graduate Instruction Committee (Member), Information Technology Committee (Member), Qatar Advisory Committee (Member), Technology-Mediated Instruction Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ STAT 608. — Least Squares and Regression Analysis (total enrollment: 47)
  ▶ STAT 653. — Statistics In Research III (total enrollment: 33)
  ▶ STAT 681. — Seminar (total enrollment: 9)
  ▶ STAT 684. — Professional Internship (total enrollment: 11)
  ▶ STAT 685. — Directed Studies (total enrollment: 9)
  ▶ STAT 689. — Special Topics in (total enrollment: 10)

  Summer
  ▶ STAT 604. — Special Problems in Statistical Computations and Analysis (total enrollment: 33)
  ▶ STAT 681. — Seminar (total enrollment: 7)
  ▶ STAT 685. — Directed Studies (total enrollment: 2)

  Fall
  ▶ STAT 657. — Advanced Programming Using SAS (total enrollment: 22)
  ▶ STAT 681. — Seminar (total enrollment: 16)
  ▶ STAT 684. — Professional Internship (total enrollment: 24)
  ▶ STAT 685. — Directed Studies (total enrollment: 9)

• PUBLICATIONS DURING 2010
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ▶ Senior Research Scientist, Texas Transportation Institute, [2007]/

• SERVICE DURING 2010
  International
  ▶ Committee/Panel: Committee on Publication Ethics (Member)

  National
  ▶ Editorial/Board: Encyclopedia of Environmetrics (Section Editor), *Chemometrics and Intelligent Laboratory Systems* (Co-Editor)
  ▶ Committee/Panel: ASA Interest Group on Forensic Science (Member), National Institute of Statistical Sciences (Representative), National Institute of Statistical Sciences (Board of Trustees)

  Department
  ▶ Service Position: Secured NISS 2011 Annual Meeting at Texas A&M UniversitySTAT (Representative)
  ▶ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ STAT 408. — *Introduction to Linear Models* (total enrollment: 12)

  Fall
  ▶ STAT 623. — *Statistical Methods in Chemistry* (total enrollment: 6)
  ▶ STAT 658. — *Transportation Statistics* (total enrollment: 11)
  ▶ STAT 685. — *Directed Studies* (total enrollment: 2)

• PRESENTATIONS DURING 2010
  ▶ JSM on the Gapped Bootstrap, May, 2010. (Invited)

• PUBLICATIONS DURING 2010


SERVICE DURING 2010

International
▷ Editorial/Board: FONDECYT - Chile Research Foundation (Reviewer)

National

University
▷ Committee/Panel: Library Committee (Member)

College
▷ Committee/Panel: Grievance Committee (Elected Member), International Programs Committee (Member)

TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 613 — Intermediate Theory of Statistics (total enrollment: 22)
▷ STAT 651 — Statistics in Research I (total enrollment: 37)

Fall
▷ STAT 651 — Statistics in Research I (total enrollment: 56)

RESEARCH PROJECTS DURING 2010

Federal
▷ Beyond Stationarity: Statistical Inference for Nonstationary Processes, National Science Foundation

PRESENTATIONS DURING 2010
▷ “A Short Course on Nonstationary Time Series,” University of Hyderabad, India, January, 2010. (Invited)
ELLEN H. TOBY

SENIOR LECTURER  (979) 845-3197
STAT-Biostatistics, Statistics Education  ellen@stat.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  - Undergraduate Advisor, Statistics Undergraduate Advising Office, Statistics, [2006]

- AWARDS DURING 2010
  College
  - Distinguished Achievement Award - Teaching, Association of Former Students

- SERVICE DURING 2010
  College
  - Committee/Panel: Faculty Advisory Council (Elected Member), Undergraduate Curriculum Committee (Member)
  Department
  - Service Position: STAT 302 (Coordinator)

- TEACHING ASSIGNMENTS DURING 2010
  Spring
  - STAT 212. — Principles of Statistics II (total enrollment: 75)
  - STAT 302. — Statistical Methods (total enrollment: 150)
  Fall
  - STAT 212. — Principles of Statistics II (total enrollment: 75)
  - STAT 302. — Statistical Methods (total enrollment: 150)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2010
  ➢ Member, Interdisciplinary Faculty, Bioinformatics, [2006]

• SERVICE DURING 2010
  National
  ➢ Editorial/Board: Grant Proposals, External Thesis (Reviewed), *Journal of Nonparametric Statistics* (Editor-in-Chief), *Various Articles for Journals* (Referee: Journals)
  Department
  ➢ Committee/Panel: College of Science Strategic Planning Committee (Member), Graduate Student Recruiting (Member), Young Investigator Award Selection Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ➢ STAT 685. — Directed Studies (total enrollment: 1)
  ➢ STAT 691. — Research (total enrollment: 3)
  Summer
  ➢ STAT 685. — Directed Studies (total enrollment: 1)
  ➢ STAT 691. — Research (total enrollment: 2)
  Fall
  ➢ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2010
  Federal
  ➢ Relating Biopsychosocial Communication to Health and Economic Outcomes, *National Institute of Mental Health*
  ➢ The Program for Rural and Minority Health Disparity Research, *National Institutes of Health*
  Private
  ➢ Maintaining Musculoskeletal Health in the Lunar Environment, *Baylor College of Medicine*

• PRESENTATIONS DURING 2010
• 13th New Researchers Conference, Vancouver, Canada, 2010. (Invited)
• Ohio State University, Columbus, OH, 2010. (Invited)
• Zhejiang University, China, 2010. (Invited)

• PUBLICATIONS DURING 2010
• SERVICE DURING 2010

University
▷ Committee/Panel: Implementation Task Force for Athletics (Member), Kappa Chapter of Phi Beta Kappa (Treasurer), Presidents Athletic Task Force (Member), University Athletic Council (Chair), Vision 2020 - Mid-term Review Task Force: Imperative 4 Study Team (Member)

College
▷ Committee/Panel: College Quality Enhancement Plan Council (Member), Research Advisory Committee (Member)

Department
▷ Committee/Panel: Examination Committee - Masters Qualifying Exam (Member), Graduate Program Committee (Member), Graduate Service Committee (Member), Parzen Prize Committee (Chair), Promotion and Tenure Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 659. — Applied Categorical Data Analysis (total enrollment: 38)
▷ STAT 691. — Research (total enrollment: 3)

Summer
▷ STAT 630. — Overview of Mathematical Statistics (total enrollment: 30)
▷ STAT 659. — Applied Categorical Data Analysis (total enrollment: 29)
▷ STAT 691. — Research (total enrollment: 2)

Fall
▷ STAT 302.(H) — Statistical Methods (total enrollment: 27)
▷ STAT 630. — Overview of Mathematical Statistics (total enrollment: 71)
▷ STAT 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2010

Federal
▷ URM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation
• SERVICE DURING 2010

National
▷ Committee/Panel: American Statistical Association (Program Chair)

State
▷ Committee/Panel: SETCASA (President)

University
▷ Event: 2011 COTS (Organizer)

Department
▷ Service Position: STAT 211 (Coordinator)
▷ Committee/Panel: Awards Committee (Member), Online Learning (Associate Director)

• TEACHING ASSIGNMENTS DURING 2010

Spring
▷ STAT 211. — Principles of Statistics I (total enrollment: 36)
▷ STAT 604. — Special Problems in Statistical Computations and Analysis (total enrollment: 24)
▷ STAT 691. — Research (total enrollment: 1)

Summer
▷ STAT 685. — Directed Studies (total enrollment: 1)

Fall
▷ STAT 604. — Special Problems in Statistical Computations and Analysis (total enrollment: 83)
▷ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2010

Federal
▷ Collaborative Research: INCIST Improving National Acceptance of Computing Intensive Statistical Techniques, National Science Foundation

• PRESENTATIONS DURING 2010
▷ “Teaching Resampling with StatCrunch,” ICTCM, Chicago, IL, March, 2010.( Invited)


“StatCrunch Workshop,” Decision Sciences Institute, San Diego, CA, November, 2010. (Contributed)


• SERVICE DURING 2010
  National
  ▶ Editorial/Board: Biometrics, Biostatistics, Computational Statistics and Data Analysis (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2010
  Spring
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ STAT 302. — Statistical Methods (total enrollment: 95)

• RESEARCH PROJECTS DURING 2010
  Federal
  ▶ Statistical Methods for Complex Functional Data, National Science Foundation

• PRESENTATIONS DURING 2010
  ▶ 2010 Joint Statistical Meetings, Vancouver, Canada, 2010. (Contributed)
  ▶ Department of Statistics, Simon Fraser University, Burnaby, Canada, June, 2010. (Invited)
  ▶ Department of Statistics, University of British Columbia, Vancouver, Canada, June, 2010. (Invited)
  ▶ ICSA 2010 Applied Statistics Symposium, Indianapolis, IN, June, 2010. (Invited)
  ▶ Department of Statistics, University of Illinois, Urbana, IL, September, 2010. (Invited)

• PUBLICATIONS DURING 2010
7. Research Activity, 2010

This section contains information on all funded research activity for the calendar year 2010. 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 2010 = # Days 2010 \times Daily Grant Award
### 7.1 Summary of Research Support, 2010

<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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<td>- Battelle - Pacific Northwest National Laboratory</td>
<td>Quantifying Protein Abundance from Mass Spectrometry Experiments Using the AMT Tag Pipeline</td>
<td>11/1/2008</td>
<td>9/30/2011</td>
<td>120,179</td>
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<td>- Subtotal: Battelle - Pacific Northwest National Laboratory</td>
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<td>11,618</td>
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<td>- Department of Energy</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>
<td>8/31/2013</td>
<td>38,423</td>
<td>3,945</td>
<td>42,368</td>
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<td>- Subtotal: Department of Energy</td>
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<td>38,423</td>
<td>3,945</td>
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<td>- Subtotal: Department of Health and Human Services</td>
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<td>56,219</td>
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<td>- Lawrence Livermore National Laboratory</td>
<td>Support of Stockpile Stewardship Program, (with: J. Guermond, B. Mallick, B. Popov)</td>
<td>9/1/2008</td>
<td>6/30/2011</td>
<td>103,865</td>
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<td><strong>Subtotal:</strong></td>
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<td><strong>Grantee:</strong> National Institute of Mental Health</td>
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<td>Wang, S.</td>
<td>Relating Biopsychosocial Communication to Health and Economic Outcomes</td>
<td>1/1/2009</td>
<td>12/31/2011</td>
<td>166,819</td>
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<td><strong>Grantee:</strong> National Institutes of Health</td>
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<td>Carroll, R.J.</td>
<td>(REN) Training Program in Biostatistics, Bioinformatics, and Nutrition</td>
<td>7/1/2006</td>
<td>6/30/2011</td>
<td>485,559</td>
<td>38,840</td>
<td>524,399</td>
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<td>Dahl, D.B.</td>
<td>Side Chain Driven Refinement of Protein Structure</td>
<td>7/1/2007</td>
<td>6/30/2010</td>
<td>49,932</td>
<td>0</td>
<td>49,932</td>
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<tr>
<td>Fan, R.</td>
<td>Genetic Basis for Exercise Training Responses</td>
<td>4/1/2008</td>
<td>3/31/2012</td>
<td>154,363</td>
<td>71,779</td>
<td>226,141</td>
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<td>Fan, R.</td>
<td>Research and Travel Support from the Intergovernmental Personnel Act (IPA)</td>
<td>9/1/2009</td>
<td>8/31/2010</td>
<td>23,538</td>
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<td>Sherman, M.</td>
<td>(REN) Fetal Alcohol Exposure and Neurodevelopment</td>
<td>7/1/2008</td>
<td>6/30/2013</td>
<td>75,000</td>
<td>32,986</td>
<td>107,986</td>
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<td>Wang, S.</td>
<td>The Program for Rural and Minority Health Disparity Research</td>
<td>10/1/2007</td>
<td>5/31/2012</td>
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SEC. 7. RESEARCH ACTIVITY 891
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<th>Grantee</th>
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<td>Hart, J.D.</td>
<td>Cluster-Based Bootstrapping in Multiple Hypothesis Testing</td>
<td>6/1/2006</td>
<td>5/31/2010</td>
<td>7,009</td>
<td>2,957</td>
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<td>Jun, M.</td>
<td>Nonstationary Spatial-Temporal Covariance Models for Multivariate Processes on a Globe</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>17,065</td>
<td>7,935</td>
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<td>Lahiri, S.N.</td>
<td>Resampling Methods for Temporal and Spatial Processes and Their Higher Order Accuracy</td>
<td>9/1/2007</td>
<td>8/31/2011</td>
<td>72,566</td>
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<td>Liang, F.</td>
<td>Collaborative Research: Effective Probabilistic Approach Using Order Reduction and Hybrid Models - A New Paradigm for Structural Dynamic Analysis</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>43,066</td>
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<td>Liang, F.</td>
<td>Sampling from Distributions with Intractable Integrals</td>
<td>8/1/2010</td>
<td>7/31/2013</td>
<td>12,628</td>
<td>1,254</td>
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<td>Ma, Y.</td>
<td>Studies in Measurement Error Problems</td>
<td>7/1/2009</td>
<td>6/30/2012</td>
<td>37,976</td>
<td>17,039</td>
<td>55,015</td>
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<td>Mallick, B.K.</td>
<td>Multiscale Data Integration Using Facies Based Hierarchical Bayesian Models, (with: Y. Efendiev, B. Mallick)</td>
<td>9/1/2007</td>
<td>8/31/2011</td>
<td>40,589</td>
<td>15,244</td>
<td>55,833</td>
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<td>Sinha, S.</td>
<td>Collaborative Research: Statistical Methods Based on Parametric and Semiparametric Hierarchical Models to Solve Problems Related to Socio-Economic-Demographic Deprivation Measures</td>
<td>5/1/2010</td>
<td>4/30/2013</td>
<td>6,693</td>
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<td>West, R.</td>
<td>Collaborative Research: INCIST Improving National Acceptance of Computing Intensive Statistical Techniques</td>
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<td>Dabney, A.R.</td>
<td>Statistical Methods for Protein Identification and Quantitation in Protein Mass Spectrometry</td>
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<td>116,773</td>
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<td>Carroll, R.J.</td>
<td>Institute for Applied Mathematics and Computational Science (IAMCS) at Texas A&amp;M University at The King Abdullah University of Science and Technology Global Research Partnership</td>
<td>6/1/2008</td>
<td>5/31/2014</td>
<td>3,333,333</td>
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<td><strong>University of Alabama-Birmingham</strong></td>
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<td>Carroll, R.J.</td>
<td>Genome-Wide Structured Association Testing and Regional Admixture Mapping</td>
<td>7/1/2007</td>
<td>8/31/2011</td>
<td>40,951</td>
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SEC. 7. RESEARCH ACTIVITY 895
### 7.2 Summary of Individual Support, 2010

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- **Subtotal Dabney, A.B.** 317,628 25,915 343,543

| National Institutes of Health                                      | Side Chain Driven Refinement of Protein Structure                          | 7/1/2007  | 6/30/2010 | 49,932   | 0        | 49,932   |

- **Subtotal Dahl, D.B.** 49,932 0 49,932

| National Institutes of Health                                      | Genetic Basis for Exercise Training Responses                              | 4/1/2008  | 3/31/2012 | 154,363  | 71,779   | 226,141  |
| National Institutes of Health                                      | Research and Travel Support from the Intergovernmental Personnel Act (IPA) | 9/1/2009  | 8/31/2010 | 23,538   | 0        | 23,538   |

- **Subtotal Fan, B.** 177,901 71,779 249,680


SEC 7. RESEARCH ACTIVITY 897
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2010 STATISTICS ANNUAL REPORT
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SEC 7.

*Research Activity* 901
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2010 Statistics annual report