Annual Report, 2011

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 $60 million in sponsored research projects that create new knowledge and drive economies around the world. Each year despite all economic indicators to the contrary, those awards steadily continue to increase, both in amount and stature, as testament to the strength of our programs and overall reputation for excellence.

The past year marked a changing of the guard in two departments: Mathematics as well as Physics and Astronomy. On September 1, mathematician Emil Straube began a four-year term as head of the former, followed two months later by physicist George Welch, who did the same in the latter. I expect big things from both professors and units as they continue to build on the Top-20 public gains realized under the previous administrations. In addition, the year also marked a major milestone in fundraising - a landmark $25 million gift (half of which was credited to Texas A&M) by George P. Mitchell ’40 and The Cynthia and George Mitchell Foundation toward construction of the Giant Magellan Telescope.

Our individual teaching, research, and service highlights in 2011 were many and magnified, highlighted primarily by big moments in research for each department. None possibly burned brighter than astronomer Nicholas Suntzeff’s near-brush with a Nobel Prize, which was shared in part by two members of the team he co-founded that discovered three-quarters of the universe and the shocking fact that its expansion is accelerating. Other noteworthy individual honors in Physics and Astronomy included Marlan Scully’s Optical Society of America Herbert Walther Award, George Kattawar’s Distinguished Texas Scientist of the Year Award and Dan Melconian’s U.S. Department of Energy Early Career Research Award.

Chemistry celebrated four new American Chemical Society Fellows (David Bergbreiter, Kim Dunbar, Francois Gabbai, Sherry Yennello). Yennello also merited the ACS Francis P. Garvan-John M. Olin Medal for distinguished service to women chemists, while a fifth chemist, Oleg Ozerov, earned the ACS Pure Chemistry Award. Finally, Marcetta Darensbourg scored a rare double, taking American Academy of Arts and Sciences Fellow as well as Sigma Xi Distinguished Scientist honors.

In Mathematics, Grigoris Paouris was selected as a Sloan Research Fellow, while in Biology, Richard Gomer and Darrell Pilling earned Texas Inventors of the Year accolades from the State Bar of Texas for their work resulting in several fibrosing disease-related patents. Statistics’ William B. Smith received the American Statistical Association Founder’s Award, while Omer Jenkins was one of four recipients of the 2011 Jefferson Award for Public Service.

On a campus achievement front, five faculty (Tadgh Begley, Dudley Herschbach, Peter Kuchment, Bani Mallick, Karen Wooley) were promoted to distinguished professor, Texas A&M’s highest academic rank for faculty. Four received university-level Texas A&M Association of Former Students Distinguished Achievement Awards - Christopher Pope in Teaching and Joseph Pascaiak, Daniel Romo and Jairo Sinova in Research. Physicist David Toback earned the Texas A&M Honors and Undergraduate Research Teacher-Scholar Award, while chemist David Bergbreiter was named...
the Wells Fargo Honors Faculty Mentor. Physicist Alexei Sokolov also earned the JoAnn Treat Research Excellence Award.

In 2011 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 2007, Fall 2008, Fall 2009, Fall 2010, Fall 2011) *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 2007, Fall 2008, Fall 2009, Fall 2010, Fall 2011) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

**Teaching**
- **SCH: Undergraduate and Graduate** - Office of Institutional Studies and Planning (OISP). (Spring 2007 - Fall 2011) *SCH Summaries by College for [Semester] [Year].*
- **FTE: 2007-2011** - Office of Institutional Studies and Planning (OISP). (Fall 2007, Fall 2008, Fall 2009, Fall 2010, Fall 2011) *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

<table>
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<th>Assoc. Prof.</th>
<th>Asst. Prof.</th>
<th>Total</th>
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*Minority= Black and/or Hispanic
## Research Snapshot

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Last year’s annual report included a duplicate record for a grant, resulting in an inflated total reported for Mathematics, Statistics and the overall College of Science. The 2011 report reflects the corrected 2010 totals. We apologize for this error.
# Student Snapshot

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<th>Undergraduate Majors (Fall)</th>
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## Teaching Snapshot

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### SCH: Graduate

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### WSCH (Weighted Semester Credit Hours) in thousands

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<td>2010</td>
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<td>2008</td>
<td>2007</td>
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## Contents

1. Departmental Statistics ................................................................. 13  
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1. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty
▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyList_FINAL.

Non-Tenure-Track Faculty
▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyListNonTTF_FINAL.

Postdoctoral Fellows
▷ Provided by the Department

Graduate Student/Undergraduate Majors
▷ Office of Institutional Studies and Planning (OISP). (Fall 2010, Fall 2011) 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 2011) 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.
# 1.1 Statistical Abstract

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<th>I. Personnel</th>
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<td>c. Postdoctoral Fellows</td>
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<td>d. Graduate Majors</td>
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<td>e. Undergraduate Majors</td>
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<td>f. Support Staff</td>
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## II. Instructional Activities

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

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<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Research Publications</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>b. Research Presentations</td>
<td>98</td>
<td>90</td>
</tr>
<tr>
<td>c. Federal</td>
<td>4,712,167</td>
<td>7,194,671</td>
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<tr>
<td>d. State</td>
<td>27,206</td>
<td>300,995</td>
</tr>
<tr>
<td>e. Private/Non-Profit</td>
<td>1,075,568</td>
<td>1,055,088</td>
</tr>
<tr>
<td>f. Industrial/Corporate</td>
<td>53,575</td>
<td>42,837</td>
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<tr>
<td>g. International</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>h. Other Govt</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>6,113,316</td>
<td>8,593,591</td>
</tr>
</tbody>
</table>
2. Honors & Awards, 2011

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2011.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2011.
### 2.1 Honors & Awards Received by Faculty, 2011

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>X. Lin</td>
<td>Teaching Excellence, Texas A&amp;M University</td>
</tr>
<tr>
<td>D. Pilling</td>
<td>Texas Inventor of the Year, State Bar of Texas</td>
</tr>
<tr>
<td>M. Sachs</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
</tbody>
</table>
2.2 Honors & Awards Received by Students, 2011

Graduate

► 1st Place for Best Platform Presentation, Genetics Subject Category  
   Mahesh Padanad

► 2nd Place for Best Poster Presentation, Genetics Graduate Research Poster Competition  
   Mahesh Padanad

► 3rd Place for Best Poster Presentation, Genetics Mini Symposium  
   Mahesh Padanad

► Golden and Southerland Aggie Scholarship  
   Mahesh Padanad

► PADI Foundation Grant  
   Sunny Scobell

► TAMU EEB Graduate Student Travel Grant  
   Sunny Scobell

► Texas A&M University Academic Achievement Scholarship  
   Mahesh Padanad

► Vern Parish Fund Award, American Livebearer Association  
   Sunny Scobell

Undergraduate

► Poster Award  
   Samson Adeniji
   Meredith Bunkers
   Maria Gutierrez
3. Students, 2011

This section contains all degrees awarded, as reported by the department, during the calendar year 2011.
3.1 Graduate Degrees Awarded, 2011

Fall

▷ M.S.
Charles Royal Carlson

Advisor(s): G. Rosenthal

▷ Ph.D.
Zachary Wyatt Culumber
Mate Choice, Genetic Variation, and Population Structure in Hybrid Zones
Advisor(s): G. Rosenthal

Krithika Kumar
Regulation of the Nitrogen Fixation Genes in the Heterocystous Cyanobacterium Anabaena sp. Strain PCC 7120
Advisor(s): M. Benedik

Sunny Kay Scobell
The Role of Androgens in Male Pregnancy and Female Competitive Behavior in a Sex Role Reversed Pipefish
Advisor(s): A. Jones

Shruti Vemaraju
Neurosensory Development in the Zebrafish Inner Ear
Advisor(s): B. Riley

Spring

▷ M.S.
Sirisha Medicherla

Advisor(s): D. Siegele

▷ Ph.D.
Abhishek Chatterjee
Connecting the Circadian Clock with Chemosensation
Advisor(s): P. Hardin

Yishi Liu
A Cholinergic Sensory-Motor Circuit Controls the Male Copulation Behavior in C. elegans
Advisor(s): R. Garcia

Thomas Charles Miller
Biological Activity of Thyrotropin in Two Teleost Fish, Red Drum (Sciaenops ocellatus) and Goldfish (Carassius auratus)
Advisor(s): D. MacKenzie

Lida Silvana Paredes Martinez
The Ribosomal DNA Genes Influence Genome-Wide Gene Expression in Drosophila melanogaster
Advisor(s): K. Maggert

Angela Dawn Witmer
Ecology of Sandy Beach Intertidal Macrino fauna Along the Upper Texas Coast
Summer

▷ M.S.

Natalie Jeanette Thompson

Advisor(s): M. Wicksten

Advisor(s): C. Campbell
### 3.2 Undergraduate Degrees Awarded, 2011

#### Fall

**B.A.**

- Rachel Diana Gubbels
- Annail Pamela Gutierrez Colombn
- Ariana Clemencia Klein
- Taylor Paige Saley
- Lilia Hortensia Sanchez

**B.S.**

- Austin Paul Akers
- Erika Jane Alvarez
- Michaela Chioma Anukwuem
- Lauren Nicole Atwood
- Jennifer Christina Blake
- Deepak Bommisetty
- Vincent Dave Bueno
- Brittny Kay Cantero
- Robert Patrick Clayton
- William Andrew Cromwell
- Priscilla Marie Cruz
- Paul Allan Daniel
- Heather Nicole Denney
- Erin Elise Doggett
- Myca Laraine Durocher
- Erin Lynn Eaton
- Tyler O’neil Eschbach
- Alberto Florez Garcia
- Benjamin Jay Fulton
- Nimimiayifa Beatrice Goin
- Linda Daniella Guajardo
- Stacey Nicole Hales
- Tahani Ali Hamdan
- Caitlin Jean Harrison
- Brent Thomas Herndon
- Jonathan Christopher Herrera
- Creston Carnell Hill
- Saba Tahir Khan
- Jennifer Dahae Kim
- Kathryn Elizabeth Klingemann
- Kenton Thomas Krol
- Derian C Lai
- Whitley Erin Lanier
- Sora Lee
- Hailey Michelle Leopold
- Matthew James Maddox
- Rebecca Rose Martin
- Lyndsay Carol Mathews
Spring

B.A.

Claire Elizabeth Allison
Victor Manuel Chavez
Bradley Walker Christensen
Lauren Elyse David
Bryce Charles Gagliano

SEC. 3.2 UNDERGRADUATE DEGREES 23
John Roland Knight
Zachary William Ratcliff
Nina Frances Victores

▷ B.S.

Cristianna Alicia Abilez
Jasson Thomas Abraham
Aaron Kenneth Adamson
Opeyemi Samson Adeniji
Sonny Aguilar
Mihika Ahluwalia
Andrew Michael Albrecht
Nicole Elizabeth Anderson
Phillip Michael Barron
Emily Lauren Beagle
Jonathan Charles Behlen
Christopher Gene Bennett
Dhara Jagdish Bhakta
Amanda Catherine Boerner
Charles Edward Boren
Matthew Roswell Braig
Kathryn Anne Brelsford
Alexandra Leigh Brenk
Amy Elizabeth Brinegar
Michael David Bruce
Kevin Alexander Bubel
Meredith Raye Bunkers
Natalie Nicole Buro
Sara Elizabeth Butters
Jared Chace Cade
Sarah Vivian Carter
Rosario Castillo
Carolina Cristina Castro
Caitlyn Elizabeth Charron
Hee Seon Choe
Matthew James Coker
Andrew Moises Contreras
Amanda Kaye Corder
Jillian Ruth Cornman
Lindsay Elizabeth Crowley
Catherine Elaine Davis
Ryan Murray Davis
Matthew Steven De La Cruz
Marie Anne De Puey
Erin Michelle Delong
Taylor Andrew Dicorte
Karen Lynne Diepstra
Brandee Danielle Duncan
Christopher Ryan Easterling
Rachel Michelle Epperly
Lauren Kay Ewald
Megan Marie Fenney
Ryan Scott Ferren
Scott Paul Foerster
Angelyka Bognot Francisco
Josh Edward Fritz
Carolina Garcia Elizondo
Melissa Gamez Gonzales
Diana Thalia Gonzalez
Kevin Douglas Grave
Brendan Michael Green
Adam Lawrence Guerrero
Lauren Elisabeth Haddox
Hillary Kate Hammond
John Jeffrey Hartman
Thomas Mitchell Harwell
Adam Douglas Hearon
Shelby Frances Hellums
Erica Brooke Hervey
Christopher William Hobaugh
Shelley Michelle Hobbs-hoefelmeyer
Jessica Denise Hubbell
Samantha Lea Hurley
Patrice Iraheta
Amy Michelle Isbell
Emily Elizabeth Jernigan
Bryan Allen Johnson
Anisha Rao Kalavar
Ashley Anne Kane
Natalie Nata Kash
Justin Ray Kaspar
Elyse Christine Katch
Jonathan Andrew Kendall
Nicholas Dean Kennedy
Jinjoo Kim
Daniel Sungwon Kim
Kyle Andrew King
Evan James Kipp
Christopher David Kosarek
Kayla Ann Krug
Natalie Amelia Kuhn
Tessia Noelle Lamison
Jason Roy Land
David Travis Lanford
Levinia Marie Lara
James Alan Lee
Tujia Li

SEC. 3.2 UNDERGRADUATE DEGREES 25
Alvaro Eugenio Rodriguez Mendoza
Laura Ann Ron
Madison Elayne Ropp
Stephanie Nicole Ropson
Stephanie Nicole Roznos
Garrett David Rueda
Taylor Lee Leilani Ryan
Nazia Saleem
Brittany Lauren Schreiber
Lee Allen Schroer
Carmen Scippa
Richard Scott Sedei
Wahab Farooq Shaikh
Asad Farooq Shaikh
shruti sharma
Ritu Shrestha
Nikit Siddhartha
Suzanne Elyse Simpson
Christina Marie Small
Zhe Song
Haileigh Kate Stainbrook
Sarah Gabrielle Stanley
Amber Lea Stelly
Ashley Dawn Stevenson
Alexandria Dawn Stewart
Kevin Wayne Stiles
Alexandra Elizabeth Stofko
Nicole Elizabeth Strickland
Amanda Louise Strickland
Ryan Timothy Tannehill
Catherine Anne Taylor
Torey James-scott Teer
James Robert Tejada
Quang Le Ton
Do Quyen T Tran
Samantha Shea Trent
Siddharth Tulsiani
Adam Ross Turner
Roxana Josephine Ullah
Christina Leigh Van Cleave
Jessica Ann Vano
Osman Edgardo Vasquez
Olivia A Villanueva
Joaquin Andres Villegas Inurriagro
Mary Garrett Walker
Jonathan Paul Walker
Benjamin Joseph Warshawsky
Anneleis Frances Willett
Barton Wade Williams
Daniel Aaron Woodie
Kelsey Alyssa Woodward
Yue Wu

Summer

▷ B.A.

Liliana Cristal Garcia

▷ B.S.

AsthA Ahuja
Erin Chelsea Bailey
Ashley Paige Barrett
Rachel Anne Bishop
Mitchell John Blien
Tiffany Marie Brandt
Dustin Oscar Cargill
Mark Anthony Chapa
Samuel Louis Edwards
Farhad Jon Foroudi
Lindsay Diane Harris
Nimisha Jacob
Jon-michael Acosta Jallorina
Supreet Kaur
Jennifer Lyn Keene
Jennifer Theresa Law
Jade Melissa Lazarow
William Edwin Martin
Sandra Leticia Martinez
Sheba Mohan
Kristen Ruth Montgomery
Sai Ni
Lisa Michelle Prejean
Osama Qureshi
Lyndsay Amanda Ratliff
Sreeram Mamidi Reddy
Misty Cassandra Reynolds
Sarah Lynn Roberts
Stephen Michael Scott
April Danyelle Snider
Lauren Ashley Springer
Samuel Robert Stone
William Edward Tausend
Rachel Nicole Turner
Stephanie Jaunell Turner
Cynthia Vasquez
Ping Zhongping Xu
Cristal Helen Yun

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2011 Biology annual report
## 4. Colloquium and Seminar Speakers, 2011

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Institution</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/18/2011</td>
<td>Vlad Panin</td>
<td>Texas A&amp;M University</td>
<td>The Neural Function of Sialylation in Drosophila</td>
</tr>
<tr>
<td>1/25/2011</td>
<td>Hubert Amrein</td>
<td>Texas A&amp;M University</td>
<td>Taste and Nutrient Sensing: Dual Roles for Gustatory Receptors in Drosophila</td>
</tr>
<tr>
<td>2/1/2011</td>
<td>John Taylor</td>
<td>University of California, Berkeley</td>
<td>Reverse Ecology and Neurospora Population Genomics</td>
</tr>
<tr>
<td>2/8/2011</td>
<td>Richard Edward Green</td>
<td>University of California, Santa</td>
<td>Understanding Recent Human Evolution Using Ancient Hominin Genomes</td>
</tr>
<tr>
<td>2/15/2011</td>
<td>Rene Garcia</td>
<td>Texas A&amp;M University</td>
<td>Dietary Modulation of Motivated Behavior in Aging C. Elegans</td>
</tr>
<tr>
<td>2/22/2011</td>
<td>Chaodong Wu</td>
<td>Texas A&amp;M University</td>
<td>Regulation of Adipose Tissue Inflammatory Response and Systemic Insulin Resistance Independent of Adiposity</td>
</tr>
<tr>
<td>3/1/2011</td>
<td>Helene Andrews-Polymenis</td>
<td>Texas A&amp;M University</td>
<td>Investigating the Molecular Roles of Genes of Unknown Function During Salmonella Infection</td>
</tr>
<tr>
<td>3/8/2011</td>
<td>Scott Fraser</td>
<td>California Institute of Technology</td>
<td>Imaging the Signals and Motions that Pattern Embryos</td>
</tr>
<tr>
<td>3/22/2011</td>
<td>Spence Behmer</td>
<td>Texas A&amp;M University</td>
<td>Nutritional Learning and Suboptimal Foraging Behavior: Unique Insights from Grasshoppers and Locusts</td>
</tr>
<tr>
<td>3/29/2011</td>
<td>Margaret Glasner</td>
<td>Texas A&amp;M University</td>
<td>Evolution of Functionally Important Amino Acids in Orthologous Enzymes</td>
</tr>
<tr>
<td>4/5/2011</td>
<td>Nihal Dharmasiri</td>
<td>Texas State University</td>
<td>Mechanisms of Plant Auxin Response: Will it all end in TIRs</td>
</tr>
<tr>
<td>4/12/2011</td>
<td>Paul Hardin</td>
<td>Texas A&amp;M University</td>
<td>The Molecular Basis of Circadian Timekeeping and Chemosensory Rhythms in Drosophila</td>
</tr>
</tbody>
</table>
4/19/2011  **Hays Rye**  
*Texas A&M University*  
Substrate Protein Loading and Unfolding on a GroEL Ring

4/26/2011  **Heidi Fisher**  
*Harvard University*  
Alliance & Antagonism: Uncovering the Mechanisms Driving Sperm Competition in Deer Mice

9/6/2011  **Xiaorong Lin**  
*Texas A&M University*  
The Molecular Link Between Morphological Transition and Pathogenicity in the Human Fungal Pathogen Cryptococcus

9/13/2011  **Janet Braam**  
*Rice University*  
Plant Environmental Stress Resistance: Roles for Time and Touch

9/20/2011  **Adam Jones**  
*Texas A&M University*  
Unlocking the Mysteries of Male Pregnancy and the Evolution of the Brood Pouch in Pipefish and Seahorses

9/27/2011  **Tim Cooper**  
*University of Houston*  
Competition for Diminishing Returns in Experimentally Evolving Populations

10/4/2011  **Gadi Shaulsky**  
*Baylor College of Medicine*  
Social Interactions and Self-Recognition in Dictyostelium

10/11/2011  **Steve Phelps**  
*The University of Texas, Austin*  
Getting Caught in Peculiar Positions: Variation in the Mechanisms of Monogamy

10/18/2011  **Kendal Hirschi**  
*Baylor College of Medicine*  
Plant Calcium Transport: A Dash of Yeast and a Pinch of Weeds

10/25/2011  **Jeffrey Cirillo**  
*Texas A&M University*  
Dissecting Bacterial Respiratory Pathogens

11/1/2011  **Dorothy Shippen**  
*Texas A&M University*  
Telomeres and Telomerase: Evolving Dance Partners at Chromosome Ends

11/8/2011  **Clay Small**  
*Texas A&M University*  
Selection in Relation to Sex and the Genomics of Male Pregnancy in Pipefishes and Seahorses

11/8/2011  **Alisa Womac**  
*Texas A&M University*  
A Study of the Regulation and Function of Extracellular ATP Accumulation in the Suprachiasmatic Nucleus
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/15/2011</td>
<td><strong>Joe Heitman</strong></td>
<td><em>Duke University Medical Center</em></td>
<td>Sexual Reproduction and Evolution of Eukaryotic Microbial Pathogens</td>
</tr>
<tr>
<td>11/22/2011</td>
<td><strong>Bessie Kebaara</strong></td>
<td><em>Baylor University</em></td>
<td>Regulation of Natural mRNA by the Saccharomyces Cerevisiae Nonsense-Mediated mRNA Decay Pathway</td>
</tr>
<tr>
<td>11/29/2011</td>
<td><strong>Marty Dickman</strong></td>
<td><em>Texas A&amp;M University</em></td>
<td>Tipping the Balance: Sclerotinia Sclerotiorum Secreted Oxalic Acid Suppresses Host Defenses by Manipulating the Host Redox Environment and Controlling Cell Death</td>
</tr>
<tr>
<td>12/6/2011</td>
<td><strong>Brigitte Dauwalder</strong></td>
<td><em>University of Houston</em></td>
<td>It takes more than Brains to be a Good Drosophila Courter</td>
</tr>
</tbody>
</table>
5. Faculty, 2011

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. Bohn ..........................................Lecturer
Lisa Campbell ............................................Professor (J)
Ginger E. Carney .........................................Associate Professor
William B. Cohn ..........................................Lecturer
Charles D. Criscione .....................................Assistant Professor
David J. Earnest ..........................................Professor (J)
James W. Erickson ........................................Associate Professor
Rene Garcia ...............................................Associate Professor
Richard H. Gomer ........................................Professor
Ira F. Greenbaum .........................................Professor
Lawrence R. Griffing .....................................Associate Professor
Timothy C. Hall .........................................Distinguished Professor Emeritus (A)
Paul E. Hardin ............................................Distinguished Professor
Mark L. Harlow ..........................................Assistant Professor
Andreas K. Holzenburg ..................................Professor
Carol B. Johnson .........................................Senior Lecturer
Adam G. Jones ............................................Associate Professor
Walter M. Kemp ..........................................Professor
Arne C. Lekven ...........................................Associate Professor
Xiaorong Lin ...............................................Assistant Professor
Robyn Lints ...............................................Assistant Professor
Thierry Lints ...............................................Assistant Professor
Steve Lockless ............................................Assistant Professor
Duncan S. MacKenzie ....................................Associate Professor
Keith A. Maggert .........................................Associate Professor
James R. Manhart .......................................Associate Professor
Michael D. Manson ......................................Professor
Thomas D. McKnight ....................................Professor
U.J. McMahan ............................................Professor
Rita B. Moyes ...........................................Instructional Assistant Professor
Comer O. Patterson ......................................Professor
Alan E. Pepper ...........................................Associate Professor
Brian D. Perkins .........................................Associate Professor
Hongmin Qin ...............................................Assistant Professor
Bruce B. Riley ............................................Professor
Gil G. Rosenthal ..........................................Associate Professor
Kathryn J. Ryan ..........................................Assistant Professor
Matthew S. Sachs ........................................Professor
Jeffrey Seemann ..........................................Professor
Deborah A. Siegele ......................................Associate Professor
James L. Smith ..........................................Assistant Professor

SEC. 5. FACULTY 33
Michael Smotherman ........................................... Associate Professor
Joseph A. 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)
Mark J. Zoran .................................................... Professor

*For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2011 (01/01/2011-12/31/2011).
5.1 Professional Activities, 2011

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2011.

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 2011.
▷ 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 2011.
▷ 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 2011
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2011
  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
  ▶ Editorial/Board: National Science Foundation and National Institutes of Health (Review: Proposals), Fungal Genetics Newsletter, PLoS ONE, The Open Mycology Journal (Editor), Genetics, Nature Genetics (Referee: Journals), PLoS ONE (of Genetics and Genomics) (Section Editor)

  University
  ▶ Research Group: Laboratory for Genome Bioinformatics (Director)
  ▶ Committee/Panel: Export Control Task Force Committee (Member), Whole Systems Genomics Computational Advisory Group (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 2011
  Spring
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 485. — Directed Studies (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 7)
  ▶ BIOL 691. — Research (total enrollment: 4)
  ▶ MICR 691. — Research (total enrollment: 1)

  Summer
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 1)
Fall

▷ BICH 450. — **Genomics** (total enrollment: 1)
▷ BICH 491. — **Research** (total enrollment: 1)
▷ BICH 650. — **Genomics** (total enrollment: 1)
▷ BIOL 450. — **Introduction to Genomics** (total enrollment: 11)
▷ BIOL 485. — **Directed Studies** (total enrollment: 4)
▷ BIOL 650. — **Genomics** (total enrollment: 5)
▷ BIOL 685. — **Directed Studies** (total enrollment: 4)
▷ BIOL 691. — **Research** (total enrollment: 2)
▷ MICR 685. — **Directed Studies** (total enrollment: 1)
▷ MICR 691. — **Research** (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2011**

  **Federal**
  ▷ (REN) Genetic and Molecular Study of Meiotic Trans-sensing and Meiotic Silencing, **National Institutes of Health**, coworkers: A. Lugena (G), R. Millimaki (G), V. Suescun (G), S. Gajjar (U)

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

• **PRESENTATIONS DURING 2011**
  ▷ 19th Annual Program for the Biology of Filamentous Fungi Symposium Texas A&M University, College Station, TX, 2011. (Invited)
• SERVICE DURING 2011

National
- Professional Affiliation: Advanced Placement Biology Exam Questions (Contributor), ETS
  Advanced Placement Exam Grading (Question 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),
  Grading Workshops, Critical Thinking Assessment Test Program (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
- Committee/Panel: Sterling Evans Library Science Specialist (Liaison)

• TEACHING ASSIGNMENTS DURING 2011

Spring
- BIOL 112. — Introductory Biology II (total enrollment: 235)
- BIOL 413. — Cell Biology (total enrollment: 40)
- BIOL 491. — Research (total enrollment: 2)

Fall
- BIOL 213. — Molecular Cell Biology (total enrollment: 95)
- BIOL 291. — Research (total enrollment: 1)
- BIOL 491. — Research (total enrollment: 1)
- BIOL 681. — Seminar (total enrollment: 5)
• SERVICE DURING 2011

International
▷ Editorial/Board: Revista Colombiana de Entomología, International Journal of Zoology (Referee: Journals)

National
▷ Editorial/Board: Zootaxa, Journal of Natural History, Inland Waters, BioMed Central Evolutionary Biology (Referee: Journals)

Department
▷ Committee/Panel: Zoology Club (Co-Advisor)

Interdisciplinary/Intercollegiate
▷ Committee/Panel: Ecology and Evolutionary Biology (Associate Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 357. — Ecology (total enrollment: 92)
▷ BIOL 481. — Seminar in Biology (total enrollment: 10)
▷ BIOL 491. — Research (total enrollment: 10)

Summer
▷ BIOL 485. — Directed Studies (total enrollment: 16)
▷ BIOL 491. — Research (total enrollment: 1)

Fall
▷ BIOL 291. — Research (total enrollment: 2)
▷ BIOL 357. — Ecology (total enrollment: 101)
▷ BIOL 358. — Ecology Laboratory (total enrollment: 19)
▷ BIOL 491. — Research (total enrollment: 4)
• SERVICE DURING 2011
  Department
  ▷ Committee/Panel: Lab Safety Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ BIOL 111. — Introductory Biology I (total enrollment: 212)
  ▷ BIOL 344. — Embryology (total enrollment: 24)
  Fall
  ▷ BIOL 111. — Introductory Biology I (total enrollment: 312)
  ▷ BIOL 414. — Developmental Biology (total enrollment: 35)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Genetics, [1998]

• SERVICE DURING 2011
  National
  ▶ Advisory Board: *Eukaryotic Cell* (Editorial Board), *Fungal Genetics and Biology* (Associate Editor), *Fungal Genetics and Biology* (Editor)
  ▶ Editorial/Board: National Institutes of Health (Review: Proposals), *Nature Reviews Genetics, Eukaryotic Cell, Fungal Genetics and Biology, Genetics, Microbiology, PNAS* (Referee: Journals)
  ▶ Committee/Panel: NIH Cellular Signaling and Regulatory Systems Study Section (Panel Member), Society for Research on Biological Clocks Program Committee (Chair)

University
  ▶ Committee/Panel: ADVANCE Research Subcommittee (Member), ADVANCE Speaker Series Committee (Member), Genetics Membership Committee (Member)

Department
  ▶ Service Position: Graduate Student Association (Faculty Advisor)
  ▶ Committee/Panel: Awards Committee (Member), Biology Seminar Committee (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 2011
  Spring
  ▶ BIOL 489. — Special Topics in (total enrollment: 12)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 691. — Research (total enrollment: 3)
  ▶ GENE 691. — Research (total enrollment: 1)
  ▶ MICR 691. — Research (total enrollment: 2)

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

Fall
  ▶ BIOL 445. — Biology of Viruses (total enrollment: 76)
  ▶ BIOL 491. — Research (total enrollment: 1)
- BIOL 691. — Research (total enrollment: 2)
- GENE 691. — Research (total enrollment: 1)
- MICR 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

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

• PRESENTATIONS DURING 2011

▷ “Circadian Control of MAPK Pathways,” 26th Fungal Genetics Conference, 2011.(Poster Individual)
▷ “Circadian Oscillator Complexity,” CBRC External Advisory Board Meeting, Texas A&M University, College Station, TX, January, 2011.( Individual)
▷ “Biological Time,” Sigma Xi Symposium The Science of Time, Texas A&M University, College Station, TX, March, 2011.( Invited)
▷ “Circadian Rhythms and Human Health,” Davidson Award Lecture, Baylor College, Waco, TX, April, 2011.( Invited)
▷ “Clock Regulation of Conserved MAPK Pathways,” Chronobiology Gordon Conference, Barga, Italy, June, 2011.( Invited)
▷ “Undergraduate Research Experience,” Development Council, Texas A&M University, College Station, TX, October, 2011.( Invited)

• PUBLICATIONS DURING 2011

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Faculty Ombuds Officer, Office of the Dean of Faculties and Associate Provost, [2010]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]
  ▶ Graduate Advisor, Biology Graduate Advising Office, Biology, [2006]

• SERVICE DURING 2011

  International
  ▶ Service Position: Dissertation for Andhara University and University of the Western Cape, Thesis for University of Cape Town (Reviewer)

  National
  ▶ Editorial/Board: Civilian Research Development Foundation, USDA (Review: Proposals), Applied and Environmental Microbiology, Applied Microbiology and Biotechnology, Journal of Industrial Microbiology and Biotechnology, Journal of Molecular Microbiology and Biotechnology, Molecular Biotechnology (Referee: Journals), Bioengineered Bugs, Journal of Microbial and Biochemical Technology (Member)

  University
  ▶ Service Position: Dean Search Committee, Texas A&M UniversityLibraries (Member), Program Review Team, Texas A&M UniversityPress (Member)
  ▶ Committee/Panel: Athletics Advisory Council (Member), Faculty Senate (Speaker), Faculty Senate (Faculty Senator - 11), Faculty Senate Executive Committee (Member)

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

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

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Faculty Groups Ad-hoc Committee (Member), Teaching Proposals Review Committee (Co-Chair)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ BIOL 406. — Bacterial Genetics (total enrollment: 22)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 606. — Microbial Genetics (total enrollment: 4)
  ▶ BIOL 681. — Seminar (total enrollment: 4)
  ▶ GENE 406. — Bacterial Genetics (total enrollment: 8)
MICR 691. — Research (total enrollment: 3)

Summer
MICR 691. — Research (total enrollment: 3)

Fall
BIOL 681. — Seminar (total enrollment: 6)
BIOL 689. — Special Topics in (total enrollment: 12)
MICR 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

State
(REN) Cyanide Remediation: Enzyme Modification and Immobilization, Texas Hazardous Waste Research Center, coworkers: J. Park (P)

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

• PUBLICATIONS DURING 2011
TEACHING ASSIGNMENTS DURING 2011

Spring

▷ BIOL 112. — Introductory Biology II (total enrollment: 471)
▷ BIOL 285. — Directed Studies (total enrollment: 1)

No report received from faculty member.

Resigned 05/31/2011.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2010]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2007]

• SERVICE DURING 2011
  International
  ▶ Editorial/Board: Biotechnology and Biological Sciences Research Council, Israeli Science Foundation, Wellcome Trust (Review: Proposals)

  National

  University
  ▶ Committee/Panel: Commitment to Excellence Dialogue on Responsibilities of the Faculty (Panelist), Council on Climate and Diversity (Member), CTE Faculty and Student Advisory Committee (Member), Dean of Faculties Mentoring Program Oversight Committee (Member), Phi Beta Kappa Members-in-Course Committee (Member), Phi Beta Kappa PhD Selection Committee (Member), 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 (Chair)

  Interdisciplinary/Intercollegiate
  ▶ Service Position: Department of Entomology Graduate Student Symposium (Judge)
  ▶ Committee/Panel: Faculty of Ecology, Evolution and Behavior (Member), TAMIN Membership (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 401. — Critical Writing in Biology (total enrollment: 100)
  ▶ BIOL 491. — Research (total enrollment: 3)
  ▶ BIOL 691. — Research (total enrollment: 2)

  Fall
• RESEARCH PROJECTS DURING 2011

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

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 2011

• TEACHING ASSIGNMENTS DURING 2011

    Spring  
    ▶ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 383)

    Summer  
    ▶ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 119)

    Fall  
    ▶ BIOL 319. — Integrated Hum AN/PHY I (total enrollment: 408)  
    ▶ BIOL 491. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2011

    ▶ “The Inaugural Meeting of the North American Society for Comparative Endocrinology,” Department of Biology, Texas A&M University, Texas Veterinary Medical Diagnostic Laboratory, College Station, TX, 2011. (Individual)

• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

International
  ▶ Editorial/Board: *International Journal for Parasitology* (Referee: Journals)

National
  ▶ Committee/Panel: Priorities and Planning Committee American Society of Parasitologists (Member)

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

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 685. — Directed Studies (total enrollment: 4)
  ▶ BIOL 691. — Research (total enrollment: 2)

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

Fall
  ▶ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 98)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)

• PRESENTATIONS DURING 2011
  ▶ “Elucidating Macroparasite Transmission and Mating Systems,” Department of Ecology and Evolutionary Biology, Rice University, Houston, TX, February, 2011. (Invited)
  ▶ “Transmission and Determinants of Inbreeding in Metazoan Parasites: Insights from Genetic Data,” Center for Genome Research and Biocomputing (CGRB) Fall Conference, Oregon State University, Corvallis, OR, September, 2011. (Invited)
• PUBLICATIONS DURING 2011
JAMES W. ERICKSON

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

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  - Member, Interdisciplinary Faculty, Genetics, [2006]

- SERVICE DURING 2011
  
  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 2011
  
  Spring
  - BIOL 481. — Seminar in Biology (total enrollment: 8)
  - BIOL 691. — Research (total enrollment: 3)

  Summer
  - PHYS 208. — Electricity and Optics (total enrollment: 96)

  Fall
  - BIOL 611. — Molecular Biology of Differentiation and Development (total enrollment: 8)
  - BIOL 691. — Research (total enrollment: 4)

- RESEARCH PROJECTS DURING 2011
  
  Federal
  - Signal Amplification Mechanisms in Primary Sex Determination, National Science Foundation, coworkers: A. Gonzalez (G), S. Mahadara (G), J. Rama (G)

  No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Assistant Professor (J), Molecular and Cellular Medicine, [2008]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2003]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2003]

• SERVICE DURING 2011

  National
  ▶ Editorial/Board: Genetics, Royal Society Interface, J. Neuroscience, Infection, Genetics and Evolution (Referee: Journals)

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

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

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 615. — Signaling Behavior & Development (total enrollment: 9)
  ▶ BIOL 691. — Research (total enrollment: 5)
  ▶ NRSC 636. — Signaling in Behavior and Development (total enrollment: 1)

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

  Fall
  ▶ BIOL 481. — Seminar in Biology (total enrollment: 9)
  ▶ BIOL 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011

  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. Rodgers (G), L. Zhang (G)

• PRESENTATIONS DURING 2011
• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
▷ 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
▷ Advisory Board: Promedior (Co-Founder), Promedior (Member), Trellis Bioscience, Promedior (Member)

University
▷ Event: TAMUS Intellectual Property Constituent Committee (Faculty Representative)
▷ Committee/Panel: TAMUS Intellectual Property Constituent Committee (Vice Chair)

College
▷ Service Position: Cotton Bowl in Arlington fundraising (Assisted)

Department
▷ Event: Biosciences Minisymposia (Organizer)
▷ Committee/Panel: Awards Committee (Member), Capstone Planning Committee (Member), Executive Committee (Member), Seminar Committee (Chair), TIGM Science Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 681. — Seminar (total enrollment: 9)
▷ BIOL 691. — Research (total enrollment: 3)

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

Fall
▷ BIOL 213. — Molecular Cell Biology (total enrollment: 212)
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 691. — Research (total enrollment: 3)
• RESEARCH PROJECTS DURING 2011

  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 2011
  ▶ “Identification of Potential New Therapeutics for Wound Healing and Fibrosing Diseases,” Texas A&M University Genetics, College Station, TX, April, 2011. (Invited)
  ▶ “Wound Healing and Fibrosing Diseases,” New Mexico State University, Las Cruces, NM, July, 2011. (Invited)

• PUBLICATIONS DURING 2011
IRA F. GREENBAUM
PROFESSOR
BIOL-Evolutionary Biology
(979) 845-7791
ira@bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2011
  National
  ▶ Editorial/Board: Cytogenetics and Genome Research, Journal of Zoology (Referee: Journals)

  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 01), Grievance Committee (Elected Departmental Representative)

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

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 466. — Principles of Evolution (total enrollment: 17)

  Fall
  ▶ BIOL 318. — Chordate Anatomy (total enrollment: 36)
  ▶ BIOL 485. — Directed Studies (total enrollment: 1)
  ▶ BIOL 697. — Methods in Teaching Biology Laboratory (total enrollment: 12)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

• SERVICE DURING 2011

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

  Department
  ▷ Committee/Panel: Safety Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ BIOL 291. — Research (total enrollment: 2)
  ▷ BIOL 430. — Biological Imaging (total enrollment: 48)
  ▷ BIOL 491. — Research (total enrollment: 10)

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

  Fall
  ▷ BIOL 291. — Research (total enrollment: 3)
  ▷ BIOL 423. — Cell Biology Laboratory (total enrollment: 29)
  ▷ BIOL 491. — Research (total enrollment: 6)

• PRESENTATIONS DURING 2011
  ▷ “Networking in the Endoplasmic Reticulum: Math Applications,” Quantitative Biology Program, College Station, TX, 2011. (Invited)
  ▷ “Genetics in Arabidopsis for High School: Inquiry Module for Planting Science,” Summer Workshop, College Station, TX, July, 2011. (Individual)


**PUBLICATIONS DURING 2011**

TIMOTHY C. HALL
DISTINGUISHED PROFESSOR EMERITUS (A) (979) 845-7728
BIOL-Biotechnology, Botany, Cell Biology tim@idmb.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  - 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]

- SERVICE DURING 2011
  - International
    - Editorial/Board: Chinese Univ.Hong Kong (Reviewer)
  - National
    - Editorial/Board: Phytochem, Plant Physiol, Planta (Referee: Journals)
  - University
    - Committee/Panel: Council of Principal Investigators Committee (Member)
  - College
    - Committee/Panel: Distinguished Professors Executive Committee (Member)
  - Department
    - Committee/Panel: Awards Committee (Chair), MEPS Executive Committee (Member), Plant Care Committee (Chair)

- TEACHING ASSIGNMENTS DURING 2011
  - Fall
    - BIOL 101. — Botany (total enrollment: 110)

- RESEARCH PROJECTS DURING 2011
  - Federal
    - Gene Networks and Chromatin Regulation of Phaseolin Transcription, National Science Foundation, coworkers: K. Cone (Staff)

Retired 08/31/2011.
• CHAIRS/PROFESSORSHIPS
  ▶ John W. Lyons ’59 Endowed Chair in Biology [2005]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Director, Center for Biological Clocks Research, Biology, [2006]

• SERVICE DURING 2011

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

  National
  ▶ Committee/Panel: Neurodifferentiation, Plasticity, and Regeneration Study Section (Member)

  University
  ▶ Committee/Panel: Council of Principal Investigators (Member)

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

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Center for Research on Biological Clocks (Director), Membership Committee, TAMU Institute for Neuroscience (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ BIOL 681. — Seminar (total enrollment: 9)
  ▶ BIOL 691. — Research (total enrollment: 4)

  Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 276)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 681. — Seminar (total enrollment: 10)
  ▶ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011
Federal
▷ (REN) Regulation of Circadian Transcription, National Institutes of Health, coworkers: G. Mahesh (P), W. Yu (P), P. Agrawal (G), P. Kim (Staff)

• PRESENTATIONS DURING 2011
▷ “Post-translational Regulation of the Drosophila Clock,” Department of Zoology, University of Delhi, Delhi, India, January, 2011. (Invited)
▷ “The Molecular Basis of Circadian Timekeeping and Chemosensory Rhythms in Drosophila,” Department of Biology, Texas A&M University, College Station, TX, April, 2011. (Invited)
▷ “NEMO Kinase Contributes to Core Period Determination by Slowing the Pace of the Drosophila Circadian Oscillator,” 3rd World Congress of Chronobiology, Puebla, Mexico, May, 2011. (Invited)

• PUBLICATIONS DURING 2011
MARK L. HARLOW

ASSISTANT PROFESSOR  (979) 458-5560
BIOL-Neurobiology  mharlow@tamu.edu

• SERVICE DURING 2011
  University
    ▶ Committee/Panel: Texas A&M Institute of Neuroscience TAMIN GRAC (Member)
  Department
    ▶ Committee/Panel: Capstone Coursework Committee (Member), Graduate Recruiting and Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
    ▶ BIOL 434. — Regulatory and Behavioral Neuroscience (total enrollment: 89)
    ▶ BIOL 491. — Research (total enrollment: 2)
    ▶ BIOL 691. — Research (total enrollment: 1)
  Summer
    ▶ BIOL 691. — Research (total enrollment: 1)
  Fall
    ▶ BIOL 491. — Research (total enrollment: 2)
    ▶ BIOL 689. — Special Topics in (total enrollment: 8)
    ▶ BIOL 691. — Research (total enrollment: 1)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - 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]

• **SERVICE DURING 2011**

  **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), Biotechnology and Biological Sciences Research Council (UK), Cancer Research (UK) (Review: Proposals), *Biochemistry Research International* (Referee: Journals), *Micron* (Referee: Journals)
  - Committee/Panel: Berlin-Brandenburg Community of Humboldtians (Member)

  **National**
  - 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)

  **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 2011

Spring
▷ BIOL 604. — Fundamental SEM/ESEM (total enrollment: 24)
▷ BIOL 608. — Light Microscopy (total enrollment: 12)
▷ BIOL 691. — Research (total enrollment: 1)

Summer
▷ BICH 691. — Research (total enrollment: 1)
▷ BIOL 603. — Advanced TEM (total enrollment: 22)

Fall
▷ BIOL 602. — Transmission Electron Microscopy (total enrollment: 24)
▷ BIOL 685. — Directed Studies (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2011
▷ “Hannover Optical Colloquium,” Leibniz University Hannover, Germany, May, 2011. (Invited)
▷ “Optical Sensors,” Imperial Palace, Goslar, Germany, May, 2011. (Poster Invited)
▷ Environmental Issues Committee, Texas A&M University, College Station, TX, October, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

Department
▷ Event: Blended Approaches for Enhancing Student Learning in Large Classes (Participant)
▷ Committee/Panel: Executive Committee, Texas State Science Olympiad (Member), Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 113. — Introductory Biology (total enrollment: 124)

Fall
▷ BIOL 112. — Introductory Biology II (total enrollment: 328)
▷ BIOL 285. — Directed Studies (total enrollment: 2)

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2011
  International

  National

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

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 214. — *Genes, Ecology and Evolution* (total enrollment: 123)
  ▶ BIOL 291. — *Research* (total enrollment: 1)
  ▶ BIOL 491. — *Research* (total enrollment: 3)
  ▶ BIOL 681. — *Seminar* (total enrollment: 6)
  ▶ BIOL 689. — *Special Topics in* (total enrollment: 8)
  ▶ BIOL 691. — *Research* (total enrollment: 5)

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

  Fall
  ▶ BIOL 491. — *Research* (total enrollment: 2)
  ▶ BIOL 691. — *Research* (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ CAREER: The Molecular Evolution of Reproductive Genes in Male-Pregnant Seahorses and Pipefishes, *National Science Foundation*, coworkers: S. Flanagan (G), K. Paczolt (G),
N. Ratterman (G), E. Rose (G), C. Small (G)

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

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 2011
  ▶ “Unlocking the Mysteries of Male Pregnancy and the Evolution of the Brood Pouch in Pipefish and Seahorses,” Texas A&M University, Department of Biology, College Station, TX, September, 2011. (Invited)
  ▶ “The Evolutionary Implications of Male Pregnancy and the Brood Pouch in Pipefishes and Seahorses,” Dartmouth College, Department of Biological Sciences, Hanover, NH, October, 2011. (Invited)

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Associate Dean for Strategic Initiatives, Main Office, College of Science, [2009]/

• SERVICE DURING 2011
  University
  ▶ Committee/Panel: Study Abroad Committee (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member), International Programs Committee (Chair)

  Department
  ▶ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 261)
  ▶ BIOL 285. — Directed Studies (total enrollment: 1)

  Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 219)

• PRESENTATIONS DURING 2011
  ▶ “The Challenges of Academic Administration,” University of Texas M. D. Anderson Cancer Center, Austin, TX, 2011. (Invited)
  ▶ Plenary Presentation at the Fancy Gap Immunoparasitology Workshop, 2011. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Graduate Advisor, Biology Graduate Advising Office, Biology, [2011]

• SERVICE DURING 2011
  National
  ▶ Editorial/Board: *PloS Genetics*, *PloS Biology*, *Development* (Referee: Journals)
  College
  ▶ Committee/Panel: Faculty Advisory Council (Representative-at-Large), Graduate Instruction Committee (Member)
  Department
  ▶ Committee/Panel: Annual Review Committee (Member), Biology Website Committee (Chair), Computer Committee (Chair), Executive Committee (Member), Graduate Programs Committee (Ex Officio Member), Graduate Recruiting and Admissions Committee (Ex Officio Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 615. — Signaling Behavior & Development (total enrollment: 9)
  ▶ BIOL 681. — Seminar (total enrollment: 9)
  ▶ BIOL 691. — Research (total enrollment: 3)
  ▶ NRSC 636. — Signaling in Behavior and Development (total enrollment: 1)
  Summer
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 3)
  Fall
  ▶ BIOL 414. — Developmental Biology (total enrollment: 35)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 12)
  ▶ BIOL 685. — Directed Studies (total enrollment: 12)
  ▶ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011
  Private
  ▶ WNT Regulation of Vertebrate Mesoderm Differentiation, *American Cancer Society*, coworkers: K. Baker (G), A. Narayana (G), A. Whitener (G), J. Lee (U), E. Lopez (U)
WNT 8 Cis-Regulatory Analysis to Study Vertebrate Mesoderm Progenitor Specification, *American Heart Association* - Texas, coworkers: K. Baker (G), J. Fleming (G), A. Narayanan (G), J. Lee (U), E. Lopez (U)

**PRESENTATIONS DURING 2011**
- “Post-transcriptional Regulation of wnt8a and Vertebrate Axis Patterning,” Wnt2011 Meeting, University of California, Los Angeles, CA, June, 2011. (Poster Individual)
- “Wnt8a is a Target of miR430 Post-transcriptional Regulation,” 70th Annual Society for Developmental Biology Meeting, Chicago, IL, July, 2011. (Poster Individual)

**PUBLICATIONS DURING 2011**
• AWARDS DURING 2011

University
▷ Teaching Excellence, Texas A&M University

• SERVICE DURING 2011

International
▷ Committee/Panel: Associated Faculty Member of Faculty 1000 (Member)

National
▷ Editorial/Board: PNAS, Antimicrobial Agent and Chemotherapy, Genetics, BMC Genomics, FEMS Microbiology Reviews, Eukaryotic Cell, Fungal Genetics and Biology, PLoS One, Mycopathologia, Applied Microbiology and Biotechnology (Referee: Journals)
▷ Committee/Panel: Eukaryotic Cell (Advisory Board)

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

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 489. — Special Topics in (total enrollment: 19)
▷ BIOL 491. — Research (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 2)

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

Fall
▷ BIOL 291. — Research (total enrollment: 1)
▷ BIOL 351. — Fund of Microbiol (total enrollment: 149)
▷ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Genetic Regulation of Invasive Hyphal Growth of Aspergillus Fumigatus, Department of Health and Human Services, coworkers: S. Upadhyay (Technician), G. Pereira (U), G. Torres (U)
The Link Between Dimorphism and Virulence in Cryptococcus, *National Institutes of Health*, coworkers: L. Wang (P), R. Gyawali (G), G. Pereira (U)

State

- Development of a Novel Antifungal Treatment, *Texas Higher Education Coordinating Board*, coworkers: L. Wang (P), R. Gyawali (G), G. Pereira (U)

Private

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

- **PRESENTATIONS DURING 2011**
  - “Conservation of Dimorphism and Virulence in the Human Fungal Pathogen: Cryptococcus,” South Texas Center for Emerging Infectious Diseases at The University of Texas, San Antonio, TX, April, 2011. (Individual)
  - “Znf2 Controls Morphogenesis and Adhesins in the Human Fungal Pathogen Cryptococcus Neoformans,” Baylor University Department of Biology, Waco, TX, October, 2011. (Individual)

- **PUBLICATIONS DURING 2011**
• SERVICE DURING 2011

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

University
▷ Event: 18th International C. Elegans Meeting, Graduate Student Poster Competition (Poster Judge)
▷ Committee/Panel: Faculty Senate (Faculty Senator - 01), Faculty Senate: The Core Curriculum Council (Member)

Department
▷ Committee/Panel: Student and Post-doc Research Symposium Organizing Committee (Co-Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 112. — Introductory Biology II (total enrollment: 286)
▷ BIOL 691. — Research (total enrollment: 1)

Fall
▷ BIOL 112. — Introductory Biology II (total enrollment: 96)
▷ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

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 2011
“Mapping the Neural Circuits that Function Downstream of the Sensory Rays in C. Ele-
gans Male Mating Behavior,” 18th International C. elegans Meeting, University of Cali-
fornia, Los Angeles, CA, June, 2011.(Poster Individual)

“The Robustness of C. Elegans Male Mating Behavior Depends on the Distributed Prop-
ties of Ray Sensory Neurons and Their Output Through Core and Male-specific Targets,”
18th International C. elegans Meeting, University of California, Los Angeles, CA, June,
2011.(Poster Individual)

• PUBLICATIONS DURING 2011

Caenorhabditis Elegans Male Mating Behavior Depends on the Distributed Properties of
Ray Sensory Neurons and Their Output through Core and Male-Specific Targets Journal
of Neuroscience, vol. 31, 7497-7510.

Liu, Y.; LeBeouf, B.; Guo, X.; Correa, P.A.; Gualberto, D.G.; Lints, R.; Garcia, L.R.
(2011) A Cholinergic-regulated Circuit Coordinates the Maintenance and Bi-stable States
of a Sensory-motor Behavior During Caenorhabditis Elegans Male Copulation PLoS Ge-
netics, vol. 7, e1001326.

Siehr, M.S.; Koo, P.K.; Sherlekar, A.L.; Bian, X.; Bunkers, M.R.; Miller, R.M.; Portman,
• SERVICE DURING 2011
  Department
  ▶ Committee/Panel: TAMIN Graduate Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 628. — Principles of Neuroscience II (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 2)
  ▶ NRSC 602. — Principles of Neuroscience II (total enrollment: 12)
  Summer
  ▶ BIOL 491. — Research (total enrollment: 2)
  Fall
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 627. — Principles of Neuroscience I (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 2)
  ▶ NRSC 485. — Directed Studies (total enrollment: 1)
  ▶ NRSC 601. — Principles of Neuroscience I (total enrollment: 7)

• RESEARCH PROJECTS DURING 2011
  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), M. Ward (G), T. Whitaker (G), R. Mennitt (U), E. Ratliff (U), C. Patel (U), D. Gettemy (U), S. Khan (U), M. Blien (U), V. Nguyen (U), L. Luc (U), B. Galinski (U), K. Rosenbaum (U), L. Brown (U), K. Soto (U)

• PRESENTATIONS DURING 2011
  ▶ “Identification of Molecular Changes Underlying the Initial Stages of Vocal Learning in the Zebra Finch,” Howard Hughes Medical Institute, Department of Neurobiology, Duke University Medical Center, Durham, NC, 2011.( Individual)
  ▶ “Statistical Parametric Mapping of Experience-dependent Immediate-early Gene Expression in the Awake Unrestrained Zebra Finch,” Department of Biology, Texas A&M University, College Station, TX, 2011.( Individual)
  ▶ “Vocal Learning in Isolate and Operant-trained Northern Mockingbirds,” Department of Biology, Texas A&M University, College Station, TX, 2011.( Individual)
STEVE LOCKLESS
ASSISTANT PROFESSOR
BIOL-Structural Biology/Neuroscience

• SERVICE DURING 2011
  National
    ▶ Editorial/Board: Biochemistry (Review: Proposals)
  Department
    ▶ Committee/Panel: Capstone Development & Advisory Committee (Member), Computer
      Committee (Member), Graduate Recruiting & Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
    ▶ BIOL 491. — Research (total enrollment: 2)
    ▶ BIOL 681. — Seminar (total enrollment: 6)
    ▶ BIOL 691. — Research (total enrollment: 1)

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

  Fall
    ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 212)
    ▶ BIOL 681. — Seminar (total enrollment: 6)
    ▶ BIOL 689. — Special Topics in (total enrollment: 8)
    ▶ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Private
    ▶ The Structural Basis for Ligand Recognition and Allostery in Signaling Proteins, *The
      Robert A. Welch Foundation*, coworkers: S. Liu (G), P. Mukherjee (G)
ADDITIONAL UNIVERSITY TITLES HELD DURING 2011

- Associate Director, Office of the Associate Provost for Undergraduate Programs and Academic Services, [2011]
- Member, Interdisciplinary Faculty, Reproductive Biology, [2006]
- Director, BioAquatics Facility, Biology, 

SERVICE DURING 2011

International
- Editorial/Board: Netherlands Organization for Scientific Research (Review: Proposals)

National
- Editorial/Board: Aquaculture (Referee: Journals)

University
- Event: Student Research Week (Presentation Judge)
- Committee/Panel: Radiological Safety Committee (Member)

College
- Committee/Panel: Teaching Lab 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), Graduate Programs Committee, IFRB (Chair)

TEACHING ASSIGNMENTS DURING 2011

Spring
- BIOL 388. — Principles of Animal Physiology (total enrollment: 57)
- BIOL 491. — Research (total enrollment: 1)
- BIOL 681. — Seminar (total enrollment: 6)
- BIOL 691. — Research (total enrollment: 3)

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

Fall
• BIOL 405. — Comparative Endocrinology (total enrollment: 28)
• BIOL 491. — Research (total enrollment: 1)
• BIOL 691. — Research (total enrollment: 2)

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2011
  National
  ▷ Editorial/Board: Genetics, Fly, PLoS ONE, Physiological Entomology, Systems Biology in Reproductive Medicine (Referee: Journals)

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

  Department
  ▷ Committee/Panel: Annual Review Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ BICh 691. — Research (total enrollment: 1)
  ▷ BIOL 213. — Molecular Cell Biology (total enrollment: 94)
  ▷ BIOL 681. — Seminar (total enrollment: 6)
  ▷ BIOL 691. — Research (total enrollment: 2)
  Summer
  ▷ BIOL 491. — Research (total enrollment: 1)

  Fall
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 652. — Epigenetic Mechanisms (total enrollment: 6)
  ▷ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ DNA Methylation in Drosophila, National Institutes of Health, coworkers: P. Guerrero (G), . Kupara (G), J. Aldrich (U), C. Alfonso (U), S. Paredes (U)

• PRESENTATIONS DURING 2011
  ▷ “Natural, Induced, and Progressive Genome Changes,” University of Kentucky, Lexington, KY, April, 2011. (Invited)

• PUBLICATIONS DURING 2011

SEC. 5.1   PROFESSIONAL ACTIVITIES

• SERVICE DURING 2011
  Department
  ▶ Committee/Panel: IEEF, Undergraduate Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 120)
  ▶ BIOL 691. — Research (total enrollment: 1)
  Fall
  ▶ BIOL 681. — Seminar (total enrollment: 9)
  ▶ BOTN 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal

• PUBLICATIONS DURING 2011

No report received from faculty member.

Retired 05/31/2011.
• SERVICE DURING 2011

International
▷ Editorial/Board: US-Israel-Binational Science Foundation, Israel Science Foundation (Review: Proposals)

National
▷ Committee/Panel: BLAST, Inc (Board of Directors)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BICH 691. — Research (total enrollment: 1)
▷ BIOL 112. — Introductory Biology II (total enrollment: 96)
▷ BIOL 291. — Research (total enrollment: 2)
▷ BIOL 438. — Bacterial Physiology (total enrollment: 40)
▷ BIOL 491. — Research (total enrollment: 8)
▷ BIOL 691. — Research (total enrollment: 3)

Summer
▷ BIOL 491. — Research (total enrollment: 7)

Fall
▷ BICH 691. — Research (total enrollment: 1)
▷ BIOL 111. — Introductory Biology I (total enrollment: 91)
▷ BIOL 291. — Research (total enrollment: 4)
▷ BIOL 406. — Bacterial Genetics (total enrollment: 24)
▷ BIOL 491. — Research (total enrollment: 7)
▷ BIOL 606. — Microbial Genetics (total enrollment: 8)
▷ BIOL 691. — Research (total enrollment: 3)
▷ GENE 406. — Bacterial Genetics (total enrollment: 14)

• RESEARCH PROJECTS DURING 2011

Federal
▷ AI-2 Chemotaxis and Biofilm Formation, National Science Foundation, coworkers: W. Cohn (G), S. Janí (G), A. Seely (G)
Private

- Bartoszek Fund for Basic Science, Texas A&M Foundation, coworkers: W. Cohn (Research Scientist), C. Adase (G), S. Jani (G), A. Seely (G), G. Whitaker (G)

- **PRESENTATIONS DURING 2011**
  - “Chemotaxis to Intradomain and Interdomain Biological Signals,” University of Texas, Houston, TX, March, 2011. (Invited)

- **PUBLICATIONS DURING 2011**
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]
  ▷ Associate Department Head, Biology, [2003]

• SERVICE DURING 2011

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

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

Department
  ▷ Committee/Panel: Executive Committee (Member), 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 2011

Spring
  ▷ BIOL 112. — Introductory Biology II (total enrollment: 286)
  ▷ BIOL 291. — Research (total enrollment: 3)
  ▷ BIOL 484. — Internship (total enrollment: 1)
  ▷ BIOL 491. — Research (total enrollment: 27)
  ▷ BIOL 691. — Research (total enrollment: 3)

Summer
  ▷ BIOL 484. — Internship (total enrollment: 2)
  ▷ BIOL 491. — Research (total enrollment: 7)
  ▷ BIOL 691. — Research (total enrollment: 2)

Fall
  ▷ BIOL 111. — Introductory Biology I (total enrollment: 308)
  ▷ BIOL 291. — Research (total enrollment: 1)
  ▷ BIOL 328. — Plants and People (total enrollment: 69)
  ▷ BIOL 484. — Internship (total enrollment: 2)
  ▷ BIOL 491. — Research (total enrollment: 31)
BIOL 691. — Research (total enrollment: 2)

- RESEARCH PROJECTS DURING 2011

Federal

- Advancing Drug Development in Medicinal Plants Using Transcriptomics and Metabolomics, National Institutes of Health, coworkers: S. Mandel (G), A. Misra (G), H. Ayyar (U), K. Mandadi (Staff)

- URM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Department Head, Biology, [2008]

• SERVICE DURING 2011
  International
  ▷ Committee/Panel: International Brain Research Organization’s Visiting Lecture Team Program (Director)
  University
  ▷ Committee/Panel: CMD Director Search Committee (Member)
  College
  ▷ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ BIOL 682. — Research Seminar (total enrollment: 33)
  ▷ BIOL 691. — Research (total enrollment: 1)
  Summer
  ▷ BIOL 691. — Research (total enrollment: 1)
  Fall
  ▷ BIOL 491. — Research (total enrollment: 1)

No report received from faculty member.
• SERVICE DURING 2011

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, Journal of Animal Science (Reviewer)
▷ Committee/Panel: Senate Subcommittee for Lecturers (Member), Women’s Faculty Network (Member)

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

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 454. — *Immunology* (total enrollment: 66)
▷ BIOL 455. — *Laboratory in Immunology* (total enrollment: 39)
▷ BIOL 491. — *Research* (total enrollment: 3)
▷ BIOL 685. — *Directed Studies* (total enrollment: 1)

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

Fall
▷ BIOL 206. — *Introductory Microbiology* (total enrollment: 97)
▷ BIOL 456. — *Medical Microbiology* (total enrollment: 92)
▷ BIOL 491. — *Research* (total enrollment: 1)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▷ Member, Interdisciplinary Faculty, Biotechnology, [2006]

• SERVICE DURING 2011

  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)

• RESEARCH PROJECTS DURING 2011

  Private
  ▷ Techniques to Improve Efficiencies of Coal Fired Industrial Plants, Harizan Farms, coworkers: R. Lyman (U), C. Lyman (U), A. Williams (U), H. Yalamanchili (U)

  No report received from faculty member.

Retired 01/31/2011.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2011
  
  International
  ▶ Committee/Panel: ICGI Subcommittee on Comparative Genomics and Evolution (Chair), Steering Committee, International Cotton Genome Initiative (Member)

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

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

  University
  ▶ Ad Hoc Committee: Bioinformatics Resources Working Group (Member)
  ▶ Committee/Panel: Laboratory for Genome Technologies Advisory Committee (Member), Whole Systems Genomics Initiative, Faculty Computational Advisory Group (Member)

  Department
  ▶ Committee/Panel: Lower Division Advisory Committee (Member)

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

• TEACHING ASSIGNMENTS DURING 2011
  
  Spring
  ▶ BIOL 635. — Plant Molecular Biology (total enrollment: 8)
  ▶ BIOL 681. — Seminar (total enrollment: 7)
  ▶ BOTN 691. — Research (total enrollment: 2)

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

Fall
- BIOL 328. — Plants and People (total enrollment: 69)
- BIOL 681. — Seminar (total enrollment: 9)
- BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
- 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)

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: S. Verma (Visiting Scientist), C. Jo-Logan Young (P)

• PRESENTATIONS DURING 2011
- “The Streptanthoid Complex: a ‘Supermodel’ for Plant Adaptation to Extreme Environments,” Texas A&M Department of Horticulture, College Station, TX, April, 2011. (Invited)

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Neuroscience, [2004]
  ▷ Member, Interdisciplinary Faculty, Genetics, [ ]

• SERVICE DURING 2011
  National
  ▷ Advisory Board: Molecular Vision (Member)
  ▷ Editorial/Board: Internal Grant - University of Adelaide (Review: Proposals), PNAS, PLoS Genetics, Organogenesis, Molecular Vision (Referree: Journals)
  University
  ▷ Committee/Panel: Committee for Athletics Task Force Recommendation #59 (Member), Faculty Senate (Faculty Senator - 04), Faculty Senate (Caucus Leader), Faculty Senate: The Academic Affairs Committee (Member), Faculty Senate: The Legislative Affairs Committee (Member), Koldus Awards Committee (Member)
  Department
  ▷ Committee/Panel: IEEF Committee (Member)
  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Faculty of Neuroscience Curriculum Committee (Member), Grant Proposal Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ BIOL 113. — Introductory Biology (total enrollment: 77)
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 691. — Research (total enrollment: 2)
  Summer
  ▷ BIOL 685. — Directed Studies (total enrollment: 1)
  Fall
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 689. — Special Topics in (total enrollment: 12)
  ▷ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011
  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 2011
  ▶ “Interaction Between Cellular Polarity and Ciliogenesis in Vertebrate Photoreceptors,” Department of Biology, University of Virginia, Charlottesville, VA, 2011. (Invited)
  ▶ “Mechanism of Photoreceptor Degeneration in Zebrafish Models of Ciliopathies,” Department of Cell Biology, University of Oklahoma Health Science Center, Oklahoma City, OK, 2011. (Invited)
  ▶ “Mechanism of Photoreceptor Degeneration in Zebrafish Models of Ciliopathies,” Department of Ophthalmology, University of Texas Southwestern Medical School, Dallas, TX, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

National
▷ Editorial/Board: National Science Foundation, USA (Review: Proposals), Current Biology, Journal of Cell Biology, PLOS One, Nature of Cell Biology, Trends in Cell Biology (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 291. — Research (total enrollment: 1)
▷ BIOL 491. — Research (total enrollment: 3)
▷ BIOL 613. — Cell Biology (total enrollment: 14)
▷ BIOL 691. — Research (total enrollment: 1)

Fall
▷ BIOL 213. — Molecular Cell Biology (total enrollment: 88)
▷ BIOL 491. — Research (total enrollment: 3)
▷ BIOL 681. — Seminar (total enrollment: 5)
▷ BIOL 691. — Research (total enrollment: 1)
▷ GENE 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Private
▷ Small G Protein Regulators of Intraflagellar Transport (IFT), American Heart Association, coworkers: Z. Fan (P), E. Richey (G), C. Hernandez (U), R. Manshouri (U), R. McMasters (U), D. Silva (U), K. Snodgrass (U), E. Lyuksyutova (Staff)
▷ 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 2011

▷ “Flagellar Assembly, Biosciences Mini-Symposium,” Department of Biology, Texas A&M University, College Station, TX, January, 2011. (Individual)
▷ “Hierarchy of Intraflagellar Transport (IFT) Particle Assembly: The Role of IFT25 and the Small G-protein IFT27 in Maintaining IFT Particle Integrity,” Molecular Cell & Developmental Biology Graduate Program, University of Texas, Austin, TX, February, 2011. (Invited)
▷ “Intraflagellar Transport (IFT) and Flagellar Assembly: Insight into Cilia-dependent Diseases,” Genetics Graduate Student Association Meeting, Texas A&M University, College Station, TX, October, 2011. (Individual)


- PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2011

National
  ▶ Advisory Board: Developmental Dynamics, PLOS ONE (Member)

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

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ BIOL 344. — Embryology (total enrollment: 48)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 685. — Directed Studies (total enrollment: 3)
  ▶ BIOL 691. — Research (total enrollment: 4)
  ▶ GENE 691. — Research (total enrollment: 1)

Summer
  ▶ BIOL 691. — Research (total enrollment: 3)
  ▶ GENE 691. — Research (total enrollment: 1)

Fall
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 611. — Molecular Biology of Differentiation and Development (total enrollment: 8)
  ▶ BIOL 681. — Seminar (total enrollment: 5)
  ▶ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

Federal
• PRESENTATIONS DURING 2011
  ▶ “Development of Zebrafish Cranial Placodes: How Vertebrate Embryos Make Sense,” University of Texas, Austin, TX, April, 2011. (Invited)

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Genetics, [2008]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2008]
  ▶ Member, Interdisciplinary Faculty, Reproductive Biology, [2008]
  ▶ Chair, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2011

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

  University
  ▶ Committee/Panel: Study Abroad Programs Policy Committee (Member), Subcommittee on Affiliated Programs (Member)

  Department
  ▶ Committee/Panel: GRAC (Co-Chair), Webpage Advisory Committee (Member)

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

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 5)

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

  Fall
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 4)
  ▶ BIOL 681. — Seminar (total enrollment: 7)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
BIOL 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▶ 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. Pazzolt (G), C. Small (G), V. Smith (G), D. Bommisetty (U), R. Easterling (U), D. Macedo (U), A. Mason (U), L. McMahon (U), O. Ochoa (U), C. Passow (U)

  • PRESENTATIONS DURING 2011
    ▶ “Mate Choice and the Evolutionary Fate of Natural Hybrids,” Society for the Study of Evolution, Norman, OK, June, 2011. (Individual)
    ▶ “Mate Choice and Evolutionary Genetics in Natural Hybrid Zones of the Neotropical Fish Xiphophorus,” Oklahoma State University, Stillwater, OK, September, 2011. (Invited)
    ▶ “Mate Choice and its Consequences in Natural Hybrid Zones,” Department of Biology, University of Pennsylvania, Philadelphia, PA, September, 2011. (Invited)
    ▶ “Mate Choice, Environmental Gradients, and Hybrid Zone Dynamics in a Neotropical Freshwater Fish,” Yale Institute for Biospheric Sciences, Yale University, New Haven, CT, September, 2011. (Invited)
    ▶ “Mate Choice, Environmental Gradients, and Hybrid Zone Dynamics in a Neotropical Freshwater Fish,” Department of Ecology & Evolutionary Biology, Tulane University, New Orleans, LA, October, 2011. (Invited)

  • PUBLICATIONS DURING 2011


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Genetics, [2007]

• SERVICE DURING 2011
  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), *Traffic, Molecular Cell Research* (Referee: Journals)
  ▶ Committee/Panel: American Society for Cell Biology (Member)

  University
  ▶ Committee/Panel: Pathway’s Student Research Symposium (Judge)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Genetics Program (Member), Program in Biology of Filamentous Fungi (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 613. — Cell Biology (total enrollment: 14)
  ▶ BIOL 691. — Research (total enrollment: 1)
  ▶ GENE 491. — Research (total enrollment: 1)

  Fall
  ▶ BIOL 413. — Cell Biology (total enrollment: 38)
  ▶ BIOL 691. — Research (total enrollment: 1)
  ▶ GENE 491. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ Molecular Mechanisms of Nuclear Pore Complex Assembly, *National Science Foundation*, coworkers: M. Kopecky (Research Assistant), J. Luo (P), J. Fritz (U), M. Payne (U), C. Spanel-Weber (U)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Genetics, [2011]

• AWARDS DURING 2011
  College
  ▶ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2011
  International
  ▶ Editorial/Board: European Research Council Peer Review, France Berkeley Fund Peer(60,274),(766,764)
  ▶ 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), Bioinformatics,
  ▶ Committee/Panel: Neurospora Policy Committee (Member)

  National
  ▶ Editorial/Board: Texas Agrilife Research Genome Seed Grant Program Proposal Review
    (Review: Proposals)
  ▶ Committee/Panel: Institute for Plant Genomics and Biotechnology Advisory Committee
    (Member), Rec Sports Participant Advisory Council (Member), Texas A&M University
    NEST (Member)

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

  Department
  ▶ Committee/Panel: Annual Review Committee (Member), Capstone Program Committee
    (Chair), Faculty Mentoring Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 351. — Fund of Microbiol (total enrollment: 114)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 4)
  ▶ BIOL 691. — Research (total enrollment: 1)
GE 491. — Research (total enrollment: 1)
MICR 691. — Research (total enrollment: 1)

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

Fall
Biol 452. — Fungal Functional Genomics (total enrollment: 10)
Biol 491. — Research (total enrollment: 1)
Biol 681. — Seminar (total enrollment: 5)
Biol 691. — Research (total enrollment: 1)
MICR 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2011

Federal
Control of Arg-2 Gene Expression in Neurospora, National Institutes of Health, coworkers: F. Yang (Research Assistant), R. Addison (P), C. Wu (P), A. Stelly (U)
Functional Analysis and Systems Biology of Filamentous Fungi, National Institutes of Health, coworkers: F. Yang (Research Assistant), R. Addison (P), A. Stelly (U)
Functional Analysis and Systems Biology of Filamentous Fungi Project I, National Institutes of Health, coworkers: K. Halbig (P), Y. Zhang (P)

- PRESENTATIONS DURING 2011

“Gene Regulation Through the Control of Ribosome Movement,” Department of Biology and Biochemistry, University of Houston, Houston, TX, February, 2011. (Invited)

- PUBLICATIONS DURING 2011

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2011
  University
  ▶ Committee/Panel: Graduate Appeals Panel (Chair), Protein Chemistry Lab User Committee (Member)

  Department
  ▶ Committee/Panel: Annual Review Committee (Member), Graduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 351. — Fund of Microbiol (total enrollment: 116)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 681. — Seminar (total enrollment: 4)
  ▶ BIOL 685. — Directed Studies (total enrollment: 2)

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

  Fall
  ▶ BIOL 351. — Fund of Microbiol (total enrollment: 149)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 681. — Seminar (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ A Next Generation E. coli Model Organism Database, National Institutes of Health, coworkers: M. Chibucos (P), A. Zweifel (P), J. Herrera (U), W. Meza (U)

  State
  ▶ A Next Generation E. coli Model Organism Resource, University of Southern California, coworkers: B. McIntosh (P), A. Zweifel (P), S. Aleksander (U), S. Gouni (U)

• PRESENTATIONS DURING 2011
• SERVICE DURING 2011

National
▷ Editorial/Board: *Applied and Environmental Microbiology, The Journal Annals of Microbiology* (Referee: Journals)

Department
▷ Committee/Panel: Capstone Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Fall
▷ BIOL 351. — Fund of Microbiol (total enrollment: 178)
▷ BIOL 491. — Research (total enrollment: 3)
▷ BIOL 691. — Research (total enrollment: 2)

• PRESENTATIONS DURING 2011

▷ “Occidiofungin, a Novel Glycolipopeptide Antifungal,” Texas A&M, Department of Plant Pathology & Microbiology, College Station, TX, February, 2011.(Individual)
▷ “Occidiofungin, a Novel Glycolipopeptide Antifungal,” University of Florida, Center for Structural Biology, Gainesville, FL, April, 2011.(Individual)
▷ “Biotechnology Careers Graduate Student Orientation Class,” Texas A&M, Department of Biology, College Station, TX, October, 2011.(Individual)
▷ “Product Development Portfolio Medical Microbiology,” November, 2011.(Individual)

• PUBLICATIONS DURING 2011

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Neuroscience, [2006]

• SERVICE DURING 2011

  National

  State
  ▷ Service Position: Texas Biomedical Research Institute (External Advisor)

  University
  ▷ Committee/Panel: IACUC (Member), TAMIN Executive Committee and Graduate Program Committee (Chair), TAMIN Seminar Committee (Member), TAMIN Undergraduate Program Committee (Member)

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

  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Animal Communication Symposium Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ BIOL 435. — Laboratory for Regulatory and Behavioral Neuroscience (total enrollment: 12)
  ▷ BIOL 491. — Research (total enrollment: 3)
  ▷ BIOL 681. — Seminar (total enrollment: 11)
  ▷ BIOL 691. — Research (total enrollment: 1)
  ▷ NRSC 681. — Seminar Credit (total enrollment: 10)
  ▷ NRSC 685. — Directed Studies Credit (total enrollment: 2)
  ▷ ZOOL 691. — Research (total enrollment: 1)

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

  Fall
  ▷ BIOL 291. — Research (total enrollment: 1)
  ▷ BIOL 434. — Regulatory and Behavioral Neuroscience (total enrollment: 48)
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 681. — Seminar (total enrollment: 7)
- **PRESENTATIONS DURING 2011**
  - “In Search of the Neural Template for Birdsong in the Bat Brain,” Animal Communication Symposium, Cornell University, Ithaca NY, August, 2011. (Invited)
  - “Animal Models of Human Speech Disorders,” MD Anderson (University of Texas) Michale Keeling Primate Center, Bastrop, TX, November, 2011. (Invited)

- **PUBLICATIONS DURING 2011**
• SERVICE DURING 2011
  
  National

  University
  ▶ Event: Pathways Student Research Symposium (Poster Judge)

• TEACHING ASSIGNMENTS DURING 2011
  
  Spring
  ▶ BIOL 351 — Fund of Microbiol (total enrollment: 111)
  ▶ BIOL 491 — Research (total enrollment: 2)

  Fall
  ▶ BIOL 491 — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011
  
  Federal
  ▶ Analysis of Clostridium Difficile Spore Germination, *National Institutes of Health*, coworkers: C. Allen (Staff)

• PRESENTATIONS DURING 2011
  

• PUBLICATIONS DURING 2011
  
THOMAS A. STIDHAM

ASSISTANT PROFESSOR (979) 845-4660
BIOL-Avian Paleontology tstdham@bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]/

• SERVICE DURING 2011
  National
  ▶ Editorial/Board: Alcheringa (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 75)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 1)
  Fall
  ▶ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 55)

• PRESENTATIONS DURING 2011

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011
  University
  ▶ Committee/Panel: Bioinformatic Resources Proposal Working Group (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 113)

• PUBLICATIONS DURING 2011
• **TEACHING ASSIGNMENTS DURING 2011**

  **Spring**
  ▶ BIOL 320. — *Integrated Hum AN/PHY II* (total enrollment: 358)

  **Summer**
  ▶ BIOL 320. — *Integrated Hum AN/PHY II* (total enrollment: 94)

  **Fall**
  ▶ BIOL 320. — *Integrated Hum AN/PHY II* (total enrollment: 283)
  ▶ BIOL 681. — *Seminar* (total enrollment: 5)

• **PUBLICATIONS DURING 2011**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Director, Shared Instrumentation Facility, Biology, []
  ▶ Director, Laboratory for Functional Genomics, Biology, []

• SERVICE DURING 2011
  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 2011
  Spring
  ▶ BIOL 451. — Bioinformatics (total enrollment: 19)
  ▶ BIOL 651. — Bioinformatics (total enrollment: 8)
  ▶ BIOL 691. — Research (total enrollment: 1)
  Fall
  ▶ BIOL 451. — Bioinformatics (total enrollment: 23)
  ▶ BIOL 651. — Bioinformatics (total enrollment: 9)
  ▶ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health, coworkers: P. Beremand (P)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

• SERVICE DURING 2011

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

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

  Interdisciplinary/Intercollegiate
  ▶ Research Group: MEPS Executive Committee (Member), MEPS Graduate Curriculum Committee (Chair), MEPS Symposium Organization Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 635. — Plant Molecular Biology (total enrollment: 8)
  ▶ BIOL 691. — Research (total enrollment: 2)

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

  Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 276)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

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

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

University
  ▶ Committee/Panel: Core Curriculum Committee (Member), Faculty Senate (Faculty Senator - 05), Personnel & Welfare Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ BIOL 206. — Introductory Microbiology (total enrollment: 40)

  Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 405)
  ▶ BIOL 285. — Directed Studies (total enrollment: 1)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011

International
▷ Editorial/Board: Journal of Marine Biological Association of the United Kingdom, Gulf of Mexico Science, Natura Croatica, Naturwissenschaften, Revista Biologia Tropical (Referee: Journals)

National
▷ Editorial/Board: Institute of Museum and Library Services (Review: Proposals), Marine Biology (Book Reviewer), Zootaxa, Crustaceana, Integrative and Comparative Biology, Latin American Journal of Aquatic Research, Marine Biology Research, Marine Biodiversity Records, Marine Biology, Natura Croatica, Nauplius (Referee: Journals)

University
▷ Committee/Panel: Awards Committee (Member), Diving Safety Committee (Member), Evaluation Board for University Critical Thinking Assessment Test (Member), Sigma Xi Distinguished Scientist Award Committee (Member), Study Abroad Reading Committee (Member), University Scholars Awards Selection Committee (Member)

Interdisciplinary/Intercollegiate
▷ Committee/Panel: Admissions Committee (Member), Marine Biology Program (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 335. — Invertebrate Zoology (total enrollment: 43)
▷ BIOL 491. — Research (total enrollment: 11)
▷ BIOL 691. — Research (total enrollment: 1)
▷ ZOOL 691. — Research (total enrollment: 2)

Summer
▷ BIOL 491. — Research (total enrollment: 7)

Fall
▷ BIOL 440. — Marine Biology (total enrollment: 30)
▷ BIOL 491. — Research (total enrollment: 10)
▷ ZOOL 691. — Research (total enrollment: 2)

• PRESENTATIONS DURING 2011

• PUBLICATIONS DURING 2011


SERVICE DURING 2011

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 2011

Spring
▷ BIOL 301. — Taxonomy of Flowering Plants (total enrollment: 27)
▷ BIOL 328. — Plants and People (total enrollment: 36)

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

No report received from faculty member.

Retired 05/31/2011.
LESLEI K. WINEMILLER

SERVICE DURING 2011

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

Department
▷ Event: TA Workshop (Presenter)

TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BIOL 107. — Zoology (total enrollment: 118)

Fall
▷ BIOL 107. — Zoology (total enrollment: 115)
▷ BIOL 113. — Introductory Biology (total enrollment: 209)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - 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 2011**

  **International**
  - Editorial/Board: Israel Binational Science Foundation (Review: Proposals), *British Journal of Nutrition* (Referee: Journals)

  **National**

  **State**
  - Research Group: Texas Brain and Spine Institute (Associate Member)
  - Committee/Panel: TAM System Research Compliance Taskforce (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), CIRTL Steering Committee (Member), Graduate Council (Chair), Graduate Operations Committee (Member), Institutional Animal Care and Use Committee (Member), NSF LSAMP Bridge to the Doctorate, Program Management Team (Member), Texas A&M UniversityChapter, Sigma Xi Society (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: Finance Committee, Texas A&M Institute for Neuroscience (Chair), Graduate Recruiting Committee, IDP in Neuroscience (Member)

• TEACHING ASSIGNMENTS DURING 2011

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

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

Fall
- BIOL 491. — Research (total enrollment: 1)
- BIOL 644. — Neural Development (total enrollment: 4)
- BIOL 691. — Research (total enrollment: 3)
- NRSC 491. — Research Credit (total enrollment: 1)
- NRSC 644. — Neural Development (total enrollment: 1)
- ZOOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
- (REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health, coworkers: A. Womac (Research Assistant)
- The Control of Neural Transmission by Glycosylation, National Institutes of Health

• PRESENTATIONS DURING 2011

- “Circadian Rhythms in Glial Calcium Signaling Mediate Rhythmic Extracellular ATP Accumulation in the Suprachiasmatic Nucleus,” 3rd World Congress of Chronobiology, Puebla, Mexico, May, 2011. (Individual)
- “Glial Cell Signaling and Brain’s Biological Clockwork,” Department of Biological Sciences, Delaware State University, Dover, DE, November, 2011. (Individual)

• PUBLICATIONS DURING 2011

6. Research Activity, 2011

This section contains information on all funded research activity for the calendar year 2011. 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 2011 = # Days 2011 × Daily Grant Award
### 6.1 Summary of Research Support, 2011

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<th>Title</th>
<th>Start</th>
<th>End</th>
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<th>Total</th>
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<tr>
<td>Lin, X.</td>
<td>Genetic Regulation of Invasive Hyphal Growth of Aspergillus Fumigatus</td>
<td>5/7/2010</td>
<td>4/30/2012</td>
<td>165,911</td>
<td>33,229</td>
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<td><strong>Subtotal: Department of Health and Human Services</strong></td>
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<td>200,985</td>
<td>47,277</td>
<td>248,262</td>
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<td><strong>National Institute on Deafness and Other Communication Disorders</strong></td>
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<td></td>
<td><strong>Subtotal: National Institute on Deafness and Other Communication Disorders</strong></td>
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<td>282,413</td>
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<td><strong>National Institutes of Health</strong></td>
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<td>Aramayo, R.</td>
<td>(REN) Genetic and Molecular Study of Meiotic Trans-sensing and Meiotic Silencing</td>
<td>1/1/2006</td>
<td>12/31/2011</td>
<td>113,995</td>
<td>70,209</td>
<td>184,205</td>
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<tr>
<td>Gomer, R.H.</td>
<td>Regulating Fibrocyte Differentiation in Fibrosis</td>
<td>8/31/2010</td>
<td>7/31/2011</td>
<td>70,569</td>
<td>30,390</td>
<td>100,959</td>
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<td>Hardin, P.E.</td>
<td>(REN) Regulation of Circadian Transcription</td>
<td>8/16/2010</td>
<td>7/31/2015</td>
<td>299,547</td>
<td>19,179</td>
<td>318,725</td>
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<tr>
<td>Lin, X.</td>
<td>The Link Between Dimorphism and Virulence in Cryptococcus</td>
<td>12/1/2011</td>
<td>11/30/2016</td>
<td>16,429</td>
<td>4,107</td>
<td>20,537</td>
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<td>Maggert, K.A.</td>
<td>DNA Methylation in Drosophila</td>
<td>1/1/2006</td>
<td>12/31/2011</td>
<td>269,876</td>
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<th>Title</th>
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<th>End</th>
<th>Direct</th>
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* Subtotal: National Institutes of Health 4,806,186 290,601 5,096,786

**National Science Foundation**


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SEC. 6. RESEARCH ACTIVITY 125
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SEC. 6. RESEARCH ACTIVITY 127
## 6.2 Summary of Individual Support, 2011

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| **Bell-Pedersen, D.** | (REN) Coordination of Circadian Physiology of Diverse Species, (with: D. Bell-Pedersen, V. Cassone, D. Earnest, S. Golden, T. Thomas, M. Zoran) | 7/1/2006    | 6/30/2012   | 161,500| 4,051    | 165,550 |
|                       | (REN) Molecular Genetic Analysis of Fungal Circadian Rhythms           | 8/1/2008    | 7/31/2012   | 232,413| 98,337   | 330,750 |
|                       | (REN) UBM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, (with: D. Bell-Pedersen, A. Dabney, J. Walton) | 9/1/2010    | 8/31/2015   | 31,910 | 1,350    | 33,260  |
| **Subtotal Bell-Pedersen, D.** |                                                                      |             |             | 704,135| 106,579  | 810,714 |

<p>| <strong>Benedik, N.J.</strong>   | (REN) Engineered Improved Micobiological Nitrilases                    | 6/1/2008    | 5/31/2011   | 20,567 | 0        | 20,567  |
|                     | (REN) Cyanide Remediation: Enzyme Modification and Immobilization     | 9/1/2010    | 8/31/2011   | 18,615 | 0        | 18,615  |</p>
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**Subtotal Lockless, S.**

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**Subtotal Naggett, K.A.**

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- Qin, H.
  American Heart Association Small G Protein Regulators of Intraflagellar Transport (IFT) 3/1/2010 2/28/2013 207,427 0 207,427
  Polycystic Kidney Disease Identification of Effectors for IFT27, an Intraflagellar Transport (IFT) Particle Protein Functioning in the Cell Cycle 4/1/2008 5/11/2011 16,400 781 17,181

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- Riley, B.B.
  National Institute on Deafness and Other Communication Disorders (REN) Genetic Analysis of Inner Ear Development in Zebrafish 4/1/2008 3/31/2013 282,413 17,478 299,891

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- Rosenthal, G.G.
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| * Versav, V.K.               |                                                                       |             |             |        |          |         |
|                              | 133,767                                                               |             |             |        |          |         |

| National Institutes of Health | (REN) Coordination of Circadian Physiology of Diverse Species,         | 7/1/2006    | 6/30/2012   | 161,500| 4,051    | 165,550 |
|                              | (with: D. Bell-Pedersen, V. Cassone, D. Earnest, S. Golden, T. Thomas, M. Zoran) |             |             |        |          |         |
| National Institutes of Health | The Control of Neural Transmission by Glycosylation                     | 8/1/2011    | 7/31/2016   | 65,261 | 0        | 65,261  |
| * Zoran, M.J.                |                                                                       |             |             |        |          |         |
|                              | 226,760                                                               |             |             |        |          |         |

*** Total: All Faculty

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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 continues to receive recognition and awards on a national level, as well as from Texas A&M University. Tadhg Begley and Karen Wooley were appointed Distinguished Professors; David Bergbreiter, Kim Dunbar, FranHois GabbaV, and Sherry Yennello were elected to the 2011 class of Fellows of the American Chemical Society; David Bergbreiter received the Wells Fargo Award for Teaching Excellence, Texas A&M University; Paul Cremer, Excellence in Innovation Award, Texas A&M University; Marcetta Darensbourg, Distinguished Scientist Award, Sigma Xi and Fellow, American Academy of Arts & Sciences; Holly Gaede, Distinguished Achievement College-Level Award in Teaching from The Association of Former Students; Daniel Romo, College of Science University-Level Distinguished Achievement Award in Research; Oleg Ozerov American Chemical Society Award in Pure Chemistry; and Gyula Vigh, Halsz Medal Award, Hungarian Society for Separation Sciences. Judy Ludwig received a College of Science Outstanding Staff Achievement Award. Congratulations to all! Our external funding for both education and research remains strong. Our National Science Foundation funded Research Experiences for Undergraduates continued to provide opportunities for undergraduates to carry out research projects in the department during the summer of 2011, 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 298, and our total number of graduate students is 282.

The coming year offers many new challenges as the enrollment in our classes continues to grow, and as we recruit new students and faculty. As we look to the future, the continued support and confidence from my colleagues and staff in the Department of Chemistry is appreciated.
2. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty
▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyList_FINAL.

Non-Tenure-Track Faculty
▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyListNonTTF_FINAL.

Postdoctoral Fellows
▷ Provided by the Department

Graduate Student/Undergraduate Majors
▷ Office of Institutional Studies and Planning (OISP). (Fall 2010, Fall 2011) 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 2011) 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>2010</th>
<th>2011</th>
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<tbody>
<tr>
<td>a. Tenured and Tenure-Track Faculty</td>
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<tr>
<td>Professor</td>
<td>28</td>
<td>25</td>
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<tr>
<td>Assistant Professor</td>
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<td>6</td>
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<tr>
<td>Associate Professor</td>
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<td>3</td>
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<tr>
<td>Distinguished Professor</td>
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<tr>
<td>Instructional Assistant Professor</td>
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<td>b. Non-Tenure-Track Faculty</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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<td>Lecturer</td>
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<td>Senior Lecturer</td>
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<td>c. Postdoctoral Fellows</td>
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<tr>
<td>d. Graduate Majors</td>
<td>289</td>
<td>282</td>
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<tr>
<td>e. Undergraduate Majors</td>
<td>252</td>
<td>298</td>
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<tr>
<td>f. Support Staff</td>
<td>74</td>
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### II. Instructional Activities

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

<table>
<thead>
<tr>
<th>Category</th>
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<tr>
<td>a. Research Publications</td>
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<td>b. Research Presentations</td>
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<td>c. Federal</td>
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<td>d. State</td>
<td>226,435</td>
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<td>e. Private/Non-Profit</td>
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<td>f. Industrial/Corporate</td>
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<td>g. International</td>
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<td>h. Other Govt</td>
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<td><strong>Total</strong></td>
<td><strong>18,150,961</strong></td>
<td><strong>19,207,182</strong></td>
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</table>
3. Honors & Awards, 2011

By Faculty

▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2011.

By Students

▷ This section contains all honors and awards, as reported by the department, during the calendar year 2011.
### 3.1 Honors & Awards Received by Faculty, 2011

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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<tbody>
<tr>
<td>D. Bergbreiter</td>
<td>Fellow, American Physical Society</td>
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<td></td>
<td>Wells Fargo Award for Teaching Excellence, Texas A&amp;M University</td>
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<tr>
<td>P. Cremer</td>
<td>Excellence in Innovation Award, Texas A&amp;M University</td>
</tr>
<tr>
<td></td>
<td>Fellow, American Association for the Advancement of Science</td>
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<tr>
<td>M. Darensbourg</td>
<td>Distinguished Scientist Award, Sigma Xi</td>
</tr>
<tr>
<td></td>
<td>Fellow, American Academy of Arts &amp; Sciences</td>
</tr>
<tr>
<td>K. Dunbar</td>
<td>Fellow, American Physical Society</td>
</tr>
<tr>
<td>F. Gabbai</td>
<td>Fellow, American Chemical Society</td>
</tr>
<tr>
<td>H. Gaede</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>O. Ozerov</td>
<td>ACS Award in Pure Chemistry, American Chemical Society</td>
</tr>
<tr>
<td>D. Romo</td>
<td>Distinguished Achievement Award - Research, The Association of Former Students</td>
</tr>
<tr>
<td>G. Vigh</td>
<td>Halász Medal Award, Hungarian Society for Separation Sciences</td>
</tr>
<tr>
<td>S. Yennello</td>
<td>Fellow, American Physical Society</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2011

Graduate

▷ Ashworth Tsutsui Memorial Award for Research-Women in Science and Engineering
   Haiyan Zhao

▷ BASF Summer Scholarships
   Melissa Clough
   Rafael Huacuja

▷ Bristol-Meyers Squibb Minority Chemist Fellowship
   Eric Plata

▷ Bruno John Zwolinski Endowed Graduate Fellowship in Physical Chemistry
   Michael Grubb
   Haifeng Zeng

▷ China Scholarship Council Award
   Zuan Zhang
   Fuwu Zhang

▷ Chinese Scholarship Award for Outstanding Self-financed Students Abroad
   Yu Zhu

▷ Coblentz Society Student Award
   Praveen BooPalachandran

▷ Department of Energy office of Science Graduate Fellowship
   Stephanie Wilson

▷ Dow Chemical Graduate Fellowship
   Jun Yong Kang
   Haw-Lih Su
   Casey Wade
   Haiyan Zhao

▷ Dr. Minoru Tsutsui Memorial Graduate Scholarship
   Ye Zhu

▷ E. Martell Travel Awards

▷ Gerry Meisner and Roberta Peascoe Meisner Endowed Graduate Scholarship
   Haiyan Zhao

▷ Marie and Jim H. Galloway Endowed Graduate Scholarship
   Tzu-Pin Lin

▷ National Science Foundation Graduate Research Fellowship
   Kevin Gagnon
Casie Hilliard

▶ North American Taiwanese Engineers Association-Dallas Chapter
  Haw-Li Su

▶ Organic Laboratory Teaching Award
  Tiffany Pinder

▶ Phil Gramm Doctoral Fellowship
  Alejandro Bugarin

▶ Polymer Additives and Modifier Division of SPE
  Christopher Hobbs

▶ Richard W. Schmude, Jr. Endowed Graduate Scholarship
  Johannes Guenther

▶ Royal Thai Government Scholarship
  Kantapat Chanaenpak

▶ Science, Mathematics and Research for Transformation Scholarship
  Billy McCulloch

▶ Sharon Dabney Memorial Scholarship
  Esther Ocola

▶ Society of Plastics Engineers
  Johannes Guenther
  Casie Hilliard
  Christopher Hobbs
  Jacqueline Pope

▶ Thomas J. Hairston Memorial Graduate Scholarship
  Alejandro Bugarin

▶ U.S. Senator Phil Gramm Fellowship
  Alejandro Bugarin

▶ Upper-Level Laboratory Teaching Award
  Michael Grubb
  Alnald Javier
4. Students, 2011

This section contains all degrees awarded, as reported by the department, during the calendar year 2011.
4.1 Graduate Degrees Awarded, 2011

Fall

▷ M.S.

Ann R Sullivan

Advisor(s): J. Gladysz

▷ Ph.D.

Xavier Sheldon Bogle

Dynamic Effects in Nucleophilic Substitution Reactions

Advisor(s): D. Singleton

Sean Michael Bowen

The Application of Dynamic Nuclear Polarization Enhanced NMR to Non-Equilibrium Systems

Advisor(s): C. Hilty

Scott Michael Brothers

Computational Benchmarking in Biomimetic Nickel, Copper, and Iron Complexes

Advisor(s): M. Darenbourg

Supakarn Chamni

New Diazot Reagents and Applications of β-Lactones for Synthesis and Biological Evaluation of Natural Product

Advisor(s): D. Romo

Sarah Cecilia Flores Araujo

Specific Ion Effects on Interfacial Phenomena

Advisor(s): P. Cremer

Weixing Gu

New Designs of Rigid Pincer Complexes with PXP Ligands and Late Tansition Metals and sp3 C-F Bond Activation with Silylium and Alumenium Species

Advisor(s): O. Ozerov

Jennifer Lynn Hess

Bioinspired Synthesis and Reactivity Studies of Nitric Oxide Iron Complexes

Advisor(s): M. Darenbourg

Ollie Michelle James

Recrossing and Heavy-Atom Tunneling in Common Organic Reactions

Advisor(s): D. Singleton

Jaibir Kherb

Specific Cation Effects in Biological Systems: Thermodynamic and Spectroscopic Insights

Advisor(s): P. Cremer

Gang Liu

Beta-Lactones as Synthetic Vehicles in Natural Product Synthesis: Total Syntheses of Schulzeines B & C and Omphadio, and Studies toward the Total Syntheses

Advisor(s): D. Romo

Esther Juliana Ocola

Vibrational and Theoretical Investigations of Molecular Conformations and Intramolecular ?-Type Hydrogen Bonding
Advisor(s): J. Laane
Houston Philipp Perry Functional Metal Phosphonates

Advisor(s): A. Clearfield
Casey Robert Wade Synthesis and Study of Boron and Antimony Lewis Acids as Small Anion Receptors and Ligands towards Transition Metals

Advisor(s): F. Gabbai
Paul David Zeits Olefin Metatheses in Metal Coordination Spheres: Development of Gyroscope-Like trans-Spanning Bis(pyridine) Complexes and Organometallic $\pi$-Adducts of Conjugated Polymers

Advisor(s): J. Gladysz
Spring

▷ M.S.
Ainsley Larue Allen Advisor(s): J. Batteas
Edward Sterling Funck Advisor(s): K. Dunbar
Mario Estuardo Gamez-Hernandez Advisor(s): D. Russell
Kayla J Messer Pyridoxal Phosphate as a Tag to Identify Enzymes Within The plp-ome

▷ Ph.D.
Alejandro Bugarin Cervantes Metal-Catalyzed Carbon-Carbon Bond Forming Reactions for the Synthesis of Significant Chiral Building Blocks Advisor(s): B. Connell
Ryan Lane Jones Mitigating Wear on Surfaces Utilizing Self-Assembled Wear Passivating Films Advisor(s): J. Batteas
Osit Karroonnirun Biometal Catalyzed Ring-Opening Polymerization of Cyclic Esters: Ligand Design, Catalyst Stereo-electivity, and Copolymer Production Advisor(s): D. Darensbourg
Dvesharronne J. Moore The Chemistry of Atherogenic High Density Lipoprotein Advisor(s): R. Macfarlane
Luis A Rivera-rivera Morphed Potential Energy Surfaces from the Spectroscopy of Weakly Bound Complexes Advisor(s): R. Lucchese
Amanda Eileen Schuckman Charge Transport through Organized Organic Assemblies in Confined Geometries
Cliferson Thivierge  
Advisor(s): J. Batteas  
Design and Syntheses of Dyes for Biological Applications

Chi-lin Tsai  
Advisor(s): K. Burgess  
Structural and Functional Studies of Human Mitochondrial Iron-Sulfur Cluster Biosynthesis

Stacey Elaine Wark  
Advisor(s): D. Barondeau  
Simple Chemical Routes for Changing Composition or Morphology in Metal Chalcogenide Nano-material

Ye Zhu  
Advisor(s): D. Son  
Asymmetric Hydrogenations of Chiral Acyclic Alkenes for Important Chiron Syntheses

Summer

▷ M.S.

Wayne Daniel Harshbarger  
Advisor(s): J. Sacchettini

Melanie Ingrid Perera  
Advisor(s): J. Bluemel

Wan Wen Zhu  
Advisor(s): J. Sacchettini

▷ Ph.D.

Maria Duran Galvan  
Justine Nicole Geidosch  
Christopher Eugene Hobbs  
Vladimir Borisovich Kuznetsov  
Haw-lih Su  
Albert Wan  
Self-Assembly of Organic Nanostructures  
Advisor(s): J. Batteas
4.2 Undergraduate Degrees Awarded, 2011

Fall

▷ B.A.
Ashley Elaine Cook
Corey Charles Daigle
Raul Gonzalez
Cullan Baynes Lucas
Megan Denise Mader

▷ B.S.
Willie Weili Hsu
Cross Dillon Medders
Jordan Everett Tham
Ashley Lauren Wallace

Spring

▷ B.A.
Katie Ann Decock
Elina Delgado
Ryan Matthew Fort
Mary Emma French
Ana Rosa Garcia Rodriguez
Whitney Alexis Graham
Annilee Hamilton
Shalene Michelle Hopkins
Kristine Michelle Jang
Kyle Daniel Jones
Leane Marie Latham
Douglas Richard Melde
Nicole Marie Reusser
Ivey Roberts Royall
Benjamin Wesley Seufferlein
Abby Alane Sisco
Christine Binamira Soriaga
Randal Garrett Spears
Kristin Nicole Waverka
Dustin Tyler Weghorst
Felix Chiu Hang Yu

▷ B.S.
Kevin Michael Arendt
Samantha Lee Burrows
Rachel Beth Chupik
Christopher Patrick Costanzo
Bryant Kirkland Delka
Jennifer Lynn Erchinger
Christina Nicole Escobedo
Megan Elizabeth Fish

SEC. 4.2 UNDERGRADUATE DEGREES 151
Matthew Aaron Freeman
Merid Minasse Haile
Kurt M Johnson
William Patrick Kolar
Nicole Elizabeth Konelick
Allen Michael Lunsford
Christopher Ryan Rhoades
Spencer Charles Wehring
Nicholas Alexander Williams
## 5. Colloquium and Seminar Speakers, 2011

**Frontiers Lecture Series**

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<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1/24/2011</td>
<td>Christopher Cummins</td>
<td>Massachusetts Institute of Technology</td>
<td>Dinitrogen Cleavage by a Three-coordinate Molybdenum(III) Complex and Related Chemistry</td>
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<td>1/25/2011</td>
<td>Christopher Cummins</td>
<td>Massachusetts Institute of Technology</td>
<td>Phosphorus Ligand Transfer Reactions including the Synthesis and Properties of AsP3</td>
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<td>1/26/2011</td>
<td>Christopher Cummins</td>
<td>Massachusetts Institute of Technology</td>
<td>New Approaches to CO2 Fixation via Group 4 and 5 Metal Systems</td>
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<td>2/28/2011</td>
<td>Phil Cole</td>
<td>Johns Hopkins School of Medicine</td>
<td>Past, Present, and Future in Drug Discovery</td>
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<td>3/1/2011</td>
<td>Phil Cole</td>
<td>Johns Hopkins School of Medicine</td>
<td>Chemical Approaches to Sorting out Signaling Pathways</td>
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<tr>
<td>3/2/2011</td>
<td>Phil Cole</td>
<td>Johns Hopkins School of Medicine</td>
<td>Targeting Acyltransferases in Cancer and Metabolism</td>
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<td>3/7/2011</td>
<td>Hisashi Yamamoto</td>
<td>University of Chicago</td>
<td>Designer Bronsted Acid Catalyst - Rapid Synthesis of Polyketides</td>
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<td>3/8/2011</td>
<td>Hisashi Yamamoto</td>
<td>University of Chicago</td>
<td>Designer Lewis Acid Catalyst - Combined Acid and cis-alpha/cis-beta Metal Catalysts</td>
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<td>3/9/2011</td>
<td>Hisashi Yamamoto</td>
<td>University of Chicago</td>
<td>Asymmetric Oxidation</td>
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<td>4/11/2011</td>
<td>Joel Harris</td>
<td>University of Utah</td>
<td>Quantitative Analysis of Interfacial Chemistry at the Single-Molecule Level</td>
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<td>4/12/2011</td>
<td>Joel Harris</td>
<td>University of Utah</td>
<td>Raman Spectroscopy of Liquid/Solid Interfaces and Dispersed Particles</td>
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<td>4/13/2011</td>
<td>Joel Harris</td>
<td>University of Utah</td>
<td>Multidimensional Spectroscopic Measurements for Unraveling Interfacial Chemistry</td>
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<tr>
<td>10/10/2011</td>
<td>Henry Schaefer</td>
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University of Georgia
The Third Age of Quantum Chemistry

10/11/2011  Henry Schaefer
University of Georgia
Lesions in DNA Subunits: Foundational Studies of Molecular Structures and Energetics

10/12/2011  Henry Schaefer
University of Georgia
From Donor-Acceptor Complexes to Gallium Nitride Nanotubes

10/24/2011  Richard Crooks
University of Texas, Austin
Dendrimer-Encapsulated Nanoparticles: Synthesis, Characterization, Electrocatalysis, and a Little DFT

10/25/2011  Richard Crooks
University of Texas, Austin
Bipolar Electrodes: Concentration, Separation and Detection in Microelectrochemical Systems

10/26/2011  Richard Crooks
University of Texas, Austin
Now What? A Few Cool Ideas I Could Use some Help With

10/31/2011  Jeff Long
University of California, Berkeley
Hydrogen Storage in Metal-Organic Frameworks

11/1/2011  Jeff Long
University of California, Berkeley
Carbon Dioxide Capture in Metal-Organic Frameworks

11/2/2011  Jeff Long
University of California, Berkeley
Applications of Coordination Chemistry in the Synthesis of Single-Molecule Magnets

11/14/2011  E.W. Meijer
Eindhoven University of Technology, The Netherlands
Supramolecular Polymers: A Modular Approach to Biomaterials

11/15/2011  E.W. Meijer
Eindhoven University of Technology, The Netherlands
Amplification of Chirality in Dynamic Supramolecular Assemblies

11/16/2011  E.W. Meijer
Eindhoven University of Technology, The Netherlands
Non-covalent Synthesis of Complex Supramolecular Systems
<table>
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<tr>
<th>Date</th>
<th>Speaker Name</th>
<th>Institution</th>
<th>Topic</th>
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<tr>
<td>1/18/2011</td>
<td>Xin Chen</td>
<td>Harvard University</td>
<td>Water and Ions at Interfaces, from Protein Surfaces to Surfaces of Everything</td>
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<td>1/27/2011</td>
<td>Rich Carter</td>
<td>Oregon State University</td>
<td>Natural Products that Inspire: Synthesis and Reaction Development</td>
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<td>2/1/2011</td>
<td>Radoslav Adzic</td>
<td>Brookhaven National Laboratory</td>
<td>Recent Developments in Platinum Monolayer Electro catalysts for the Oxygen Reduction Reaction and Electro catalysts for Ethanol Oxidation to CO2</td>
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<td>2/2/2011</td>
<td>John Berry</td>
<td>University of Wisconsin, Madison</td>
<td>Coordination Complexes with Multiple Inorganic Functional Groups</td>
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<td>2/8/2011</td>
<td>Romauldo DeSouza</td>
<td>Indiana University</td>
<td>Exploring a Neutron Star’s Crust with Nuclear Reactions</td>
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<td>2/10/2011</td>
<td>Sheo Singh</td>
<td>Merck Laboratories</td>
<td>Discovery and Development of Platensimyin</td>
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<td>2/15/2011</td>
<td>Wei Zhan</td>
<td>Auburn University</td>
<td>Molecular Photovoltaics: A Lipid-Based Approach</td>
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<td>2/16/2011</td>
<td>Jerome Lacour</td>
<td>University of Geneva</td>
<td>Investigations in Asymmetric Synthesis and Catalysis</td>
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<td>2/17/2011</td>
<td>Karl Scheidt</td>
<td>Northwestern University</td>
<td>New Directions with Carbene Catalysis</td>
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<tr>
<td>2/22/2011</td>
<td>YuYe Tong</td>
<td>Georgetown University</td>
<td>In situ Spectroelectrochemical Investigation of Pt-based Electro catalysts</td>
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<td>2/23/2011</td>
<td>Christine Thomas</td>
<td>Brandeis University</td>
<td>Metal-Metal Multiple Bonds in Early/Late Heterobimetallic Complexes: Applications Towards Small Molecule Activation and Catalysis</td>
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<td>2/24/2011</td>
<td>Vy Dong</td>
<td>University of Toronto</td>
<td>Stereoselective Strategies for Transforming C-H Bonds, Simple Olefins and Carbon Dioxide</td>
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<td>3/22/2011</td>
<td>Robert Tycko</td>
<td>National Institutes of Health</td>
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New Insights into Amyloid Structure, Protein Folding, and Solid State NMR Spectroscopy

Boston University
Putting Metals to Work: Transition Metal Complexes for Electron Transfer and Electron Transport

3/24/2011 Jared Shaw
University of California, Davis
Multicomponent Approaches to Stereoselective Synthesis and Chemical Biology

3/25/2011 Steven Mansoorabadi
University of Texas, Austin
(S)-2-Hydroxypropylphosphonate Epoxidase: Mechanism, Reactivity, and Substrate

4/5/2011 Richard Loomis
Washington University, St. Louis
Colloidal Semiconductor Nanowires: Can They Behave as Model 1-D Quantum Systems?

4/20/2011 Richard Brutchey
University of Southern California
New Routes to Functional Nanocrystals for Solar Energy Conversion and Energy Storage

4/21/2011 Olafs Daugulis
University of Houston
Palladium and Copper-Catalyzed Functionalization of C-H Bonds

4/22/2011 Matthew Shores
Colorado State University
Putting a New Spin on Coordination Complexes

4/26/2011 Amy Walker
University of Texas, Dallas
Ionic Liquid Matrix-Enhanced Secondary Ion Mass Spectrometry

4/27/2011 Rodolphe Clerac
University of Bordeaux
Rational Design of Magnetic Materials Based on Singlemolecule Magnet Building-Blocks

4/27/2011 David MacMillan
University of Bordeaux
Rational Design of Magnetic Materials Based on Singlemolecule Magnet Building-Blocks

4/28/2011 Chaitan Khosla
Stanford University
Assembly Line Biosynthesis of Complex Molecules

4/29/2011 Felix Castellano
Bowling Green State University
Molecular Inorganic Photonics
5/2/2011 Nathaniel Rosi
University of Pittsburgh
Biomolecules as Building Blocks for Directing the Structure and Function of New Materials

5/3/2011 Ryan Bailey
University of Illinois, Urbana-Champaign
Multiparameter Biomolecular Analysis Using Chip-Integrated Silicon Photonic Sensor Arrays

5/4/2011 Sascha Ott
Uppsala University, Sweden
Developing Proton Reduction Catalysts Inspired by Hydrogenase Enzyme Active Sites

5/5/2011 Anne McNeit
University of Michigan
Synthesizing π-Conjugated Copolymers with Sequence Control Using Ni Catalysis

5/13/2011 James Stevens
DOW Chemical Company
Teaching Old Polyolefins New Tricks with Modern Catalysts

5/17/2011 Andrew Teplyakov
University of Delaware
Tuning Surface Properties by Chemical Functionalization

5/19/2011 Scott Schaus
Boston University
Asymmetric Boronate Reactions: Catalysis and Synthesis

9/7/2011 Gregg Grant
University of Tennessee, Chattanooga
Squares, Triangles, Square Pyramids, and Trigonal Bipyramids in Thiacrown Complexes: Adventures in Research with Undergraduate Students

9/8/2011 John Anthony
University of Kentucky
Small Molecule Semiconductors for Organic Electronics

9/9/2011 Ian Blair
University of Pennsylvania
Stable Isotope Labeling by Essential Nutrients in Cell Culture (SILEC) and LC-MS for Assessing Mitochondrial Dysfunction

9/14/2011 Brad Pierce
University of Texas, Arlington
Single-Turnover of Substrate-Bound Ferric Cysteine Dioxygenase with Superoxide Anion: Enzymatic Reactivation, Product Formation, and a Transient Intermediate

9/15/2011 John Markley
University of Wisconsin, Madison
Order-Disorder Transitions in IscU, the Scaffold Protein for Iron-Sulfur Cluster Assembly

9/22/2011 Guorong Sun
Texas A&M University
RAFT Polymerization of Functional Monomers: Towards the Construction of Functional Nanomaterials
9/28/2011 Seth Cohen
University of California, San Diego
Postsynthetic Modification of Metal-Organic Frameworks

9/29/2011 Jun Liu
Johns Hopkins School of Medicine
Exploration of the Existing Drug Space for New Molecular Probes of Angiogenesis

10/4/2011 Xiaoyang Zhu
University of Texas, Austin
How Does One Become Two? Solar Energy Conversion Beyond the Limit

10/5/2011 Curtis Berlinguette
University of Calgary
Rational Design of Transition Metal Complexes for Solar Energy Conversion Schemes

10/13/2011 Brad Moore
University of California, San Diego
Genomics-Inspired Discovery and Bioengineering of Natural Product Drug Leads

10/17/2011 Barry Trost
Stanford University
The Alkyne Strategy for the Synthesis of Bioactive Targets

10/18/2011 Songi Han
University of California, Santa Barbara
Biological Interactions Probed via Site-specific Hydration Dynamics

10/19/2011 Marc Knecht
University of Miami
Probing and Exploiting the Biological/Inorganic Interface to Control the Activity of Bio-Inspired Nanomaterials

10/20/2011 Steve Almo
Albert Einstein College of Medicine
Flexibility of an Unusual Non-heme Iron-dependent Enzyme

10/27/2011 Tom Miller
California Institute of Technology
Bridging Lengthscales and Timescales in the Simulation of Condensed-Phase Reaction Dynamics

11/3/2011 Tracey Rouault
National Institutes of Health
Synthesis of Mammalian Iron-Sulfur Clusters and Relevance to Human Disease

11/8/2011 Catalina Achim
Carnegie Melon University
Hybrid Inorganic-Peptide Nucleic Acid Structures

11/9/2011 Charles Casey
Design Evolution Leading to the Discovery of an Efficient Iron Catalyst for the Chemoselective Hydrogenation of Aldehydes and Ketones

11/10/2011 Dale Boger
Scripps Research Institute
Re-engineering Vancomycin for Activity Against Vancomycin-resistant Bacteria

11/30/2011 Jeremy Smith
New Mexico State University
Single Atom Ligands in Three-Fold Symmetric Iron Complexes

12/1/2011 David Sherman
University of Michigan
Chemical Diversity and Metabolic Versatility in Microbial Natural Product Biosynthesis

12/7/2011 Theodore Betley
Harvard University
Driving Multi-electron Chemistry Using Polynuclear Reaction Sites

12/8/2011 Weiping Tang
University of Wisconsin, Madison
Development of New Reactions Driven by the pi-Acidity of Rhodium(I) Catalyst

12/14/2011 Richard Adams
University of South Carolina
Mixed-metal Cluster Complexes and Their Use as Precursors to Bimetallic Nanoparticles for Heterogeneous Catalysis
6. Faculty*, 2011

David P. Barondeau .............................................. Assistant Professor
James D. Batteas .................................................. Associate Professor
Tadhg P. Begley .................................................... Distinguished Professor
David E. Bergbreiter .............................................. Professor
John W. Bevan ..................................................... Professor
Janet F. Bluemel ..................................................... Professor
Lawrence S. Brown .............................................. Instructional Assistant Professor
Kevin Burgess ..................................................... Professor
Abraham Clearfield ............................................. Distinguished Professor
Brian T. Connell .................................................... Assistant Professor
Paul S. Cremer .................................................... Professor
Donald J. Daresbourg ........................................... Distinguished Professor
Marcetta Y. Daresbourg ......................................... Distinguished Professor
Kim R. Dunbar ..................................................... Distinguished Professor
John P. Fackler ...................................................... Distinguished Professor Emeritus (A)
Francois P. Gabbai .............................................. Professor
Holly C. Gaede ..................................................... Instructional 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
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
Joseph B. Natowitz .............................................. Distinguished Professor
Simon W. North .................................................. Professor
Oleg V. Ozerov .................................................... Professor
Joanna G. Pellois ................................................ Senior Lecturer
James D. Pennington .......................................... Instructional Assistant Professor
Udani A. Perera .................................................... Lecturer
Krishan Ponnampерuma ........................................ 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 ........................................... Associate 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
Steven E. Wheeler ........................................... Assistant Professor
Vickie M. Williamson ........................................... Instructional Assistant Professor
Karen L. Wooley ........................................... Distinguished Professor
Jiong Yang ........................................... Assistant Professor
Danny L. Yeager ........................................... Professor
Sherry J. Yennello ........................................... Professor
Renyi Zhang ........................................... Professor (J)
Hong-cai Zhou ........................................... Professor

*For the Annual Report, faculty are defined as tenured, tenure-track and non-tenure track employees who were employed at any time during 2011 (01/01/2011-12/31/2011).*
6.1 Professional Activities, 2011

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2011.

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 2011.
- 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 2011.
- 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 2011

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 2011

Spring
▷ BICH 691. — Research (total enrollment: 1)
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 6)

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

Fall
▷ BICH 491. — Research (total enrollment: 1)
▷ BICH 691. — Research (total enrollment: 1)
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 272)
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2011

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

State
▷ A Novel Hydrogenase Fusion Protein for Sustained Aerotolerant Hydrogen Production, Texas Higher Education Coordinating Board, coworkers: D. Martin (G)

Private

164  2011 CHEMISTRY ANNUAL REPORT
Deciphering Normal and Aberrant Function for Clinical Variants Associated with Fe-S Assembly and Heart Disease, *American Heart Association - Texas*, coworkers: J. Bridwell-Rabb (G), M. Levy (G), E. Carr (U), A. Winn (U)

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

**PRESENTATIONS DURING 2011**

- “Human Frataxin is an Allosteric Switch that Activates the Fe-S Cluster Biosynthetic Complex,” 22nd Enzyme Mechanisms Conference, St. Pete Beach, FL, January, 2011. (Invited)
- “Mechanistic Studies of the Human Fe-S Assembly Complex,” 2nd Annual Stone Symposium, Baylor University, Waco, TX, May, 2011. (Invited)
- “Mechanism of Sulfur Delivery for Human Fe-S Cluster Biosynthesis,” Florida State University, Tallahassee, FL, November, 2011. (Invited)

**PUBLICATIONS DURING 2011**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2011

  International
  ▶ Editorial/Board: *ISRN Nanotechnology* (Member), *RSC Advances* (Associate Editor)

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

  Department
  ▶ Committee/Panel: Academic Operations Committee (Member), Analytical Chemistry Division (Chair), Graduate Admissions and Review Committee (Chair), Graduate Admissions and Review Committee (Member), Graduate Curriculum Committee (Member), Graduate Recruiting (Coordinator)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 56)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 6)

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

  Fall
  ▶ CHEM 415. — Analytical Chemistry (total enrollment: 36)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 6)
  ▶ MSEN 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▶ ARRA Solvation Studies of Responsive Polymers in Solution and at Surfaces, *National Science Foundation*
Collaborative Research: Conduction in Confined Molecular Assemblies, *National Science Foundation*

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

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

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

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

- **PRESENTATIONS DURING 2011**

  - “Studies of Conduction in Confined Molecular Assemblies,” Johns Hopkins University, Baltimore, MD, February, 2011. (Individual)
  - “Studies of Conduction in Confined Molecular Assemblies,” University of Delaware, Newark, DE, February, 2011. (Individual)
  - “Coming to America, Graduate School Opportunities for International Students in the US,” 241st National Meeting of the American Chemical Society, March, 2011. (Individual)
  - “Surface Decoration of Zirconium Phosphate Nanoplatelets: Improving Applicability from Drug Delivery to Thin Janus Nanoparticles,” 43rd IUPAC World Chemistry Congress, San Juan, Puerto Rico, July, 2011. (Graduate, A. Diaz)
  - “Tuning the Assembly of Porphyrin Nanowires,” 242nd National Meeting of the American Chemical Society, August, 2011. (Individual)
  - “Tales from the Nanoscale: Fabrication and Tuning of Quantum Dot Assemblies on Surfaces for Optoelectronics and Sensing,” Cameron University, Lawton, OK, September, 2011. (Individual)
  - “Effect of Local Environment on Photobrightened CdSe Quantum Dots,” 67th Southwest Regional Meeting of the American Chemical Society, Austin, TX, November, 2011. (Poster Graduate, A. Pravitsari)
  - “Effect of Local Environment on Photobrightened CdSe Quantum Dots,” Materials Characterization Facility Open House, Texas A&M University, College Station, TX, November, 2011. (Poster Graduate, A. Pravitsari)
  - “Novel Zirconium Phosphate Nanoplatelets for Drug Delivery in Cancer Nanotherapy,” 67th Southwest Regional Meeting of the American Chemical Society, Austin, TX, November, 2011. (Graduate, A. Diaz)
  - “Refining Nanografting based Lithography: Effects of Fabrication Parameters Studied SEC. 6.1 PROFESSIONAL ACTIVITIES 167
by AFM and STM,” 67th annual ACS Southwest Regional Meeting, November, 2011. (Graduate, B. Ewers)

▷ “Structure of Self-Assembled Monolayers on Surfaces with Nanoscopic Curvature Examined by Molecular Dynamics,” 67th annual ACS Southwest Regional Meeting, November, 2011. (Postgraduate, B. Ewers)

▷ “Surface Compositions of Pd-Cu Alloys,” 67th Southwest Regional Meeting of the American Chemical Society, Austin, TX, November, 2011. (Graduate, S. Skiles)


• PUBLICATIONS DURING 2011


TADHG P. BEGLEY
DISTINGUISHED PROFESSOR (979) 862-4091
CHEM-Biological/Organic/Bioorganic Chemistry begley@chem.tamu.edu

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

- SERVICE DURING 2011

  National
  - Editorial/Board: Biochimica et Biophysica Acta - Proteins and Proteomics (Member), Bioorganic Chemistry (Member), Chemical Biology and Drug Design (Member), Molecular Biosystems on Posttranslational Modification of Proteins (Co-Editor)
  - Committee/Panel: ACS (Chair elect), ACS Awards Committee (Member), Enzyme Mechanisms Conference, Organizing Committee (Member), NIH Macromolecular Structure and Function Study Section (Member), NIH Mentoring Workshop for New Faculty (Co-Chair)

  University
  - Editorial/Board: University of Alberta (External Review Committee)

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

  Department
  - Committee/Panel: Division of Biological Chemistry (Chair), Executive Committee (Member), LBMS Advisory Committee (Chair), 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)
  - Committee/Panel: Dean of Faculties Committee (Member)

- TEACHING ASSIGNMENTS DURING 2011

  Spring
  - CHEM 691. — Research (total enrollment: 7)

  Summer
  - CHEM 691. — Research (total enrollment: 9)

  Fall
  - CHEM 689. — Special Topics in (total enrollment: 9)
  - CHEM 691. — Research (total enrollment: 6)

- RESEARCH PROJECTS DURING 2011

  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 2011**
- ACS Southwest Regional Meeting, 2011. (Invited)
- Center for Cellular and Molecular Biology, Hyderabad, India, 2011. (Invited)
- College of Wooster, Wooster, OH, 2011. (Invited)
- Georgia Institute of Technology, Atlanta, GA, 2011. (Invited)
- Indian Institute of Chemical Technology, Hyderabad, India, 2011. (Invited)
- Indian Institute of Science Education and Research, Pune, India, 2011. (Invited)
- Indian Institute of Technology, Mumbai, India, 2011. (Invited)
- International Conference on Cofactors, 2011. (Invited)
- International Symposium on Flavins and Flavoproteins, 2011. (Invited)
- National Chemical Laboratory, Pune, Pune, India, 2011. (Invited)
- National Institute of Pharmaceutical Education and Research, Hyderabad, India, 2011. (Invited)
- National University of Ireland, Cork, Ireland, 2011. (Invited)
- Oberlin College, Oberlin, OH, 2011. (Invited)
- Society for Industrial Microbiology, 2011. (Invited)
- Tata Institute of Fundamental Research, Mumbai, India, 2011. (Invited)
- The Scripps Research Institute, Jupiter, FL, 2011. (Invited)
- University of Alberta, Alberta, Canada, 2011. (Invited)
- University of Texas, Austin, TX, 2011. (Invited)
- University of Texas, San Antonio, TX, 2011. (Invited)
- University of Utah, Salt Lake City, UT, 2011. (Invited)

**PUBLICATIONS DURING 2011**


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

• AWARDS DURING 2011
  University
  ▷ Wells Fargo Award for Teaching Excellence, Texas A&M University

• SERVICE DURING 2011
  International
  ▷ Advisory Board: IUPAC Conference on Polymers in Organic Chemistry, Doha, Qatar
     Advisory Committee (Member)
  National
  ▷ Editorial/Board: *Macromolecules* (Advisory Board)
  ▷ Committee/Panel: American Chemical Society’s Joint Board/Council Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ CHEM 446. — Organic Chemistry III (total enrollment: 25)
  ▷ CHEM 491. — Research (total enrollment: 3)
  ▷ CHEM 691. — Research (total enrollment: 5)
  Summer
  ▷ CHEM 691. — Research (total enrollment: 8)
  Fall
  ▷ CHEM 491. — Research (total enrollment: 2)
  ▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ ARRA Solvation Studies of Responsive Polymers in Solution and at Surfaces, *National Science Foundation*, coworkers: K. Tan (P), M. Harrell (U), K. Light (U), A. Mijilis (U)
  ▷ Biphasic Catalysis using Soluble Polymer Supports, *National Science Foundation*, coworkers: C. Hobbs (G), T. Khamatnurova (G), U. Priyadarshani (G), H. Su (G), Y. Yang (G), Y. Yang (G)
  Private
Synthesis, Characterization and Applications of Novel Lipophilic Metathesis Catalysts, *Qatar National Research Fund*, coworkers: C. Hobbs (G), Y. Liang (G), H. Su (G), J. Ling (U)

Phase Facilitated Catalysis and Synthesis, *The Robert A. Welch Foundation*, coworkers: Y. Yang (P), C. Hobbs (G), I. Medina (G), U. Priyadarshani (G), J. Suriboot (G), Y. Yang (G)

**PRESENTATIONS DURING 2011**

- “Designing and Using Responsively Soluble Polymers,” Oklahoma State University, Stillwater, OK, April, 2011. (Invited)
- “Soluble Polymer Supported Ligands for Catalyst Separations,” 16th Organometallic Chemistry for Organic Synthesis Symposium, Shanghai, China, July, 2011. (Individual)
- “Recycling and Reusing Homogeneous Catalysts with Soluble Polymers,” Southeastern Louisiana University, Hammond, LA, October, 2011. (Individual)
- “Smart Responsive Nanocomposite Grafts,” Texas A&M Polymer Consortium Meeting, College Station, TX, October, 2011. (Individual)

**PUBLICATIONS DURING 2011**


JOHN W. BEVAN

PROFESSOR
CHEM-Physical/Nuclear Chemistry

(979) 845-2372
bevan@chem.tamu.edu

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

• SERVICE DURING 2011

  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 2011

  Spring
  ▶ CHEM 327. — Physical Chemistry (total enrollment: 34)
  ▶ CHEM 691. — Research (total enrollment: 2)

  Summer
  ▶ CHEM 327. — Physical Chemistry (total enrollment: 18)
  ▶ CHEM 491. — Research (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 2)

  Fall
  ▶ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 168)
  ▶ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 20)
  ▶ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 72)
  ▶ CHEM 322. — Physical Chemistry for Engineers (total enrollment: 31)
  ▶ CHEM 491. — Research (total enrollment: 3)
  ▶ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▶ Spectroscopic and Computational Investigations of Fundamental Characteristics in Non-Covalent Interactions, National Science Foundation, coworkers: F. Lovas (Research Staff), V. Vaks (Research Staff), S. Belov (P), Z. Wang (P), B. McElmurry (G), L. Rivera (G)
Private

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

- **PRESENTATIONS DURING 2011**
  - “Infrared Quantum Cascade Laser Spectroscopy of Low Frequency Vibrations of Intermolecular Complexes,” 36th International Conference IRMMW-THz, Houston, TX, October, 2011. (Individual)
  - “Towards Sub ppq Detection and Monitoring Capabilities for Environmental Applications Using Novel THz Technologies,” 36th international conference IRMMW-THz, Houston, TX, October, 2011. (Individual)

- **PUBLICATIONS DURING 2011**
• SERVICE DURING 2011

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

University
▷ Professional Affiliation: Texas A&M University Chapter of American Chemical Society (Past Chair)

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 634. — Physical Methods in Inorganic Chemistry (total enrollment: 6)
▷ CHEM 691. — Research (total enrollment: 4)

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

Fall
▷ CHEM 462. — Inorganic Chemistry (total enrollment: 16)
▷ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011

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

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

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

• PRESENTATIONS DURING 2011
▷ “A Highly Stable Dispersion of Nanoparticle/Polymer Nanocomposite Obtained via Free Radical Copolymerization,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), Texas A&M, College Station, TX, April, 2011. (Poster Individual)
▷ “Characterization of PEEK (Polyetheretherketone) Polymers by Solid-state NMR Spectroscopy,” Polymer Technology Industrial Consortium (PTIC) Meeting of the Polymer Technology Center (PTC), Texas A&M University, College Station, TX, April, 2011. (Poster Individual)
▷ “Characterization of PEEK (Polyetheretherketone) Polymers by Solid-state NMR Spectroscopy,” F. A. Cotton Medal Symposium, Texas A&M University, College Station, TX, April, 2011. (Poster Individual)
▷ “Chelate Phosphine Linkers with Long Alkyl Chains for Immobilizing Catalysts on Oxide Supports,” F. A. Cotton Medal Symposium, Texas A&M University, College Station, TX, April, 2011. (Poster Individual)
▷ “Chelate Phosphine Linkers with Long Alkyl Chains for Immobilizing Catalysts on Oxide Supports,” Southwest Catalysis Society (SWCS) Spring Meeting, Rice University, Houston, TX, April, 2011. (Poster Individual)
▷ “Homogeneous Catalysts Immobilized on Silica by Optimized Linker Systems for Superior Lifetimes and Activities,” Kent State University, Kent, OH, April, 2011. (Invited)
▷ “Phosphine Oxide Adsorption on Silica Surfaces,” F. A. Cotton Medal Symposium, Texas A&M University, College Station, TX, April, 2011. (Poster Individual)
▷ “New Rigid Linkers for Superior Immobilized Catalysts,” Department of Chemistry, Texas A&M University, College Station, TX, April, 2011. (Invited)
▷ “Adsorption of Phosphines and Phosphine Oxides on Silica Supports,” EUROMAR, Frankfurt, Germany, August, 2011. (Invited)
▷ “Chelate Phosphine Linkers with Long Alkyl Chains for Immobilizing Catalysts on Oxide Supports,” EUROMAR, Frankfurt, Germany, August, 2011. (Poster Individual)
▷ “Rhodium Catalysts Immobilized on Silica Supports by Phosphine Linkers with Long Alkyl Chains,” Sam Houston State University, Huntsville, TX, November, 2011. (Invited)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011

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

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

Department
▷ Committee/Panel: Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 316)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 67)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 72)
▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 60)

Fall
▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 531)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 156)
▷ CHEM 116. — Molecular Science for Citizens Laboratory (total enrollment: 13)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 69)
▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 60)

• PUBLICATIONS DURING 2011
• CHAIRS/PROFESSORSHIPS
  ▷ Rachal Chair in Chemistry [2004]

• SERVICE DURING 2011
  University
  ▷ Committee/Panel: Sterling C. Evans Library Council (Representative)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ CHEM 228. — Organic Chemistry II (total enrollment: 33)
  ▷ CHEM 691. — Research (total enrollment: 8)
  Summer
  ▷ CHEM 691. — Research (total enrollment: 5)
  Fall
  ▷ CHEM 610. — Organic Reactions (total enrollment: 17)
  ▷ CHEM 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011
  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), J. Taechalertpaisarn (G)
  ▷ ARRA Solar-Driven Catalysis, National Science Foundation, coworkers: A. Loudet (P), A. Raghuraman (P), S. Khumsudee (G), Y. Zhu (G)
  ▷ (REN) The Texas Two-Step Approach to Privileged Chirons, National Science Foundation, coworkers: Z. Liu (Visiting Scientist), A. Raghuraman (P), S. Khumsudee (G), H. Zhou (G), Y. Zhu (G)
  Private
  ▷ Acidic Intermediates in Asymmetric Hydrogenations, The Robert A. Welch Foundation, coworkers: E. Ko (G), C. Thivierge (G), Y. Zhu (G)

• PRESENTATIONS DURING 2011
  ▷ “Fluorescent Probes for Multiplexed Intracellular Imaging,” Bowling Green State University, Bowling Green, OH, March, 2011. (Individual)
“Secondary Structure, Minimalist, Universal Hot Spot, and Proteomimics: An Evolutionary Story,” Protein, Protein Interactions as Drug Targets, San Diego, CA, April, Individual


“Small Molecules to Mimic or Disrupt Protein-protein Interactions,” The Peptide Conference, Cambridge, United Kingdom, April, 2011.( Individual)


“Fluorescent Probes for Multiplexed Intracellular Imaging,” Chulabhorn Research Institute, Bangkok, Thailand, September, 2011.( Individual)

“Fluorescent Probes for Multiplexed Intracellular Imaging,” Silpakorn University, Bangkok, Thailand, September, 2011.( Individual)

“Secondary Structure, Minimalist, Universal Hot Spot, and Interface Mimics: An Evolutionary Story,” Southwestern University, Georgetown, TX, October, 2011.( Individual)

“Fluorescent Probes for Multiplexed Intracellular Imaging,” Hong Kong Polytechnic University, Hong Kong, November, 2011.( Individual)


- PUBLICATIONS DURING 2011


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2007]

• SERVICE DURING 2011
  International
  ▶ Committee/Panel: IUPAC Symposium (Chair)
  National
  ▶ Editorial/Board: Early Career Research Program of DOE Basic Energy Sciences (Reviewer), Metal Phosphonate Chemistry: Synthesis and Applications (Editor), Oak Ridge Neutron Powder Beam Line (Member)
  ▶ Committee/Panel: ACS Cotton Gold Medal Committee (Member), ACS National Awards Selection Committee (Member)
  University
  ▶ Service Position: Fulbright Scholar from Nigeria (Host)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 635. — Introduction to X-ray Diffraction Methods (total enrollment: 25)
  ▶ CHEM 691. — Research (total enrollment: 6)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 6)
  Fall
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ Separation of Americium from Curium by Ion Exchange, Department of Energy, coworkers: J. Burns (G), F. Alshafe (U)
  ▶ (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), A. Mukherjee (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
Private
▷ (REN) Metal Phosphonates as Crystal Engineered Solids, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2011
▷ “Novel Inorganic Layered Nanoplatelets for Drug Delivery in Cancer Nanotherapy,” 67th Southwest Regional Meeting of the American Chemical Society, Austin, TX, November, 2011. (Individual)
▷ “Secondary Ion Emission from Surface Modified and Intercalated Nanoplatelets,” Southwest Regional Meeting of the American Chemical Society, Austin, TX, November, 2011. (Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

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 2011

Spring

▷ CHEM 689. — Special Topics in (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 3)

Summer

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

Fall

▷ CHEM 227. — Organic Chemistry I (total enrollment: 58)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 276)

• RESEARCH PROJECTS DURING 2011

Federal

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

• PUBLICATIONS DURING 2011

No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ▷ A.E. Martell Endowed Chair [2007]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• AWARDS DURING 2011
  University
  ▷ Excellence in Innovation Award, Texas A&M University

• SERVICE DURING 2011
  National
  ▷ Service Position: Institutes for Defense Analysis (Consultant)
  ▷ Advisory Board: NESAC/Bio (Member)

  College
  ▷ Event: Junior Faculty Success Program (Participant)

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

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ CHEM 491. — Research (total enrollment: 3)
  ▷ CHEM 602. — Analytical Chemistry II (total enrollment: 7)
  ▷ CHEM 691. — Research (total enrollment: 14)

  Summer
  ▷ CHEM 691. — Research (total enrollment: 15)

  Fall
  ▷ CHEM 491. — Research (total enrollment: 2)
CHEM 690. — **Theory of Chemical Research** (total enrollment: 5)
CHEM 691. — **Research** (total enrollment: 14)

- **RESEARCH PROJECTS DURING 2011**
  
  **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**
  - Patterning Nanoscale Arrays by Evaporative Templating, *Texas Higher Education Coordinating Board*
  
  **Private**
  - (REN) Probing Cation-Amide Interactions, *The Robert A. Welch Foundation*
  - The Effect of Osmolytes on Water and Protein Structure, *The Robert A. Welch Foundation*

- **PRESENTATIONS DURING 2011**
  
  - “Detecting Biomolecules by Local pH Modulation,” Center for Bioengineering, University of California, Santa Barbara, CA, February, 2011. (Individual)
  - “Detecting Biomolecules by Local pH Modulation, ESF-EMBO Symposium: Biological Surface Interfaces,” San Feliu, Spain, June, 2011. (Individual)
  - “Investigating Separation & Sensing on Supported Lipid Bilayers,” Department of Chemistry, Penn State University, State College, PA, September, 2011. (Individual)
  - “Investigating Separation & Sensing on Supported Lipid Bilayers,” Department of Chemistry, Wabash College, Crawfordsville, IN, October, 2011. (Individual)
  - “Investigating Separation & Sensing onSupported Lipid Bilayers,” Department of Chemistry, Butler University, Indianapolis, IN, October, 2011. (Individual)
  - “Investigating the Binding of Anions and Cations to Polypeptides,” Department of Chemistry, Purdue University, West Lafayette, IN, October, 2011. (Individual)
• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Director, X-Ray Diffraction Laboratory (formerly Crystal and Molecular Structure Laboratory), Chemistry, [1985]

• SERVICE DURING 2011
  International
  ▶ Editorial/Board: Scientific Advisory Board of ICCDU (Member)
  ▶ Committee/Panel: International Scientific Committee Carbon Dioxide Utilization (Member)
  National
  ▶ Editorial/Board: Editorial Advisory Board of Organometallics, Editorial Advisory Board of Advances in Inorganic Chemistry, National Science Foundation Graduate Fellowship Selection Committee, National Science Foundation Chemical Catalysis Program (Member), Various Research Proposals and Manuscripts (Review: Proposals)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ CHEM 489. — Special Topics in (total enrollment: 96)
  ▶ CHEM 491. — Research (total enrollment: 3)
  ▶ CHEM 691. — Research (total enrollment: 6)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 6)
  Fall
  ▶ CHEM 103. — Structure and Bonding (total enrollment: 34)
  ▶ CHEM 113. — Physical and Chemical Principles (total enrollment: 34)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ Biodegradable Copolymers Produced from Carbon Dioxide and Epoxides by Well-Defined Metal Catalysts: Mechanistic and Technology Enabling Studies, National Science Foundation, coworkers: W. Chung (G), O. Karroonmirun (G), R. Poland (G), S. Rajkumar (G), S. Wei (G), A. Yeung (G), C. Costanzo (U), C. Escobedo (U), E. Schepp (U), S. John (G)
Catalytic Syntheses of Biodegradable Polymeric Biomaterials, *National Science Foundation*, coworkers: W. Chung (G), R. Poland (G), S. Rajkumar (G), S. Wei (G), A. Yeung (G), C. Costanzo (U), C. Escobedo (U), E. Schepp (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), R. Poland (G), S. Rajkumar (G), S. Wei (G), S. Wilson (G), A. Yeung (G), C. Costanzo (U), C. Escobedo (U), E. Schepp (U)

**PRESENTATIONS DURING 2011**

- “Aliphatic Polycarbonates Produced from the Coupling of Carbon Dioxide and Oxetanes,” 11th International Conference on Carbon Dioxide Utilization, 2011. (Invited)
- “Making Plastics from Carbon Dioxide. Carbon Dioxide a Waste or a Raw Material,” New Mexico State University, Las Cruces, NM, February, 2011. (Invited)
- “Making Plastics from Carbon Dioxide. Carbon Dioxide a Waste or a Raw Material,” Dalian University of Technology, Dalian, China, May, 2011. (Invited)
- “Making Plastics from Carbon Dioxide. Carbon Dioxide a Waste or a Raw Material,” Hebei University of Technology, Tianjin, China, May, 2011. (Invited)
- “Polymers Derived from Cyclic Ethers and Carbon Dioxide. Carbon Dioxide a Waste or a Raw Material,” Mettler Toledo Polymer Information Sharing Symposium, College Station, TX, June, 2011. (Invited)
- “From the WGSR to Copolymers from Cyclic Ethers: Chemistry of Carbon Dioxide,” 242nd ACS National Meeting, Denver, CO, August, 2011. (Invited)
- “Polymers Derived from Cyclic Ethers and Carbon Dioxide,” Georgia Institute of Technology, Atlanta, GA, October, 2011. (Invited)

**PUBLICATIONS DURING 2011**

- Darensbourg, D.J.; Moncada, A.I.; Wei, S.H. (2011) Aliphatic Polycarbonates Produced from the Coupling of Carbon Dioxide and Oxetanes and Their Depolymerization via Cyclic...

Ivie, J.A.; Darensbourg, D.J.; Webster, C.E. (2011) Alternating Copolymerization of CO$_2$ and Styrene Oxide with Co(III)-Based Catalyst Systems: Differences Between Styrene Oxide and Propylene Oxide in Reactivity, Polymer Selectivity, and Regioselective Ring-Opening *Energy & Environmental Science*, vol. 4, 5084-5092.


• AWARDS DURING 2011
  National
  ▸ Fellow, American Academy of Arts & Sciences
  University
  ▸ Distinguished Scientist Award, Sigma Xi

• SERVICE DURING 2011
  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)
  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 2011
  Spring
  ▸ CHEM 491. — Research (total enrollment: 2)
  ▸ CHEM 636. — Mechanistic Inorganic Chemistry (total enrollment: 5)
  ▸ CHEM 691. — Research (total enrollment: 6)
  Summer
  ▸ CHEM 691. — Research (total enrollment: 7)
  Fall
  ▸ CHEM 362. — Descriptive Inorganic Chemistry (total enrollment: 44)
CHEM 491. — Research (total enrollment: 1)
CHEM 690. — Theory of Chemical Research (total enrollment: 5)
CHEM 691. — Research (total enrollment: 6)

- RESEARCH PROJECTS DURING 2011
  
  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), P. Ghosh (G), J. Hess (G), T. Pinder (G), R. Pulukkody (G), G. Serna (G), S. Butch (U), R. Chupik (U), S. Harman (U), A. Lunsford (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), P. Ghosh (G), J. Hess (G), T. Pinder (G), R. Pulukkody (G), G. Serna (G), S. Butch (U), R. Chupik (U), S. Harman (U), A. Lunsford (U)

- PRESENTATIONS DURING 2011
  - “Evolution of Organometallic Chemistry: Roles for Fundamental $Fe(CO)_{3-n}(CN)$ and $Fe(NO)_2$ Units in Biology,” 242nd ACS National Meeting, Denver, CO, August, 2011. (Invited)
Invited)

- “Requirements for Molecular Constructs as [FeFe]-H₂ase Enzyme Active Site Biomimetics for Proton Reduction,” Proton Coupled Electron Transfer International Meeting, Loire Valley, France, October, 2011. (Invited)
- “Requirements for Molecular Constructs as [FeFe]-H₂ase Enzyme Active Site Biomimetics for Proton Reduction,” Arizona State University, Tempe, AZ, November, 2011. (Invited)
- “Requirements for Molecular Constructs as [FeFe]-H₂ase Enzyme Active Site Biomimetics for Proton Reduction,” Ohio State University, Columbus, OH, November, 2011. (Invited)
- “Old Biology Inspires New Chemistry,” Texas A&M University Sigma Xi Award Lecture, College Station, TX, December, 2011. (Invited)

• PUBLICATIONS DURING 2011

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

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, /2006/
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, /2006/

• SERVICE DURING 2011

  International
  ▶ Event: From Molecules to Molecular Devices US Evaluator of the European COST Program (Participant), Fulbright Scholar from the Ukraine (Host)
  ▶ Advisory Board: American Advisor for Molmagnet, The European Funding Network for Research on Magnetism (Advisor), International Conference on Molecule-Based Magnets (Member)
  ▶ Professional Affiliation: Wilsmore - University of Melbourne, Australia (Fellow)

  National
  ▶ Professional Affiliation: American Association for the Advancement of Science (Fellow), American Chemical Society (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)
  ▶ Committee/Panel: Harvard President Advisory Panel (Member)

  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 2011

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

  Summer
  ▶ CHEM 691. — Research (total enrollment: 11)
Fall
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 11)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Design Principles for Nanomagnets Based on Molecules-Investigation of Effect of Spin, Orbital and Molecular Shape Anisotropies, 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: A. Prosvirin (P), H. Zhao (P), A. Brown (G), M. Saber (G), C. Sanders (G), H. Southerland (G), T. Woods (G)
▷ (REN) Magnetism, Conductivity and the Interplay between these Properties in d, p and f Block Materials with Organocyanide Ligands, National Science Foundation, coworkers: H. Zhao (P), X. Zhang (G), Z. Zhang (G)

Private
▷ (REN) Magnetism, Conductivity and the Interplay between these Properties, The Robert A. Welch Foundation, coworkers: H. Zhao (P), M. Saber (G), X. Zhang (G), Z. Zhang (G)

Other
▷ (REN) Design, Synthesis, and Photochemistry of New Ru(II) Complexes as Potential Photo-Cisplatin Analogs, Ohio State University, coworkers: H. Chifotides (P), A. David (G), S. Lane (G), Z. Li (G), B. Pena (G)

• PRESENTATIONS DURING 2011
▷ University of Calgary, Canada, March, 2011. (Invited)
▷ “First Example of Main-group Binary Conducting MOFs and Their Structure-Property Correlations: Tl(TCNQ) and Tl(TCQX2) (X=Cl, Br, I),” ISSMMM Meeting, Argonne National Laboratory, IL, March, 2011. (Contributed)
▷ “Increasing the Barrier Height of Single Molecule Magnets by Incorporating Highly Anisotropic Metal Ions into Cyanide Bridged Metal Clusters,” ISSMMM Meeting, Argonne National Laboratory, IL, March, 2011. (Contributed)
▷ Ben-Gurion University of the Negev, Beer-Sheva, Israel, May, 2011. (Invited)
▷ University of Strasbourg, Alsace, France, July, 2011. (Invited)
▷ COST ACTION D5, Final Conference, Santa Margherita di Pula, Sardinia, Italy, September, 2011. (Invited)
University of Manchester, United Kingdom, September, 2011. (Invited)
University of Strasbourg, Alsace, France, September, 2011. (Invited)
La Trobe University, Australia, November, 2011. (Invited)
Monash University, Australia, November, 2011. (Invited)
University of Melbourne, Australia, November, 2011. (Invited)
University of South Wales, Australia, November, 2011. (Invited)
University of Sydney, Australia, November, 2011. (Invited)
“Enriching Magnetic Properties Through Single Ion Anisotropy,” SW Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)
“Increasing the Barrier Height of Single Molecule Magnets by Incorporating Highly Anisotropic Metal Ions into Cyanide Bridged Metal Clusters,” SW Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)
“Introduction of Highly Anisotropic Building Blocks into Small Molecule Clusters: Probing the Role of Spin-orbit Coupling Effects on Single Molecule Magnet Behavior,” SW Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)
“Investigation of $[Rh_2(\mu - L - L)_2(CH_3CN)_6][BF_4]_2$ Partial Paddlewheel Compounds as Photodynamic Therapy Agents,” SW Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)
“Ruthenium (II) Bis-acetonitrile Complexes as Photocisplatin Analogues,” SW Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)
“Supramolecular Chemistry of Anions with Electron-Deficient Aromatic Rings: Examples of the Critical Roles of Anion-Pi Interactions,” 2011 SW Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)
“Synthesis and Characterization of Dirhodium Based Metallopeptides: Facilitating Drug Delivery Systems from Cell Translocation,” SW Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)
“Use of 4d and 5d Trivalent Anions to Engender Greater Magnetic Anisotropy,” SW Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)

PUBLICATIONS DURING 2011


200 2011 CHEMISTRY ANNUAL REPORT


Ouellette, W.; Darling, K.; Prosvirin, A.; Whitenack, K.; Dunbar, K.R.; Zubieta, J. (2011) Syntheses, Structural Characterization and Properties of Transition Metal Complexes of 5,5'-(1,4-phenylene)bis(1H-tetrazole) ($H_{2}bdt$) and 5,5',5''-(1,3,5-phenylene)tris(1H-tetrazole) ($H_{3}btt$) Dalton Transactions, vol. 40, 12288-12300.


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]/
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]/

• SERVICE DURING 2011

  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 Min-
    istry for the Brazos Valley (Vice President)

  University
  ▶ Committee/Panel: National Advisory Board PEER, College of Veterinary Medicine (Mem-
    ber), Parenta 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)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ CHEM 491. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

  Private
  ▶ Polynuclear Gold and Related Element Chemistry with Nitrogen Ligands-Syntheses,
    Structure and Reactivity, The Robert A. Welch Foundation, coworkers: G. Cinarella (P),
    D. Melgarejo (P)

• PUBLICATIONS DURING 2011
    Homocubane Collapses to a Tetracapped Tetrahedron Upon Hydride Insertion Inorganic


No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ▶ Davidson Chair in Science /2008/

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, /2006/

• AWARDS DURING 2011
  International
  ▶ Fellow, American Chemical Society

• SERVICE DURING 2011
  National
  ▶ Editorial/Board: Organometallics (Associate Editor)
  ▶ Committee/Panel: ACS Division of Organic Chemistry (Chair)
  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 Commit-
    tee (Chair), Inorganic Chemistry Division (Member), Promotion and Tenure Committee
    (Member), Shop Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ CHEM 433. — Advanced Inorganic Chemistry Laboratory (total enrollment: 20)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 6)
  Summer
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 8)
  Fall
  ▶ CHEM 433. — Advanced Inorganic Chemistry Laboratory (total enrollment: 22)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2011
Federal
▷ (REN) Cationic Lewis Acids as Anion Receptors, National Science Foundation, coworkers: T. Matsumoto (P), K. Chansaenpak (G), A. Hampton (G), M. Hirai (G), J. Jones (G), I. Ke (G), L. Leamer (G), T. Lin (G), C. Wade (G), H. Yang (G)

Private
▷ Synthesis and Reduction Chemistry of α-Phosphonyl-Carbocations and α-Phosphonio-Carbocations, The Robert A. Welch Foundation, coworkers: D. Cao (P), Z. Hernandez-Garcia (P), C. Dorsey (G), M. Hirai (G), J. Jones (G), I. Ke (G), L. Leamer (G), T. Lin (G), C. Wade (G), H. Zhao (G)

• PRESENTATIONS DURING 2011
▷ “Lewis Acidic Properties of Stibonium and Telluronium Ions,” Trinity University, San Antonio, TX, February, 2011. (Individual)
▷ “Lewis Acidic Properties of Pnictogenium and Chalcogenium Ions,” ExxonMobil, Freeport, TX, April, 2011. (Individual)
▷ “Fluoride Capture by Boron Compounds: From Aqueous Fluoride Anion Sensing to Fluorination and 18F-Radiofluorination Reactions,” EQI Meeting, Guadalajara, Mexico, July, 2011. (Individual)
▷ “Lewis Acidic Behavior of Heavy Onium Ions,” University of California, Davis, CA, October, 2011. (Individual)
▷ “Lewis Acidic Behavior of Heavy Onium Ions,” University of Laval, Quebec, October, 2011. (Individual)
▷ “Lewis Acidic Behavior of Heavy Onium Ions,” University of Nevada, Reno, NV, October, 2011. (Individual)
▷ “Lewis Acidic Behavior of Heavy Onium Ions,” Fudan University, Shangai, China, November, 2011. (Individual)
“Lewis Acidic Behavior of Heavy Onium Ions,” National Taiwan University, Taipei, Taiwan, November, 2011. (Individual)

- PUBLICATIONS DURING 2011


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Undergraduate Advisor, Chemistry Undergraduate Advising Office, Chemistry, //

• AWARDS DURING 2011

College
  ▷ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2011

National
  ▷ Professional Affiliation: American Chemical Society, Chemical Education Division (Member), Biophysical Society (Member)
  ▷ Committee/Panel: National Science Foundation Research Experience for Undergraduates Leadership Group (Chair elect), National Science Foundation Research Experience for Undergraduates Leadership Group (Member)

University
  ▷ Committee/Panel: Faculty Advisory Board to the Vice President for Student Affairs (Member), Faculty Advisory Board, Center for Teaching Excellence (Member), Faculty Senate (Faculty Senator - 10), Faculty Senate: The Academic Affairs Committee (Member), Faculty Senate: The Personnel and Welfare Committee (Member), Selection Committee, Presidential Professorship for Teaching Excellence (Member), Selection Committee, Regent Professor (Member), Undergraduate Research, Office of Honors and Undergraduate Research (Panelist), University Council on Teacher Education (Member), Workplace Climate and Diversity Committee, Faculty Senate (Chair), Writing Course Advisory Committee (Member)

College
  ▷ Committee/Panel: Undergraduate Program Committee (Member)

Department
  ▷ Event: Summer Research Experience for Undergraduates (Director)
  ▷ Committee/Panel: Academic Operations Council (Member), Council on Undergraduate Research (Member), Teaching Awards Committee (Member), Undergraduate Awards Committee (Chair), Undergraduate Curriculum Committee (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▷ CHEM 106. — Molecular Science for Citizens (total enrollment: 64)
  ▷ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 44)
Summer
▷ CHEM 485. — Directed Studies (total enrollment: 1)
▷ CHEM 491. — Research (total enrollment: 19)

Fall
▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 28)
▷ CHEM 481. — Seminar (total enrollment: 25)
▷ CHEM 491. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

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

• PRESENTATIONS DURING 2011
▷ Houston area ALMA Meeting, Deer Park, TX, May, 2011.( Individual)
• **CHAIRS/PROFESSORSHIPS**
  ▶ Dow Chair in Chemical Invention [2007]

• **SERVICE DURING 2011**

  **International**
  ▶ Advisory Board: International Conference on Organometallic Chemistry (ICOMC) (Member), International Symposium on Fluorous Technologies (Member)

  **National**
  ▶ Advisory Board: *New Journal of Chemistry* (Member)
  ▶ Editorial/Board:
    *ACS Catalysis* (Member), *Organometallics* (Editor-in-Chief), *Sheffield/Academic Press Postgraduate Series* (Member)
  ▶ Committee/Panel: ACS Committee on Data Accessibility, Integrity, and Stewardship (Member)

  **University**
  ▶ Committee/Panel: Search Committee, Vice Chancellor for Academic Affairs (Member), Executive Committee, Distinguished Professors (Member)

  **Department**
  ▶ Committee/Panel: Academic Operations Council (Member), Awards Committee (Member), Organic Division (Chair)

• **TEACHING ASSIGNMENTS DURING 2011**

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

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

  **Fall**
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 690. — *Theory of Chemical Research* (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 8)

• **RESEARCH PROJECTS DURING 2011**

  **Federal**
  ▶ Complexes in Which sp Carbon Chains Span Two Metals, *National Science Foundation*, coworkers: N. Weisbach (Research Associate), Z. Baranova (G), M. Clough (G), T. Zhang (G)
Private
▷ Phase Transfer Activation and Recycling of Ruthenium Catalysts for RCM and ROMP, "Qatar National Research Fund, coworkers: Z. Xi (Research Associate), M. Jurisch (Research Assistant), S. Ghosh (G)
▷ Selective Methane Oxidations in Fluorous Media, "The Robert A. Welch Foundation"

• PRESENTATIONS DURING 2011
  ▷ “Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” 3rd Latin American Symposium on Coordination and Organometallic Chemistry, La Serena, Chile, July, 2011. (Invited)
  ▷ “Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” University of California, San Diego, CA, January, 2011. (Invited)
  ▷ “Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” McGill University, Montreal, Canada, February, 2011. (Invited)
  ▷ “From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” University of Ottawa, Ontario, Canada, February, 2011. (Invited)
  ▷ “Regioregular Organometallic π-adducts of Poly(phenylene-vinylene) via ADMET Polymerization,” 14th Annual Student Research Week, College Station, TX, March, 2011. (Contributed)
  ▷ “Werner-type Complexes in Hydrogen Bond Mediated Catalysis,” 14th Annual Student Research Week, College Station, TX, March, 2011. (Contributed)
  ▷ “Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” University of Oklahoma, Norman, OK, April, 2011. (Invited)
  ▷ “CpºIr and CpºRu Regioregular π-Adducts of Poly(phenylene-vinylene) via ADMET Polymerization,” The Polymer Technology Industrial Consortium, College Station, TX, April, 2011. (Contributed)
  ▷ “Molecular Polygons Incorporating Sp-Hybridized Carbon Chains: Synthesis and Characterization,” F. A. Cotton Medal Symposium, College Station, TX, April, 2011. (Contributed)
  ▷ “Phase Transfer Activation of Catalysts for Olefin Metathesis,” 241st American Chemical Society National Meeting, Anaheim, CA, April, 2011. (Contributed)
  ▷ “Phase Transfer Activation Of Catalysts For Olefin Metathesis,” F. A. Cotton Medal Symposium, College Station, TX, April, 2011. (Contributed)
“Regioregular CpIr π-Adducts of Polyacetylene via ROMP,” The Polymer Technology Industrial Consortium, College Station, TX, April, 2011. (Contributed)

“From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” Yale University, New Haven, CT, May, 2011. (Invited)


“Synthesis and Characterization of the new Mondentated 1,2-Disubstituted Cyrhetre-nilphosphines \((\eta^5 - 1 - PR_2 - 2 - Br - C_5H_2)Re(CO)_3(R = Ph, Cy)\),” 3rd Simposio Latinoamericano de Química de Coordinación y Organometálica, La Serena, Chile, July, 2011. (Contributed)


“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” Brock University, St. Catharines, Ontario, Canada, October, 2011. (Invited)

“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” McMaster University, Hamilton, Ontario, Canada, October, 2011. (Invited)

“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” University of Guelph, Ontario, Canada, October, 2011. (Invited)

“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” University of Toronto, Ontario, Canada, October, 2011. (Invited)

“From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” Massachusetts Institute of Technology, Cambridge, MA, October, 2011. (Invited)


“From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” National Taiwan University, Taipei, Taiwan, November, 2011. (Invited)

“From Molecular Gyroscopes to Homeomorphic Isomerization: Molecules that Turn Themselves Inside-Out,” Academia Sinica, Taipei, Taiwan, November, 2011. (Invited)

“Molecular Gyroscopes Based on Trans-Spanning Diarsine and Diphosphine Cages,” 67th Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)


“Platinum Based Molecular Squares Incorporating sp-Hybridized Carbon Chains and Novel Diphosphines,” 67th Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Contributed)

“Phase Transfer Phenomena in Fluorous Chemistry,” Fourth International Symposium on Fluorous Technologies, Hong Kong, China, December, 2011. (Invited)

• PUBLICATIONS DURING 2011


D. WAYNE GOODMAN

DISTINGUISHED PROFESSOR  (979) 845-0214
CHEM-Physical/Nuclear Chemistry Division  goodman@chem.tamu.edu

- CHAIRS/PROFESSORSHIPS
  ▶ Robert A. Welch Foundation Chair in Chemistry [1994]

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▶ Director, Center for Surface Science and Catalysis, Chemistry, []

- SERVICE DURING 2011
  National
  ▶ Editorial/Board: Topics in Catalysis, Catalysis Letters, Journal of Molecular Catalysis A: Chemical (Editorial Advisory Board)

  Department
  ▶ 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 2011
  Spring
  ▶ CHEM 691. — Research (total enrollment: 4)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▶ CHEM 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) The Physical and Chemical Properties of Nanostructured Mixed-Metal Catalysts, Department of Energy, coworkers: L. Chen (P), L. Liu (P), Z. Yan (P), Y. Yao (P), F. Yang (G), Z. Zhou (G)

  Private
  ▶ (REN) Vibrational and Electronic Properties of Supported Metal Clusters, The Robert A. Welch Foundation, coworkers: Z. Yan (P), H. Min (G), F. Yang (G), Z. Zhou (G)

  International
  ▶ Activation Studies with Cobalt Catalysts for Gas-to-Liquid Conversion, Qatar Foundation, coworkers: Z. Yan (P), Z. Zhou (G)
Other
▷ Computational Catalysis and Atomic-level Synthesis of Materials: Building Effective Catalysts from First Principles, Louisiana State University, coworkers: K. Katsiev (P), L. Liu (G), S. Skiles (G), Z. Zhou (G)

• PRESENTATIONS DURING 2011
▷ “Modeling the Complexities of Heterogeneous Catalysts,” Southwest Exchange Speaker Program at University of Texas, Houston, TX, January, 2011. (Individual)
▷ “Using Supported Metal Clusters to Probe the Structure-activity Relationship in Heterogeneous Catalysis,” Gordon Research Conference on Chemical Reactions at Surfaces, February, 2011. (Individual)
▷ “From Imagining to Imaging a Working Catalytic Surface,” Southwest Exchange Speaker Program in University of Texas, El Paso, TX, March, 2011. (Individual)
▷ “Supported Metal Clusters as Models for Catalysis: Silica Supported Rh Nanoparticles,” MRS Spring Meeting, San Francisco, CA, April, 2011. (Individual)
▷ “Experimental and Computational Studies of the Structure and Chemical Activity of 2-D Gold Islands on Single-layer Graphene/Ru(0001),” ACS Fall National Meeting ACS, Denver, CO, August, 2011. (Individual)

• PUBLICATIONS DURING 2011

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• SERVICE DURING 2011

University
▷ Service Position: Chi Psi Beta (Faculty Advisor), Sigma Alpha Lambda (Faculty Advisor)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 262)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 560)

Summer
▷ CHEM 228. — Organic Chemistry II (total enrollment: 106)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 60)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 315)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 574)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 144)

No report received from faculty member.
MICHAEL B. HALL

PROFESSOR
CHEM-Inorganic Chemistry

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hall@science.tamu.edu

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

- **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Executive Associate Dean, Main Office, College of Science, [2002]
  - Director, Laboratory for Molecular Simulation, Chemistry, [1997]

- **SERVICE DURING 2011**
  **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 2011**
  **Spring**
  - CHEM 641. — **Structural Inorganic Chemistry** (total enrollment: 12)
  - 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 2011**
  **Federal**
  **Private**

SEC. 6.1 PROFESSIONAL ACTIVITIES 217
(REN) Computational Chemistry of Transition Metal Systems, The Robert A. Welch Foundation, coworkers: S. Kritikov (G), 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, coworkers: K. Turner (U)

• PRESENTATIONS DURING 2011
▷ “Mechanism of the Reaction of Nickel bis(Dithiolenes) with Alkenes,” World Association of Theoretical and Computational Chemists (WATOC-2011), Santiago de Compostela, Spain, July, 2011. (Individual)
▷ “Understanding the Factors Affecting the Activation of Alkane by Cp’Rh(CO)$_2$(Cp’ = CporCp*) : An Experimental and Theoretical Study,” Southwest Theoretical Chemistry Conference (SWTCC), Lubbock, TX, October, 2011. (Invited)

• PUBLICATIONS DURING 2011
of $Ni(\mu - SR)[Fe(NO)_{2}]$ and an Unexpected, Abbreviated Metaloadamantyl Cluster, $Ni_{2}(\mu - SR)_{4}[Fe(NO)_{2}]_{3}$ Dalton Transactions, vol. 40, 6047-6053.

> Huang, S.H.; Wang, X.; Nesterov, V.; Hrovat, D.A.; Hall, M.B.; Richmond, M.G. (2011) Allyl Ligand Reactivity in Tantalum(V) Compounds: Experimental and Computational Evidence for Allyl Transfer to the Formamidinate Ligand in fac-Ta(NMe$_{2}$)$_{3}(\eta^{1} -$ allyl)$[^{t}PrNC(H)NH^{t}Pr]$ via a Metallo-Claisen Rearrangement Organometallics, vol. 30, 5832-5843.


• SERVICE DURING 2011

College
▷ Committee/Panel: Teaching Lab Safety Committee (Chair), Teaching Lab Safety Committee (Member)

Department
▷ Service Position: Organic Teaching Laboratories (Coordinator)
▷ Committee/Panel: Cume Preparation and Grading (Participant)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 228.(H) — Organic Chemistry II (total enrollment: 39)
▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 18)

Summer
▷ CHEM 227. — Organic Chemistry I (total enrollment: 65)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 33)

Fall
▷ CHEM 227.(H) — Organic Chemistry I (total enrollment: 50)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 276)
▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 11)

• PRESENTATIONS DURING 2011


• PUBLICATIONS DURING 2011

• SERVICE DURING 2011
  Department
  ▷ Event: Annual Chemistry Open House and Science Exploration Gallery (Contributor)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ CHEM 228. — Organic Chemistry II (total enrollment: 63)
  ▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 192)
  ▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 142)
  Fall
  ▷ CHEM 227. — Organic Chemistry I (total enrollment: 102)
  ▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 188)
  ▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 54)
• SERVICE DURING 2011

National
▷ Committee/Panel: National Institutes of Health (Panelist)

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

Department
▷ Committee/Panel: Graduate Awards Committee (Member), Information Technology Committee (Member), Texas A&M University Local Section of the American Chemical Society (Secretary)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ BICH 691. — Research (total enrollment: 2)
▷ CHEM 689. — Special Topics in (total enrollment: 8)
▷ CHEM 691. — Research (total enrollment: 5)

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

Fall
▷ BICH 691. — Research (total enrollment: 2)
▷ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 56)
▷ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Acquisition of a Cryoprobe for a NMR Spectrometer, National Science Foundation
▷ CAREER: Biochemical Reaction Mechanisms by Real-Time Hyperpolarization Enhanced Nuclear Magnetic Resonance, National Science Foundation, coworkers: S. Bowen (G), H. Chen (G), S. Hwang (G), Y. Lee (G), M. Ragavan (G), G. Sekar (G), H. Zeng (G)

Private
▷ Metallocene Catalyzed Polymerization Investigated by Hyperpolarized NMR, American Chemical Society, coworkers: H. Chen (G), Y. Lee (G), M. Ragaven (G), H. Zeng (G)
> Structure and Function of Membrane Proteins by NMR Using DNP Hyperpolarization, *Camille and Henry Dreyfus Foundation*, coworkers: S. Bowen (G), H. Chen (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)

**PRESENTATIONS DURING 2011**

> “Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” Pines Lab, University of California, Berkeley, CA, March, 2011. (Individual)

> “Application of DNP-NMR for Kinetic and Mechanistic Analysis of the Reaction Catalyzed by Uronate Isomerase,” 52nd Experimental Nuclear Magnetic Resonance Conference, Asilomar, CA, April, 2011. (Poster Individual)


> “Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” Massachusetts Institute of Technology, Boston, MA, April, 2011. (Individual)


> “Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” Los Alamos National Laboratory, NM, August, 2011. (Individual)

> “Hypermagnified NMR of Polypeptides,” EUROMAR Conference, Frankfurt, Germany, August, 2011. (Individual)

> “Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” University of California, Irvine, CA, September, 2011. (Individual)


> “Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” Joint Midwest Regional and Great Lakes Regional ACS Meeting, St. Louis, MO, October, 2011. (Individual)

> “Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” University of California, Los Angeles, CA, October, 2011. (Individual)
“Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” Gulf Coast Consortia Magnetic Resonance Conference, Houston, TX, December, 2011. (Individual)

“Chemical and Biochemical Reactions Investigated by Dynamic Nuclear Polarization,” New Directions in Magnetic Resonance Workshop, Pacific Northwest National Laboratory, Richland, WA, December, 2011. (Individual)

**PUBLICATIONS DURING 2011**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Director, First Year Chemistry Program, Chemistry, [2010]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2011
  Department
  ▶ Research Group: X-Ray Diffraction User Group (Member)
  ▶ Committee/Panel: Academic Operations Council (Member), Computer User Group (Member), Executive Committee (Member), First-Year Program (Director), Inorganic Division (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 316)
  ▶ CHEM 691. — Research (total enrollment: 4)
  ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 36)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▶ CHEM 673. — Symmetry and Group Theory in Chemistry (total enrollment: 17)
  ▶ CHEM 691. — Research (total enrollment: 3)
  ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 60)
WENDY KEENEY-KENNICUTT
INSTRUCTIONAL ASSISTANT PROFESSOR (979) 845-3256
CHEM-First Year Chemistry kennicutt@chem.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Associate Director, First Year Chemistry Program, Chemistry, //

• SERVICE DURING 2011

Regional
▶ Service Position: American Chemical Society Local Chapter (Alternate Councilor)

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), Chemistry in SL - Enhancement of Spatial Abilities and Chemistry Concept Learning using Second Life (Presenter), Commitment to Excellence Dialogue on Accountability for the Impact of Teaching (Panelist), Dean of Faculties (Mediator), Faculty Teaching Academy (Fellow), Faculty Teaching Academy (Mentor), Faculty Teaching Academy (Panelist), Graduate Teaching Academy (Fellow), Graduate Teaching Academy (Mentor), Instructional Technology Showcase, What’s New with Clickers (Panelist), Rugby Little Sisters (Faculty Advisor), Texas Environmental Action Coalition (Faculty Advisor), Using Second Life to Teach Across the Disciplines, 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), Vision 2020 Faculty Imperative Study Group (Member), Texas A&M University Second Life User Group (Member)

College
▶ Event: All Chemistry Events and Pentathalon, Texas Science Olympiad and Coaches Clinic (Coordinator), Texas A&M Regional Junior Science Bowl (Judge), Texas A&M Regional Science Bowl (Judge), Texas Science Olympiad Coaches Clinic (Presenter), “Hands-On Science Exhibition” Mitchell Institute for Fundamental Physics (Chemistry Coordinator)

Department
▶ Service Position: Chemistry 116 (Coordinator), Chemistry In Review for Fundamentals of Engineering Exam (Presenter), Chemistry Open House and Exploration Gallery (Coordinator)
▶ Event: First Year Chemistry Study Hall and Computer Lab (Participant)
▶ Committee/Panel: AFS Distinguished Achievement Awards for Teaching (Chair), TA Training (Speaker)

• TEACHING ASSIGNMENTS DURING 2011
Spring
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 480)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 72)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 286)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 140)
▷ CHEM 485.(H) — Directed Studies (total enrollment: 4)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 289)
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 254)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 502)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 96)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 216)

• PRESENTATIONS DURING 2011
▷ “Technology in the Classroom - Lessons Learned,” Texas A&M University Graduate Teaching Academy, College Station, TX, February, 2011. (Invited)
▷ “Can Writing Using Calibrated Peer Review be Effective as Optional Assignments?,” 242nd American Chemical Society Meeting, Denver, CO, August, 2011. (Invited)
▷ “Why My Students and I Appreciate Clickers (most of the time),” 242nd American Chemical Society Meeting, Denver, CO, August, 2011. (Invited)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Professor (J), Physics and Astronomy, /2007/

• SERVICE DURING 2011

  International
  ▷ Editorial/Board: European Congress on Molecular Spectroscopy & International Congress on Molecular Spectroscopy (Elected Member), Journal of Spectroscopy & Dynamics (Board Member), International Journal of Spectroscopy (Board Member), Journal of Molecular Structure (Editor), Laser Chemistry (Board Member)

  National
  ▷ Professional Affiliation: Alumni Council, Alexander von Humboldt Foundation (Co-Chair), Alexander von Humboldt Association of America (President)

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

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

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ CHEM 322. — Physical Chemistry for Engineers (total enrollment: 93)
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 4)

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

  Fall
  ▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 168)
  ▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 48)
  ▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 71)
  ▷ CHEM 327. — Physical Chemistry (total enrollment: 78)
  ▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

  Private
Molecular Structures and Vibrational Potential Energy Surfaces in Ground and Excited Electronic States, *The Robert A. Welch Foundation*, coworkers: H. Shin (P), P. Boopalachandran (G), H. Chun (G), E. Ocola (G), C. Medders (U)

**PRESENTATIONS DURING 2011**

- “Raman Spectra and the Potential Energy Function for the Internal Rotation of 1,3-Butadiene and its Isotopomers,” APS Texas Regional Spring Meeting, Dallas, TX, March, 2011. (Invited)
- “Spectroscopic and Theoretical Investigations of the Potential Energy Surfaces of Molecules with Intramolecular Pi-type Hydrogen Bonding,” APS Texas Regional Spring Meeting, Dallas, TX, March, 2011. (Individual)
- “Spectroscopic Investigation of the Ground and Excited States of 1,3-Butadiene, Pyridines, and Cyclic Alcohols with \( \pi \)-type Intramolecular Hydrogen Bonding,” International Congress on Molecular Spectroscopy, Kudowa Zdroj, Poland, September, 2011. (Individual)
- “Spectroscopic and Ab Initio Studies of \( \pi \)-Type Hydrogen Bonding in Cyclic Alcohols and Amines,” APS Texas Regional Fall Meeting, Commerce, TX, October, 2011. (Individual)
- “4-Silaspiro-(3,3)-heptane: Comparison Between Theory and Experiment,” ACS Southwest Regional Meeting, Austin, TX, November, 2011. (Individual)

**PUBLICATIONS DURING 2011**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Director, Biology Interface Training Program, Chemistry, //

• SERVICE DURING 2011
  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: Awards Committee (Member), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BICH 689. — Special Topics in (total enrollment: 14)
  ▶ BICH 691. — Research (total enrollment: 2)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 3)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 3)
  Fall
  ▶ BICH 685. — Lab Rotation (total enrollment: 1)
  ▶ BICH 691. — Research (total enrollment: 1)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 628. — Coordination and Bioinorganic Chemistry (total enrollment: 6)
  ▶ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011
  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*, coworkers: G. Holmes-Hampton (G), N. Jhurry (G), S. McCormick (G), J. Park (G), N. Williams (U)


### PRESENTATIONS DURING 2011

- “Biophysical Probes of Iron Metabolism in Eukaryotic Cells,” University of South Carolina, Department of Chemistry and Biochemistry, Columbia, SC, November, 2011. (Invited)
- “Whole-Cell Mathematical Modeling,” Iowa State University, Department of Bioinformatics and Computational Biology, Ames, IA, November, 2011. (Invited)

### PUBLICATIONS DURING 2011

• SERVICE DURING 2011

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 2011

Spring
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 630. — Biorganic Chemistry (total enrollment: 3)
  ▶ CHEM 681. — Seminar (total enrollment: 12)
  ▶ CHEM 691. — Research (total enrollment: 5)

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

Fall
  ▶ CHEM 228. — Organic Chemistry II (total enrollment: 68)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2011

Federal
  ▶ Phage Display with Two Genetically Incorporated Noncanonical Amino Acids, National Institutes of Health, coworkers: Y. Kurra (P), Y. Zeng (P), K. Odoi (G), Y. Wang (G)

Private

**PRESENTATIONS DURING 2011**
- “Fascile System for Genetic Incorporation of Two Different Noncanonical Amino Acids into One Protein in Escherichia coli,” 241st National Meeting and Exposition, March, 2011. (Graduate, Y. Huang)
- “Probing the Active Site of Alanine Racemase by Incorporation of Noncanonical Amino Acids,” 241st National Meeting and Exposition, March, 2011. (Graduate, K. Jacob)
- “Genetic Encoding of Methyl and Acetyllysine Analogos into Proteins,” 242nd National Meeting and Exposition, August, 2011. (Graduate, Y. Wang)
- “Genetic Incorporation of L-tyrosine Derivatives Mutants,” 67th Southwest Regional Meeting of the American Chemical Society, November, 2011. (Graduate, Y. Wang)

**PUBLICATIONS DURING 2011**
• SERVICE DURING 2011

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 2011

Spring
- CHEM 631. — Statistical Thermodynamics (total enrollment: 8)
- CHEM 681. — Seminar (total enrollment: 14)
- CHEM 691. — Research (total enrollment: 3)

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

Fall
- CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 167)
- CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 48)
- CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 72)
- CHEM 328. — Physical Chemistry II (total enrollment: 43)
- CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
- Molecular Photoionization Studies of Nucleobases and Correlated Systems, Department of Energy
- Spectroscopic and Computational Investigations of Fundamental Characteristics in Non-Covalent Interactions, National Science Foundation

Private
- Molecular and Recoil Frame Photoelectron Angular Distributions from Nonlinear Molecules, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2011
• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

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 2011

Spring
▷ CHEM 315. — Quantitative Analysis (total enrollment: 36)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 18)
▷ CHEM 491. — Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 3)

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

Fall
▷ CHEM 315. — Quantitative Analysis (total enrollment: 36)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 39)
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Lipoprotein Density Profiling for Clinical Studies, National Institutes of Health

• PUBLICATIONS DURING 2011

Moore, D.; McNeal, C.; Macfarlane, R. (2011) Isoforms of Apolipoprotein C-I Associated with Individuals with Coronary Artery Disease *Biochemical and Biophysical Research Communications*, vol. 404, 1034-1038.

*No report received from faculty member.*
ELMO J. MAWK

SENIOR LECTURER
CHEM-First Year Chemistry
mawk@mail.chem.tamu.edu

• SERVICE DURING 2011

National
▷ Professional Affiliation: American Chemical Society, Chemical Education Division (Member)

Department
▷ Service Position: Chem 320 Instrumental Analysis Laboratory (Coordinator)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 255)
▷ CHEM 317. — Quantitative Analysis (total enrollment: 29)
▷ CHEM 320. — Instrumental Analysis Laboratory (total enrollment: 29)

Summer
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 58)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 36)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 580)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 168)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 24)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 72)
▷ CHEM 320. — Instrumental Analysis Laboratory (total enrollment: 28)
• TEACHING ASSIGNMENTS DURING 2011

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 559)
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 235)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 316)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 48)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 137)

No report received from faculty member.
• SERVICE DURING 2011
  National
  ▶ Professional Affiliation: American Chemical Society - Chemical Education and Biological Chemistry Divisions (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 308)
  ▶ CHEM 242. — Elementary Organic Chemistry Laboratory (total enrollment: 192)
  Summer
  ▶ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 61)
  ▶ CHEM 242. — Elementary Organic Chemistry Laboratory (total enrollment: 15)
  Fall
  ▶ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 109)
• **CHAIRS/PROFESSORSHIPS**
  ▶ Cyclotron Institute Bright Chair in Nuclear Science [2002]

• **SERVICE DURING 2011**
  
  **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 2011**
  
  **Spring**
  ▶ CHEM 102.(H) — **Fundamentals of Chemistry II** (total enrollment: 18)
  ▶ CHEM 112.(H) — **Fundamentals of Chemistry Laboratory II** (total enrollment: 15)
  ▶ CHEM 691. — **Research** (total enrollment: 1)

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

  **Fall**
  ▶ CHEM 101.(H) — **Fundamentals of Chemistry I** (total enrollment: 26)
  ▶ CHEM 111(H) — **Fundamentals of Chemistry Laboratory I** (total enrollment: 28)
  ▶ CHEM 691. — **Research** (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2011**
Federal
▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy

**PUBLICATIONS DURING 2011**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Graduate Advisor, Chemistry Graduate Advising Office, Chemistry, [2009]/
  ▶ Associate Director, Center for Atmospheric Chemistry and the Environment, Chemistry,

• SERVICE DURING 2011

  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: Center for Teaching Excellence (Board Member), National Aerothermochemistry Laboratory (Co-Director)

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

  Department
  ▶ Committee/Panel: Academic Operations Committee (Member), Graduate Admission and Review Committee (Member), Graduate Curriculum Committee (Chair), Promotion and Tenure Committee (Member), Shop User Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ CHEM 491. — Research (total enrollment: 3)
  ▶ CHEM 621. — Chemical Kinetics (total enrollment: 12)
  ▶ CHEM 691. — Research (total enrollment: 10)

  Summer
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 685. — Directed Studies (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 16)

  Fall
  ▶ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 290)
  ▶ CHEM 491. — Research (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 51)
• CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 32)

• RESEARCH PROJECTS DURING 2011

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)
▷ (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)

• PRESENTATIONS DURING 2011

▷ “Roaming in the Dark: Unraveling the Atmospheric Photochemistry of the Nitrate Radical,” James Madison University, Harrisonburg, VA, 2011. (Individual)
▷ “Roaming in the Dark: Unraveling the Atmospheric Photochemistry of the Nitrate Radical,” Southwest Regional ACS Meeting, Austin, TX, 2011. (Invited)

• PUBLICATIONS DURING 2011

• AWARDS DURING 2011

National
▷ ACS Award in Pure Chemistry, American Chemical Society

• SERVICE DURING 2011

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 Admissions and Review Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 104. — Chemistry of the Elements (total enrollment: 18)
▷ CHEM 114. — Quantitative Analysis (total enrollment: 17)
▷ CHEM 691. — Research (total enrollment: 10)

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

Fall
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 642. — Organometallic Chemistry and Homogeneous Catalysis (total enrollment: 14)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 12)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) New Horizons in c-F Activation by Main Group Electrophiles, Department of Energy, 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 (G), R. Huacuja (G), B. McCulloch (G), A. Hollas (U), E. Youm (Staff)
- 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 2011**

- “Studies of Oxygenous Ligands and Their Relevance to Transition Metal-catalyzed Water Oxidation,” CCI 3rd Annual Retreat, Huntington Beach, CA, January, 2011. (Graduate, R. Huacuja)
- “Breaking and Making Bonds With Pincer Complexes,” University of Calgary, Calgary, Canada, March, 2011. (Invited)
- “Structural Dynamics of PNP-supported Main Group Complexes,” 67th Southwestern Regional ACS Meeting, Austin, TX, November, 2011. (Invited)
- “Catalytic Cross-coupling with (POCOPiPr)Rh Fragment,” 67th Southwest Regional Meeting of the American Chemical Society, Austin, TX, November, 2011. (Graduate, S. Timpa)
- “Convenient C-Alkylation of the [HCB_{11}Cl_{11}]^{-} Carborane Anion,” 67th ACS Southwest Regional Meeting, Austin, TX, November, 2011. (Graduate, R. Ramirez)
- “Novel Dianionic (SiNN)Ir Pincer Complexes,” 67th Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Graduate, S. Lee)
- “Reduction of CO_{2} to Free CO: A First for (PNP)Pd Complexes,” 67th Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Graduate, C. Palit)
- “Unsaturated Pt Pincer Complexes: C-H Activation and Metalloradical Behavior,” 67th Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Graduate, J. DeMott)

**PUBLICATIONS DURING 2011**


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• SERVICE DURING 2011
  Department
  ▷ Committee/Panel: Academic Operations Committee (Member), Graduate Admissions and Review Committee (Member), Teaching Assistant Orientation (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ CHEM 481 — Seminar (total enrollment: 26)
  ▷ CHEM 686 — Ethics in Chemical Research and Scholarship (total enrollment: 51)
  Fall
  ▷ CHEM 107 — General Chemistry for Engineering Students (total enrollment: 2)
SERVICE DURING 2011

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 2011

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 187)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 566)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 314)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 714)

PRESENTATIONS DURING 2011
▷ Iola Elementary, Iola, TX, January, 2011. (Individual)
▷ Neal Elementary, Bryan, TX, January, 2011. (Individual)
▷ Aggieland Saturday, February, 2011. (Individual)
▷ Milam Elementary, Bryan, TX, February, 2011. (Individual)
▷ The Society of Mexican American Engineers and Scientists Science Extravaganza, February, 2011. (Individual)
▷ Bellville High School, Bellville, TX, March, 2011. (Individual)
▷ Creek View Elementary, College Station, TX, March, 2011. (Individual)
▷ Huntsville ISD, Huntsville, TX, March, 2011. (Individual)
▷ Kiwanis, March, 2011. (Individual)
▷ Taylor Public Library, Family Science Night, Taylor, TX, March, 2011. (Individual)
▷ Navarro Elementary, Bryan, TX, April, 2011. (Individual)
▷ Roland Reynolds Elementary, Franklin, TX, April, 2011. (Individual)
▷ Austin Elementary, May, 2011. (Individual)
▷ Chilton High School, May, 2011. (Individual)
▷ O-Chem 228, Texas A&M University, College Station, TX, May, 2011. (Individual)
AGGIE-STEM Summer Camp, June, 2011. (Individual)
Clara Mounce Library Summer Reading Program, Bryan, TX, June, 2011. (Individual)
College of Education Future Teachers Camp, June, 2011. (Individual)
Hearne Public Library, Summer Reading Program, Hearne, TX, June, 2011. (Individual)
Larry J. Ringer Library Summer Reading Program, College Station, TX, June, 2011. (Individual)
Liberty Municipal Library Summer Reading Program, Liberty, TX, June, 2011. (Individual)
Missouri City Branch Library, Missouri City, TX, June, 2011. (Individual)
Orange Public Library, June, 2011. (Individual)
REU, June, 2011. (Individual)
Robertson County Carnegie Library, Summer Reading Program, Franklin, TX, June, 2011. (Individual)
Wintermann Library, Summer Reading Program, Eagle Lake, TX, June, 2011. (Individual)
Alvin Library, Alvin, TX, July, 2011. (Individual)
Bastrop Library, Bastrop, TX, July, 2011. (Individual)
Brazoria Community Library Summer Reading Program, July, 2011. (Individual)
Passport to Aggieland, July, 2011. (Individual)
Shepherd Public Library Summer Reading Program, Shepherd, TX, July, 2011. (Individual)
Sweeny Library Summer Reading Program, Sweeny, TX, July, 2011. (Individual)
Society of Women Engineers Summer Camp, August, 2011. (Individual)
Callison Elementary, September, 2011. (Individual)
Centerville ISD, Centerville, TX, September, 2011. (Individual)
Coffee Talk, September, 2011. (Individual)
Cornerstone Christian Academy, College Station, TX, September, 2011. (Individual)
Gary High School, Gary, TX, September, 2011. (Individual)
Saturday Morning Biophysics: Image Life!, September, 2011. (Individual)
Texas A&M University ACS-SAC, College Station, TX, October, 2011. (Individual)
Chemistry Open House, College Station, TX, October, 2011. (Individual)
Pebble Creek Elementary, College Station, TX, October, 2011. (Individual)
Rock Prairie, College Station, TX, October, 2011. (Individual)
Strake Jesuit College Preparatory, Houston, TX, November, 2011. (Individual)
Westwood High School, Austin, TX, November, 2011. (Individual)
Brazos School, Bryan, TX, December, 2011. (Individual)
Chem 100, College Station, TX, December, 2011. (Individual)
Expanding Your Horizons, December, 2011. (Individual)
Wilder Elementary, December, 2011. (Individual)
No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 227. — Organic Chemistry I (total enrollment: 240)
▷ CHEM 228. — Organic Chemistry II (total enrollment: 51)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 560)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 304)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 672)

No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 524)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 72)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 288)
▷ CHEM 116. — Molecular Science for Citizens Laboratory (total enrollment: 58)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 143)

No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ▶ Davidson Chair in Science /2004/

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Toxicology, /2006/
  ▶ Director, Center for Biological Nuclear Magnetic Resonance, Chemistry, //

• SERVICE DURING 2011
  National
  ▶ Editorial/Board: Archives of Biochemistry & Biophysics (Member), Biochemistry (Member), BioOrganic Chemistry (Member)
  College
  ▶ Committee/Panel: Research Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ BICH 691. — Research (total enrollment: 2)
  ▶ CHEM 672. — Bioorganic Reaction Mechanisms (total enrollment: 11)
  ▶ CHEM 681. — Seminar (total enrollment: 4)
  ▶ CHEM 691. — Research (total enrollment: 6)
  Summer
  ▶ BICH 691. — Research (total enrollment: 4)
  ▶ CHEM 691. — Research (total enrollment: 5)
  Fall
  ▶ BICH 691. — Research (total enrollment: 4)
  ▶ CHEM 491. — Research (total enrollment: 3)
  ▶ CHEM 681. — Seminar (total enrollment: 8)
  ▶ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) Enzymatic Detoxification of Organophosphate Nerve Agents, National Institutes of Health
  ▶ (REN) Mechanism and Control of Urea Biosynthesis, National Institutes of Health

Private
(REN) Enzyme Reaction Mechanisms, *The Robert A. Welch Foundation*

**Other**
- Collaborative Center for an Enzyme Function Initiative, *University of Illinois*
- (REN) Deciphering Enzyme Specificity: Amidohydrolase Superfamily, *University of Illinois*

**PRESENTATIONS DURING 2011**
- “Annotating Proteins of Unknown Function,” Department of Chemistry, Baylor University, Waco, TX, August, 2011. ([Invited])
- “Deciphering the C-P Lyase Pathway in E. coli,” Beilstein Symposium, Ruedesheim, Germany, September, 2011. ([Invited])
- “Deciphering the C-P Lyase Pathway in E. coli,” ACS National Meeting, Denver, CO, November, 2011. ([Invited])

**PUBLICATIONS DURING 2011**


• AWARDS DURING 2011

University
▷ Distinguished Achievement Award - Research, The Association of Former Students

• SERVICE DURING 2011

National
▷ 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 2011

Spring
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 615. — Organic Synthesis (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 8)

Summer
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 7)

Fall
▷ CHEM 231. — Techniques of Organic Chemistry (total enrollment: 124)
▷ CHEM 491. — Research (total enrollment: 5)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Bioactive Natural Product Total Synthesis via B-lactones, Department of Health and Human Services, coworkers: G. Liu (G), M. Shirley (G)
▷ New Methods for Simultaneous Arming and SAR Studies of Natural Products, Department of Health and Human Services, coworkers: 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)
▷ β-Lactones: Bioactive Targets and Vehicles for Synthesis, National Institute of General Medical Sciences, coworkers: A. Tully (G), S. Vellalath (G)
- (REN) Novel Asymmetric Routes to 2-Oxetanones and Their Application, *National Science Foundation*
- Novel Asymmetric Routes to 2-Oxetanones and Their Applications, *National Science Foundation*, coworkers: S. Chamni (G), N. Harvey (G), C. Levarett (G)

**PRESENTATIONS DURING 2011**

- “Inspired by Natural Products: Extraordinary Forums for Studies at the Chemistry/Biology Interface,” Texas Junior Science & Humanities Symposium; College of Science, College Station, TX, January, 2011. (Individual)
- “Bioactive Natural Products as Inspiration for Synthetic Methodology Total Synthesis, and Drug Discovery,” University of Kansas, Lawrence, KS, March, 2011. (Invited)
- “Enhancing the Anticancer Potential of Phytochemicals Obtained from Indigenous Plants of the Mexican-USA Border,” CONACYT Collaborative Research Grant Program Symposium, College Station, TX, March, 2011. (Poster Graduate, J. Li)
- “Enhancing the Anticancer Potential of Phytochemicals Obtained from Indigenous Plants of the Mexican-USA Border,” Texas A&M - CONACYT Collaborative Research Grant Program Symposium, College Station, TX, March, 2011. (Graduate, O. Robles)
- “Bioactive Natural Products as Inspiration for Synthetic Methodology and Strategy Development Towards New Drug Leads,” University of Wisconsin-Madison School of Pharmacy, Madison, WI, April, 2011. (Invited)
- “Natural Products as Enduring Forums for Synthetic Strategy and Biological Discovery,” Gordon Research Conferences Heterocyclic Compounds, June, 2011. (Invited)
“Chemical Synthesis and Biomechanistic Studies of Natural Products,” University of Kansas, Lawrence, KS, September, 2011.( Invited)


• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▸ Associate Department Head, Chemistry, /1981/

• SERVICE DURING 2011

  University
  ▸ Committee/Panel: Laboratory Safety Sub-Committee (Member)

  College
  ▸ Committee/Panel: 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 2011

  Spring
  ▸ CHEM 102.(H) — Fundamentals of Chemistry II (total enrollment: 24)
  ▸ CHEM 112.(H) — Fundamentals of Chemistry Laboratory II (total enrollment: 16)

  Fall
  ▸ CHEM 101.(H) — Fundamentals of Chemistry I (total enrollment: 31)
  ▸ CHEM 111.(H) — Fundamentals of Chemistry Laboratory I (total enrollment: 28)
• CHAIRS/PROFESSORSHIPS

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]

• SERVICE DURING 2011
  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)

  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 2011
  Spring
  ▶ CHEM 691. — Research (total enrollment: 11)

  Summer
  ▶ CHEM 691. — Research (total enrollment: 14)

  Fall
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 15)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (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
  ▶ Acquisition of a Cryoprobe for a NMR Spectrometer, National Science Foundation
MRI: Development of Ion Mobility Mass Spectrometer for Protein Chemistry, *National Science Foundation*

**PRIVATE**

- (REN) Studies of the Structure of Gas-Phase Peptide Ions, *The Robert A. Welch Foundation*

**PRESENTATIONS DURING 2011**

- “Removal of Neutral and Ionic Additives from Protein Solutions by an Electrophoretic


“Ion Mobility-tandem Mass Spectrometry as a Structural Probe for Disulfide Containing Biomolecules,” 67th Southwest Regional Meeting of the American Chemical Society, Austin, TX, November, 2011. (Individual)

• PUBLICATIONS DURING 2011


• TEACHING ASSIGNMENTS DURING 2011

Spring
✓ CHEM 227. — Organic Chemistry I (total enrollment: 169)
✓ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 18)
✓ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 168)

Fall
✓ CHEM 227. — Organic Chemistry I (total enrollment: 312)
✓ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 24)
✓ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 160)
• **TEACHING ASSIGNMENTS DURING 2011**
  
  **Spring**
  - CHEM 234. — *Organic Synthesis and Analysis IV* (total enrollment: 24)

• **PUBLICATIONS DURING 2011**

*No report received from faculty member.*
EMILE A. SCHWEIKERT

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- ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  - Director, Elemental Analysis Laboratory, Chemistry,
  - Director, Center for Chemical Characterization and Analysis (CCCA), Chemistry,

- SERVICE DURING 2011

National
  - Committee/Panel: Reactor Safety Board, Nuclear Science Center (Chair), Research Park Advisory Committee (Member)

University
  - Committee/Panel: Board of Managers, TamChem LLC (Member)

- TEACHING ASSIGNMENTS DURING 2011

Spring
  - CHEM 434. — Analytical Instrumentation Laboratory (total enrollment: 17)
  - CHEM 681. — Seminar (total enrollment: 17)
  - CHEM 691. — Research (total enrollment: 4)

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

Fall
  - CHEM 317. — Quantitative Analysis (total enrollment: 24)
  - CHEM 681. — Seminar (total enrollment: 14)
  - CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  - CHEM 691. — Research (total enrollment: 5)

- RESEARCH PROJECTS DURING 2011

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)

- PRESENTATIONS DURING 2011

  - “Characteristics of Positive and Negative Secondary Ions Emitted from $Au^+_3$ and $Au^{+4}_{400}$ Impacts,” 18th International Conference on Secondary Ion Mass Spectrometry, September, 2011. (Individual)


“Surface Characterization of Biological Nanodomains using NP-ToF-SIMS,” 18th International Conference on Secondary Ion Mass Spectrometry, September, 2011. (Individual)


**PUBLICATIONS DURING 2011**


Cytokine Immunoassays *Biomaterials*, vol. 32, 5478-5488.

• SERVICE DURING 2011

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)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Molecular Recognition in Dendrimers Based on Melamine, National Institutes of Health

Private
▷ Molecular Recognition in Cyclodextrin-Containing Dendrimers, The Robert A. Welch Foundation

• PUBLICATIONS DURING 2011


No report received from faculty member.

Resigned 08/16/2011.
CHAIRS/PROFESSORSHIPS
- Davidson Chair in Science [2005]

ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
- Director, Nuclear Magnetic Resonance Laboratory (NMR), Chemistry

SERVICE DURING 2011
National
- Editorial/Board: The Journal of Organic Chemistry (Associate Editor)
- Committee/Panel: The Open Organic Chemistry Journal, Member (Editorial Board)

Department
- Research Group: NMR User Group (Chair)
- Committee/Panel: Graduate Awards Committee (Member), IT Committee (Member), Promotion and Tenure Committee (Member), Undergraduate Curriculum Committee (Chair)

TEACHING ASSIGNMENTS DURING 2011

Spring
- CHEM 491. — Research (total enrollment: 1)
- CHEM 647. — Spectra of Organic Compounds (total enrollment: 23)
- CHEM 691. — Research (total enrollment: 8)

Summer
- CHEM 691. — Research (total enrollment: 7)

Fall
- CHEM 491. — Research (total enrollment: 1)
- CHEM 646. — Organic Chemistry (total enrollment: 20)
- CHEM 690. — Theory of Chemical Research (total enrollment: 5)
- CHEM 691. — Research (total enrollment: 6)

RESEARCH PROJECTS DURING 2011

Federal
- New Concepts in Organic Selectivity and Mechanisms, National Institutes of Health, coworkers: E. Kwan (P), J. Waas (P), I. Andujar-De Sanctis (G), J. Bailey (G), B. Biswas (G), X. Bogle (G), Z. Chen (G), O. James (G), R. Plata (G), L. Quijan (G), D. Sepulveda Camarena (G)
- Acquisition of a Cryoprobe for a NMR Spectrometer, National Science Foundation
• PRESENTATIONS DURING 2011
  ∗ “Competition Between Reaction and Intramolecular Energy Redistribution in the Ozonolysis of Vinyl Ethers,” Southwest Theoretical Chemistry Conference, Lubbock, TX, October, 2011. (Individual)
  ∗ “Natural Abundance Isotope Effects and Experimental Transition States,” Earlham College, Richmond, IN, November, 2011. (Invited)
  ∗ “Natural Abundance Isotope Effects and Experimental Transition States,” Rose-Hulman Institute of Technology, Terre Haute, IN, November, 2011. (Invited)
  ∗ “Natural Abundance Isotope Effects and Experimental Transition States,” St. Edwards University, Austin, TX, November, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

University
▷ Committee/Panel: Advisory Committee of Microscopy and Imaging Center (Member)

Department
▷ Event: Physical Chemistry Laboratory (Coordinator)
▷ Committee/Panel: Admission and Retention Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 328. — Physical Chemistry II (total enrollment: 16)
▷ CHEM 691. — Research (total enrollment: 5)

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

Fall
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 601. — Analytical Chemistry I (total enrollment: 12)
▷ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ CAREER: Ultrafast Electronic Magnetic and Coherent Lattice Dynamics and the Dynamic Structure-Property Relationship in Nanocrystalline Transition Metal Oxides, National Science Foundation, coworkers: H. Chen (G), S. Maiti (G)

Private
▷ Energy Transfer in Doped Anisotropic Semiconductor Nanostructures, The Robert A. Welch Foundation, coworkers: H. Chen (G), Y. Park (G)

• PRESENTATIONS DURING 2011


“Structurally Correlated Exciton Dynamics in Mn-doped Semiconductor Nanocrystals,” 67th Southwest Regional Meeting of the ACS, Austin, TX, 2011. (Invited)

**PUBLICATIONS DURING 2011**


• SERVICE DURING 2011

  Department
  ▶ Event: Quantitative Analysis Laboratory Chemistry 318 (Coordinator)
  ▶ Committee/Panel: Analytical Chemistry Laboratory Development Committee (Member),
    Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ CHEM 316. — Quantitative Analysis (total enrollment: 93)
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 79)

  Summer
  ▶ CHEM 316. — Quantitative Analysis (total enrollment: 27)
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 19)

  Fall
  ▶ CHEM 316. — Quantitative Analysis (total enrollment: 137)
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 107)

• RESEARCH PROJECTS DURING 2011

  State
  ▶ "Enhancement of Student Instructional Computing for CHEM 318 Laboratories, Texas
    A&M University"

• PUBLICATIONS DURING 2011

    Laboratory Manual.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2011
  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 2011
  Spring
  ▶ CHEM 315. — Quantitative Analysis (total enrollment: 34)
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 17)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 3)

  Summer
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 71)
  ▶ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 52)
  ▶ CHEM 691. — Research (total enrollment: 2)

  Fall
  ▶ CHEM 315. — Quantitative Analysis (total enrollment: 35)
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 29)
  ▶ CHEM 491. — Research (total enrollment: 3)
  ▶ CHEM 691. — Research (total enrollment: 3)

No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 435)
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 96)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 302)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total enrollment: 204)

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Undergraduate Advisor, Chemistry Undergraduate Advising Office, Chemistry, //

• SERVICE DURING 2011
  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 2011
  Spring
  ▶ CHEM 228. — Organic Chemistry II (total enrollment: 164)
  ▶ SCEN 392. — Cooperative Education in Science (total enrollment: 1)
  Fall
  ▶ CHEM 100. — Horizons in Chemistry (total enrollment: 136)
  ▶ CHEM 228. — Organic Chemistry II (total enrollment: 168)
• CHAIRS/PROFESSORSHIPS
  ⊳ Gradipore Chair in Separation Science in Chemistry [2001]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ⊳ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• AWARDS DURING 2011
  International
  ⊳ Halász Medal Award, Hungarian Society for Separation Sciences

• SERVICE DURING 2011
  International
  ⊳ Committee/Panel: Permanent Scientific Committee of International Symposia on Isoelectrofocusing (Member)

  National
  ⊳ Editorial/Board: Electrophoresis (Member)

  Department
  ⊳ Committee/Panel: Executive Committee (Member), Graduate Awards Committee (Member), Library Committee (Member), Scientific Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ⊳ CHEM 603. — Modern Chromatographic Separation Methods (total enrollment: 7)
  ⊳ CHEM 691. — Research (total enrollment: 1)

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

  Fall
  ⊳ CHEM 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2011

“Design and Synthesis of Rapidly Focusing pI Markers,” Chemistry Department, Oklahoma State University, Stillwater, OK, October, 2011. (Individual)


PUBLICATIONS DURING 2011


CORAN M.H WATANABE
ASSOCIATE PROFESSOR (979) 458-8094
CHEM-Biological Chemistry watanabe@chem.tamu.edu

• SERVICE DURING 2011

National
▷ Event: American Cancer Society Study Section (Participant)
▷ Committee/Panel: NIH SBCB Study Section (Member), Zing Conference: Enzymes, Coenzymes, and Metabolic Pathways (Session Chair)

College
▷ Committee/Panel: Diversity Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 489. — Special Topics in (total enrollment: 18)
▷ CHEM 491. — Research (total enrollment: 4)
▷ CHEM 691. — Research (total enrollment: 2)

Summer
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 4)

Fall
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 681. — Seminar (total enrollment: 17)
▷ CHEM 689. — Special Topics in (total enrollment: 14)
▷ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011

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)

• PRESENTATIONS DURING 2011
▷ “Unveiling the Biosynthesis of the Anti-Tumor Agent Azinomycin B,” Zing Conference: Enzymes Coenzymes and Metabolic Pathways, Cancun, Mexico, November, 2011.( Individual)

• PUBLICATIONS DURING 2011

SEC. 6.1 PROFESSIONAL ACTIVITIES 283

• SERVICE DURING 2011

National
▷ Editorial/Board: National Science Foundation & American Chemical Society Petroleum Research Fund (Review: Proposals)
▷ Committee/Panel: NSF Xsede Resource Allocation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Fall
▷ CHEM 327. — Physical Chemistry (total enrollment: 35)
▷ CHEM 681. — Seminar (total enrollment: 12)
▷ CHEM 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Private
▷ Intermolecular Non-Covalent Interactions in π-Conjugated Heterocyclic Oligomers, American Chemical Society
▷ Non-Covalent Pi-Stacking Interactions in Organocatalysis, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2011

▷ “π -Stacking Interactions in Organic Chemistry,” Chemistry Departmental Seminar, Trinity University, San Antonio, TX, October, 2011. (Invited)
▷ “Role of π-Stacking Interactions in the Enantioselective Propargylation of Aromatic Aldehydes Catalyzed by Helical N-Monoxides,” Southwest Theoretical Chemistry Conference (SWTCC), Texas Tech University, Lubbock, TX, October, 2011. (Individual)
“Substituent Effects in π-Stacking Interactions: What a Difference an Edge Makes,” Southwest Theoretical Chemistry Conference (SWTCC), Texas Tech University, Lubbock, TX, October, 2011. (Individual)

“Taking the Aromaticity out of Aromatic Interactions,” Southwest Theoretical Chemistry Conference (SWTCC), Texas Tech University, Lubbock, TX, October, 2011. (Poster Individual)


“Role of p-Stacking Interactions in the Enantioselective Propargylation of Aromatic Aldehydes by helical N-monoxides,” ACS Southwest Regional Meeting, Austin, TX, November, 2011. (Poster Individual)

“Stacking Interactions at Defective Sites in Graphene and Carbon Nanotubes,” CS Southwest Regional Meeting, Austin, TX, November, 2011. (Poster Individual)

“Stacking Interactions in Nitroarene Binding Sites of Proteins,” ACS Southwest Regional Meeting, Austin, TX, November, 2011. (Poster Individual)

“Substituent Effects in π-Stacking Interactions: What a Difference an Edge Makes,” Southwest Regional Meeting, Austin, TX, November, 2011. (Individual)

“Theoretical Study on Mechanisms of Allylation of Aldehydes with Allyltrichlorosilanes Catalyzed by QUINOX,” ACS Southwest Regional Meeting, Austin, TX, November, 2011. (Individual)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011

National
▷ Editorial/Board: *Chemical Educator* (Reviewer), *Journal for Science Education and Technology* (Board Member), *Journal of Chemical Education* (Reviewer)
▷ Committee/Panel: ACS Chemical Education Research Committee (Chair)

State
▷ Committee/Panel: Region V, Associated Chemistry Teachers of Texas (Director)

Regional
▷ Event: Visit of Society of Women Engineers (SWE) High School Conference (Host)

University
▷ Service Position: On-Line Web Learning Homework (Administrator)
▷ Event: Aggie Recruitment Committee (Host)

Department

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 102. — *Fundamentals of Chemistry II* (total enrollment: 516)
▷ CHEM 111. — *Fundamentals of Chemistry Laboratory I* (total enrollment: 214)
▷ CHEM 112. — *Fundamentals of Chemistry Laboratory II* (total enrollment: 423)
▷ CHEM 117. — *General Chemistry for Engineering Students Laboratory* (total enrollment: 214)
▷ CHEM 485. — *Directed Studies* (total enrollment: 7)

Fall
▷ CHEM 101. — *Fundamentals of Chemistry I* (total enrollment: 578)
▷ CHEM 111. — *Fundamentals of Chemistry Laboratory I* (total enrollment: 504)
▷ CHEM 112. — *Fundamentals of Chemistry Laboratory II* (total enrollment: 71)
▷ CHEM 116. — *Molecular Science for Citizens Laboratory* (total enrollment: 21)
▷ CHEM 117. — *General Chemistry for Engineering Students Laboratory* (total enrollment: 141)
▷ CHEM 485. — *Directed Studies* (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

SEC. 6.1  PROFESSIONAL ACTIVITIES  287
Federal
▷ Students’ Attempts at Understanding the Unobservable: A Multi-Method Approach to Visualization Analysis and Design, National Science Foundation

• PRESENTATIONS DURING 2011
▷ “Which Visualizations are Students Able to use Effectively?,” 241st National Meeting of the American Chemical Society, Anaheim, CA, March, 2011.( Individual)
▷ “Students Attempts at Understanding the Unobservable,” Gordon Research Conference Visualization in Science Education, Smithfield, RI, July, 2011.( Invited)
▷ “Clickers in a Large Lecture Class: Student Impressions and Perceived Learning,” 242nd National Meeting of the American Chemical Society, Denver, CO, August, 2011.( Individual)
▷ “Using Visualization Techniques in General Chemistry,” Southwest Regional Meeting of the American Chemical Society, Austin, TX, November, 2011.( Individual)

• PUBLICATIONS DURING 2011
• CHAIRS/PROFESSORSHIPS
  ▷ W.T. Doherty-Welch Foundation Chair in Chemistry [2009]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Professor (J), Chemical Engineering, [2009]

• SERVICE DURING 2011
  International
  ▷ Advisory Board: 20th IUPAC International Symposium on Ionic Polymerization (Member), Dutch BioMedical Materials Program (Member), International Journal of Nanomedicine (Member)

  National
  ▷ Event: American Association for Cancer Research Symposium, Nano in Cancer: Linking Chemistry, Biology, and Clinical Applications in Vivo (Co-Organizer)
  ▷ Advisory Board: Bioconjugate Chemistry, Editorial (Member), NIH Nanomedicine Development Centers (Member), University of California, Santa Barbara, Materials Research Laboratory (Member), University of Nebraska NIH COBRE Center (Member), Chemistry of Materials (Member), Journal of Biotechnology and Biomaterials - Open Access (Member), Journal of the American Chemical Society, Editorial (Member)
  ▷ Editorial/Board: Journal of Polymer Science, Part A: Polymer Chemistry (Editor)
  ▷ Committee/Panel: NIH NANO Study Section Panel (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), Faculty Search Committee, Marine Sciences Department, Texas A&M University at Galveston (Member), Institute for Advanced Study Administrative Council (Member)

  Department
  ▷ Committee/Panel: ADVANCE-IT Project, Departmental Mini-Grants Subcommittee (Member), Executive Committee (Member), Faculty Search Committee (Member), Joint Appointments Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011
Spring
▷ CHEM 466. — Polymer Chemistry (total enrollment: 77)
▷ CHEM 691. — Research (total enrollment: 10)

Summer
▷ CHEM 691. — Research (total enrollment: 15)

Fall
▷ CHEM 689. — Special Topics in (total enrollment: 6)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 13)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) The Development of Non-Toxic Anti-Fouling Coatings Based Upon Nanoscopic Surface Complexities, Department of Defense, coworkers: J. Raymond (P), P. Imbesi (G), K. Pollack (G), K. Rauwerdink (G), K. Seetho (G), B. Tucker (U)
▷ Adhesion-Based Nanotherapeutics in Urinary Tract Infection, National Institutes of Health, coworkers: G. Heo (G), L. Lin (G)
▷ Integrated Nanosystems for Diagnosis and Therapy, National Institutes of Health, coworkers: M. El Sabahy (P), J. Zou (P), S. Florez (G), G. Heo (G), N. Lee (G), A. Li (G), Y. Lim (G), L. Lin (G), D. Policarpio (G), S. Samarajeewa (G), R. Shresta (G), S. Zhang (G)
▷ Charged Block Copolymer Assembly of Unique Nanoscale Objects, National Science Foundation, coworkers: G. Sun (P), G. Heo (G), Z. Li (G), A. Li (G), A. Pavia (G), D. Policarpio (G), C. Yang (G), S. Zhang (G)
▷ Complex Functional Materials Accessed Uniquely through Selective Covalent and Non-Covalent Macromolecular Interactions, National Science Foundation, coworkers: G. Sun (P), A. Li (G), A. Pavia (G), D. Policarpio (G), S. Zhang (G)
▷ Degradable Polycarbonates from Polyhydroxy Natural Products, National Science Foundation, coworkers: K. Mikami (P), A. Lonnecker (G), J. Streff (G)
▷ Scientific Methodology Development, Utilizing the Physical and Chemical Manipulation of Discrete Nanoscale Objects, National Science Foundation, coworkers: G. Sun (P), G. Heo (G), Z. Li (G), A. Li (G), C. Yang (G), S. Zhang (G)
▷ The Development of Non-toxic and Anti-fouling Coatings Based upon Nanoscopic Surface Complexities, Office of Naval Research

Industrial
▷ The Development of Nanoparticulate Embedded Therapeutics, Covidien, Inc., coworkers: M. Elsabahy (P), J. Raymond (P), P. Imbesi (G), N. Lee (G), A. Li (G), L. Lin (G), S. Samarajeewa (G), R. Shresta (G), F. Zhang (G)
▷ Negative Active EUV Photoresists with Controlled Molecular Architecture, Dow Chemical Co., coworkers: G. Sun (P), S. Cho (G), A. Li (G), C. Clark (U)

• PRESENTATIONS DURING 2011
"Power of Polymer Chemistry to Produce Intricate Nanostructures for Advanced Medicine," 2011. (Individual)


"Combinations of Covalent and Non-covalent Interactions, Applied Iteratively in Various Sequences, to Achieve Unique, Nanoscopic Macromolecular Assemblies in Solution," Oklahoma State University, Stillwater, OK, April, 2011. (Individual)

"Degradable Polycarbonates Designed for Orthopedic Applications," Polymer Technology Center Consortium Meeting, Texas A&M University, College Station, TX, April, 2011. (Individual)

"Degradable Polycarbonates Designed for Orthopedic Applications," The F. A. Cotton Medal for Excellence in Chemical Research Symposium, Texas A&M University, College Station, TX, April, 2011. (Individual)

"Unique Optical and Assembly Effects that Arise from the Placement of Active Units within Stimuli-responsive Nanoscopic Polymer Frameworks," UK High Polymer Research Group Conference, Pott Shrigley, United Kingdom, April, 2011. (Individual)

"Challenges in Science: How to Succeed in Research and Enjoy a Productive Scientific Career," Research Experiences for Undergraduates Career Development Seminar Series, Texas A&M University, College Station, TX, May, 2011. (Individual)


"The Development of Non-toxic Anti-fouling Coatings Based Upon Nanoscopic Surface Complexities," Office of Naval Research Biofouling/Coatings Program Review, New Or-
leans, LA, June, 2011. (Individual)

- "Wooley Laboratory Overview: Diverse opportunities-from Materials to Medicine-for Well-defined Polymer Chemistry," Research Experiences for Undergraduate Student Summer Research Presentation, Texas A&M University, College Station, TX, July, 2011. (Individual)


- "Nanoscale Polymer Objects of Unique Shapes, Morphologies and Dimensions as Controlled Drug Delivery Devices- (Cancer, Bladder Infections, and Lung Infections),” American Chemical Society National Meeting, Denver, CO, August, 2011. (Individual)

- "Combinations of Covalent and Non-Covalent Interactions, Applied Iteratively in Various Sequences, to Achieve Unique, Nanoscopic Macromolecular Structures,” The University of North Carolina at Chapel Hill, Chapel Hill, NC, September, 2011. (Individual)

- "Degradable Engineering Polycarbonates Derived from Polyhydroxy Natural Products - A Special Emphasis Toward Degradable Materials for Orthopedic Applications,” Bayreuth Polymer Symposium ’11, Bayreuth, Germany, September, 2011. (Individual)

- "Degradable Engineering Polycarbonates Derived from Polyhydroxyl Natural Products: A Special Emphasis Toward Degradable Materials for Orthopedic Applications,” Lilly-Brown Lecture 2011, Purdue University, West Lafayette, IN, September, 2011. (Individual)


- **PUBLICATIONS DURING 2011**


JIONG YANG
ASSISTANT PROFESSOR (979) 845-2889
CHEM-Organic Chemistry yang@chem.tamu.edu

• SERVICE DURING 2011
  National

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ CHEM 234. — *Organic Synthesis and Analysis IV* (total enrollment: 24)
  ▶ CHEM 681. — *Seminar* (total enrollment: 36)
  ▶ CHEM 691. — *Research* (total enrollment: 6)
  Summer
  ▶ CHEM 491. — *Research* (total enrollment: 1)
  ▶ CHEM 691. — *Research* (total enrollment: 5)
  Fall
  ▶ CHEM 234. — *Organic Synthesis and Analysis IV* (total enrollment: 24)
  ▶ CHEM 491. — *Research* (total enrollment: 1)
  ▶ CHEM 681. — *Seminar* (total enrollment: 28)
  ▶ CHEM 690. — *Theory of Chemical Research* (total enrollment: 5)
  ▶ CHEM 691. — *Research* (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011
  Private
  ▶ (REN) Development of New Reagents for Selective Enolization of Carbonyl Compounds, *The Robert A. Welch Foundation*, coworkers: P. Gopal (P), M. Hashim (G), T. Hood (G), J. Huang (G), C. Huehls (G), T. Kaiser (G), K. Rosa-Perez (G), H. Xue (G), D. Jasinski (U)

• PRESENTATIONS DURING 2011

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

University
▷ Service Position: Chapter of the Brazos Valley Coalition Against the War (Faculty Advi-
sor), Texas A&M University (ALLY)
▷ Committee/Panel: Texas A&M University Chapter of Phi Beta Kappa (President)

Department
▷ Committee/Panel: Computer Committee (Member), Information and Communications
   Technology Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 328. — Physical Chemistry II (total enrollment: 34)

Summer
▷ CHEM 328. — Physical Chemistry II (total enrollment: 11)

Fall
▷ CHEM 111. — Fundamentals of Chemistry Laboratory I (total enrollment: 334)
▷ CHEM 112. — Fundamentals of Chemistry Laboratory II (total enrollment: 95)
▷ CHEM 117. — General Chemistry for Engineering Students Laboratory (total
   enrollment: 143)
▷ CHEM 648. — Principles of Quantum Mechanics (total enrollment: 7)

• RESEARCH PROJECTS DURING 2011

Private
▷ Electron Atom/Molecule Scattering and Auger Resonances and Photoionization Cross
   Sections Using Complex Scaled Multiconfigurational Based Methods, The Robert A. Welch
   Foundation, coworkers: L. Ling (P), S. Zhang (P), Y. Zhou (P)

• PRESENTATIONS DURING 2011

▷ “Aspects of Complex Scaling for Electron-Atom/Molecule Resonances Using MCSCF, MC-
   STEP and MCTDH,” Southwest Theoretical Chemistry Conference, Texas Tech University,
   Lubbock, TX, October, 2011. (Invited)
▷ “The Complex Scaled Multi-Configuration Time Dependent Hartree Fock Method for
   Shape and Feshbach Resonances,” Southwest Theoretical Chemistry Conference, Texas
   Tech University, Lubbock, TX, October, 2011. (Poster Individual)
▷ “Low Energy Electron-Atom / Molecule Scattering & Complex Scaled Method for Reso-
   nance Study,” Lawrence Berkeley Laboratory, Berkeley, CA, December, 2011. (Invited)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Associate Dean for Faculty Affairs, Office of Faculty Affairs, College of Science, [2008]

• SERVICE DURING 2011

  International
  ▶ Committee/Panel: Gordon Research Seminar in Nuclear Chemistry (Vice Chair), NUSYM11 Organizing Committee (Member)

  National
  ▶ Committee/Panel: APS Division of Nuclear Physics Education Committee (Chair), APS Nominating Committee (Member), Gender Equity Conversations (Co-Chair), NSCL Program Advisory Committee (Member)

  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 2011

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

  Summer
  ▶ CHEM 491. — Research (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 9)

  Fall
  ▶ CHEM 106. — Molecular Science for Citizens (total enrollment: 36)
  ▶ UGST 181 — First Year Seminar: Kitchen Chemistry (total enrollment: 19)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
  ▶ CHEM 691. — Research (total enrollment: 9)

• RESEARCH PROJECTS DURING 2011

  Federal
• Presentations during 2011
  ▶ “How Cutting Edge Science can Prepare a Diverse Technical Workforce for the Future,” Garvin Medal Award Talk, American Chemical Society Meeting, March, 2011. (Invited)
  ▶ “Can Le Chatlier’s Principle be used to Maintain Work-life Equilibrium?,” Texas A&M University, College Station, TX, April, 2011. (Invited)
  ▶ “Nuclear Reactions: How to Boil a Nucleus and What do we Learn From it?,“ International Workshop on Nuclear Physics, Stellenbosch South Africa, May, 2011. (Invited)
  ▶ “Constraining the Symmetry Energy of Nuclear Matter using Heavy-ion Reactions,” American Chemical Society Meeting, Denver, CO, August, 2011. (Invited)
  ▶ “How to be a Good Mentor to Your Faculty Colleagues,” WFN Mentoring Panel, September, 2011. (Invited)


“Studies of Heavy Residues from Peripheral Collisions near the Fermi Energy,” American Physical Society Division of Nuclear Physics Meeting, East Lansing, MI, November, 2011. (Invited)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011

National
▷ Event: ARPA-E Summit (Participant), DOE Tech Team Meeting on Hydrogen and Fuel Cell (Speaker)
▷ Editorial/Board: Chemical Reviews Thematic Issue on Metal-Organic Frameworks (Guest Editor), National Science Foundation (Review Panel)

University
▷ Research Group: Multiple Center Proposals to NSF and DOE (Organizer), Multiple MRI and IGERT Proposals (Participant)
▷ Event: ARISE (Organizer), Biweekly Meetings for ARPA-E Project (Organizer)

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ CHEM 362. — Descriptive Inorganic Chemistry (total enrollment: 31)
▷ CHEM 491. — Research (total enrollment: 3)
▷ CHEM 681. — Seminar (total enrollment: 37)
▷ CHEM 691. — Research (total enrollment: 10)
▷ CHEM 695. — Frontiers in Chemical Research (total enrollment: 70)

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

Fall
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 681. — Seminar (total enrollment: 30)
▷ CHEM 690. — Theory of Chemical Research (total enrollment: 5)
▷ CHEM 691. — Research (total enrollment: 9)
▷ CHEM 695. — Frontiers in Chemical Research (total enrollment: 51)

• RESEARCH PROJECTS DURING 2011

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

Mash-Adjustable Molecular Sieve Membranes for Olefin/Paraffin 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 2011

“Optically Controlled MOFs and MOPs, and Their Applications in Carbon Capture,” Jinhee Park and Hong-Cai Zhou, Carbon Capture Seminar, Berkeley, CA, February, 2011. (Individual)


“Metal-Organic Frameworks and Metal-Organic Polyhedra: Preparation and Application,” Chemical Sciences & Engineering Division Colloquia, Argonne National Laboratory, Chicago, IL, April, 2011. (Individual)


“From Metal-Organic Polyhedra (MOPs) to Metal-Organic Frameworks (MOFs),” Beijing Normal University, Beijing, China, June, 2011. (Individual)


“Metal-Organic Frameworks and Metal-Organic Polyhedra: Preparation and Application,” Beijing Normal University, Beijing, China, June, 2011. (Individual)

“Metal-Organic Frameworks and Metal-Organic Polyhedra: Preparation and Application,” Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China,


“Metal-Organic Frameworks and Metal-Organic Polyhedra: Preparation and Application,” State Key Laboratory of Coordination Chemistry, Nanjing University, Nanjing, China, June, 2011. (Individual)


“Metal-organic Frameworks for Gas Storage and Separation,” APCRE 11 (Asia Pacific Chemical Reaction Engineering Symposium), Beijing, China, September, 2011. (Individual)

“Metal-organic Frameworks for Gas Storage and Separation,” Nankai University, Tianjin, China, September, 2011. (Individual)

“Metal-organic Frameworks for Gas Storage and Separation,” National Center for Nanoscience and Technology, Beijing, China, September, 2011. (Individual)

“Metal-organic Frameworks for Gas Storage and Separation,” The University of Texas, Austin, TX, September, 2011. (Individual)

“Metal-organic Frameworks for Gas Storage and Separation,” Tianjin Normal University, Tianjin, China, September, 2011. (Individual)


“MOFs, MOPs, and PPNs: Porous Materials through Rational Design,” University of California, Berkeley, CA, October, 2011. (Individual)

“Metal-organic Frameworks Constructed from Infinite Zinc Chains,” Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Individual)

“Metal-organic Frameworks with Tunable Magnetic Properties,” Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Individual)

“MOFs, MOPs, and PPNs: Porous Materials through Rational Design,” ACS Southwest Regional Meeting, Austin, TX, November, 2011. (Individual)

“MOFs, MOPs, and PPNs: Preparation and Application,” Nanyang Technological University, Singapore, November, 2011. (Individual)
“MOFs, MOPs, and PPNs: Preparation and Application,” National University of Singapore, Singapore, November, 2011. (Individual)

“MOFs, MOPs, and PPNs: Preparation and Application,” Sichuan Normal University, Sichuan, China, November, 2011. (Individual)

“MOFs, MOPs, and PPNs: Preparation and Application,” Sichuan University, Sichuan, China, November, 2011. (Individual)

“MOFs, MOPs, and PPNs: Preparation and Application,” University of North Carolina, Chapel Hill, NC, November, 2011. (Individual)

“New Interweaving MOF Possessing the Pt3O4-net Topology Based on a Metalloligand,” Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Individual)

“Optically Controlled Hydrogen Adsorption in MOFs and MOPs,” Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Individual)

“Tuning Metal-Organic Frameworks Properties for Selective CO2 Adsorption,” Southwest Regional ACS Meeting, Austin, TX, November, 2011. (Individual)

**PUBLICATIONS DURING 2011**


7. Research Activity, 2011

This section contains information on all funded research activity for the calendar year 2011. 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 2011 = # Days 2011 × Daily Grant Award
### 7.1 Summary of Research Support, 2011

<table>
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<tr>
<th>Grantee</th>
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<th>Indirect</th>
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<td><strong>Subtotal: Department of Defense</strong></td>
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<td><strong>Department of Energy</strong></td>
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<tr>
<td>Clearfield, A.</td>
<td>Separation of Americium from Curium by Ion Exchange</td>
<td>3/25/2009</td>
<td>9/30/2011</td>
<td>12,915</td>
<td>4,843</td>
<td>17,758</td>
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<td>Lucchese, R.R.</td>
<td>Molecular Photoionization Studies of Nucleobases and Correlated Systems</td>
<td>11/1/2010</td>
<td>10/31/2013</td>
<td>51,642</td>
<td>21,067</td>
<td>72,709</td>
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2011 CHEMISTRY ANNUAL REPORT
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<tr>
<td>Romo, D.</td>
<td>Bioactive Natural Product Total Synthesis via B-lactones</td>
<td>7/1/2010</td>
<td>6/30/2013</td>
<td>23,553</td>
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<td>Romo, D.</td>
<td>New Methods for Simultaneous Arming and SAR Studies of Natural Products</td>
<td>9/12/2008</td>
<td>6/30/2012</td>
<td>239,272</td>
<td>72,937</td>
<td>312,209</td>
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<tr>
<td>Johnson, A.E.</td>
<td>(REN) Protein Trafficking and Dislocation at the ER Membrane</td>
<td>7/1/2008</td>
<td>6/30/2012</td>
<td>242,000</td>
<td>110,110</td>
<td>352,110</td>
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- **Subtotal: Department of Energy** | 2,035,953 | 432,655 | 2,468,608 |
- **Subtotal: Department of Health and Human Services** | 971,350 | 118,292 | 1,089,642 |
- **Subtotal: National Aeronautics and Space Administration** | 39,890 | 0 | 39,890 |
- **Subtotal: National Institute of Allergy and Infectious Diseases** | 262,852 | 119,537 | 382,389 |

- **Subtotal: National Institute of General Medical Sciences**
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<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
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<tbody>
<tr>
<td>Burgess, K.</td>
<td>Development of an Optimized System for Non-Covalent Delivery of Proteins into Cells</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>146,677</td>
<td>28,467</td>
<td>175,144</td>
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<tr>
<td>Lindahl, P.A.</td>
<td>Training at the Chemistry-Biology Interface</td>
<td>7/1/2009</td>
<td>6/30/2014</td>
<td>86,500</td>
<td>815</td>
<td>87,316</td>
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**Subtotal: National Institute of General Medical Sciences**

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<tr>
<td>Burgess, K.</td>
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</tr>
<tr>
<td>Lindahl, P.A.</td>
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<td>6/30/2014</td>
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**National Institutes of Health**

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<tr>
<td>Begley, T.P.</td>
<td>Mentoring for the Future in Academic Chemistry</td>
<td>5/5/2010</td>
<td>4/30/2015</td>
<td>37,262</td>
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<td>Begley, T.P.</td>
<td>Resolving the Problem of Orphan Enzyme Activities</td>
<td>5/1/2009</td>
<td>4/30/2012</td>
<td>27,571</td>
<td>12,451</td>
<td>40,022</td>
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<td>Lindahl, P.A.</td>
<td>(REN) Bioinorganic Chemistry of Carbon Monoxide Dehydrogenase</td>
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<td>9/30/2012</td>
<td>210,000</td>
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<td>Liu, W.</td>
<td>Phage Display with Two Genetically Incorporated Noncanonical Amino Acids</td>
<td>7/1/2011</td>
<td>6/30/2016</td>
<td>113,999</td>
<td>34,634</td>
<td>148,633</td>
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<td>Rauschel, F.M.</td>
<td>(REN) Mechanism and Control of Urea Biosynthesis</td>
<td>9/1/2008</td>
<td>8/31/2012</td>
<td>225,000</td>
<td>75,000</td>
<td>300,000</td>
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<td>Sacchettini, J.C.</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>1,786,964</td>
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<tr>
<td>Wooley, K.L.</td>
<td>Adhesion-Based Nanotherapeutics in Urinary Tract Infection</td>
<td>8/1/2010</td>
<td>7/31/2014</td>
<td>475,943</td>
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**Total:** 764,024
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<tr>
<td>Wooley, K.L.</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>1,786,964</td>
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* Subtotal: National Institutes of Health

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<tr>
<td>Batteas, J.D.</td>
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<td>Batteas, J.D.</td>
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<td>Batteas, J.D.</td>
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<td>Batteas, J.D.</td>
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<td>Batteas, J.D.</td>
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<td>Bluemel, J.F.</td>
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SEC. 7. RESEARCH ACTIVITY 309
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<tr>
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<tr>
<td>Cremer, P.S.</td>
<td>Probing Protein-Salt Interactions with Micro-fluidics and Nonlinear Optics</td>
<td>8/1/2008</td>
<td>7/31/2011</td>
<td>72,736</td>
<td>7,498</td>
<td>80,234</td>
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<tr>
<td>Darensbourg, D.J.</td>
<td>Biodegradable Copolymers Produced from Carbon Dioxide and Epoxides by Well-Defined Metal Catalysts: Mechanistic and Technology Enabling Studies</td>
<td>2/1/2006</td>
<td>1/31/2012</td>
<td>120,264</td>
<td>9,236</td>
<td>129,500</td>
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<td>Darensbourg, M.Y.</td>
<td>(REN) Bioorganometallic Chemistry of Enzyme Active Sites with Focus on Hydrogenase</td>
<td>8/15/2009</td>
<td>7/31/2013</td>
<td>173,742</td>
<td>30,719</td>
<td>204,461</td>
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<td>Dunbar, K.R.</td>
<td>(REN) Magnetism, Conductivity and the Interplay between these Properties in d, p and f Block Materials with Organocyanide Ligands</td>
<td>4/1/2010</td>
<td>3/31/2013</td>
<td>150,000</td>
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<td>Gaede, H.C.</td>
<td>REU Site: Biological, Environmental, and Materials Chemistry Research at Texas A&amp;M University, (with: J. Batteas, H. Gaede)</td>
<td>3/1/2008</td>
<td>2/28/2012</td>
<td>30,303</td>
<td>3,799</td>
<td>34,103</td>
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<td>Gladysz, J.A.</td>
<td>Complexes in Which sp Carbon Chains Span Two Metals</td>
<td>8/1/2007</td>
<td>7/31/2011</td>
<td>59,674</td>
<td>6,517</td>
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<td>Hilty, C.B.</td>
<td>CAREER: Biochemical Reaction Mechanisms by Real-Time Hyperpolarization Enhanced Nuclear Magnetic Resonance</td>
<td>1/1/2009</td>
<td>12/31/2013</td>
<td>103,793</td>
<td>6,208</td>
<td>110,000</td>
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<td>Lindahl, P.A.</td>
<td>Integrated Modeling and Analysis of Animal Cell Cytokinesis</td>
<td>8/1/2008</td>
<td>7/31/2012</td>
<td>123,000</td>
<td>0</td>
<td>123,000</td>
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<td>Ozerov, O.V.</td>
<td>Rigid Chelating Ligands as Tools for Discovery of New Reactions and Applications in Catalysis</td>
<td>7/1/2009</td>
<td>1/31/2012</td>
<td>98,230</td>
<td>17,811</td>
<td>116,041</td>
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<td>Romo, D.</td>
<td>Novel Asymmetric Routes to 2-Oxetanones and Their Applications</td>
<td>7/1/2008</td>
<td>6/30/2011</td>
<td>66,636</td>
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<td>Russell, D.H.</td>
<td>MRI: Development of Ion Mobility Mass Spectrometer for Protein Chemistry</td>
<td>9/1/2008</td>
<td>8/31/2012</td>
<td>275,680</td>
<td>73,462</td>
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<td>Singleton, D.A.</td>
<td>Acquisition of a Cryoprobe for a NMR Spectrometer, (with: J. Bluemel, C. Hilty, D. Russell, D. Singleton)</td>
<td>8/1/2009</td>
<td>7/31/2013</td>
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<td>Williamson, V.M.</td>
<td>Students' Attempts at Understanding the Unobservable: A Multi-Method Approach to Visualization Analysis and Design</td>
<td>9/1/2009</td>
<td>8/31/2012</td>
<td>8,471</td>
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SEC. 7. RESEARCH ACTIVITY 311
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<td>Wooley, K.L.</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>
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<td>Wooley, K.L.</td>
<td>Degradable Polycarbonates from Polyhydroxy Natural Products</td>
<td>8/1/2011</td>
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<td>Yennello, S.J.</td>
<td>ADVANCE-IT: Promoting the Success of Women Faculty through a Psychologically Healthy Workplace</td>
<td>10/1/2010</td>
<td>9/30/2015</td>
<td>489,602</td>
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<td>Yennello, S.J.</td>
<td>Expanding Opportunities through the Science Scholars Program, (with: T. Scott, S. Yennello)</td>
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<td>59,967</td>
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<td>Yennello, S.J.</td>
<td>Professional Development Skills for Women</td>
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<td>1/31/2011</td>
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<td>Yennello, S.J.</td>
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<td>3/1/2007</td>
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<td>11,322</td>
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<td>Yennello, S.J.</td>
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<td>1/23/2014</td>
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<td>Zhou, H.</td>
<td>Mash-Adjustable Molecular Sieve Membranes for Olefin/Paraffin Separations</td>
<td>1/10/2010</td>
<td>1/9/2013</td>
<td>54,238</td>
<td>20,832</td>
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* Subtotal: National Science Foundation

3,677,634  831,507  4,509,141

**Office of Naval Research**

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<tr>
<td>Wooley, K.L.</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>1,134</td>
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* Subtotal: Office of Naval Research

1,134  0  1,134

* Subtotal: Federal Agencies

13,424,103  2,003,649  15,427,752

**Industrial/Corporate Agencies**

* APPEAL Consortium

312  2011 CHEMISTRY ANNUAL REPORT
<table>
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<td>Bluemel, J.F.</td>
<td>Structure, Dynamics, and Reactivity of PAEK (Polyaryletherketone) Polymers: New Insights by Solid-state NMR Spectroscopy</td>
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<td>Cooviden, Inc.</td>
<td>The Development of Nanoparticulate Embedded Therapeutics</td>
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<td>Dov Chemical Co.</td>
<td>Negative Active EUV Photoresists with Controlled Molecular Architecture</td>
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**INTERNATIONAL AGENCIES**

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**OTHER GOVERNMENT**

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SEC. 7. RESEARCH ACTIVITY 313
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<tr>
<td><strong>University of California - Berkeley</strong></td>
<td>Zhou, H. The Center for Gas Separation Relevant to Clean Energy Technologies</td>
<td>9/1/2009 8/31/2014</td>
<td>187,811</td>
<td>12,189</td>
<td>200,000</td>
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<td><strong>University of Illinois</strong></td>
<td>Raushel, F.M. Collaborative Center for an Enzyme Function Initiative</td>
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<td>14,166</td>
<td>279,921</td>
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<td>Raushel, F.M. (REN) Deciphering Enzyme Specificity: Amidohydrolase Superfamily</td>
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<td><strong>University of Northern Iowa</strong></td>
<td>Hall, M.B. (REN) Dinuclear Complexes with an All Carbon Cyclopentadienyl Frame</td>
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<td>2,420</td>
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<td>996,789</td>
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**Private/Non-Profit Agencies**

<p>| <strong>American Cancer Society</strong> | Watanabe, C.M. Probing the Biosynthesis of the Anti-Tumor Agent Azinomycin B | 7/1/2007 6/30/2012 | 119,934 | 23,987 | 143,921 |
| <strong>Subtotal: American Cancer Society</strong> | | | | 119,934 | 23,987 | 143,921 |
| <strong>American Chemical Society</strong> | Hilty, C.B. Metallocene Catalyzed Polymerization Investigated by Hyperpolarized NMR | 1/1/2010 8/31/2013 | 27,280 | 0 | 27,280 |
| | Wheeler, S.E. Intermolecular Non-Covalent Interactions in π-Conjugated Heterocyclic Oligomers | 1/1/2011 8/31/2013 | 37,410 | 0 | 37,410 |
| <strong>Subtotal: American Chemical Society</strong> | | | | 64,690 | 0 | 64,690 |
| <strong>American Heart Association - Texas</strong> | Barondeau, D.P. Deciphering Normal and Aberrant Function for Clinical Variants Associated with Fe-S Assembly and Heart Disease | 1/1/2011 12/31/2012 | 66,635 | 3,173 | 69,808 |
| <strong>Subtotal: American Heart Association - Texas</strong> | | | | 66,635 | 3,173 | 69,808 |
| <strong>California Institute of Technology</strong> | | | | | | |</p>
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<tbody>
<tr>
<td>Ozerov, O.V.</td>
<td>Powering the Planet: A Chemical Bonding Center in the Direct Conversion of Sunlight into Chemical Fuel</td>
<td>1/1/2009</td>
<td>7/31/2011</td>
<td>57,976</td>
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**Subtotal: California Institute of Technology**

| Ozerov, O.V.       | Recyclable Catalysts and Structural Discovery through Ligand Design  | 1/1/2009    | 4/30/2012   | 22,531  | 0        | 22,531 |

**Subtotal: Camille and Henry Dreyfus Foundation**

| Hilty, C.B.        | Structure and Function of Membrane Proteins by NMR Using DNP Hyperpolarization | 9/1/2006    | 8/31/2011   | 6,630   | 0        | 6,630  |
| Ozerov, O.V.       | Recyclable Catalysts and Structural Discovery through Ligand Design      | 1/1/2009    | 4/30/2012   | 22,531  | 0        | 22,531 |

**Subtotal: Camille and Henry Dreyfus Foundation**

| Sacchettini, J.C.  | (REN) Chemical Validation of Malate Synthase as a Drug Target for Persistent TB | 8/17/2009   | 8/16/2011   | 92,779  | 0        | 92,779 |

**Subtotal: Global Alliance for TB Drug Development**

| Darenbourg, D.J.   | Detection and Reaction Dynamics of Intermediates in Ruthenium Catalyzed Process | 10/1/2010   | 9/30/2013   | 140,000 | 35,000   | 175,000|

**Subtotal: Qatar National Research Fund**

| Bergbreiter, D.E.  | Structure and Chemistry of DNA Repair Enzyme Spore Photoproduct Lyase | 6/1/2010    | 5/31/2012   | 50,000  | 0        | 50,000 |
| Bergbreiter, D.E.  | Phase Facilitated Catalysis and Synthesis                           | 6/1/2009    | 5/31/2012   | 20,000  | 0        | 20,000 |

**Subtotal: Qatar National Research Fund**

| Barondeau, D.P.    | Structure and Chemistry of DNA Repair Enzyme Spore Photoproduct Lyase    | 6/1/2010    | 5/31/2012   | 50,000  | 0        | 50,000 |
| Bergbreiter, D.E.  | Phase Facilitated Catalysis and Synthesis                           | 6/1/2009    | 5/31/2012   | 20,000  | 0        | 20,000 |

**Subtotal: Qatar National Research Fund**

<p>| SEC. 7.            | RESEARCH ACTIVITY                                                   | 315         |</p>
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<tr>
<td>Bluemel, J.F.</td>
<td>The Sonogashira Catalyst System for C-C Coupling Reactions: New Mechanistic Insights and Improved Recyclability</td>
<td>6/1/2009</td>
<td>5/31/2012</td>
<td>50,000</td>
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<td>Burgess, K.</td>
<td>Acidic Intermediates in Asymmetric Hydrogenations</td>
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<td>Clearfield, A.</td>
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<td>5/31/2012</td>
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<td>Darensbourg, D.J.</td>
<td>Mixed Metal Cyanide Derivatives and Their Role in Catalysis</td>
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<td>70,000</td>
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<td>Gabbai, F.P.</td>
<td>Synthesis and Reduction Chemistry of α-Phosphonyl-Carboxylations and α-Phosphono-Carboxylations</td>
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<td>5/31/2011</td>
<td>20,567</td>
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<td>Gladysz, J.A.</td>
<td>Selective Methane Oxidations in Fluorous Media</td>
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<td>5/31/2011</td>
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<td>Goodman, D.</td>
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<td>Hall, M.B.</td>
<td>(REN) Computational Chemistry of Transition Metal Systems</td>
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<td>Hilty, C.B.</td>
<td>Molecular Basis for Autotransporter Function</td>
<td>7/1/2010</td>
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<td>52,143</td>
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2011 CHEMISTRY ANNUAL REPORT
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<td>Liu, W.</td>
<td>Synthesis and Evaluation of Methltransferase-Mediated Alkylating Agents of Biopolymers</td>
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<td>Lucchese, R.R.</td>
<td>Molecular and Recoil Frame Photo-electron Angular Distributions from Nonlinear Molecules</td>
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<td>Natowitz, J.B.</td>
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<td>North, S.W.</td>
<td>(REN) Photofragment Imaging of Atmospheric Free Radicals</td>
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<td>Ozerov, O.V.</td>
<td>New Discoveries of Main Group Hypercoordinate Compounds and Beyond</td>
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<td>Russell, D.H.</td>
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<td>Simanek, E.E.</td>
<td>Molecular Recognition in Cyclodextrin-Containing Dendrimers</td>
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<td>Son, D.</td>
<td>Energy Transfer in Doped Anisotropic Semiconductor Nanostructures</td>
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<td>Wheeler, S.E.</td>
<td>Non-Covalent Pi-Stacking Interactions in Organocatalysis</td>
<td>6/1/2011</td>
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* Subtotal: The Robert A. Welch Foundation 1,506,673 0 1,506,673

* Subtotal: Private/Non-Profit Agencies 2,264,163 96,316 2,360,469

State Agencies

* Texas A&M University
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<td>Soriaga, E.</td>
<td>&quot;Enhancement of Student Instructional Computing for CHEM 318 Laboratories</td>
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<td>Barondeau, D.P.</td>
<td>A Novel Hydrogenase Fusion Protein for Sustained Aerotolerant Hydrogen Production</td>
<td>8/1/2010</td>
<td>7/31/2012</td>
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<td>Cremer, P.S.</td>
<td>Patterning Nanoscale Arrays by Evaporative Templating</td>
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## 7.2 Summary of Individual Support, 2011

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<tr>
<td><strong>Barondeau, D.P.</strong></td>
<td>Structure and Mechanism of the Human Fe-S Cluster Assembly Complex</td>
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<td>8/31/2015</td>
<td>62,986</td>
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<td>82,365</td>
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<td>American Heart Association - Texas</td>
<td>Deciphering Normal and Aberrant Function for Clinical Variants Associated with Fe-S Assembly and Heart Disease</td>
<td>1/1/2011</td>
<td>12/31/2012</td>
<td>66,635</td>
<td>3,173</td>
<td>69,808</td>
</tr>
<tr>
<td>The Robert A. Welch Foundation</td>
<td>Structure and Chemistry of DNA Repair Enzyme Spore Photoproduct Lyase</td>
<td>6/1/2010</td>
<td>5/31/2012</td>
<td>50,000</td>
<td>0</td>
<td>50,000</td>
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<tr>
<td>Texas Higher Education Coordinating Board</td>
<td>A Novel Hydrogenase Fusion Protein for Sustained Aerotolerant Hydrogen Production</td>
<td>8/1/2010</td>
<td>7/31/2012</td>
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<td>0</td>
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<td><strong>22,552</strong></td>
<td><strong>262,733</strong></td>
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| **Bateas, J.D.** | ARRA Solvation Studies of Responsive Polymers in Solution and at Surfaces, (with: J. Batteas, D. Bergbreiter) | 9/1/2009 | 8/31/2012 | 44,703 | 17,586 | 62,289 |
| National Science Foundation | Collaborative Research: Conduction in Confined Molecular Assemblies | 7/1/2009 | 6/30/2012 | 87,416 | 29,417 | 116,833 |
| National Science Foundation | Probing the Role of Surface Defects and Disorder on the Tribiology of Nanoscopic Contacts | 7/1/2008 | 6/30/2012 | 40,001 | 14,268 | 54,269 |
| National Science Foundation | (REN) Probing the Role of Surface Defects and Disorder on the Tribiology of Nanoscopic Contacts | 9/1/2011 | 8/31/2014 | 32,893 | 0 | 32,893 |
| National Science Foundation | REU Site: Biological, Environmental, and Materials Chemistry Research at Texas A&M University, (with: J. Batteas, H. Gaede) | 3/1/2008 | 2/28/2012 | 30,303 | 3,799 | 34,103 |
| National Science Foundation | REU: Biological, Environmental, and Materials Chemistry Research Experiences for Undergraduates at Texas A&M University, (with: J. Batteas, H. Gaede) | 4/1/2011 | 3/31/2014 | 37,652 | 0 | 37,652 |
| *Subtotal Bateas, J.D.* | | | | **272,968** | **65,071** | **338,039** |

**SEC. 7.**

**RESEARCH ACTIVITY**

319
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<th>Indirect</th>
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<td><strong>Begley, T.P.</strong></td>
<td>Genomics of Coenzyme Metabolism in Bacterial Pathogens</td>
<td>5/1/2009</td>
<td>7/31/2011</td>
<td>7,740</td>
<td>3,599</td>
<td>11,338</td>
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<td>National Institutes of Health</td>
<td>Mentoring for the Future in Academic Chemistry</td>
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<td>National Institutes of Health</td>
<td>Resolving the Problem of Orphan Enzyme Activities</td>
<td>5/1/2009</td>
<td>4/30/2012</td>
<td>27,571</td>
<td>12,451</td>
<td>40,022</td>
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<tr>
<td>National Institutes of Health</td>
<td>The Mechanistic Enzymology of Thiamin Biosynthesis</td>
<td>12/1/2009</td>
<td>4/30/2013</td>
<td>271,117</td>
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- Natowitz, J.B.

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- Subtotal Natowitz, J.B. 413,243 35,661 448,904

- North, S.W.

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- **Ozerov, O.V.**

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<td>Rigid Chelating Ligands as Tools for Discovery of New Reactions and Applications in Catalysis</td>
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<td>98,230</td>
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<td>California Institute of Technology</td>
<td>Powering the Planet: A Chemical Bonding Center in the Direct Conversion of Sunlight into Chemical Fuel</td>
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- **Raushel, F.M.**

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<td>National Institutes of Health</td>
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- **Rome, D.**

| Department of Health and Human Services | Bioactive Natural Product Total Synthesis via B-lactones                      | 7/1/2010 | 6/30/2013 | 23,553 | 0        | 23,553    |
| Department of Health and Human Services | New Methods for Simultaneous Arming and SAR Studies of Natural Products      | 9/12/2008 | 6/30/2012 | 239,272 | 72,937   | 312,209   |
| National Science Foundation | (REN) Novel Asymmetric Routes to 2-Oxetanones and Their Application            | 10/1/2011 | 9/30/2014 | 20,921 | 7,090    | 28,011    |
| National Science Foundation | Novel Asymmetric Routes to 2-Oxetanones and Their Applications              | 7/1/2008 | 6/30/2011 | 66,636 | 0        | 66,636    |
| **Subtotal Rome, D.** |                                                                         |         |           |         |          | **832,537** |

- **Russell, D.H.**

| Department of Energy | (REN) Nanoparticle Laser Desorption Ionization and IM-MS Applied Structural Mass Spectrometry | 4/1/2010 | 3/31/2012 | 170,000 | 0        | 170,000    |
| Department of Health and Human Services | Mass Spectrometry Based Molecular Imaging of Native Biological Nanodomains | 8/1/2010 | 4/30/2011 | 9,803   | 784      | 10,587     |
| National Science Foundation | Acquisition of a Cryoprobe for a NMR Spectrometer, (with: J. Bluemel, C. Hilty, D. Russell, D. Singleton) | 8/1/2009 | 7/31/2013 | 15,452  | 0        | 15,452     |
| National Science Foundation | MRI: Development of Ion Mobility Mass Spectrometer for Protein Chemistry | 9/1/2008 | 8/31/2012 | 275,680 | 73,462   | 349,142    |
| The Robert A. Welch Foundation | (REN) Studies of the Structure of Gas-Phase Peptide Ions                          | 6/1/2010 | 5/31/2012 | 50,000  | 0        | 50,000     |
| **Subtotal Russell, D.H.** |                                                                         |         |           |         |          | **520,935** |

- **Sacchettini, J.C.**

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<td>Intermolecular Non-Covalent Interactions in (\pi)-Conjugated Heterocyclic Oligomers</td>
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<td>Students' Attempts at Understanding the Unobservable: A Multi-Method Approach to Visualization Analysis and Design</td>
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<td>Adhesion-Based Nanotherapeutics in Urinary Tract Infection</td>
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**Yang, J.**

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**Yeager, D.L.**

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**Yemelle, S.J.**

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<td>Professional Development Skills for Women</td>
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**Subtotal Zhang, B.**

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<td>A Biomimetic Approach to New Adsorption Hydrogen Storage Metal-Organic Frameworks</td>
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<td>177,973</td>
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**Zhong, H.**

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<td>The Center for Gas Separation Relevant to Clean Energy Technologies</td>
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* Subtotal Zhou, N. *          | 796,612                  | 194,535 | 991,148   |

*** Total: All Faculty ***      | 17,013,826               | 2,193,356 | 19,207,182 |
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1. Foreword from the Department Head

The report that follows documents the Department’s activities in research, teaching, and outreach during 2011. In this foreword, I give a brief synopsis and highlight a few noteworthy activities/accomplishments, and provide some additional information.

The faculty as a whole continues to be exceptionally successful in attracting funding, and about three quarters (more than twice the national average) of our tenure/tenure track faculty have external support. Our faculty has received a number of prestigious awards, including a Sloan Fellowship for Assistant Professor Grigoris Paouris, an Honorary Doctorate for Professor Emeritus Carl Maxson from the Johannes Kepler University in Austria, the Gold Medal of the Fondation des Sciences Mathématiques de Paris for Distinguished Professor Ron DeVore, and a Foreign Fellowship in the Indian Science Academy for Professor Gilles Pisier. Local awards include a Distinguished Professorship for Peter Kuchment, a Distinguished Achievement Award in Research from the AFS for Professor Joe Pasciak, and a Distinguished Achievement Award in Teaching - College Level from the AFS for Associate Professor Phil Yasskin.

During 2011, the department has taught approximately 77,000 credit hours. The bulk of these hours results from service teaching, making the department essential to the University’s educational mission as well. In this regard, a new dialogue has been initiated with Engineering, one of our biggest client disciplines, in order to ensure continued high quality service for their needs. One significant innovation is the Personalized Precalculus Program. This NSF funded on-line program is offered to students who have been identified, through our Math Placement Exam, of being at risk of not succeeding in Calculus. In our own programs, enrollments (as of fall 2011) were as follows: 394 undergraduates, 129 graduate students in residence, and 45 on-line Masters students. The department graduated 67 Bachelors, 26 Masters, and 4 Ph.D.s. A large number of the Masters degrees came from the on-line Masters program, now in its tenth year. The low number of Ph.D.s is an abomination resulting from the dismal job market last year, which caused a number of students to postpone graduation. This number will be corrected this year. In fact, by August, we will have graduated 14 Ph.D. students, with up to 6 more in the pipeline for December 2012.

The department ran several NSF funded outreach programs: Research Experiences for Undergraduates (REU), Undergraduate Research Experiences in Biological and Mathematical Sciences (UBM), and Mentoring Through Critical Transition Points (MCTP). The latter actually encompasses the four sub-programs Summer Mathematics Research Training High School Camp (SMaRT Camp), a Pre-REU program, a Bridge program for current juniors, and a Bridge program for entering graduate students. Our annual High School Mathematics Contest attracts contestants from across the state. In addition, the department ran the AP Calculus and Pre-AP High School Mathematics Institutes for High School Teachers.

In addition to the above activities, the department hosted six major research conferences during 2011. Our excellent staff help to manage this enormous workload for the benefit of students and faculty.

I am proud of the many accomplishments of our faculty, staff, and students.
2. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyList_FINAL.

Non-Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyListNonTTF_FINAL.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2010, Fall 2011) 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, Fall 2011) 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>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Tenured and Tenure-Track Faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>44</td>
<td>43</td>
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<tr>
<td>Assistant Professor</td>
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<td>6</td>
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<tr>
<td>Associate Professor</td>
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<td>25</td>
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<tr>
<td>Distinguished Professor</td>
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<td>7</td>
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<tr>
<td>b. Non-Tenure-Track Faculty</td>
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<td></td>
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<tr>
<td>Visiting Professor</td>
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<tr>
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<td>Visiting Associate Professor</td>
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<td>1</td>
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<tr>
<td>Lecturer</td>
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<td>10</td>
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<tr>
<td>Senior Lecturer</td>
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<td>20</td>
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<tr>
<td>c. Postdoctoral Fellows</td>
<td>0</td>
<td>3</td>
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<tr>
<td>d. Graduate Majors</td>
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<td>158</td>
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<tr>
<td>e. Undergraduate Majors</td>
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<td>394</td>
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<tr>
<td>f. Support Staff</td>
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### II. Instructional Activities

<table>
<thead>
<tr>
<th>Category</th>
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<tr>
<td>a. Graduate Semester Credit Hours</td>
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<td>4,046</td>
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<td>b. Undergraduate Semester Credit Hours</td>
<td>72,516</td>
<td>73,772</td>
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<td>c. PhD Degrees</td>
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<tr>
<td>d. Masters Degrees</td>
<td>23</td>
<td>27</td>
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<td>e. Undergraduate Degrees</td>
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### III. Research Activities

<table>
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<th>Category</th>
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<td>a. Research Publications</td>
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<td>b. Research Presentations</td>
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<td>345</td>
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<td>c. Federal</td>
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<td>7,353,085</td>
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<td>d. State</td>
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<td>e. University</td>
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<td>f. Private/Non-Profit</td>
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<tr>
<td>g. Industrial/Corporate</td>
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<td>h. International</td>
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<td>3,373,171</td>
</tr>
<tr>
<td>i. Other Govt</td>
<td>45,915</td>
<td>43,427</td>
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<tr>
<td>Total</td>
<td>12,644,471</td>
<td>11,304,376</td>
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</table>

*Last year’s annual report included a duplicate record for a grant, resulting in an inflated total reported for Mathematics, Statistics and the overall College of Science. The 2011 report reflects the corrected 2010 totals. We apologize for this error.*
3. Honors & Awards, 2011

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2011.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2011.
### 3.1 Honors & Awards Received by Faculty, 2011

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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<tbody>
<tr>
<td>M. Anshelevich</td>
<td>Outstanding Teaching Award, Department of Mathematics</td>
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<tr>
<td>G. Berkolaiko</td>
<td>Outstanding Service Award, Department of Mathematics</td>
</tr>
<tr>
<td>K. Bollinger</td>
<td>Outstanding Teaching Award, Department of Mathematics</td>
</tr>
<tr>
<td>R. DeVore</td>
<td>Gold Medal, La Fondation Sciences Mathématiques de Paris</td>
</tr>
<tr>
<td>S. Fulling</td>
<td>Outstanding Service Award, Department of Mathematics</td>
</tr>
<tr>
<td>G. Kanschat</td>
<td>The Richard Stadelmann Faculty Senate Service Award, Texas A&amp;M University</td>
</tr>
<tr>
<td>G. Paouris</td>
<td>Research Fellow, Alfred P. Sloan Foundation</td>
</tr>
<tr>
<td>J. Pasciak</td>
<td>Distinguished Achievement Award - Research, The Association of Former Students</td>
</tr>
<tr>
<td>G. Pisier</td>
<td>Foreign Fellow, Indian Science Academy</td>
</tr>
<tr>
<td>M. Tretkoff</td>
<td>Big 12 Faculty Fellowship, Texas A&amp;M University</td>
</tr>
<tr>
<td>P. Yasskin</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2011

Graduate

▷ Dean’s Scholar Fellowship
  Shubin Fu
  Cong Gu
  Yonghui Guan
  Bingbing Ji
  Minh Kha
  Eric Klyberg
  Guanglian Li
  Emma Owusukwaakwah
  Yu Shi
  Sandra Truong
  Eric Wendel
  Yupeng Xu
  Yong Yang
  Jun Yao
  Sheng Zhang

▷ Graduate Merit Fellowship
  Jennifer Anderson

▷ Houston A&M Mother’s Club Outstanding TA Award
  Ryan Causey
  Wen Liu
  Mitch Phillipson
  Ursula Zavala

▷ IGERT Fellowship
  Yaniel Cabrena
  Craig Gin
  Alexis Olson
  Anastasiya Romahovskaya

▷ Kaust Fellowship
  Donald Brown
  Sunnie Joshi
  Jun Ren
  Vladimir Tornov
  Lihua Zuo

▷ Koss Endowed Fellowship in Mathematics
  Hao Nguyen
  Thang Tran

▷ L.F. Guseman Prize in Mathematics
  Moritz Allmaras
  Abraham Martin Del Campo Sanchez

SEC. 3.2  HONORS AND AWARDS - STUDENTS  343
Lechner Fellowship
Jennifer Anderson
Benjamin Francisco
Lauren Grimley

LSAMP Fellowship
Lauren Grimley

Pearcy Endowed Fellowship
Jennifer Anderson
Ryan Hotovy
Yanfang Yang

Undergraduate

Best in Class Award for Math 409
Jennifer Bryson
Justin Cantu
Robert Carpenter
Megan Eccell
Nicole Gardner
Shelby Lee

Best in Class Award for Math 409H
Zachary Maril

Best in Class Award for Math 411
Siying Peng
Andrew Ryan
Neal Williams
Christina Wright

Best in Class Award for Math 415/416
John Laky

Best in Class Award for Math 415/416H
Jacob Peterson
Andrew Young

Best in Class Award for Math 425
Jeff Nolan

Best in Class Award for Math 446
Emely Keller
Kenneth Reed

Best in Class Award for Math 446/447H
Derek Allums
Christopher Brooks

Bruce Treybig Scholarship
Ernesto Calleros
Joshua Keneda  
Zachary Maril  
Kathryn Switzer  
Tanner Wilson

▷ Dr. Walter E. Koss, Roger McGee and John Hillman Endowed Scholarships in Mathematics
   Jennifer Bryson  
   Emily Keller  
   Danielle Leonard  
   Hung Le Nguyen  
   Taylor Rust  
   Calvin Smith  
   Eric Trandai  
   Katherine Turner

▷ Elizabeth A. Lepley Scholarship
   Laura Caflisch  
   Ashley Lecheler

▷ G. Alan Cannon Scholarship
   Derek Allums  
   June Strange

▷ Gathright Scholar Award
   Robert Bordovsky

▷ Jack and Nancy Matz Scholarship
   Justin Cantu

▷ James Boone Scholarship
   Megan Eccell  
   Shea Ling Lee

▷ Mary & Robert N. Walker Endowed Scholarship
   Robert Carpenter  
   Maxwell Easton  
   Anna Grimmer  
   Devin Light

▷ New Pi Beta Kappa Member
   Rachel Briscoe  
   Robert Carpenter  
   Shelby Lee  
   Shea Ling Lee  
   Seth Seidel

▷ New Pi Mu Epsilon Member
   Joseph Anderson  
   Zach Bartholomew  
   Elizabet Bernard

SEC. 3.2  HONORS AND AWARDS - STUDENTS  345
Justin Cantu  
Samuel Childers  
Elizabeth Coffeey  
Jason Coffman  
Alyssa Davis  
Megan Eccell  
Kala Finley  
Brian Fleming  
Addison Folsom  
Jason George  
Jason Harris  
William Hunter  
Abby Janssen  
Kristen Kilpatrick  
Andrew King  
Ashley Lecheler  
Meghan Lindinger  
Zack Maril  
Tianyi Miao  
Garrett Mock  
Luke Mulcahey  
Leslie Nickel  
Ian Paige  
Prachi Pendse  
Kenneth Reed  
Jorge Romero  
Andrew Ryan  
Tood Schrader  
Aaron Smith  
Calvin Smith  
Adam Solomon  
Joseph Street  
Justin Thakkar  
Eric Trandai  
Brent Tucker  
Katherine Turner  
Frances Withrow  
Christina Wright  
Andrew Young  
Felix Yu

▷ Walter E. Koss/E.C. Klipple Endowed Scholarship in Mathematics
Derek Allums  
Aaron Burkhard  
Shelby Lee  
Michael Strong
4. Students, 2011

This section contains all degrees awarded, as reported by the department, during the calendar year 2011.
4.1 Graduate Degrees Awarded, 2011

Fall

▷ M.S.

David Thomas Kincaid
Advisor(s): M. Pilant
Danny L. Ralston
Advisor(s): M. Rahe
Bradley K Scott
Advisor(s): S. Geller
Michael Vieira Serpa
Advisor(s): R. Allen

▷ Ph.D.

Moritz Allmaras
Modeling Aspects and Computational Methods for Some Recent Problems of Tomographic Imaging
Advisor(s): W. Bangerth
Kateryna Iushchenko
On Two Properties of Operator Algebras: Log-modularity of Subalgebras, Embeddability into $R^w$
Advisor(s): G. Pisier
Jeffrey Pattillo
Mathematical Foundation and Algorithms for Clique Relaxations in Networks
Advisor(s): C. Yan

Spring

▷ M.S.

Jeffrey Bouas
Advisor(s): S. Fulling
Ryan Michael Causey
Advisor(s): I. Zelenko
Michael Brandon Dearman
Advisor(s): T. Schlumprecht
Rudy C Medina
Advisor(s): R. Allen
Fernando Mera
Advisor(s): S. Fulling
Thomas Andrew Moseder
Advisor(s): J. Pitts
Ebru Celile Ozbay
Advisor(s): R. Allen
Casey Rodriquez  Advisor(s): H. Boas
Andrew Clinton Sharp  Advisor(s): G. Kanschat
Michael Kenneth Soper  Advisor(s): S. Geller
Jason Tepe  Advisor(s): S. Geller
Jennifer Kristi Ulrich  Advisor(s): M. Rahe

Summer

▷ M.S.
Rashi Arora  Advisor(s): A. Boggess
Sarah Evangeline Atchison  Advisor(s): M. Rahe
Camellia Barton  Advisor(s): S. Geller
Yaniel Cabrera  Advisor(s): J. Landsberg
Jesse H. Laeuchli  Advisor(s): M. Rahe
Ruifang Li
Amanda Jennifer Rich  Advisor(s): C. Yan
Elaine Marie Smith  Advisor(s): R. Smith
Cort Warner Spellman  Advisor(s): P. Lima-Filho
Henan Wang  Advisor(s): A. Boggess
Ursula Zavala  Advisor(s): T. Schlumprecht

▷ Ph.D.
Benjamin Aaron Bailey  Studies in Interpolation and Approximation of Multivariate Bandlimited Functions  Advisor(s): T. Schlumprecht
## 4.2 Undergraduate Degrees Awarded, 2011

### Fall

- **B.A.**
  - Sandra Kay Darilek
  - Michael Thomas Dix
  - Flora Fleeger
  - Yaneira Gonzalez Vergara
  - David Michael Goodenough
  - Lindsay Jane Mitchell
  - Leah Terese Savens
  - Michael Andrew Strong
  - Derek Chase Tomlin

- **B.S.**
  - Joseph Ryan Bacica
  - Albert Luther Jackson
  - Hak Yong Lee
  - Kirk Hunter Nelson
  - Jude Oriaku Anayochi
  - Courtney Nicole Sears

### Spring

- **B.A.**
  - Mary Catherine Berkhouse
  - Rachel Anne Briscoe
  - Amy Lynn Clanton
  - Matthew Cole Enderle
  - Cory Lauren Finch
  - Amanda Kay Harrison
  - Stephanie June Herd
  - Sarah Jo Hodde
  - Nicole Dianne James
  - Faris Musa Judeh
  - Joseph Robert Lazarine
  - Rachel Anne Lietzau
  - Stavroula Mavrokordatos
  - Lauren Beverly Newton
  - Christopher Perez
  - Kellie Elizabeth Prieto
  - Jose David Salinas
  - Seth Daniel Seidel
  - Leann Vernice Smith
  - June Elizabeth Strange
  - Caitlyn Raleigh Travis
  - Jacob Alan Wilson
  - Eric Scott Wolff

- **B.S.**

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2011 Mathematics annual report
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melissa Anne Alston</td>
</tr>
<tr>
<td>Lynette Avina</td>
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<tr>
<td>Marilynn Castoreno</td>
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<td>Zackary Daniel Darwin</td>
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<td>Bryan Paxton Dickson</td>
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<td>Rebecca Lauren Duvall</td>
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<td>Paul David Garrett</td>
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<td>Anne Wiley Goldsmith</td>
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<td>Laura Brooke Harred</td>
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<td>Kate Lauren Inman</td>
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<td>Eric William Kylberg</td>
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<td>Lisa Anne Mercaldo</td>
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<td>Stephen Darrell Miller</td>
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<td>Clayton Patrick Molitor</td>
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<td>Jeffrey Scott Nolan</td>
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<td>Siying Peng</td>
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<td>Tammy Christine Schmidt</td>
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<td>Laura Jean Spencer</td>
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<td>Sandra Khavi Truong</td>
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<td>Daniel Wayne Woelfel</td>
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<table>
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<tr>
<td><strong>B.A.</strong></td>
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<tr>
<td>Cayleigh Paige Hammit</td>
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<td>Daniella Leonard</td>
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<td>Stephanie Nicole Smith</td>
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<table>
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<th><strong>B.S.</strong></th>
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<td>Robert Stone Gravesmill</td>
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<td>Gabriel Anton Hackebeil</td>
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<td>Bethany Ann Tietze</td>
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### 5. Colloquium and Seminar Speakers, 2011

**Algebra and Combinatorics**

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
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<tr>
<td>1/28/2011</td>
<td>Aaron Lauve</td>
<td>Loyola University</td>
<td>Primitive and Antipode Formulas in Graded Connected Hopf Algebras</td>
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<td>2/11/2011</td>
<td>Marcelo Aguiar</td>
<td>Texas A&amp;M University</td>
<td>The Functor Represented by an Infinitesimal Bialgebra</td>
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<tr>
<td>2/18/2011</td>
<td>Jeanette Shakalli-Tang</td>
<td>Texas A&amp;M University</td>
<td>Deformations of an Algebra</td>
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<tr>
<td>2/25/2011</td>
<td>Ashraf Ibrahim</td>
<td>Texas A&amp;M University</td>
<td>Tropical Genericity of Regular Polynomials</td>
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<td>3/4/2011</td>
<td>Mounir Nisse</td>
<td>Texas A&amp;M University</td>
<td>Complex Algebraic Varieties and the Volume of Their Amoebas</td>
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<tr>
<td>3/25/2011</td>
<td>Martin Avendaño</td>
<td>Texas A&amp;M University</td>
<td>Factorization via Interpolation</td>
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<tr>
<td>4/1/2011</td>
<td>Joseph Landsberg</td>
<td>Texas A&amp;M University</td>
<td>A Surprising Connection Between a Question in Quantum Mechanics and Complexity Theory</td>
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<tr>
<td>4/8/2011</td>
<td>Catherine Yan</td>
<td>Texas A&amp;M University</td>
<td>Goncarov Polynomials and Applications in Combinatorics</td>
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<tr>
<td>4/15/2011</td>
<td>Paul Bruillard</td>
<td>Texas A&amp;M University</td>
<td>Modular Categories, Integrality and Egyptian Fractions</td>
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<tr>
<td>4/21/2011</td>
<td>Alessandro Bernardi</td>
<td>Université degli Studi di Firenze</td>
<td>Normal Bundle of Rational Curves and the Waring’s Problem</td>
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<tr>
<td>4/29/2011</td>
<td>J. Maurice Rojas</td>
<td>Texas A&amp;M University</td>
<td>Extremal Sparse Polynomial Systems Over Local Fields</td>
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<tr>
<td>9/9/2011</td>
<td>Eric Rowell</td>
<td>Texas A&amp;M University</td>
<td>Quantum Computation and Locality</td>
</tr>
<tr>
<td>9/16/2011</td>
<td>Zoran Sunic</td>
<td>Texas A&amp;M University</td>
<td>Twin Towers of Hanoi</td>
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</tbody>
</table>
9/23/2011  David Jordan
University of Texas, Austin
Classifying Spaces for Fusion Categories

9/30/2011  Frank Sottile
Texas A&M University
Combinatorial Positivity in the Schubert Calculus via Dual Equivalence Graphs

10/7/2011  Tony Giaquinto
Loyola University
Cohomology, Deformations, and Cohomology of Deformations

10/14/2011  June Huh
University of Michigan, Ann Arbor
Correspondences Between $P^n$

10/21/2011  Eunjeong Yi
Texas A&M University, Galveston
On Chromatic Number, Domination Number, and Metric Dimension of Function Graphs

10/28/2011  Piyush Shroff
Texas A&M University
Finite Generation of Cohomology

Texas A&M University
Galois Groups of Schubert Problems

11/11/2011  Peter Kuchment
Texas A&M University
Identities for $\sin(x)$ that came from Medical Imaging

11/18/2011  Olena Bormashenko
University of Texas, Austin
A Coupling Argument for the Random Transposition Walk
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
<th>Title</th>
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</thead>
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<tr>
<td>9/12/2011</td>
<td>Frank Sottile</td>
<td>Texas A&amp;M University</td>
<td>The Phase Limit Set of a Variety</td>
</tr>
<tr>
<td>9/19/2011</td>
<td>Frank Sottile</td>
<td>Texas A&amp;M University</td>
<td>Symmetric Output Feedback Control and Isotropic Schubert Calculus</td>
</tr>
<tr>
<td>9/26/2011</td>
<td>Brian Lehmann</td>
<td>Rice University</td>
<td>Numerical Reduction Maps</td>
</tr>
<tr>
<td>10/3/2011</td>
<td>Thomas Kahle</td>
<td>Isaac Newton Institute</td>
<td>How Primary Decomposition of Congruences and Binomial Ideals is Wrong</td>
</tr>
<tr>
<td>10/17/2011</td>
<td>Mikael Vejderbo Johansson</td>
<td>St Andrews</td>
<td>Persistent Homology and Algebraic Varieties: Estimating Topological Features Using Point Clouds from Varieties</td>
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<td>11/7/2011</td>
<td>Joseph Landsberg</td>
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<td>On the Complexity of Matrix Multiplication</td>
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<td>Carlos Ariel Pompeoyo Gutierrez</td>
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<td>Spaces with Thick Points</td>
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Toan Nguyen

Brown University

On Stability of Boundary Layers
Banach Spaces Seminar

4/1/2011  Ellen Veomett  
*California State University, East Bay*
Spaces of Small Metric Cotype

5/13/2011  Daniel Freeman  
*University of Texas, Austin*
Weak Grothendieck Compactness Principles
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A Continuum Model of Colloid-stabilized Interfaces

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Texas A&M University
Thermoacoustic Tomography and the Spherical Mean Problem

10/20/2011  Yunus Zeytunca
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Some Varieties in the GCT Program

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Texas A&M University
Real Solving and Numerical Algebraic Geometry

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Transformation Properties of Hypergeometric Series over Finite Fields

10/24/2011  Xueying Wang
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Stochastic Modeling of Transmission of Escherichia Coli O157:H7 in Diary Cattle

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Massively Parallel Finite Element Simulations with Application to Convection in the Earth’s Mantle

10/27/2011  Philipp Lamby
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High-dimensional Approximation With Tree-based Algorithms

10/27/2011  Conni Liaw
Texas A&M University
Cyclic Vectors are Not Rare

11/8/2011  Remi Abgrall
INRIA and University of Bordeaux

11/23/2011  Guido Kanschat
Texas A&M University
Discontinuous Galerkin Methods for Diffusion-Dominated Radiative Transfer Problems
First Year Graduate Student Seminar

1/19/2011  **Harold Boas**  
*Texas A&M University*  
Professional Mathematical Societies

1/19/2011  **Jay Walton**  
*Texas A&M University*  
Professional Mathematical Societies

2/2/2011  **Peter Howard**  
*Texas A&M University*  
Applied Mathematics Seminar

3/2/2011  **Peter Kuchment**  
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Inverse Problems Seminar

3/23/2011  **Harold Boas**  
*Texas A&M University*  
Mathematical Multimedia Show

4/6/2011  **Guido Kanschat**  
*Texas A&M University*  
Numerical Analysis Seminar; Ethics in the Profession

4/6/2011  **Jay Walton**  
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Numerical Analysis Seminar; Ethics in the Profession

4/20/2011  **Colleen Robles**  
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Geometry Seminar

8/31/2011  **Peter Howard**  
*Texas A&M University*  
Informal Introductory Meeting

8/31/2011  **Paulo Lima-Filho**  
*Texas A&M University*  
Informal Introductory Meeting

9/14/2011  **David Larson**  
*Texas A&M University*  
NSF Fellowships and other Opportunities

9/28/2011  **Jill Zarestky**  
*Texas A&M University*  
The Art and Practice of being a TA

10/12/2011  **Michael Anshelevich**  
*Texas A&M University*  
Research Groups: Applied Math and Real Analysis

10/12/2011  **Peter Howard**
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Texas A&M University
Research Groups: Applied Math and Real Analysis

10/12/2011  David Kerr
Texas A&M University
Research Groups: Applied Math and Real Analysis

10/26/2011  Mustafa Ayyuru
Texas A&M University
The Road to Success in the Qualifying Exams

10/26/2011  Andres del Campo
Texas A&M University
The Road to Success in the Qualifying Exams

10/26/2011  Lauren Ferguson
Texas A&M University
The Road to Success in the Qualifying Exams

11/16/2011  Wolfgang Bangerth
Texas A&M University
Research Groups: Numerical Analysis and Algebra/Combinatorics

11/16/2011  Frank Sottile
Texas A&M University
Research Groups: Numerical Analysis and Algebra/Combinatorics
Free Probability

Octavio Arizmendi

Universität des Saarlandes

k-equal Partitions and the Product of Free Random Variables
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*University of Illinois, Chicago*  
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10/21/2011  Andrew Carroll  
*Northeastern University*  
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10/28/2011  James Pascaleff  
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11/11/2011  Ketan Mulmuley  
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11/18/2011  Andrew Neitzke  
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12/2/2011  Dincer Guler  
*Park University*  
Joint with SCV: Nef Line Bundles of Compact Kahler Manifolds
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Solving Sudoku Puzzles Using Groebner Bases

9/15/2011  Piyush Shroff  
*Texas A&M University*  
Chain Conditions

9/22/2011  David Kerr  
*Texas A&M University*  
Paradoxicality in Dynamics and Operator Algebras

9/22/2011  Frank Sottile  
*Texas A&M University*  
The Control of Linear Systems and the Schubert Calculus

9/29/2011  Gregory Berkolaiko  
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Zeros of Eigenfunctions

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10/27/2011  Sunnie Joshi  
*Texas A&M University*  
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11/3/2011  Mustafa Ayyuru  
*Texas A&M University*  
The Two Igniters of Several Complex Variables

11/10/2011  Paul Bruillard  
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Introduction to Classical and Quantum Computation

11/16/2011  Michael Anshelevich  
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Orthogonal Polynomials, Simple and Complex

12/1/2011  Jennifer Webster  
*Texas A&M University*  
Two Approaches to Binary Classification of Data
### Groups and Dynamics

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*Universidad de Santiago de Chile*  
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8/31/2011  Yaroslav Vorobets  
*Texas A&M University*  
Group-theoretic Properties of Interval Exchange Transformations

9/7/2011  Rostyslav Kravchenko  
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Structure of the Lattice of Subgroups of the Lamplighter Group

9/21/2011  Volodymyr Nekrashevych  
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Patterson-Sullivan Measures on Hyperbolic Groupoids

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10/5/2011  Lewis Bowen  
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11/2/2011  Lewis Bowen  
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Remi Abgrall
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<td>Peter Pivovarov</td>
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<td>A Probabilistic Take on Isoperimetric-type Inequalities</td>
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<td>Ellen Veomett</td>
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<td>Spaces of Small Metric Cotype</td>
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<td>Regularizations of Singular Integral Operators</td>
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<td>University of Houston</td>
<td>q-blossoming and h-blossoming and Applications</td>
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<td>Asymmetric Covariance Inequalities of Brascamp-Lieb Type</td>
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<td>Lattices and their Applications to Algorithmic Convex Geometry</td>
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<td>Operator-Valued Measures, Dilations, and the Theory of Frames</td>
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<td>10/21/2011</td>
<td>Daniel Markiewicz</td>
<td>Ben-Gurion University</td>
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<td>11/18/2011</td>
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Local Rigidity for Riemannian Metrics with Possible Conjugate Points

Bifurcation and Chaos of One-dimensional Wave Equations

Investigation of Problems of Mathematical Physics by the Methods of Global and Stochastic Analysis

Relativistic Impulse Dynamics

The Type Problem

On Stability of Standing Waves of Nonlinear Dirac Equations

Generalized Curvature-dimension Inequalities, Li-Yau Inequalities and Volume Growth in sub- Riemannian Geometry

Spaces with Thick Points

Localization on Metric Graphs with a Random Potential

Using Magnetic Perturbation to Count Zeros of Eigenfunctions of the Discrete Laplacian

Using Magnetic Perturbation to Count Zeros of Eigenfunctions of the Discrete Laplacian
Surface Field Structures: Bridging the THz Gap in High-power Region

10/14/2011 **Fernando Mera**  
*Texas A&M University*  
Convergence of the Neumann Series for the Schroedinger Equation in Banach Spaces

10/21/2011 **Peter Kuchment**  
*Texas A&M University*  
Asymptotics of Greens Functions of Periodic Schroedinger Operators at the Spectral Gap Edges

10/28/2011 **Jon Harrison**  
*Baylor University*  
Spectral Determinants of Schrödinger Operators on Metric Graphs

11/18/2011 **Constanze Liaw**  
*Texas A&M University*  
A Geometric Approach to Finite Rank Unitary Perturbations via the Theory of Dilations

12/2/2011 **Peter Howard**  
*Texas A&M University*  
Stability of Transition front Solutions in Cahn-Hilliard Equations: Spectral Aspects

12/9/2011 **Alexander Soshnikov**  
*University of California, Davis*  
Spectral Properties of Large Random Matrices
Maxson Lecture Series

4/25/2011 Peter Sarnak  
Princeton University  
Thin Groups and the Affine Sieve

4/26/2011 Peter Sarnak  
Princeton University  
Zeros of Modular Forms and Ovals of Random Real Projective Curves
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<td>Some Open Problems in Transcendence Arising in the Study of Mumford-Tate Domains</td>
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<td><em>Princeton University</em></td>
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<td><strong>Riad Marsi</strong></td>
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<td><strong>Zachary Miner</strong></td>
<td><em>University of Texas, Austin</em></td>
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<td>Periods, Traces of Frobenius, and the Picard-Fuchs Differential Equation</td>
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<td><strong>Sheng-Chi Liu</strong></td>
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<td><em>University of Iowa</em></td>
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*Utrecht University*
Algebraicity of the Appell-Lauricella and Horn Functions

11/2/2011  Matthew Young  
*Texas A&M University*
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<td>5/9/2011</td>
<td>Edriss Titi</td>
<td>Weizmann Institute of Science</td>
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<td>8/31/2011</td>
<td>Steffen Weiser</td>
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<td>Florian Thomines</td>
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<td>Damien Fournier</td>
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<td>Thomas Hagstrom</td>
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<td>Towards the Ultimate Solver for Wave Equations in the Time Domain</td>
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<td>10/12/2011</td>
<td>Natasha Sharma</td>
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<td>Convergence Analysis of an Adaptive Interior Penalty Discontinuous Galerkin Method for the Helmholtz Equation</td>
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<td>Andrew Raich</td>
<td>University of Arkansas</td>
<td>Heat Equations, Gaussian Decay, and the Fourier Transform</td>
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<td>Emil Straube</td>
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<td>Al Boggess</td>
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<td>Explicit Computation of the Fundamental Solution to the $Box_b$ Laplacian on Certain Quadrics</td>
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<td>Dincer Guler</td>
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<td>Nef Line Bundles of Compact Kahler Manifolds</td>
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<td>Yang Qi</td>
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<td>Ming Yang</td>
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<td>Signal Processing and Subspace Varieties, after DeLauthauwer</td>
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*Texas A&M University*  
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*Texas A&M University*  
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9/8/2011  Harlan Kadish  
*Texas A&M University*  
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9/15/2011  Ke Ye  
*Texas A&M University*  
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9/22/2011  Yang Qi  
*Texas A&M University*  
Weak Defectivity and Uniqueness for Tensor Decomposition  

9/29/2011  Ming Yang  
*Texas A&M University*  
Tensor Decomposition in Applications  

10/20/2011  Joseph Landsberg  
*Texas A&M University*  
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10/27/2011  Harlan Kadish  
*Texas A&M University*  
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*Texas A&M University*  
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SEC. 5.  

**COLLOQUIUM AND SEMINAR SPEAKERS**  

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<td>Wilfried Schmid</td>
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6. Faculty, 2011

Wael AbuShammala .................................................. Lecturer
Marcelo Aguiar ...................................................... Professor
G. Donald Allen ...................................................... Professor
Angela Allen .......................................................... Senior Lecturer
Michael Anshelevich ........................................ Associate Professor
Ben Aurispa .......................................................... Senior Lecturer
Amy L. Austin ........................................................ Senior Lecturer
Wolfgang Bangerth ............................................. Associate Professor
Majid Bani-Yaghoub .............................................. Lecturer
Guy A. Battle ........................................................ Professor
Arthur P. Belmonte ................................................ Senior Lecturer
Gregory Berkolaiko ........................................ Associate Professor
G. Robert Blakley ................................................ Professor
Harold P. Boas ........................................................ Professor
May Boggess .......................................................... Senior Lecturer
Albert Boggess ...................................................... Professor
Kathryn L. Bollinger ................................................ Senior Lecturer
Andrea Bonito ......................................................... Assistant Professor
Itshak Borosh ........................................................ Professor
Lewis Bowen .......................................................... Associate Professor
Goong Chen ........................................................... Professor
Chia-Rong Chen ...................................................... Lecturer
Andrew Comech ..................................................... Associate Professor
Lisa Cox ............................................................... Lecturer
Prabir Daripa ........................................................ 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
Gregory S. Klein ........................................ Senior Lecturer
Peter Kuchment ....................................... Distinguished Professor
Soumendra N. Lahiri .................................. Professor (J)
Joseph M. Landsberg ................................. Professor
David R. Larson ....................................... Professor
Raytcho D. Lazarov ................................... Professor
Donka D. Lazarov ..................................... Lecturer
Daniel R. Lewis ....................................... Senior Professor
Jennifer Lewis ......................................... Lecturer
Paulo Lima-Filho ...................................... Professor
Jean Marie Linhart .................................... Lecturer
Bruce D. Lowe ......................................... Associate Professor
David J. Manuel ....................................... Senior Lecturer
Riad M. Masri .......................................... Assistant Professor
Laura F. Matusevich .................................. Associate Professor
Hassan Moghbelli ...................................... Senior Lecturer
Mila Mogilevsky ........................................ Senior Lecturer
Francis J. Narcowich ................................ Professor
Volodymyr Nekrashevych ............................. Professor
Sandra G. Nite ......................................... Senior Lecturer
Dmitry Panchenko ..................................... Associate Professor
Lee Panetta ............................................ Professor (J)
Grigoris Paouris ...................................... Assistant Professor
Matthew A. Papanikolas .............................. Professor
Joseph E. Pasciak ...................................... Professor
Carl Pearcy ............................................. Professor
Guergana P. Petrova .................................. Professor
Michael S. Pilant ...................................... Professor
Gilles Pisier ............................................ Distinguished Professor
Jon T. Pitts ............................................. Professor
Alexei G. Poltoratski .................................. Professor
Bojan Popov ............................................ Associate Professor
Maurice H. Rahe ........................................ Associate Professor
K.R. Rajagopal ......................................... Professor (J)
J.N. Reddy ............................................. Professor (J)
Colleen M. Robles .................................... Assistant Professor
J. Maurice Rojas ....................................... Professor
Marco Roque-Sol ...................................... Lecturer
Eric C. Rowell ........................................ Assistant Professor
William Rundell ...................................... Professor
Sherry L. Scarborough ................................. Senior Lecturer
Jane F. Schielack ...................................... Professor
Vincent P. Schielack .................................. Associate Professor
Thomas B. Schlumprecht .............................. Professor
Oksana Shatalov ....................................... Lecturer
Natarajan Sivakumaran ............................... Associate Professor
John Slattery .......................................... Professor (J)
Roger R. Smith ........................................ Professor
For the Annual Report, faculty are defined as tenured, tenure-track and non-tenure track employees who were employed at any time during 2011 (01/01/2011-12/31/2011).
6.1 Professional Activities, 2011

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2011.

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 2011.
▶ 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 2011.
▶ 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 2011

National

Department
  ▶ Committee/Panel: Award Committee (Chair), Award Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ MATH 662. — Seminar in Algebra (total enrollment: 17)
  ▶ MATH 691. — Research (total enrollment: 1)

Fall
  ▶ MATH 415. — Modern Algebra I (total enrollment: 30)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
  ▶ Combinational Hopf Algebras and Algebraic Combinatorics, National Science Foundation

• PRESENTATIONS DURING 2011
  ▶ “Algebra and Combinatorics Seminar,” Texas A&M University, College Station, TX, February, 2011. (Individual)
  ▶ “Meeting Regularizations and Renormalizations Schemes,” Université de Nice Sophia-Antipolis, Nice, Italy, March, 2011. (Individual)
  ▶ “Séminaire d’Algèbre,” Université de Montpellier, France, March, 2011. (Individual)
“Hopf Algebras and Tensor Categories,” University of Almera, Almeria, Spain, July, 2011. (Individual)


“Combinatorics Seminar,” University of California, Berkeley, CA, October, 2011. (Individual)

“Math Department Colloquium,” Stanford University, Stanford, CA, October, 2011. (Individual)

“Probabilistic Operator Algebra Seminar,” University of California, Berkeley, CA, October, 2011. (Individual)

“Algebra Seminar,” University of Southern Alabama, Mobile, AL, December, 2011. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Director, Center for Technology-Mediated Learning in Mathematics, Board of Regents, [2008]

• SERVICE DURING 2011

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)

University
  ▶ Committee/Panel: GK-12 Educational Outreach Institutionalization Committee (Chair), Southwest Educational Research Association (Co-Chair), STEPS Management Team (College of Engineering) (Member), Teacher Quality Grants Instructional Leaders Community (Member)

College
  ▶ Committee/Panel: Institutional Effectiveness Working Group (Member)

Department
  ▶ Committee/Panel: Camtasia Steering Committee (Member), Engineering Sequence Mathematics Committee (Chair), Executive Committee (Member), Honors Committee (Member), Sigma XI Educational Outreach Committee (Member), Undergraduate Studies Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ MATH 664. — Seminar in Applied Mathematics (total enrollment: 17)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

Fall
  ▶ MATH 645. — A Survey of Mathematical Problems I (total enrollment: 14)

• RESEARCH PROJECTS DURING 2011

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*
• Functions in Algebra 1 & 2 with Vertical Alignment, *Texas Higher Education Coordinating Board*

**Industrial**

• Mathematics All Around Us: Oil and Gas Applications, *Halliburton Corporation*

**PRESENTATIONS DURING 2011**

• “Applying for Type 1-B following a Type 1-A Grants,” Third Texas STEP Workshop, Dallas, TX, May, 2011.( Individual)
• “Visual Algebra, Presented to AP pre-Calculus Institute,” Texas A&M University, Presented to the AP Calculus Institute, College Station, TX, July, 2011.( Individual)
• “Mathematics Content, WEPS and STACK Meeting, Exactum Building,” University of Helsinki, Helsinki, Finland, August, 2011.( Invited)
• AWARDS DURING 2011
  Department
  ▶ Outstanding Teaching Award, Department of Mathematics

• SERVICE DURING 2011
  National
  ▶ Event: Free Probability Seminar (Co-Organizer)
  Department
  ▶ Committee/Panel: Honors Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Fall
  ▶ MATH 251. — *Engineering Mathematics III* (total enrollment: 100)
  ▶ MATH 607. — *Real Variables I* (total enrollment: 23)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ Applications of Polynomial Families and Free Probability, *National Science Foundation*

• PRESENTATIONS DURING 2011
  ▶ “Non-commutative/Discrete Harmonic Analysis Seminar,” University of Wroclaw, Poland, OR, 2011.( Individual)
  ▶ “Random Matrices Seminar,” Université Paul Sabatier, France, 2011.( Individual)
  ▶ University of Texas, San Antonio, TX, 2011.( Individual)
  ▶ “Bialgebras in Free Probability,” Erwin Schrdinger Institute, Vienna, Austria, February, 2011.( Invited)
  ▶ “Bialgebras in Free Probability,” Erwin Schrdinger Institute, Vienna, Austria, April, 2011.( Invited)
  ▶ “West Coast Operator Algebra Seminar,” University of New Mexico, Albuquerque, NM, October, 2011.( Invited)

• PUBLICATIONS DURING 2011
WOLFGANG BANGERTH

ASSOCIATE PROFESSOR (979) 845-3261
MATH-Numerical Analysis & Computational Mathematics bangerth@math.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2011
  International
  ▷ Editorial/Board: Czech Science Foundation, Saudi Arabian Science Foundation (Review: Proposals)
  National
  ▷ Editorial/Board: ACM Transactions on Mathematical Software (Associate Editor), National Science Foundation (Review: Proposals), SIAM Journal on Scientific Computing (Associate Editor)
  ▷ Committee/Panel: Science Steering Committee, Center for Computational Infrastructure in Geodynamics (Elected Member)
  University
  ▷ Ad Hoc Committee: Open Source Licensing (Member)
  ▷ Committee/Panel: Executive Committee, Center for Computational Infrastructure in Geodynamics (Elected Member), Supercomputing Advisory Council (Member), Texas A&M University Council of Principal Investigators (Elected Member)
  Department
  ▷ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ MATH 676. — Finite Element Methods in Scientific Computing (total enrollment: 17)
  ▷ MATH 691. — Research (total enrollment: 4)

    Summer
    ▷ MATH 691. — Research (total enrollment: 4)

    Fall
    ▷ MATH 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011
  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
Geoinformatics Facility Support Computational Infrastructure in Geodynamics, National Science Foundation

Private
Inverse Problems and Computational Science, Alfred P. Sloan 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

• PRESENTATIONS DURING 2011
  “Mathematical and Computer Sciences and Engineering Division,” King Abdullah University of Science and Technology, Saudi Arabia, 2011. (Individual)
  Phys-Math-Viz Workshop, Cook’s Branch, TX, March, 2011. (Invited)
  American Geophysical Union Fall Meeting, San Francisco, CA, December, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011
  
  National
  ▷ Editorial/Board: *Applied and Computational Harmonic Analysis* (Member)

  University
  ▷ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ MATH 152. — *Engineering Mathematics II* (total enrollment: 306)
  ▷ MATH 414. — *Fourier Series and Wavelets* (total enrollment: 39)

  Summer
  ▷ MATH 308. — *Differential Equations* (total enrollment: 83)

  Fall
  ▷ MATH 251. — *Engineering Mathematics III* (total enrollment: 100)
  ▷ MATH 409. — *Advanced Calculus I* (total enrollment: 29)
• AWARDS DURING 2011
  Department
  ▷ Outstanding Service Award, Department of Mathematics

• SERVICE DURING 2011
  National
  ▷ Editorial/Board: Nonlinearity (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)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ MATH 685. — Directed Studies (total enrollment: 1)
  Summer
  ▷ MATH 685. — Directed Studies (total enrollment: 1)
  Fall
  ▷ MATH 251. — Engineering Mathematics III (total enrollment: 93)
  ▷ MATH 308 — Differential Equations (total enrollment: 1)
  ▷ MATH 308.(H) — Differential Equations (total enrollment: 24)
  ▷ MATH 685. — Directed Studies (total enrollment: 1)
  ▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ Graphs in Spectral Analysis of Complex Systems, National Science Foundation

• PRESENTATIONS DURING 2011
  ▷ “Nodal Domains and Spectral Critical Partitions on Graphs,” Erwin Schrodinger Institute, Vienna, Austria, January, 2011.( Invited)
  ▷ “Mathematical Physics Seminar,” University of Texas, Austin, TX, March, 2011.( Individual)


PUBLICATIONS DURING 2011

Band, R.; Berkolaiko, G.; Raz, H.; Smilansky, U. (2011) The Number of Nodal Domains on Quantum Graphs as a Stability Index of Graph Partitions Communications In Mathematical Physics.


• SERVICE DURING 2011

International

▷ Advisory Board: Springer-Verlag’s International Journal of Information Security (Member)
▷ Editorial/Board: Springer-Verlag’s International Journal of Information Security (Co-Founder)

*No report received from faculty member.*

*Retired 02/28/2011.*
• SERVICE DURING 2011

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

National
▷ Editorial/Board: MathSciNet (Reviewer), Zentralblatt MATH (Reviewer), American Mathematical Monthly, Complex Variables and Elliptic Equations, Notices of the American Mathematical Society, Proceedings of the American Mathematical Society (Referee: Journals), Complex Variables and Elliptic Equations (Associate Editor)
▷ Committee/Panel: AAAS Electorate Nominating Committee (Member), Joseph L. Doob Prize Committee, American Mathematical Society (Member), Stefan Bergman Trust Fund Committee, American Mathematical Society (AMS) (Member)

University
▷ Committee/Panel: Scholar Selection Committee (Member), Selection Committee for the Association of Former Students Distinguished Achievement Awards (Member)

Department
▷ Service Position: First-Year Graduate-Student Seminar (Co-Organizer)
▷ Committee/Panel: Teaching Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 409(H) — Advanced Calculus I (total enrollment: 10)
▷ MATH 409. — Advanced Calculus I (total enrollment: 22)
▷ MATH 618. — Theory of Functions of a Complex Variable II (total enrollment: 18)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

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

Fall
▷ MATH 407. — Complex Variables (total enrollment: 29)
▷ MATH 650. — Several Complex Variables (total enrollment: 5)
▷ MATH 691. — Research (total enrollment: 1)
• SERVICE DURING 2011

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 Subcouncil for the Council on the Built Environment (Member), University Department Heads Council (Member)

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

Department
▷ Service Position: Recruitment of Mathematics Faculty for Texas A&M University-Qatar (Manager)

• TEACHING ASSIGNMENTS DURING 2011

Fall
▷ MATH 419. — *Applications of Actuarial Science* (total enrollment: 18)
▷ MATH 640. — *Linear Algebra for Applications* (total enrollment: 18)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Graduate Assistance in Areas of National Need, *Department of Education*
▷ MCTP: Transition Points for High School and Undergraduate Mathematics Students, *National Science Foundation*

• PRESENTATIONS DURING 2011
▷ “Fundamental Solutions for Box_b on Quadrics,” Holy Cross College, Worcester, MA, April, 2011. (Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

National

University
▷ Committee/Panel: Pathways (Judge)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 308. — Differential Equations (total enrollment: 112)
▷ MATH 685. — Directed Studies (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 610. — Numerical Methods in Partial Differential Equations (total enrollment: 16)
▷ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Space and Time Adaptivity for Moving and Free Boundary Problems, *National Science Foundation*

• PRESENTATIONS DURING 2011

▷ Department of Mathematics, University of Maryland, College Park, MD, March, 2011. (Invited)
▷ “Applied Mathematics Seminar,” Department of Mathematics, Minneapolis, MN, April, 2011. (Invited)
▷ “Fluid-Structure Interactions,” AMS Western Section Meeting, Las Vegas, NV, April, 2011. (Individual)
▷ Department of Mathematics, University of Maryland, College Park, MD, May, 2011. (Invited)
“Center for Computation and Technology,” Louisiana State University, Baton Rouge, LA, August, 2011. (Invited)
“Geometric PDEs: Theory, Numerics, and Applications,” Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany, November, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

National

Department
▷ Committee/Panel: Library Committee (Member), Talent Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 304. — *Linear Algebra* (total enrollment: 34)
▷ MATH 433. — *Applied Algebra* (total enrollment: 27)

*No report received from faculty member.*

*Retired 05/31/2011.*
LEWIS BOWEN
ASSOCIATE PROFESSOR (979) 845-7554 lpbowen@math.tamu.edu
MATH-Ergodic Theory

• SERVICE DURING 2011

National
▷ Editorial/Board: Contemporary Mathematics (Co-Editor), National Science Foundation (Review: Proposals), Contemporary Mathematics, IMRN, Journal of Functional Analysis (Referee: Journals)

University
▷ Event: Group Actions on Measure Spaces (Co-Organizer)
▷ Committee/Panel: AMS Special Session, Dynamical Systems and Operator Algebras (Co-Chair)

Department
▷ Event: Groups and Dynamics Seminar (Organizer), Workings Seminar in Groups and Dynamics (Organizer)
▷ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 663. — Seminar in Analysis (total enrollment: 11)

Fall
▷ MATH 431. — Structures and Methods of Combinatorics (total enrollment: 14)
▷ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ CAREER: Ergodic Theory of Non-amenable Group Actions, National Science Foundation
▷ Ergodic Theory of Non-amenable Group Actions, National Science Foundation

Private
▷ Ergodic Theory Beyond Amenable Groups, United States - Israel Binational Science Foundation

• PRESENTATIONS DURING 2011

▷ “Trends in Dynamics,” Northwestern University, Evanston, IL, April, 2011.( Invited)
▷ “Finite-dimensional Approximations to Discrete Groups,” Mathematisches Forschungsinstitut, Oberwolfach, Germany, May, 2011.( Invited)
“Groups, Graphs and Stochastic Processes,” Banff International Research Station, June, 2011.( Invited)
“Fall Central AMS Meeting,” University of Nebraska, Lincoln, NE, October, 2011.( Invited)
Rice University, Houston, TX, October, 2011.( Individual)

• PUBLICATIONS DURING 2011
GOONG CHEN

PROFESSOR (979) 845-7336
gchen@math.tamu.edu

MATH-Control Theory

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Professor (J), Mathematics (Qatar), Texas A&M University - Qatar, /2011/

• SERVICE DURING 2011

  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
  ▶ Editorial/Board: Chapman & Hall/CRC Press Applied Mathematics and Nonlinear Sci-
    ences 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)

  Department
  ▶ Research Group: Institute for Quantum Studies (Department Representative)

• TEACHING ASSIGNMENTS DURING 2011

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

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 1)
  ▶ PHYS 201. — College Physics (total enrollment: 80)

  Fall
  ▶ MATH 664. — Seminar in Applied Mathematics (total enrollment: 7)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

  State
  ▶ Mathematical Study of Wind Power Generation, Texas Higher Education Coordinating
    Board

  International
  ▶ Light Bullets, Fractional Vortices, Nonlocal Solitons and Surface Waves for all-Optical
    Information Transmission in Photonic Crystals, Optical Lattices, Dispersion-managed Sys-
    tems, and Distributed Fibers, Qatar Foundation
• PRESENTATIONS DURING 2011
  ▶ “Computation and Visualization of the Nonlinear Schrödinger Equation in Nonlinear Optics by OpenFOAM,” University of Texas-Pan American, Edinburg, TX, March, 2011. (Individual)
  ▶ “Spectral Analysis of Highly Oscillatory Curves,” University of Texas, El Paso, TX, June, 2011. (Invited)
  ▶ “Chaotic Vibrations in Hyperbolic PDEs Due to the Imbalance of Energy Flow,” University of Nevada, Las Vegas, NV, October, 2011. (Invited)
  ▶ “Computation and Visualization of the Nonlinear Schrödinger Equation by OpenFOAM,” National Tsing Hua University, Hsinchu, Taiwan, December, 2011. (Invited)
  ▶ “Recent Advances in the Study of Chaotic Vibrations of Second Order Hyperbolic PDEs with a van der Pol Boundary Condition (1),” National Tsing Hua University, Hsinchu, Taiwan, December, 2011. (Invited)
  ▶ “Recent Advances in the Study of Chaotic Vibrations of Second Order Hyperbolic PDEs with a van der Pol Boundary Condition (2),” National Tsing Hua University, Hsinchu, Taiwan, December, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

Department
▷ Committee/Panel: Teaching Committee (Member)
▷ Event: Waves and Spectra Converence (Organizer)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 43)

Summer
▷ MATH 304. — Linear Algebra (total enrollment: 29)
▷ MATH 685. — Directed Studies (total enrollment: 1)

Fall
▷ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Waves and Spectra Analysis/PDE Conference, National Science Foundation

• PRESENTATIONS DURING 2011

▷ “Waves and Spectra,” Texas A&M University, College Station, TX, January, 2011. (Individual)
▷ “Analysis/PDE Reading Seminar,” Texas A&M University, College Station, TX, February, 2011. (Individual)
▷ McGill University, Montreal, Quebec, Canada, March, 2011. (Individual)
▷ University of Texas, Austin, TX, March, 2011. (Invited)
▷ McGill University, Montreal, Quebec, Canada, April, 2011. (Individual)
▷ Rutgers University, New Brunswick, NJ, April, 2011. (Individual)
▷ University of North Carolina, Charlotte, NC, April, 2011. (Individual)
▷ “Partial Differential Equations in Mathematical Physics,” IITP, Moscow, Russia, May, 2011. (Invited)
▷ Université de Franche-Comté, May, 2011. (Individual)
▷ 23rd Petrovskii Conference, Moscow, Russia, June, 2011. (Individual)
▷ “Analysis – With Applications to Mathematical Physics,” Mathematisches Institut, Göttingen, Germany, August, 2011. (Contributed)
▷ Institute for Information Transmission Problems, September, 2011. (Invited)
• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International

National

University
▷ Committee/Panel: Undergraduate Appeals Panel (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 308. — Differential Equations (total enrollment: 48)
▷ MATH 672. — Hydrodynamic Stability (total enrollment: 8)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 605. — Mathematical Fluid Dynamics (total enrollment: 10)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

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 2011

Benaras Hindu University, Varanasi, India, January, 2011.( Invited)

“Generalized Saffman-Taylor Formula for Multi-layer Hele-Shaw Flows,” APS March Meeting, Dallas, TX, March, 2011.( Invited)

Institute of Mathematics of the Romanian Academy, Bucharest, Romania, April, 2011.( Invited)


“Minisymposium on Coupling of Interface Methods with PDEs and Their Applications Modeling of Complex Flows Involving Interfaces,” Vancouver, Canada, July, 2011.( Invited)

Indian Institute of Technology, Chennai, India, August, 2011.( Invited)


**PUBLICATIONS DURING 2011**


• CHAIRS/PROFESSORSHIPS
  ▶ Walter E. Koss Endowed Professorship /2008/

• AWARDS DURING 2011
  International
  ▶ Gold Medal, La Fondation Sciences Mathématiques de Paris

• SERVICE DURING 2011
  International
  ▶ Editorial/Board: Int. J. Wavelets Multiresolut. Inf. Process (Associate Editor)

  National

• TEACHING ASSIGNMENTS DURING 2011
  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▶ MATH 412. — Theory of Partial Differential Equations (total enrollment: 22)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  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

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

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), National Science Foundation (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)
▷ Committee/Panel: Mathematics Department, Wayne State University, Mathematics Department, University of Kansas (Reviewer)

University
▷ Event: Special Session at JMM, Special Session at IWOTA Conference, Special Session at AMS Regional Meeting (Co-Organizer)
▷ Committee/Panel: Faculty Senate (Faculty Senator - 08), Faculty Senate: The Legislative Affairs Committee (Member), Faculty Senate: The Planning Committee (Member)

College
▷ Committee/Panel: Distinguished Professors Executive Committee (Chair)

Department
▷ Committee/Panel: Department Committee D (Chair), Distinguished Position Recruitment Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 447(H) — Topics in Analysis (total enrollment: 4)
▷ MATH 447. — Topics in Analysis (total enrollment: 14)

Fall
▷ MATH 409(H) — Advanced Calculus I (total enrollment: 2)
▷ MATH 409. — Advanced Calculus I (total enrollment: 8)

• PRESENTATIONS DURING 2011
▷ STOP Conference, Lisbon, Portugal, June, 2011. (Invited)
▷ IWOTA Conference, Seville, Spain, July, 2011. (Invited)
▷ IWOTA Special Session, Seville, Spain, July, 2011. (Invited)
“AMS Regional Meeting,” Ithaca, NY, September, 2011.( Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International

National

• TEACHING ASSIGNMENTS DURING 2011

Spring
♢ MATH 691. — Research (total enrollment: 3)

Summer
♢ MATH 691. — Research (total enrollment: 2)

Fall
♢ MATH 663. — Seminar in Analysis (total enrollment: 5)
♢ MATH 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

Federal
♢ Functions of Operators on Hilbert Spaces, *National Science Foundation*
♢ Sums of Hermitian Operators and Connections to Connes’ Embedding Problem Hyperinvariant Subspaces, *National Science Foundation*

• PRESENTATIONS DURING 2011

♢ “Applications of Free Probability to Sofic Groups,” Erwin Schrödinger Institute, Vienna, Austria, February, 2011. (Invited)
♢ “Free Probability,” Erwin Schrödinger Institute, Vienna, Austria, February, 2011. (Invited)
♢ “On Single Commutators in $II_1$ Factors,” University of Rome, Tor Vergata, February, 2011. (Invited)
♢ “Sofic Dimension of Groups, Equivalence Relations and Amalgams,” Texas A&M University, College Station, TX, March, 2011. (Invited)
♢ “Sofic Groups, Sofic Dimension and Amalgams,” Technical University of Graz, Austria, March, 2011. (Invited)
“Sofic Groups and Sofic Dimension,” 4th EU-Noncommutative Geometry Conference, April, 2011. (Invited)


“Sofic Dimension,” University of Konstanz, Germany, July, 2011. (Invited)

“Some Partial Answers to Natural Questions in $II_1$-factors,” University of Houston, Houston, TX, October, 2011. (Invited)

“Sofic Groups,” Texas Christian University, Fort Worth, TX, November, 2011. (Invited)

**PUBLICATIONS DURING 2011**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Director, Institute for Scientific Computation, College of Science, [2011]
  ▷ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2011

  International
  ▷ Editorial/Board: Georigian, Norwegian, UK Agencies (Review: Proposals), Norway Research Council, Swiss National Science Foundation (Reviewer)

  National
  ▷ Event: Sessions in SIAM Geoscience (Organizer)
  ▷ Committee/Panel: Tera Grid Allocation Board (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ MATH 685. — Directed Studies (total enrollment: 1)
  ▷ MATH 691. — Research (total enrollment: 3)

  Summer
  ▷ MATH 685. — Directed Studies (total enrollment: 2)
  ▷ MATH 691. — Research (total enrollment: 3)

  Fall
  ▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 44)
  ▷ MATH 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2011

  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

Improving Research and Educational Activities in Multifunctional Nanomaterials, Fund for the Improvement of Postsecondary Education

Iterative Upscaling of Fluid Flows in Nonlinear Deformable Porouse Media, National Science Foundation

Multiscale Data Integration Using Facies Based Hierarchical Bayesian Models, National Science Foundation

Industrial

Unconditionally Stable Time Stepping in Reservoir Simulation, Chevron U.S.A.

International

Development of a Computational Groundwater Model for Qatar, Qatar Foundation

• PRESENTATIONS DURING 2011
  ▶ Stochastic Modeling and Uncertainty Quantification, Rio de Janeiro, August, 2011. (Invited)
  ▶ “Splitting and Multiscale Methods for Computational PDEs,” Baylor University, Waco, TX, September, 2011. (Individual)
  ▶ DOE Applied Math Workshop, Reston, VI, October, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

   International
   ▷ Research Group: Center for Experimental and Constructive Mathematics at Simon Fraser University (Associate Member)
   ▷ Professional Affiliation: Mathematical Institute of the Hungarian Academy of Science (Associate Member)

   National
   ▷ Professional Affiliation: Janos Bolyai Mathematical Society (Member)

• TEACHING ASSIGNMENTS DURING 2011

   Spring
   ▷ MATH 151. — Engineering Mathematics I (total enrollment: 345)

   Fall
   ▷ MATH 151. — Engineering Mathematics I (total enrollment: 228)

• PRESENTATIONS DURING 2011

   ▷ Turán Memorial Conference, Budapest, Hungary, August, 2011.( Individual)

• PUBLICATIONS DURING 2011

   ▷ Erdelyi, T. (2011) Sieve-type Lower Bounds for the Mahler Measure of Polynomials on


• SERVICE DURING 2011
  Department
  ▷ Committee/Panel: Subcommittee P (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 8)
  ▷ MATH 685. — Directed Studies (total enrollment: 1)
  Fall
  ▷ MATH 685. — Directed Studies (total enrollment: 1)

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Professor (J), Physics and Astronomy, [2000]

• AWARDS DURING 2011
  Department
  ▶ Outstanding Service Award, Department of Mathematics

• SERVICE DURING 2011
  International
  ▶ Editorial/Board: *International Journal of Quantum Information* (Referee: Journals)

  National

  Department
  ▶ Event: Mathematical Physics Harmonic Analysis and Differential Equations Seminar (Organizer)
  ▶ Committee/Panel: Executive Committee (Member), Subcommittee P (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 467. — Modern Geometry (total enrollment: 35)
  ▶ MATH 491. — Research (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 2)

  Fall
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 239)
  ▶ MATH 460. — Tensors and General Relativity (total enrollment: 10)
  ▶ MATH 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) Collaborative Research: Quantum Vacuum Energy, *National Science Foundation*

• PRESENTATIONS DURING 2011

SEC. 6.1  PROFESSIONAL ACTIVITIES  429

**PUBLICATIONS DURING 2011**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Undergraduate Advisor, Mathematics Undergraduate Advising Office, Mathematics, [2004]
  ▶ Director, Mathematics Honors Program, Mathematics, [2003]
  ▶ Professor, Veterinary Integrative Biosciences, [1994]

• SERVICE DURING 2011
  National
  ▶ Event: Women In Mathematics (Speaker)
  ▶ Committee/Panel: AMS/MMA Joint Data Committee (Member), Employment Opportunities Joint Committee (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 (Chair)
  Department
  ▶ Committee/Panel: Honors Programs (Director), Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 289. — Special Topics in (total enrollment: 17)
  ▶ MATH 416(H) — Modern Algebra II (total enrollment: 5)
  ▶ MATH 416. — Modern Algebra II (total enrollment: 5)
  ▶ MATH 491. — Research (total enrollment: 1)
  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ MATH 304. — Linear Algebra (total enrollment: 38)
  ▶ MATH 396. — Communications in Mathematics (total enrollment: 6)
  ▶ MATH 415(H) — Modern Algebra I (total enrollment: 12)
• MATH 415. — Modern Algebra I (total enrollment: 9)
• MATH 485.(H) — Directed Studies (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011
  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 2011
  ▶ “Moderator for One Session of Talks,” Nebraska Conference for Undergraduate Women in Mathematics, College Station, TX, January, 2011. (Individual)
  ▶ “Moderator of One Break-out Session,” Nebraska Conference for Undergraduate Women in Math., College Station, TX, January, 2011. (Individual)
• SERVICE DURING 2011

International
▷ Event: International Algebraic Conference and International Conference in Armenia: Dynamics Systems, Nonlinear Analysis and Applications (Organizer), Mathematics Competition for Young Mathematicians in Ukraine (Organizer)
▷ Editorial/Board: Switzerland National Science Foundation, Science and Engineering Research Canada, Israel Science Foundation, Marie Curie (EPPS), Pierre Deligne, European Research Council, Canada Research Chair, Austrian Science Fund (Review: Proposals), Ukrainian Mathematical Journal (Editor), Geometriae Dedicata (Editor), International Journal of Algebra and Computation, Matematicheskii Sbornik (Referee: Journals), International Journal of Algebra and Computation (Editor), Mathematicini Studii (Editor)

National

Department
▷ Event: Groups and Dynamics Seminar (Head)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 654. — Algebra II (total enrollment: 17)
▷ MATH 691. — Research (total enrollment: 1)

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

Fall
▷ MATH 304. — Linear Algebra (total enrollment: 72)
▷ MATH 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2011
▷ “Algebra and Applications in Honour of Prof. Said Sidki on the Occasion of his 70th Birthday Caldas Novas,” Brazil, May, 2011. (Invited)
▷ Binghamton University, East Vestal, NY, May, 2011. (Individual)
• PUBLICATIONS DURING 2011
JEAN-LUC GUERMOND

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MATH-Numerical Analysis

- **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT,

- **SERVICE DURING 2011**

  **International**

  **National**

  **Department**
  - Committee/Panel: Award Committee (Member), IUMRI Search Committee (Member), USC Committee (Member)

- **TEACHING ASSIGNMENTS DURING 2011**

  **Spring**
  - MATH 691. — Research (total enrollment: 1)

  **Summer**
  - MATH 691. — Research (total enrollment: 2)

  **Fall**
  - MATH 601. — Methods of Applied Mathematics I (total enrollment: 43)
  - MATH 661. — Mathematical Theory of Finite Element Methods (total enrollment: 7)
  - MATH 691. — Research (total enrollment: 2)

- **RESEARCH PROJECTS DURING 2011**

  **Federal**
  - L 1-Based Approximations of PDEs and Applications (AFSOR), *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 2011**

- Lawrence Livermore National Lab, Livermore, Canada, March, 2011. (Individual)
- Laboratoire Dieudonné, Nice, France, April, 2011. (Individual)
- “Methodes Numeriques Pour les Ecoulements Compressibles et Faiblement Compressibles,” SMAI Workshop, France, May, 2011. (Invited)
- CERMICS, ENPC, Marnes la Vallee, France, May, 2011. (Individual)

**PUBLICATIONS DURING 2011**

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 368. — Introduction to Abstract Mathematical Structures (total enrollment: 65)
▷ MATH 423(H) — Linear Algebra II (total enrollment: 4)
▷ MATH 423. — Linear Algebra II (total enrollment: 13)

Summer
▷ MATH 366. — Structure of Mathematics II (total enrollment: 7)

Fall
▷ MATH 302. — Discrete Mathematics (total enrollment: 96)
• SERVICE DURING 2011
  National
    ▷ Editorial/Board: *American Mathematical Monthly* (Editor)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
    ▷ MATH 304. — *Linear Algebra* (total enrollment: 31)
  Fall
    ▷ MATH 490. — *The Putnam Challenge* (total enrollment: 11)

*Retired 07/10/2011.*
• SERVICE DURING 2011

National

University
▷ Committee/Panel: Math and Engineering Student Success Task Force (Member)

Department
▷ Event: Math Mini Fair (Co-Organizer)
▷ Committee/Panel: Engineering Math Committee (Member), M308 Textbook Selection Committee (Member), Outreach Activities Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 647. — Mathematical Modelling (total enrollment: 12)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Spectral Analysis and Stability for Wave Patterns and Multidimensional Waves, *National Science Foundation*

• PRESENTATIONS DURING 2011

▷ Texas A&M University, College Station, TX, September, 2011. (Individual)
▷ University of Helsinki, Helsinki, Finland, September, 2011. (Individual)
▷ Texas A&M University, College Station, TX, December, 2011. (Individual)

• PUBLICATIONS DURING 2011

• **CHAIRS/PROFESSORSHIPS**
  ▶ Arthur George and Mary Emolene Owen Chair in Mathematics [1984]

• **SERVICE DURING 2011**
  
  **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 2011**
  
  **Spring**
  ▶ MATH 691. — **Research** (total enrollment: 1)

  **Summer**
  ▶ MATH 685. — **Directed Studies** (total enrollment: 4)
  ▶ MATH 691. — **Research** (total enrollment: 1)

  **Fall**
  ▶ MATH 691. — **Research** (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2011**
  
  **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

  **Private**
  ▶ Topics in the Geometry of Banach Spaces, U.S. Israel Binational Science Foundation

• **PRESENTATIONS DURING 2011**
  ▶ “Quantitative Geometry,” Introductory Workshop, Berkeley, CA, August, 2011.(Invited)
  ▶ University of California, Berkeley, CA, October, 2011.( Individual)
• PUBLICATIONS DURING 2011
GUIDO KANSCHAT
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• AWARDS DURING 2011
  University
    ▶ The Richard Stadelmann Faculty Senate Service Award, Texas A&M University

• SERVICE DURING 2011
  International
    ▶ Editorial/Board: German Science Foundation (Review: Proposals)
  National
  University
    ▶ Committee/Panel: Council on Climate and Diversity (Member), Council on the Built Environment (Member), Faculty Senate (Faculty Senator - 11)
  College
    ▶ Committee/Panel: Faculty Advisory Council (Elected Member)
  Department
    ▶ Event: Math Table at the Physics and Engineering Festival (Participant)
    ▶ Committee/Panel: Subcommittee T (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
    ▶ MATH 152. — Engineering Mathematics II (total enrollment: 180)
    ▶ MATH 417. — Numerical Analysis I (total enrollment: 52)
  Summer
    ▶ MATH 691. — Research (total enrollment: 1)
  Fall
    ▶ MATH 491. — Research (total enrollment: 1)
    ▶ MATH 664. — Seminar in Applied Mathematics (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011
  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 2011
  - University of Heidelberg, Germany, January, 2011. (Individual)
  - “Workshop on Advances in Numerical Analysis and Scientific Computing,” University of Houston, Houston, TX, April, 2011. (Individual)

- PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
▷ Editorial/Board: *Journal für die reine und angewandte Mathematik* (Referee: Journals)

National
▷ Editorial/Board: *Proceedings of the American Mathematical Society, Linear and Multilinear Algebra, Contemporary Mathematics* (Referee: Journals)

Department
▷ Event: Dynamical Systems and Operator Algebras, AMS Sectional Meeting (Co-Organizer), Group Actions on Measure Spaces (Co-Organizer), Real Analysis Qualifying Exam Committee (Grader), Weekly Linear Analysis Seminar (Organizer), Texas A&M University-Functional Analysis Group for First-Year Graduate Students (Speaker)
▷ Committee/Panel: Executive Committee (Member), Undergraduate Studies Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 608. — Real Variables II (total enrollment: 14)
▷ MATH 685. — Directed Studies (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)

Fall
▷ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ CAREER: Operator Algebras, Dynamics, and Classification, *National Science Foundation*

• PRESENTATIONS DURING 2011

▷ “Ergodic Theory Seminar,” Rice University, Houston, TX, February, 2011. (Individual)
▷ “Groups and Dynamics Seminar,” Texas A&M University, College Station, TX, February, 2011. (Individual)
▷ “Texas Ergodic Theory Workshop,” University of Houston, Houston, TX, March, 2011. (Invited)
University of Virginia, Charlottesville, VA, March, 2011. (Individual)
“Canadian Operator Symposium,” University of Victoria, Canada, May, 2011. (Invited)
“Advanced Course on Dynamical Systems,” Centre de Recerca Matematica, Barcelona, Spain, June, 2011. (Invited)
“Conference on Structure and Classification of C*-Algebras,” Centre de Recerca Matematica, Barcelona, Spain, June, 2011. (Individual)
“Operator Algebras Session of the Canadian Mathematical Society Summer Meeting,” University of Alberta, Edmonton, Canada, June, 2011. (Invited)
“Workshop on Positivity,” Fields Institute, Toronto, Canada, August, 2011. (Invited)
“Conference on C*-Algebras and Related Topics, RIMS,” Kyoto University, Kyoto, Japan, September, 2011. (Invited)
“Groups and Dynamics Seminar,” Texas A&M University, College Station, TX, September, 2011. (Individual)
“Analysis Seminar,” University of Illinois, Urbana, IL, October, 2011. (Individual)
Purdue University, West Lafayette, IN, October, 2011. (Individual)
“C*-Algebra Seminar,” University of Münster, Germany, November, 2011. (Individual)
“Workshop in Honor of Eberhard Kirchberg’s 65th Birthday,” University of Copenhagen, Denmark, November, 2011. (Invited)
Minicourse on Operator Algebras, Fields Institute, Toronto, Canada, December, 2011. (Invited)

• PUBLICATIONS DURING 2011
THOMAS R. KIFFE

ASSOCIATE PROFESSOR
MATH-Integral Equations
tkiffe@math.tamu.edu

• SERVICE DURING 2011

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 2011

Spring
▷ MATH 639. — Iterative Techniques (total enrollment: 28)

Summer
▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 22)

Fall
▷ MATH 172. — Calculus (total enrollment: 154)

• PUBLICATIONS DURING 2011

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2011
  
  International
  ▶ Committee/Panel: National Science Prize of Chile (Member)

  National

  University
  ▶ Event: Inverse Spectral Problems at the International Meeting Applied Inverse Problems (Co-Organizer)
  ▶ Committee/Panel: Applied Inverse Problems Organizing Committee (Member)

  Department
  ▶ Event: Inverse Problems Seminar (Organizer), Math Physics and Harmonic Analysis Seminar (Co-Organizer)
  ▶ Committee/Panel: Awards Committee (Member), Endowed Professorship Hiring Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ MATH 167. — For All Practical Purposes (total enrollment: 88)
  ▶ MATH 308.(H) — Differential Equations (total enrollment: 25)
  ▶ MATH 685. — Directed Studies (total enrollment: 4)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 4)

  Fall
• MATH 611. — *Ordinary Differential Equations* (total enrollment: 15)
• MATH 691. — *Research* (total enrollment: 3)

**RESEARCH PROJECTS DURING 2011**

**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*
- MCTP: Transition Points for High School and Undergraduate Mathematics Students, *National Science Foundation*
- SM: Analysis on Graphs and its Applications, *National Science Foundation*

**PRESENTATIONS DURING 2011**
- “Critical Partitions and the Nodal Count for Billiard Eigenfunctions,” Mathematical Physics Seminar, Texas A&M University, College Station, TX, January, 2011. (Invited)
- “Detecting Small Low Emission Sources on a Large Random Background,” Mathematical Physics Seminar, Texas A&M University, College Station, TX, February, 2011. (Invited)
- “Hybrid Methods of Medical Imaging,” Texas A&M University, College Station, TX, May, 2011. (Invited)
- “Tomographic Methods in Imaging, I, II,” Texas A&M University, College Station, TX, May, 2011. (Invited)
- “Ultrasound Modulated Imaging Modalities,” Session on Hybrid Methods in Medical Imaging, at the ICIAM, Vancouver, Canada, July, 2011. (Invited)
- “Asymptotics of Greens Functions of Periodic Schroedinger Operators at the Spectral Gap Edges,” Mathematical Physics Seminar, Texas A&M University, College Station, TX, October, 2011. (Invited)
- “Identities for Sin(x) that came from Medical Imaging,” Algebra and Combinatorics Seminar, Texas A&M University, College Station, TX, November, 2011. (Individual)

**PUBLICATIONS DURING 2011**
• SERVICE DURING 2011

International
▷ Editorial/Board: Netherlands NWO (analog of NSF), Ukraine NSF (Review: Proposals)

National
▷ Editorial/Board: Cambridge, Tenure, Graduate and Undergraduate Textbooks (Wiley, Prentice, AMS) (Reviewed), National Science Foundation (Review: Proposals), Differential Geometry and its Applications (Editor), LAA, Inventiones, Annals Combinatorics, Proc. AMS, FOCS, IMRN, J. Algebra, Linear and Multilinear Alg., AAEC, JAMS, Duke, JMAA (Referee: Journals)
▷ Committee/Panel: AMS Committee (Member), National Science Foundation (Panel Member)

Department
▷ Event: Geometry Seminar and the Working Geometry Seminar (Organizer)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 23)
▷ MATH 491.(H) — Research (total enrollment: 1)
▷ MATH 622. — Differential Geometry I (total enrollment: 15)
▷ MATH 691. — Research (total enrollment: 3)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 5)

Fall
▷ MATH 491. — Research (total enrollment: 1)
▷ MATH 623. — Riemannian Geometry (total enrollment: 8)
▷ MATH 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Analytic Geometry and Representation Theory, National Science Foundation
▷ (REN) Texas Geometry and Topology Conference, National Science Foundation

• PRESENTATIONS DURING 2011
▷ University of Chicago, Chicago, IL, February, 2011. (Individual)
▷ “Conformal Differential Geometry and its Interaction with Representation Theory,” University of Arkansas, Fayetteville, AK, April, 2011. (Invited)
Rice University, Houston, TX, April, 2011. (Individual)
Mittag-Leffler Institute, Stockholm, Sweden, May, 2011. (Individual)
Linkoping University, Linkoping, Sweden, June, 2011. (Individual)
“Algebraic Geometry Seminar,” University of Montpellier, France, July, 2011. (Individual)
17th Conference of the International Linear Algebra Society, Braunschweig, Germany, August, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

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: Wavelets, Fractal Geometry, and Operator Algebras (Co-Organizer)
▷ Committee/Panel: Editorial Committee Operators and Matrices, Banach Journal of Mathematical Analysis, Journal of Function Spaces and Applications, Involve (Member), Oberwolfach Workshop Organizing Committee (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 2011

Fall
▷ MATH 409. — Advanced Calculus I (total enrollment: 17)

• RESEARCH PROJECTS DURING 2011

Federal
▷ SM Workshop in Analysis, National Science Foundation

• PRESENTATIONS DURING 2011

▷ Technical University of Munich, Munich, Germany, March, 2011. (Individual)
Baylor University, Waco, TX, April, 2011. (Individual)
University of Houston, Houston, TX, December, 2011. (Individual)

**PUBLICATIONS DURING 2011**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2011
  International
  ▶ Editorial/Board: *International Journal on Finite Volumes* (Associate Editor), *Zentralblatt fur Mathematik* (Referee: Journals)

National

Department
  ▶ Committee/Panel: Graduate Committee (Member), Postdoc Hiring Committee (Member), Undergraduate Curriculum Development Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 601. — *Methods of Applied Mathematics I* (total enrollment: 35)
  Fall
  ▶ MATH 609. — *Numerical Analysis* (total enrollment: 40)

• RESEARCH PROJECTS DURING 2011
  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 2011
  ▶ University of California, Irvine, CA, March, 2011. (Invited)
  ▶ “Numerical Upscaling of Flows in Heterogeneous Porous Media,” University of Houston, Houston, TX, April, 2011. (Invited)
PUBLICATIONS DURING 2011

• RESEARCH PROJECTS DURING 2011

    Federal
    → MCTP: Transition Points for High School and Undergraduate Mathematics Students, National Science Foundation

    No report received from faculty member.

    Retired 01/15/2011.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Graduate Advisor, Mathematics Graduate Advising Office, Mathematics, [2006]

• SERVICE DURING 2011
  National
  ▷ Editorial/Board: *Homology, homotopy and applications; Proceedings of AMS; Transactions of AMS; Houston Math. J., J. Pure and Appl. Algebra, Topology and its Applications* (Referee: Journals)

  University
  ▷ Committee/Panel: Faculty Advisory Committee for the Mexico City Center (Member), Faculty Senate (Faculty Senator - 09), Faculty Senate: The Legislative Affairs Committee (Member)

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

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 26)
  ▷ MATH 685. — *Directed Studies* (total enrollment: 1)

  Summer
  ▷ MATH 663. — *Seminar in Analysis* (total enrollment: 17)

  Fall
  ▷ MATH 636. — *Topology I* (total enrollment: 25)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ Graduate Assistance in Areas of National Need, *Department of Education*

• PRESENTATIONS DURING 2011
  ▷ “do Ensino e Nivelamento da Matemática no Ensino Superior,” Department of Science and Technology of the State of Pernambuco, Arcoverde, Brazil, November, 2011. (Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011
  Regional
    ▷ Committee/Panel: Exam Committee High School Math Conference (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
    ▷ MATH 172(H) — Calculus (total enrollment: 8)
    ▷ MATH 172. — Calculus (total enrollment: 78)
    ▷ MATH 425. — The Mathematics of Contingent Claims (total enrollment: 45)
  Summer
    ▷ MATH 409. — Advanced Calculus I (total enrollment: 24)
  Fall
    ▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 10)
    ▷ MATH 629. — History of Mathematics (total enrollment: 18)
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• SERVICE DURING 2011

  International

  National
  ➤ Editorial/Board: Proceedings of the American Mathematical Society (Referee: Journals)

• RESEARCH PROJECTS DURING 2011

  Federal
  ➤ Investigations on Heegner Points with Applications to L Functions, Elliptic Curves, and Combinatorics, Department of Defense

• PRESENTATIONS DURING 2011

  ➤ “Modular Forms and Mock Modular Forms and their Applications in Arithmetic, Geometry, and Physics,” International Center for Theoretical Physics, Trieste, Italy, March, 2011. (Invited)
  ➤ “American Mathematical Society, Special Session on Elliptic Curves, Modular Forms, and Related Topics,” Wake Forest University, Winston-Salem, NC, September, 2011. (Invited)

• PUBLICATIONS DURING 2011

LAURA F. MATUSEVICH
ASSOCIATE PROFESSOR  (979) 845-7554
MATH-Algebraic Geometry & Combinatorics  laura@math.tamu.edu

• SERVICE DURING 2011
  University
  ▶ Event: Special Session on Hypergeometric Functions and Differential Equations (Co- Organizer)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ MATH 152(H) — Engineering Mathematics II (total enrollment: 33)
  ▶ MATH 152. — Engineering Mathematics II (total enrollment: 66)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 689. — Special Topics in (total enrollment: 18)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ Multivariate Hypergeometric Functions and Equations, National Science Foundation
  ▶ New Development in Hypergeometric Equations, National Science Foundation
  Private
  ▶ Alfred P. Sloan Research Fellowship in Mathematics, Alfred P. Sloan Foundation

• PRESENTATIONS DURING 2011
  ▶ “Frank Stones Memorial Colloquium,” Texas Christian University, Fort Worth, TX, March, 2011.( Individual)
  ▶ “Special Session on Geometric Commutative Algebra and Applications,” University of Iowa, Iowa City, IA, March, 2011.( Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Director, Center for Approximation Theory (CAT), Mathematics, [ ]

• SERVICE DURING 2011
  International
  ▷ Editorial/Board: SIAM Journal on Numerical Analysis (Member)

  National

  Department
  ▷ Committee/Panel: Engineering Mathematics Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ MATH 308. — Differential Equations (total enrollment: 55)
  ▷ MATH 642. — Analysis for Applications II (total enrollment: 13)

  Summer
  ▷ MATH 412. — Theory of Partial Differential Equations (total enrollment: 19)
  ▷ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▷ MATH 641. — Analysis for Applications I (total enrollment: 22)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ Analysis and Synthesis of Scattered Data on Surfaces via Radial and Related Basis Functions, National Science Foundation

• PRESENTATIONS DURING 2011

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
▷ Editorial/Board: Israel Science Foundation (Review: Proposals), Archiv der Mathematik
(Referee: Journals)

National
▷ Editorial/Board: Algebra and Discrete Mathematics (Editor), Groups, Geometry and
Linear Algebra, Groups, Geometry and Dynamics, Algebra and Discrete Mathematics,
Dynamics of Continuous, Discrete & Impulsive Systems (Referee: Journals)

Regional
▷ Service Position: High School Mathematics Contest (Grader)

Department
▷ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 367. — Basic Concepts of Geometry (total enrollment: 44)
▷ MATH 685. — Directed Studies (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 112)
▷ MATH 411. — Mathematical Probability (total enrollment: 45)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Iterated Monodromy Groups, National Science Foundation

• PRESENTATIONS DURING 2011
▷ 45th Spring Topology and Dynamics Conference., Tyler, TX, March, 2011.( Individual)
▷ University of Illinois, Chicago, IL , March, 2011.( Individual)
▷ “Algebra and Applications,” In Honor of Said Sidki on the Occasion of his 70th Birthday,
Caldas Novas, Brazil, May, 2011.( Invited)

Goettingen University, Goettingen, Germany, June, 2011. (Individual)


“Dynamical Systems and Operator Algebras,” Fall Central Section Meeting, Special Session, Lincoln, NE, October, 2011. (Individual)

West Coast Operator Algebra Seminar, Albuquerque, NM, October, 2011. (Invited)

• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

International
▷ Editorial/Board: Annales de l’Institut Henri Poincaré (Referee: Journals)

National

Department
▷ Committee/Panel: Awards Committee (Member), Postdoc Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 625. — Applied Stochastic Differential Equations (total enrollment: 7)

Fall
▷ MATH 251. — Engineering Mathematics III (total enrollment: 97)
▷ MATH 619. — Applied Probability (total enrollment: 15)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Mean-Field Spin Glass Models, National Science Foundation

• PRESENTATIONS DURING 2011

▷ “Limit Theorems in Probability and Applications,” Novosibirsk, Russia, August, 2011.(Individual)
▷ “High Dimensional Probability,” The Sixth International Conference, Banff, Canada, October, 2011.(Individual)
▷ “Linear Analysis Seminar,” Texas A&M University, College Station, TX, November, 2011.(Individual)

• PUBLICATIONS DURING 2011

• AWARDS DURING 2011
  National
  ▷ Research Fellow, Alfred P. Sloan Foundation

• SERVICE DURING 2011
  National
  ▷ Editorial/Board: National Science Foundation (Review: Proposals), Proc. AMS, GAFA, GAFA Seminar, Studia M. (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2011
  Fall
  ▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 95)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ Measure-Theoretic Aspects of Convex Bodies, National Science Foundation
  ▷ Set Theory and the Geometry of Banach Spaces, National Science Foundation

  Private
  ▷ The Hierarchy of Mass Concentration on Convex Bodies, U.S. Israel Binational Science Foundation

• PRESENTATIONS DURING 2011
  ▷ “Asymptotic Geometric Analysis and Convexity,” Hagoshrim, Israel, April, 2011.( Individual)
  ▷ University of Michigan, Ann Arbor, MI, October, 2011.( Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

National
▷ Event: Stark-Heegner Points (Co-Organizer)

Department
▷ Committee/Panel: Department Head Search Committee (Member), Post-doctoral Hiring Committee (Chair), Post-doctoral Hiring Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 94)
▷ MATH 627. — Theory of Numbers (total enrollment: 9)

Fall
▷ MATH 470(H) — Communications and Cryptography (total enrollment: 8)
▷ MATH 470. — Communications and Cryptography (total enrollment: 42)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Southwest Center for Arithmetic Geometry, National Science Foundation
▷ (REN) Special Functions and Transcendence, National Science Foundation

• PRESENTATIONS DURING 2011

• PUBLICATIONS DURING 2011
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• AWARDS DURING 2011
  University
  ▷ Distinguished Achievement Award - Research, The Association of Former Students

• SERVICE DURING 2011
  International
  ▷ Editorial/Board: Science China Math. (Referee: Journals)

  National
  ▷ Committee/Panel: Scientific Committee, Copper Mountain Multigrid Meetings (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ MATH 308. — Differential Equations (total enrollment: 168)

  Fall
  ▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 42)

• RESEARCH PROJECTS DURING 2011
  International
  ▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2011
  ▷ “Analysis of a Cartesian PML Approximation to Acoustic Scattering Problems,” Texas Finite Element Rodeo, Texas A&M University, College Station, TX, March, 2011.( Individual)
  ▷ “Analysis of a Cartesian PML Approximation to the Acoustic Scattering Problem,” La Serena Numerica, La Serena, Chile, December, 2011.( Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

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 2011

Spring
  ▶ MATH 410. — Advanced Calculus II (total enrollment: 18)

• PUBLICATIONS DURING 2011


No report received from faculty member.

Retired 08/31/2011.
• SERVICE DURING 2011

National

University
  ▶ Committee/Panel: Graduate Faculty Committee (Member)

Department
  ▶ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ MATH 691. — Research (total enrollment: 1)

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

Fall
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

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

Other
  ▶ Model Classes, Approximation, and Metrics for Dynamic Processing of Urban Terrain Data, University of South Carolina

• PRESENTATIONS DURING 2011

  ▶ “Graduate Student Seminar,” Texas A&M University, College Station, TX, February, 2011. (Individual)

• PUBLICATIONS DURING 2011

Mathematical Analysis, vol. 43, 1457-1472.


SERVICE DURING 2011

College
▷ Service Position: Information Technology Lab (Director)
▷ Committee/Panel: Diversity Committee (Member), Grievance Committee (Elected Member), Information Technology Committee (Member), Qatar Advisory Committee (Member), Technology-Mediated Instruction Committee (Member)

Department
▷ Committee/Panel: Engineering Mathematics Sequence (Chair), Math 150/151 Task Force (Member), Vision 2020 Imperative 4 Subcommittee (Member)

TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 646. — A Survey of Mathematical Problems II (total enrollment: 17)

Summer
▷ MATH 696. — Mathematical Communication and Technology (total enrollment: 14)

Fall
▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 64)
▷ MATH 609. — Numerical Analysis (total enrollment: 26)
▷ MATH 685. — Directed Studies (total enrollment: 1)

RESEARCH PROJECTS DURING 2011

Federal
▷ Enhancing Calculus I Success, National Science Foundation
▷ Retention Through Remediation in Pre-Calculus Savings in the Thousands, National Science Foundation

PRESENTATIONS DURING 2011
• CHAIRS/PROFESSORSHIPS
  ▶ Arthur George and Mary Emolene Owen Chair in Mathematics [1985]

• AWARDS DURING 2011
  International
  ▶ Foreign Fellow, Indian Science Academy

• SERVICE DURING 2011
  International
  ▶ Committee/Panel: Banff International Research Station (BIRS) External Review Board (Member)

  National

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) Geometry of Banach Spaces and Operator Spaces, National Science Foundation
  ▶ SM Workshop in Analysis, National Science Foundation

• PRESENTATIONS DURING 2011
  ▶ “L2 Invariants and Their Relatives for Finitely Generated Groups,” AIM (Palo Alto), September, 2011.( Individual)
  ▶ “Quantitative Geometry,” Member of MSRI Program, September, 2011.( Individual)
• PUBLICATIONS DURING 2011
• **SERVICE DURING 2011**
  
  **College**
  ▶ Committee/Panel: Faculty Advisory Council (Representative-at-Large)

  **Department**
  ▶ Service Position: Departmental of Mathematics (Mentor)

• **TEACHING ASSIGNMENTS DURING 2011**

  **Spring**
  ▶ MATH 251. — **Engineering Mathematics III** (total enrollment: 95)
  ▶ MATH 637. — **Topology II** (total enrollment: 10)

  **Summer**
  ▶ MATH 666. — **Seminar in Geometry** (total enrollment: 12)

  **Fall**
  ▶ MATH 470. — **Communications and Cryptography** (total enrollment: 50)
  ▶ MATH 689. — **Special Topics in** (total enrollment: 5)

• **RESEARCH PROJECTS DURING 2011**

  **Federal**
  ▶ (REN) Texas Geometry and Topology Conference, *National Science Foundation*
• SERVICE DURING 2011

National
  ▶ Editorial/Board: Various Journals (Referee: Journals)

Department
  ▶ Event: Analysis/PDE Working Seminar (Co-Organizer), Mathematical Physics and Harmonic Analysis Seminar (Co-Organizer)
  ▶ Committee/Panel: Subcommittee T (Member)

• TEACHING ASSIGNMENTS DURING 2011

Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

Fall
  ▶ MATH 308. — Differential Equations (total enrollment: 56)
  ▶ MATH 617. — Theory of Functions of a Complex Variable I (total enrollment: 12)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
  ▶ Completeness Problems in Harmonic Analysis and Spectral Theory, National Science Foundation, coworkers: M. Mitkovski (G), R. Rupam (G)
  ▶ Uniqueness and Convergence of Analytic Integrals in Harmonic and Spectral Analysis, National Science Foundation, coworkers: M. Mitkovski (G)
  ▶ Waves and Spectra Analysis/PDE Conference, National Science Foundation

• PRESENTATIONS DURING 2011

  ▶ “Krein-de Branges Spaces of Entire Functions,” CRM, Barcelona, Spain, May, 2011. (Individual)
  ▶ “19th Annual Analysis Meeting,” Euler Institute, St. Petersburg, Russia, June, 2011. (Individual)
  ▶ “Gap and Type problems in Harmonic Analysis,” St.Petersburg University, St. Petersburg, Russia, October, 2011. (Individual)
  ▶ “Integrable Systems,” Mittag-Leffler Institute, Sweden, October, 2011. (Individual)
Georgia Institute of Technology, Atlanta, GA, October, 2011.( Individual)
• SERVICE DURING 2011

National

Regional
▷ Event: A&M High School Math. Contest (Organizer)

Department
▷ Event: Math Mini Fair (Organizer)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 664. — *Seminar in Applied Mathematics* (total enrollment: 12)
▷ MATH 691. — *Research* (total enrollment: 1)

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

Fall
▷ MATH 251. — *Engineering Mathematics III* (total enrollment: 99)
▷ MATH 412(H) — *Theory of Partial Differential Equations* (total enrollment: 12)
▷ MATH 412. — *Theory of Partial Differential Equations* (total enrollment: 8)
▷ MATH 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

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 2011


• PUBLICATIONS DURING 2011

MAURICE H. RAHE

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• SERVICE DURING 2011
  Department
    ▶ Committee/Panel: Teaching Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
    ▶ MATH 470. — Communications and Cryptography (total enrollment: 53)
    ▶ MATH 471. — Numerical Analysis (total enrollment: 19)

No report received from faculty member.

Retired 08/31/2011.
• SERVICE DURING 2011

International
▷ Editorial/Board: Bulletin of the London Mathematical Society (Referee: Journals)

National
▷ Committee/Panel: AMS Special Session on Geometric Structures on Manifolds with Special Holonomy and Applications in Physics (Co-Chair)

Regional
▷ Event: Grader for A&M High School Mathematics Contest (Volunteer)

Department
▷ Event: Geometry Seminar (Co-Organizer), Mentoring Program for Women in Mathematics (Co-Organizer), Working Geometry Seminar (Co-Organizer)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 666. — Seminar in Geometry (total enrollment: 7)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 111)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Analytic Geometry and Representation Theory, National Science Foundation

• PRESENTATIONS DURING 2011

▷ University of Colorado, Boulder, CO, March, 2011. (Individual)
▷ University of California, Irvine, CA, May, 2011. (Individual)
▷ “Workshop on Moving Frames,” CRM, Montreal, Canada, June, 2011. (Individual)
“Algebra-Geometry-Combinatorics Seminar,” University of Illinois, Champaign, IL, September, 2011. (Individual)
• SERVICE DURING 2011

International
▷ Editorial/Board: Canadian NSERC Program (Reviewer)

National
▷ Editorial/Board: Contemporary Mathematics, Foundations of Computational Mathematics, MEGA (Referee: Journals)

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 12), Faculty Senate: Legislative Affairs Committee (Member), Faculty Senate: The Research Committee (Member)

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

Department
▷ Editorial/Board: Spanish Language (Examiner)
▷ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 489. — Special Topics in (total enrollment: 18)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

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

Fall
▷ MATH 311. — Topics in Applied Mathematics I (total enrollment: 45)
▷ MATH 648. — Computational Alg Geom (total enrollment: 15)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

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

• PRESENTATIONS DURING 2011
➤ “New Multiplier Sequences via Discriminant Amoebae,” Linear Analysis Seminar, Texas A&M University, College Station, TX, January, 2011. (Invited)
➤ “What is the P vs. NP Problem?,” Applied Mathematics Undergraduate Seminar, Texas A&M University, College Station, TX, February, 2011. (Individual)
➤ “Algebraic Geometry and Algorithms,” Texas A&M University, College Station, TX, March, 2011. (Individual)
➤ “Extremal Sparse Polynomial Systems Over Local Fields,” Algebra/Combinatorics Seminar, Texas A&M University, College Station, TX, April, 2011. (Invited)
➤ “Is 1+2=1 an Error?,” Texas A&M University, College Station, TX, April, 2011. (Individual)
➤ “Solving a Real Analogue of Smale’s 17th Problem,” Algebraic Geometry Seminar, Texas A&M University, College Station, TX, October, 2011. (Invited)
➤ “Polyhedra and Polynomials,” Texas A&M University, College Station, TX, November, 2011. (Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

National
- Editorial/Board: *J. Knot Theory Ramifications, Algebras and Representation Theory* (Referee: Journals)

Department
- Committee/Panel: Algebra Qualifying Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
- MATH 662. — *Seminar in Algebra* (total enrollment: 17)
- MATH 685. — *Directed Studies* (total enrollment: 1)

Fall
- MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 26)
- MATH 685. — *Directed Studies* (total enrollment: 1)
- MATH 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
- Modular Categories and Braid Group Representations, *Department of Defense*
- Topological Phases of Matter and Their Application to Quantum Computing, *National Science Foundation*

• PRESENTATIONS DURING 2011

- “Quantum Topology Seminar,” Ohio State University, Columbus, OH, January, 2011. (Individual)
- “Hopf Algebras and Tensor Categories,” University Almeria, Almeria, Spain, July, 2011. (Individual)

• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

National
▷ Editorial/Board: National Science Foundation (Review: Proposals)
▷ Committee/Panel: Imaging and Inverse Problems (Editoral Board), Inverse Problems (Editoral Board), National Science Foundation (Member)

University
▷ Committee/Panel: Applied Inverse Problems Organising Committee (Chair), Organiser Applied Inverse Problems Conference (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 308. — Differential Equations (total enrollment: 111)
▷ MATH 470. — Communications and Cryptography (total enrollment: 48)
▷ MATH 691. — Research (total enrollment: 2)

Fall
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Graduate Student and Postdoctoral Conference on Applied Inverse Problems, National Science Foundation
▷ Reconstruction Algorithms for Inverse Obstacle Problems, National Science Foundation
▷ US-China Collaborations in Inverse Problems, National Science Foundation

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ 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 2011
  National
  ▶ Editorial/Board: School Science and Mathematics Journal (Associate Editor)

  State
  ▶ Committee/Panel: Universal Screener Development/Review Teams, Texas Education Agency (Member)

  University
  ▶ Committee/Panel: ADVANCE Conference Planning Committee (Member), Faculty Development Leave Committee (Member), Institutional Assessment Advisory Committee (Member), MidCareer Math/Science Recruitment Grant Advisory Council (Member)

  College
  ▶ Event: Regional Junior Science Bowl (Judge), Regional Science Bowl (Judge), Science Ed Policy Position Search Committee (Chair)
  ▶ Committee/Panel: Executive Committee (Member), Technology-Mediated Instruction Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ EDCI 691. — Research (total enrollment: 1)

  Fall
  ▶ MATH 365. — Structure of Mathematics I (total enrollment: 29)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ 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 2011

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• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Undergraduate Advisor, University Studies Undergraduate Advising, Math/Teaching, University Studies, [2011]

• SERVICE DURING 2011
  National
  ▶ Event: We’ve Got Your Number, National Science Olympiad (Coordinator)
  ▶ Advisory Board: 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 2011
  Spring
  ▶ EDCI 691. — Research (total enrollment: 2)
  ▶ MATH 366. — Structure of Mathematics II (total enrollment: 39)
  ▶ MATH 376. — Intermediate Abstract Algebra (total enrollment: 8)
  ▶ MATH 403. — Mathematics and Technology (total enrollment: 13)

  Summer
  ▶ EDCI 691. — Research (total enrollment: 1)
  ▶ MATH 366. — Structure of Mathematics II (total enrollment: 10)

  Fall
- EDCI 691. — **Research** (total enrollment: 2)
- MATH 366. — **Structure of Mathematics II** (total enrollment: 37)
- MATH 375. — **Intermediate Real Analysis** (total enrollment: 8)
- MATH 403. — **Mathematics and Technology** (total enrollment: 15)

**PRESENTATIONS DURING 2011**
- “Fermi Questions,” Texas Science Olympiad Coaches’ Clinic, November, 2011. (Individual)
- “Fermi Questions/ We’ve Got Your Number,” Texas Science Olympiad Coaches’ Clinic for South Texas, November, 2011. (Individual)
- “We’ve Got Your Number,” Texas Science Olympiad Coaches’ Clinic, November, 2011. (Individual)
• SERVICE DURING 2011

International

National

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ MATH 691. — Research (total enrollment: 1)

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

Fall
  ▶ MATH 308. — Differential Equations (total enrollment: 50)
  ▶ MATH 655. — Functional Analysis I (total enrollment: 11)

• RESEARCH PROJECTS DURING 2011

Federal
  ▶ (REN) Banach Spaces: Theory and Applications, *National Science Foundation*

• PRESENTATIONS DURING 2011
  ▶ University of Glasgow, Glasgow, Scotland, March, 2011. (Individual)
  ▶ Universidade de Sao Paulo, Sao Paulo, Brazil, May, 2011. (Individual)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011
  Department
  ▶ Service Position: Undergraduate Students (Mentor)
  ▶ Committee/Panel: Library Committee (Member), Speakers Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 691. — Research (total enrollment: 1)
  Fall
  ▶ MATH 221. — Several Variable Calculus (total enrollment: 84)
  ▶ MATH 615. — Introduction to Classical Analysis (total enrollment: 18)

• PRESENTATIONS DURING 2011
  ▶ Department of Mathematics, University of Pondicherry, India, April, 2011. (Individual)
  ▶ “Summer Graduate Fellowship Programme,” Indian Institute of Technology Madras, India, July, 2011. (Individual)
  ▶ Department of Mathematics, Indian Institute of Technology Madras, India, August, 2011. (Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International

National

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 411. — Mathematical Probability (total enrollment: 43)
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 695. — Frontiers in Mathematical Research (total enrollment: 10)

Summer
▷ MATH 411. — Mathematical Probability (total enrollment: 44)
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 66)
▷ MATH 409. — Advanced Calculus I (total enrollment: 18)
▷ MATH 446(H) — Principles of Analysis I (total enrollment: 4)
▷ MATH 446. — Principles of Analysis I (total enrollment: 29)
▷ MATH 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Studies in Operator Algebras, National Science Foundation

• PRESENTATIONS DURING 2011
▷ University of Glasgow, Glasgow, Scotland, June, 2011.( Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International

National
  ▶ Event: AMS Special Session on Combinatorial Algebraic Geometry, Joint Mathematical Meetings (Co-Organizer)

  ▶ Committee/Panel: American Institute of Mathematics Open-Source Textbook Initiative (Editorial Board), SIAM Activity Group on Algebraic Geometry (Chair), SIAM Conference on Algebraic Geometry Program Committee (Chair), SIAM Conference on Discrete Mathematics Program Committee (Member), US Participation in Mittag-Leffler Conferences Advisory Committee (Member)

Department
  ▶ Committee/Panel: Executive Committee (Member), Honors Committee (Member), Outreach Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 2)

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

Fall
  ▶ MATH 221. — Several Variable Calculus (total enrollment: 130)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 3)
• RESEARCH PROJECTS DURING 2011

Federal
▷ 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

• PRESENTATIONS DURING 2011

▷ Institut Mittag-Leffler, Stockholm, Sweden, April, 2011. (Individual)
▷ KTH, Stockholm, Sweden, April, 2011. (Individual)
▷ Uppsala University, Uppsala, Sweden, April, 2011. (Individual)
▷ “Discrete, Tropical and Algebraic Geometry,” Frankfurt, Germany, May, 2011. (Invited)
▷ RWTH, Aachen, Germany, May, 2011. (Individual)
▷ Texas A&M University, College Station, TX, September, 2011. (Individual)

• PUBLICATIONS DURING 2011

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Undergraduate Advisor, University Studies Undergraduate Advising, Math/Pre-Professional, University Studies, [2011]
  ▶ Undergraduate Advisor, University Studies Undergraduate Advising, Math/Business, University Studies, [2011]
  ▶ Undergraduate Advisor, Mathematics Undergraduate Advising Office, Mathematics, [1990]

• SERVICE DURING 2011
  Regional
  ▶ Event: Annual High School Mathematics Contest (Supervisor)
  Department
  ▶ Service Position: Maple (Ambassador)
  ▶ Committee/Panel: Sub委员会 L (Member), Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 170. — Freshman Mathematics Laboratory (total enrollment: 43)
  ▶ MATH 172. — Calculus (total enrollment: 62)
  ▶ MATH 407. — Complex Variables (total enrollment: 13)
  Fall
  ▶ MATH 170. — Freshman Mathematics Laboratory (total enrollment: 84)
  ▶ MATH 323. — Linear Algebra I (total enrollment: 45)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Associate Director, Institute for Scientific Computation, Vice President for Research, [1999]
  ▶ Professor (J), Computer Science and Engineering, [1993]

• SERVICE DURING 2011
  National
  ▶ Editorial/Board: Air Force Office of Scientific Research (Reviewer), NSF Division of Mathematical Sciences (Reviewer)
  University
  ▶ Committee/Panel: External Tenure and Promotion Cases (Reviewer)
  Department
  ▶ Committee/Panel: Post-Doctoral Hiring Committee (Member), Promotion Committee P (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 304. — Linear Algebra (total enrollment: 36)
  ▶ MATH 691. — Research (total enrollment: 1)
  Fall
  ▶ MATH 467. — Modern Geometry (total enrollment: 29)
  ▶ MATH 653. — Algebra I (total enrollment: 27)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ Geometric Methods for ATR Shape Analysis, Object/image Metrics, Shape Reconstruction, and Shape Statistics, Air Force Office of Scientific Research
  ▶ Algebro-Geometric Methods in Object Recognition and Shape Reconstruction Across Multiple Sensor Types, Department of Defense
  ▶ Development of Spatially Immersive Visualization Facilities, National Science Foundation

• PRESENTATIONS DURING 2011
• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Department Head, Mathematics, [2011]

• SERVICE DURING 2011

  International
  ▶ Event: ESI Vienna (Organizer)

  National
  ▶ Editorial/Board: Imperial Press (Book Reviewer), Journal of Mathematical Analysis and Applications (Associate Editor)
  ▶ Committee/Panel: Several Complex Variables (Panel)

  University
  ▶ Committee/Panel: Council of Principal Investigators (Member)

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

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

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ MATH 612. — Partial Differential Equations (total enrollment: 11)
  ▶ MATH 685. — Directed Studies (total enrollment: 2)
  ▶ MATH 691. — Research (total enrollment: 2)

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

  Fall
  ▶ MATH 691. — Research (total enrollment: 2)
• RESEARCH PROJECTS DURING 2011
  
  Federal
  ▷ (REN) Research and Education in Several Complex Variables, *National Science Foundation*

• PRESENTATIONS DURING 2011
  
  ▷ “37th Annual New York Regional Graduate Mathematics Conference,” Syracuse University, Syracuse, NY, April, 2011. (Individual)
  ▷ “Midwest Several Complex Variables Conference,” Washington University, St. Louis, MO, May, 2011. (Invited)
ZORAN SUNIK
ASSOCIATE PROFESSOR (979) 845-7554
MATH-Group Theory & Generalizations sunik@math.tamu.edu

• SERVICE DURING 2011
  International
  ▶ Editorial/Board: *International Journal of Algebra and Computation* (Referee: Journals)
  National
  ▶ Editorial/Board: *Group, Geometry, and Dynamics, Transactions of AMS, Journal of Algebra, Algebra and Number Theory, Groups, Complexity, Cryptology, Math Magazine, Math Reviews* (Referee: Journals), *Groups, Geometry and Dynamics* (Editor)
  Department
  ▶ Event: Groups and Dynamics Seminar (Organizer)
  ▶ Committee/Panel: Outreach Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 601. — *Methods of Applied Mathematics I* (total enrollment: 35)
  ▶ MATH 662. — *Seminar in Algebra* (total enrollment: 8)
  Summer
  ▶ MATH 304. — *Linear Algebra* (total enrollment: 54)
  Fall
  ▶ MATH 171. — *Analytic Geometry and Calculus* (total enrollment: 80)
  ▶ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 24)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ Finiteness Properties of Groups Acting on Rooted Trees, *National Science Foundation*
  ▶ Self-similar Groups of Rooted Tree Automorphisms, *National Science Foundation*

• PRESENTATIONS DURING 2011
  ▶ Spring Topology and Dynamics Conference, Taylor, TX, March, 2011.( Individual)
  ▶ CombinaTexas, Huntsville TX, April, 2011.( Individual)
  ▶ “Algebra and Applications,” Caldas Novas GO, Brazil, May, 2011.( Individual)
  ▶ “Geometric and Asymptotic Group Theory with Applications,” Manresa, Spain, July, 2011.( Individual)

- **PUBLICATIONS DURING 2011**
STEVEN D. TALIAFERRO
ASSOCIATE PROFESSOR (979) 845-7554
MATH-Partial Differential Equations stalia@math.tamu.edu

• SERVICE DURING 2011
  National
  Equations, Discrete and Continuous Dynamical Systems, Journal of Mathematical Analysis and Applications, Nonlinear Analysis (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 409. — Advanced Calculus I (total enrollment: 27)
  Fall
  ▶ MATH 308. — Differential Equations (total enrollment: 111)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
▷ Editorial/Board: Swiss National Science Foundation, OTKA (Review: Proposals), International Journal of Number Theory (Editor), Intl. J. of Number Theory (Referee: Journals)

National

University
▷ Committee/Panel: Committee for Academic Freedom, Responsibility and Tenure (Member)

Department
▷ Committee/Panel: Subcommittee P (Member), Teaching Committee (Chair), Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 172. — Calculus (total enrollment: 160)

Fall
▷ MATH 304. — Linear Algebra (total enrollment: 35)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Transcendence on Varieties in Families, National Science Foundation

• PRESENTATIONS DURING 2011
▷ “Number Theory Days,” EPFL, Lausanne, Switzerland, May, 2011.( Individual)
▷ ETH Zurich, Zurich, Switzerland, May, 2011.( Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011
  National
  ▶ Editorial/Board: *Physics of Fluids, SIAM Journal on Mathematical Analysis* (Referee: Journals)
  University
  ▶ Committee/Panel: University Honor Council (Member)
  Department
  ▶ Event: MathCounts Contest (Volunteer)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 311. — *Topics in Applied Mathematics I* (total enrollment: 85)
  Fall
  ▶ MATH 309. — *Linear Algebra for Differential Equations* (total enrollment: 70)
YAROSLAV VOROBETS

ASSOCIATE PROFESSOR  (979) 845-7554
MATH-Periodic Geodesics yvorobet@math.tamu.edu

• SERVICE DURING 2011

National
▷ Editorial/Board: Dynamical Systems and Group Actions (Co-Editor), *Journal of Modern Dynamics* (Referee: Journals)

Department
▷ Committee/Panel: Award Committee of the Mathematics Competition for Young Mathematicians (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 304. — Linear Algebra (total enrollment: 23)

Fall
▷ MATH 304. — Linear Algebra (total enrollment: 83)

• PRESENTATIONS DURING 2011

▷ “Group Actions on Measure Spaces,” College Station, TX., March, 2011.( Individual)
▷ Rice University, Houston, TX, October, 2011.( Individual)

• PUBLICATIONS DURING 2011

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  - Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2011**

  **International**

  **National**
  - Committee/Panel: Board of Directors, Society of Engineering Science (Member)

  **University**
  - Event: IAMCS Special Year in Mathematical Biology (Organizer)
  - 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)

  **Interdisciplinary/Intercollegiate**
  - Committee/Panel: Ecological and Evolutionary Biology (Member)

• **TEACHING ASSIGNMENTS DURING 2011**

  **Spring**
  - MATH 685. — *Directed Studies* (total enrollment: 2)
  - MATH 691. — *Research* (total enrollment: 4)
  - WFSC 485. — *Directed Studies* (total enrollment: 1)

  **Summer**
> MATH 685. — **Directed Studies** (total enrollment: 3)
> MATH 691. — **Research** (total enrollment: 4)

**Fall**
> BIOL 285. — **Directed Studies** (total enrollment: 8)
> MATH 285. — **Directed Studies** (total enrollment: 17)
> MATH 603. — **Methods of Applied Mathematics II** (total enrollment: 17)
> MATH 691. — **Research** (total enrollment: 6)

**• RESEARCH PROJECTS DURING 2011**

**Federal**
> 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 2011**

**• PUBLICATIONS DURING 2011**

SEC. 6.1  PROFESSIONAL ACTIVITIES  509
• SERVICE DURING 2011

National

Department
▷ Committee/Panel: Committee P (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 308. — Differential Equations (total enrollment: 112)
▷ MATH 401. — Advanced Engineering Mathematics (total enrollment: 48)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 56)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Analysis and Synthesis of Scattered Data on Surfaces via Radial and Related Basis Functions, National Science Foundation

• PRESENTATIONS DURING 2011

▷ “Polyharmonic and Related Kernels on Manifolds: Interpolation and Approximation,” University of Alberta, Alberta, Canada, August, 2011. (Individual)

• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

  International
  ▶ Editorial/Board: *Frontiers of Mathematics in China* (Referee: Journals)

  National
  ▶ Committee/Panel: AMS Committee on Education (Member), AMS Council (Member), AMS Graduate Student Travel Grants Panel (Member), AMS Working Group on the Nominee Program (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 2)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 2)

  Fall
  ▶ MATH 368. — Introduction to Abstract Mathematical Structures (total enrollment: 32)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▶ Collaborative Research: Cohomology, Deformations, and Invariants, *National Science Foundation*
  ▶ Collaborative Research: Cohomology, Deformations, and Representations of Algebras, *National Science Foundation*

• PRESENTATIONS DURING 2011
  ▶ “Algebra and Geometry Seminar,” Uppsala University, Sweden, March, 2011. (Individual)


“Representation Theory: Cohomology and Support,” Morningside Center, Beijing, China, September, 2011. (Invited)

**PUBLICATIONS DURING 2011**


CATHERINE HUAFEI YAN

PROFESSOR (979) 845-7554
cyan@math.tamu.edu

MATH-Combinatorics

• SERVICE DURING 2011

National

State
▷ Event: CombinaTexas Conference, Sam Houston State University (Organizer)

Department
▷ Committee/Panel: Powell Chair Search Committee (Member)

• RESEARCH PROJECTS DURING 2011

Federal
▷ A Novel Approach in Enumerative Combinatorics, Department of Defense

• PRESENTATIONS DURING 2011

▷ “Algebra and Combinatorics Seminar,” Texas A&M University, College Station, TX, April, 2011. (Individual)
▷ CombinaTexas, Sam Houston State University, Huntsville, TX, April, 2011. (Invited)
▷ “Department Seminar,” Graduate School of Academic Sinica, July, 2011. (Individual)
• AWARDS DURING 2011
  College
  ▶ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2011
  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 (Chair), Outreach Committee (Member), Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ MATH 221. — Several Variable Calculus (total enrollment: 102)
  ▶ MATH 251(H) — Engineering Mathematics III (total enrollment: 13)
  ▶ MATH 351. — Engineering Mathematics III (total enrollment: 81)

  Fall
  ▶ MATH 151(H) — Engineering Mathematics I (total enrollment: 50)
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 362)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) Collaborative Proposal: Maplets for Calculus, National Science Foundation, coworkers: M. Barry (G), F. Doe (G)
  ▶ 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 2011
> “Electronic Study Guide for Precalculus and Calculus,” Teaching with Technology Conference, Texas A&M University, College Station, TX, February, 2011. (Contributed)
> “Pick’s Theorem,” Texas A&M University Math Club, College Station, TX, February, 2011. (Individual)
> “Platonic Solids,” Harmony Academy, Houston, TX, February, 2011. (Individual)
> “Creating Customized Graphical User Interfaces in Maple,” 23rd International Conference on Technology in Collegiate Mathematics, Denver, CO, March, 2011. (Contributed)
> “Map Coloring,” Circle on the Road/Julia Robinson Festival, Houston, TX, March, 2011. (Invited)
> “Student Programming Projects to Create Pedagogically Effective Calculus Applets,” Technology and Teaching, MathFest, Lexington, KY, August, 2011. (Contributed)
> “Maplets for Calculus: Effective Resource for Teaching and Studying Calculus,” The 16th Asian Technology Conference in Mathematics, Abant Izzet Baysal University, Bolu, Turkey, September, 2011. (Contributed)
• SERVICE DURING 2011

International
▷ Editorial/Board: Hong Kong Research Grant Council (Review: Proposals), Canadian Math Bulletin, Bulletin of the Korean Math Society (Referee: Journals)

National

Department
▷ Event: Number Theory Seminar (Participant), Working Seminar in Number Theory (Organizer)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 414. — Fourier Series and Wavelets (total enrollment: 10)
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 251. — Engineering Mathematics III (total enrollment: 95)
▷ MATH 308. — Differential Equations (total enrollment: 55)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Families of L-Functions and Automorphic Forms, National Science Foundation
▷ Mean Values of L-functions, National Science Foundation

• PRESENTATIONS DURING 2011
▷ Stanford University, Stanford, CA, May, 2011.( Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
▷ Editorial/Board: *Proceedings of London Mathematical Society, Izvestija RAN. Seriya Matematicheskaya* (Referee: Journals)

National

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 251. — *Engineering Mathematics III* (total enrollment: 90)

Fall
▷ MATH 251. — *Engineering Mathematics III* (total enrollment: 97)
▷ MATH 666. — *Seminar in Geometry* (total enrollment: 19)

• PRESENTATIONS DURING 2011

▷ “Vector Distributions and Sub-Riemannian Geometry,” Banach Center, Warsaw, Poland, March, 2011. (Invited)
▷ “Moving Frames in Geometry,” CRM, Montreal, Canada, June, 2011. (Invited)
▷ “Cartan Connections, Geometry of Homogeneous Spaces, and Dynamics,” Erwin Schrödinger International Institute for Mathematical Physics, Vienna, Austria, July, 2011. (Invited)
▷ “Geometry and Topology Seminar,” University of Wisconsin, Madison, WI, November, 2011. (Individual)

• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

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

University
▷ Service Position: Texas A&M University Chinese Student and Scholar Association (Advisor)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ MATH 308. — Differential Equations (total enrollment: 112)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 304. — Linear Algebra (total enrollment: 34)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 651. — Optimization I (total enrollment: 12)
▷ MATH 685. — Directed Studies (total enrollment: 1)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Computational Theory and Methods for Finding Multiple Solutions to Differential Systems, National Science Foundation
▷ Computational Theory and Methods for Solving Differential Multiple Solution Problems, National Science Foundation
▷ US-China Collaboration in Mathematical Research Program, National Science Foundation

• PRESENTATIONS DURING 2011
“An Inequality for a Two-level Domain Decomposition Preconditioner in Processing High-contrast Images,” AMS Meeting 1071, April, 2011. (Invited)


“A Viable Problem Approach for a Two-level Domain Decomposition Preconditioner in Processing High-contrast Images,” Hunan Normal University, Changsha, China, June, 2011. (Individual)

“Solving Multiple Solution Problems: Theory and Methods,” Hunan University, Changsha, China, June, 2011. (Individual)

• PUBLICATIONS DURING 2011


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Professor (J), Statistics, [1988]

• SERVICE DURING 2011
  National
  ▷ Editorial/Board: Annals of Probability, PTRF (Probability Theory and Related Fields),
  Journal of Theoretical Probability, Proceedings of the AMS, Electronic Communications
  in Probability, Studia Mathematica, Illinois Journal of Mathematics (Referee: Journals),
  Journal of Theoretical Probability (Associate Editor)
  College
  ▷ Committee/Panel: Tenure and Promotion Advisory Committee (Member)
  Department
  ▷ Event: Workshop in Linear Analysis and Probability (Co-Organizer)
  ▷ Committee/Panel: Subcommittee P (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ MATH 606. — Theory of Probability I (total enrollment: 8)
  ▷ MATH 691. — Research (total enrollment: 1)
  Summer
  ▷ MATH 433. — Applied Algebra (total enrollment: 14)
  ▷ MATH 691. — Research (total enrollment: 2)
  Fall
  ▷ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 28)
  ▷ MATH 411. — Mathematical Probability (total enrollment: 43)
  ▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ Graduate Assistance in Areas of National Need, Department of Education
  ▷ SM Workshop in Analysis, National Science Foundation

• PRESENTATIONS DURING 2011
  ▷ “Acheson J. Duncan Lectures,” Johns Hopkins University, Baltimore, MD, April, 2011.(Invited)
7. Research Activity, 2011

This section contains information on all funded research activity for the calendar year 2011. 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 2011 = # Days 2011 × Daily Grant Award
# 7.1 Summary of Research Support, 2011

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<th>Grantee</th>
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<td>• Air Force Office of Scientific Research</td>
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<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>58,137</td>
<td>5,827</td>
<td>63,965</td>
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<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>14,022</td>
<td>979</td>
<td>15,000</td>
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<td>Petrova, G.P.</td>
<td>Surface Reconstruction from Point Clouds Using Wavelets</td>
<td>5/1/2009</td>
<td>4/30/2012</td>
<td>166,582</td>
<td>0</td>
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<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>58,137</td>
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<td>63,965</td>
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<td>Rowell, E.C.</td>
<td>Modular Categories and Braid Group Representations</td>
<td>4/1/2010</td>
<td>3/31/2012</td>
<td>14,022</td>
<td>978</td>
<td>15,000</td>
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<td>Stiller, P.F.</td>
<td>Algebro-Geometric Methods in Object Recognition and Shape Reconstruction Across Multiple Sensor Types</td>
<td>8/1/2011</td>
<td>7/31/2014</td>
<td>14,080</td>
<td>6,547</td>
<td>20,626</td>
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<td>Yan, C.</td>
<td>A Novel Approach in Enumerative Combinatorics</td>
<td>2/1/2011</td>
<td>2/1/2013</td>
<td>26,760</td>
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<td>Boggess, A.</td>
<td>Graduate Assistance in Areas of National Need, (with: A. Boggess, S. Geller, P. Lima-Filho, J. Rojas, J. Zinn)</td>
<td>9/1/2006</td>
<td>8/31/2011</td>
<td>12,738</td>
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<th>Title</th>
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<tr>
<td>Zinn, J.</td>
<td>Graduate Assistance in Areas of National Need, (with: A. Boggess, S. Geller, P. Lima-Filho, J. Rojas, J. Zinn)</td>
<td>9/1/2006</td>
<td>8/31/2011</td>
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* Subtotal: Department of Education 63,689 0 63,689

- **Department of Energy**

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<th>Grantee</th>
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<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<tr>
<td>Bangerth, W.</td>
<td>3-D Deep Penetration Neutron Imaging of Thick Absorbing and Diffusive Heterogeneous Objects Using Transport Theory</td>
<td>5/1/2007</td>
<td>4/30/2011</td>
<td>11,537</td>
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* Subtotal: Department of Energy 200,326 14,366 214,692

- **Fund for the Improvement of Postsecondary Education**

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SEC. 7. RESEARCH ACTIVITY 527
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- **Subtotal: Federal Agencies**
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**Industrial/Corporate Agencies**

- **Chevron U.S.A.**

Efendiev, Y.R. Unconditionally Stable Time Stepping in Reservoir Simulation, (with: D. Copeland, Y. Efendiev)

- **Subtotal: Chevron U.S.A.**
  | 398 | 185 | 584 |

- **Halliburton Corporation**
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**INTERNATIONAL AGENCIES**

* **King Abdullah University of Science and Technology**

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**Subtotal: Qatar Foundation**

- **Subtotal: Qatar Foundation**

**Subtotal: International Agencies**

- **Subtotal: Qatar Foundation**

- **Subtotal: International Agencies**

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**Other Government**

- **University of Minnesota**

- **Subtotal: University of Minnesota**

- **University of South Carolina**

- **Subtotal: University of South Carolina**

- **Subtotal: Other Government**

---

**Private/Non-Profit Agencies**

- **Alfred P. Sloan Foundation**

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2011 MATHEMATICS ANNUAL REPORT
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<td>Inverse Problems and Computational Science</td>
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| DeVore, R.A. | Computational Duality | 7/1/2007 | 8/31/2011 | 93,016 | 0 | 93,016 |
| *Subtotal: Princeton University | | | | 93,016 | 0 | 93,016 |

- **Qatar National Research Fund**

| *Subtotal: Qatar National Research Fund | | | | 167,684 | 0 | 167,684 |

- **U.S. Israel Binational Science Foundation**

| Paouris, G. | The Hierarchy of Mass Concentration on Convex Bodies | 9/1/2011 | 8/31/2015 | 3,149 | 0 | 3,149 |
| *Subtotal: U.S. Israel Binational Science Foundation | | | | 3,317 | 0 | 3,317 |

- **United States - Israel Binational Science Foundation**

| Bowen, L. | Ergodic Theory Beyond Amenable Groups | 9/1/2009 | 8/31/2013 | 12,576 | 424 | 13,000 |
| *Subtotal: United States - Israel Binational Science Foundation | | | | 12,576 | 424 | 13,000 |

*Subtotal: Private/Non-Profit Agencies* 301,593 424 302,017

**State Agencies**

- **Region XIII**

| Schielack, J.F. | Interagency Agreement with Region XIII, Austin, Texas | 9/1/2010 | 5/31/2011 | 22,588 | 0 | 22,588 |
| *Subtotal: Region XIII | | | | 22,588 | 0 | 22,588 |

- **Texas A&M University**

| Daripa, P. | Interdisciplinary Research on Complex Flows of Complex Fluids | 1/1/2010 | 5/31/2011 | 1,321 | 0 | 1,321 |
| *Subtotal: Texas A&M University | | | | 1,321 | 0 | 1,321 |

- **Texas Education Agency**

SEC. 7. RESEARCH ACTIVITY 537
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<td>8/31/2011</td>
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* Subtotal: State Agencies

*** Total: All Grantees

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### 7.2 Summary of Individual Support, 2011

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<td>Retention Through Remediation in Pre-Calculus Savings in the Thousands, (with: G. Allen, S. Nite, M. Pilant)</td>
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<td>5/31/2011</td>
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SEC. 7. RESEARCH ACTIVITY 539
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<td>3-D Deep Penetration Neutron Imaging of Thick Absorbing and Diffusive Heterogeneous Objects Using Transport Theory</td>
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- **Boggess, A.**

| Department of Education             | Graduate Assistance in Areas of National Need, (with: A. Boggess, S. Geller, P. Lima-Filho, J. Rojas, J. Zinn) | 9/1/2006    | 8/31/2011   | 12,738 | 0        | 12,738  |

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<th>Title</th>
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<td>Qatar Foundation</td>
<td>Light Bullets, Fractional Vortices, Nonlocal Solitons and Surface Waves for all- Optical information Transmission in Photonic Crystals, Optical Lattices, Dispersion-managed Systems, and Distributed Fibers</td>
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**SEC. 7.**

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- **Howard, P.B.**

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- **Subtotal Howard, P.B.** 49,552 21,606 71,157

- **Johnson, W.B.**

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**Subtotal Zhou, J.** 43,652 11,386 55,037

**Subtotal Zinn, J.** 38,486 0 38,486

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1. Foreword from the Department Head

The Department of Physics and Astronomy has continued to excel in teaching, research, and service. Five undergraduates graduated with Bachelor of Arts degrees in 2011 and ten received Bachelor of Science degrees. Twelve graduate students received Master of Science degrees, and eighteen of our graduate students completed their studies with Doctorates of Philosophy.

Principal Investigators in our department received over $16 million in research funding from various state and federal agencies, and our endowments (which exceed $16 million) contributed over $800 thousand. Among the many outstanding awards and recognition received by our faculty were:

▷ Assistant Professors Artem Abanov and Rainer Fries were granted tenure and promoted to associate professor. Associate Professor Igor Lyuksyutov was promoted to professor.
▷ Prof. Dudley Herschbach was named Distinguished Professor.
▷ Prof. George Kattawar was named 2011 Distinguished Texas Scientist by the Texas Academy of Science.
▷ Prof. Dan Melconian was recognized with a 2011 DOE Early Career Research Award (CA-REER Award).
▷ Prof. Alexei Sokolov received the 2011 JoAnne Treat Research Excellence Award by the TAMU Research Foundation.
▷ Prof. Marlan O. Scully was selected to receive the 2011 Herbert Walther Award of the Optical Society of America.
▷ Prof. Jairo Sinova received an AFS University-level research award and Prof. Chris Pope received an AFS University-level teaching award.
▷ Prof. M. Suhail Zubairy received the 2011 Bush Excellence Award for international research and public service.
▷ Prof. David Toback was one of two campus-wide recipients of the 2011 Honors Teacher/Scholar Award, presented by Texas A&M Honors and Undergraduate Research.
▷ Dr. Jennifer Marshall received the Ethel Ashworth-Tsutsui Memorial Award for Mentoring.

Our department is very active in outreach. In April, 2011 we hosted another in a series of public lectures by world famous cosmologist Stephen Hawking, who maintains his close ties with our department, and brings great recognition to the university. The 2011 annual Physics and Astronomy festival brought in about 4000 visitors for this one-day event. Continued excellence and growth are ensured by our receipt of an inaugural Tier One Program grant.

We also continue to be active in development. In 2011, philanthropist and TAMU alumnus George Mitchell donated 12.5 million dollars to support TAMU’s participation in the Giant Magellan Telescope. This helps to ensure TAMU’s place as a founding member and equal partner in one of the world’s forefront major scientific endeavors of the 21st century. Sheridan Mitchell Lorenz established the Cynthia Woods Mitchell Undergraduate Scholarship for Women in Physics at Texas A&M University. Her gift was matched equally by contributions from 11 physics and astronomy faculty.

Our department made an important transition in leadership in 2011. Prof. Ed Fry stepped down after leading the department for more than 10 years as department head. Prof. George Welch was
named the new head by the dean of the College of Science, and started officially on November 1, 2011. Dr. Fry led us through a time of unprecedented growth. We are looking forward to exciting times as we move forward.
2. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyList_FINAL.

Non-Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyListNonTTF_FINAL.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2010, Fall 2011) 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, Fall 2011) 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>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Tenured and Tenure-Track Faculty</td>
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<td>68</td>
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<tr>
<td>Professor</td>
<td>42</td>
<td>42</td>
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<tr>
<td>Assistant Professor</td>
<td>11</td>
<td>9</td>
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<tr>
<td>Associate Professor</td>
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<td>8</td>
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<tr>
<td>Distinguished Professor</td>
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<td>9</td>
</tr>
<tr>
<td>b. Non-Tenure-Track Faculty</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Visiting Professor</td>
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<td>1</td>
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<tr>
<td>Visiting Assistant Professor</td>
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<td>2</td>
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<tr>
<td>Visiting Associate Professor</td>
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<td>1</td>
</tr>
<tr>
<td>Lecturer</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>1</td>
<td>1</td>
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<tr>
<td>c. Postdoctoral Fellows</td>
<td>42</td>
<td>41</td>
</tr>
<tr>
<td>d. Graduate Majors</td>
<td>177</td>
<td>187</td>
</tr>
<tr>
<td>e. Undergraduate Majors</td>
<td>148</td>
<td>150</td>
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<tr>
<td>f. Support Staff</td>
<td>20</td>
<td>18</td>
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### II. Instructional Activities

<table>
<thead>
<tr>
<th>Activity</th>
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<td>a. Graduate Semester Credit Hours</td>
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<td>b. Undergraduate Semester Credit Hours</td>
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<td>30,349</td>
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<tr>
<td>c. PhD Degrees</td>
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<td>18</td>
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<td>d. Masters Degrees</td>
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<td>12</td>
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<tr>
<td>e. Undergraduate Degrees</td>
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### III. Research Activities

<table>
<thead>
<tr>
<th>category</th>
<th>2010</th>
<th>2011</th>
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<tbody>
<tr>
<td>a. Research Publications</td>
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<td>487</td>
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<tr>
<td>b. Research Presentations</td>
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<td>494</td>
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<td>c. Federal</td>
<td>10,315,575</td>
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<td>d. State</td>
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<td>e. University</td>
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<td>f. Private/Non-Profit</td>
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<td>1,778,750</td>
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<td>g. Industrial/Corporate</td>
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<td>26,130</td>
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<td>h. International</td>
<td>859,638</td>
<td>427,391</td>
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<tr>
<td>i. Other Govt</td>
<td>226,910</td>
<td>246,122</td>
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<tr>
<td>Total</td>
<td>13,401,946</td>
<td>14,614,830</td>
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</table>
3. Honors & Awards, 2011

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2011.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2011.
### 3.1 Honors & Awards Received by Faculty, 2011

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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</thead>
<tbody>
<tr>
<td>A. Finkelstein</td>
<td>Humboldt Senior Scientist Award, Alexander von Humboldt-Stiftung/Foundation</td>
</tr>
<tr>
<td>D. Herschbach</td>
<td>Gold Medal, American Institute of Chemists</td>
</tr>
<tr>
<td></td>
<td>Honorary Doctorate, Harvard University</td>
</tr>
<tr>
<td></td>
<td>Phi Beta Kappa Award for Outstanding Teaching, Harvard University</td>
</tr>
<tr>
<td>T. Kamon</td>
<td>Fellow, DESY/University of Hamburg</td>
</tr>
<tr>
<td>G. Kattawar</td>
<td>Distinguished Texas Scientist, Texas Academy of Science</td>
</tr>
<tr>
<td>D. Melconian</td>
<td>Early Career Research Award, Department of Energy</td>
</tr>
<tr>
<td>C. Pope</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>M. Scully</td>
<td>Herbert Walther Award, Deutsche Physikalische Gesellschaft (DPG) and the Optical Society (OSA)</td>
</tr>
<tr>
<td>J. Sinova</td>
<td>Distinguished Achievement Award - Research, The Association of Former Students</td>
</tr>
<tr>
<td>A. Sokolov</td>
<td>Jo Ann Treat Research Excellence Award, Texas A&amp;M Research Foundation</td>
</tr>
<tr>
<td>M. Zubairy</td>
<td>Bush Excellence Award for Faculty in International Research, George Bush Presidential Library Foundation</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2011

Graduate

- Susan M. Arseven ’75 Make-A-Difference Memorial Award
  Karie Badgley

Undergraduate

- Coleman Loyd Scholarship
  Richard Vega

- Donald F. Hagan ’76 Endowed Scholarship in Physics
  Ben Becker
  Alex Waldrop

- Jack McIntyre Scholarship in Physics
  Deepak Bastola
  Kelsey Red
  Krishna Thapa

- James G. Potter Scholarship
  Ghrisitan Freeman

- Marianne and Robert Hamm Endowed Scholarship
  William Baker
  Kelli Humbird
  Emily Martin
  Catherine Spohnheimer
  Cynthia Trendafilova

- Matthew P. Hodges ’00 Memorial Scholarship
  James C. Perkins

- Physics Undergraduate Scholarship
  Richard Vega
4. Students, 2011

This section contains all degrees awarded, as reported by the department, during the calendar year 2011.
4.1 Graduate Degrees Awarded, 2011

Fall

▷ M.S.
  Samuel David Gooding
  Advisor(s): N. Suntzeff

▷ Ph.D.
  Andrey Lvovich Elagin
  Search for the Higgs Boson Decaying to Two Tau Leptons in Proton-Antiproton Collisions at a Center of Mass Energy of 1.96TeV
  Advisor(s): A. Safonov

  Matthew Edgar McClesky
  Advisor(s): R. Tribble

  Christopher Michael O’Brien
  Advisor(s): O. Kocharovskaya

  Dong Sun
  Extending Coherent Effects from Atomic and Molecular Media to Plasmas and Nanostructures
  Advisor(s): Y. Rostovtsev

Spring

▷ M.S.
  Narangerel Altangerel
  Advisor(s): W. Bassichis

  Michael A Mason
  Advisor(s): D. Toback

  Elizabeth Sheridan Sooby
  Advisor(s): P. McIntyre

▷ Ph.D.
  Lei Bi
  Light Scattering by Ice Crystals and Mineral Dust Aerosols in the Atmosphere
  Advisor(s): G. Kattawar

  Yong Hee Cho
  Electronic States and Optical Transitions in Bulk and Quantum Well Structures of III-V Compound Semiconductors
  Advisor(s): A. Belyanin

  Yu-chieh Chung
  Supersymmetric F-Theory Guy Model
  Advisor(s): K. Becker

  Ariunbold Gombojav
  Ultrafast Cooperative Phenomena in Coherently Prepared Media: From Superfluorescence to Coherent Raman Scattering and Applications
  Advisor(s): M. Scully
Nathaniel Johnston Pogue  
*Dielectric-Loaded Microwave Cavity for High-Gradient Testing of Superconducting Materials*

*Advisor(s): P. McIntyre*

Xi Wang  
*Coherent Anti-Stokes Raman Scattering (CARS) Optimized by Exploiting Optical Interference*

*Advisor(s): A. Sokolov*

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### Summer

▶ **M.S.**

Joy Michelle Chavez  
*Advisor(s): D. Depay*

Jeson Chen  
*Yield Optimization Of Nitrogen Vacancy Centers In Diamond*

*Advisor(s): A. Sokolov*

Nathan Andrew Hart  
*Advisor(s): G. Paulus*

Yang Liu  
*Advisor(s): J. Sinova*

Vaikunth Thukral  
*Advisor(s): D. Toback*

Kechen Wang  
*Advisor(s): B. Dutta*

Jianping Xiao  
*Advisor(s): S. Chin*

Wenlong Yang  
*Advisor(s): A. Sokolov*

▶ **Ph.D.**

Guangyu Guo  
*Higher Derivative D-brane Couplings*

*Advisor(s): K. Becker*

Alfredo Gurrola  
*Search for Heavy Resonances Decaying to Taus in 7 TeV Proton-Proton Collisions at the Large Hadron Collider*

*Advisor(s): T. Kamon*

Abram Michael Krislock  
*Making the Dark Matter Connection between Particle Physics and Cosmology*

*Advisor(s): B. Dutta*

Xiongjun Liu  
*Theory of the Anomalous Hall Effect in the Insulating Regime*

*Advisor(s): J. Sinova*

Hyo-in Park  
*High-Precision Measurements of the Superallowed 38Ca and 46V Decays of 38Ca and 46V*

*Advisor(s): J. Hardy*
Sergio Yanuen Rodriguez Robles
Magnetic and Electronic Properties in Rattling Systems, an Experimental and Theoretical Study
Advisor(s): J. Ross

Matthew Ryan Sears
Application of Irreversible Thermodynamics: Bulk and Interfacial Electronic, Ionic, Magnetic and Thermal Transport
Advisor(s): W. Saslow

Dan Xie
Aspects of Four Dimensional N= 2 Field Theory
Advisor(s): D. Nanopoulos
### 4.2 Undergraduate Degrees Awarded, 2011

<table>
<thead>
<tr>
<th>Semester</th>
<th>Degree</th>
<th>Names</th>
</tr>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td>B.A.</td>
<td>Lewis Barclay Bell, Carolyn Nicole Mcgraw, Edgar Abraham Ochoa, Gleb Zhelezov</td>
</tr>
<tr>
<td></td>
<td>B.A.</td>
<td>Denny Luong</td>
</tr>
<tr>
<td></td>
<td>B.S.</td>
<td>Sean Campbell Grant, Kyle David Kaszynski, John Rayburn Langford, Brian Daniel Oszdolay, Siying Peng, Paul K Robert, Read Mullan Sandstrom, Joseph Benjamin Wallace, Sean Daniel Wu</td>
</tr>
<tr>
<td><strong>Summer</strong></td>
<td>B.A.</td>
<td>Zachary Shea Elewitz</td>
</tr>
</tbody>
</table>
## Atomic and Molecular Optics Seminar

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/6/2011</td>
<td>Weng Chow</td>
<td>Sandia National Labs</td>
<td>Quantum Optics with Semiconductor Quantum Dots</td>
</tr>
<tr>
<td>9/5/2011</td>
<td>Thomas Becker</td>
<td>Max-Planck Institute for Quantum Optics Garching, Germany</td>
<td>The Micromaser: From Quantum Science to Quantum Technology</td>
</tr>
<tr>
<td>9/14/2011</td>
<td>Dudley Herschbach</td>
<td>Texas A&amp;M University</td>
<td>Glimpses of Chemical Wizardry</td>
</tr>
<tr>
<td>9/20/2011</td>
<td>George Welch</td>
<td>Texas A&amp;M University</td>
<td>Nonlinear Optical Detection of Biologically Interesting Molecules</td>
</tr>
<tr>
<td>10/3/2011</td>
<td>Daniil Kartashov</td>
<td>Photonics Institute Vienna University of Technology Vienna, Austria</td>
<td>Filament-ignited Free-space Nitrogen Laser: Problem Overview and First Results</td>
</tr>
<tr>
<td>10/4/2011</td>
<td>Dudley Herschbach</td>
<td>Texas A&amp;M University</td>
<td>Molecular Thermodynamics Visualized</td>
</tr>
<tr>
<td>10/11/2011</td>
<td>Marlan Scully</td>
<td>Texas A&amp;M University</td>
<td>Stimulated and Spontaneous Emission Revisited</td>
</tr>
<tr>
<td>10/18/2011</td>
<td>Dudley Herschbach</td>
<td>Texas A&amp;M University</td>
<td>From Bones and Brains to Batteries</td>
</tr>
<tr>
<td>10/19/2011</td>
<td>Anatoly Svidzinsky</td>
<td>Texas A&amp;M University</td>
<td>Superradiance from N Atoms as a Many-body Eigenvalue Problem</td>
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<tr>
<td>10/25/2011</td>
<td>Alexander Lvovský</td>
<td>University of Calgary, Calgary, Canada</td>
<td>Quantum Engineering of Light and Atoms</td>
</tr>
<tr>
<td>11/1/2011</td>
<td>Dudley Herschbach</td>
<td>Texas A&amp;M University</td>
<td>Group Theory &amp; Molecular Gymnastics</td>
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<tr>
<td>11/8/2011</td>
<td>Tim Phillips</td>
<td>Texas A&amp;M University</td>
<td>Ancient Medicine for Populations at Risk for Aflatoxicosis</td>
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<tr>
<td>11/15/2011</td>
<td>Alexey Belyanin</td>
<td>Texas A&amp;M University</td>
<td>Ultrafast Phenomena and Superfluorescence in a Dense Semiconductor Plasma</td>
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**SEC. 5. COLLOQUIUM AND SEMINAR SPEAKERS**
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
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<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1/20/2011</td>
<td><strong>Paul Padley</strong></td>
<td>Rice University</td>
<td>Cosmology at the Microscopic Scale</td>
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<tr>
<td>1/27/2011</td>
<td><strong>Craig Roberts</strong></td>
<td>Argonne National Laboratory</td>
<td>The Paradox of Emptiness: Much Ado About Nothing</td>
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<tr>
<td>2/3/2011</td>
<td><strong>Gregory Boebinger</strong></td>
<td>National High Magnetic Field Laboratory</td>
<td>Electrons, Energy and Health: The Sometimes Hidden Role of High Magnetic Fields</td>
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<tr>
<td>2/10/2011</td>
<td><strong>Xiangdong Ji</strong></td>
<td>University of Maryland</td>
<td>China Deep Underground Lab and Dark Matter Experiment PandaX</td>
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<tr>
<td>2/17/2011</td>
<td><strong>Ian Hinchcliffe</strong></td>
<td>Berkeley National Laboratory</td>
<td>The First Year of LHC Physics with ATLAS</td>
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<td>2/24/2011</td>
<td><strong>Ward Plummer</strong></td>
<td>Louisiana State University</td>
<td>Emerging Functionality in Complex Oxides Driven by Spatial Confinement</td>
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<td>3/10/2011</td>
<td><strong>Mark Reed</strong></td>
<td>Yale University</td>
<td>CMOS Nanowire Biosensors</td>
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<tr>
<td>3/31/2011</td>
<td><strong>Dieter Heermann</strong></td>
<td>University of Heidelberg</td>
<td>Chromosomes: Loops and Entropy, that’s what it’s all about</td>
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<tr>
<td>4/14/2011</td>
<td><strong>Jonathan Gardner</strong></td>
<td>NASA’s Goddard Space Flight Center</td>
<td>Science with the James Webb Space Telescope</td>
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<tr>
<td>4/21/2011</td>
<td><strong>Mikhail Lukin</strong></td>
<td>Harvard University</td>
<td>Exploring New Frontiers of Quantum Optical Science</td>
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<tr>
<td>10/17/2011</td>
<td><strong>Casey Papovich</strong></td>
<td>Texas A&amp;M University</td>
<td>The Formation of Galaxies and it’s Relation to the Cosmos</td>
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</tbody>
</table>

**SEC. 5.**

**COLOQUIM AND SEMINAR SPEAKERS**
11/3/2011 Nicholas Suntzeff
Texas A&M University
The Accelerating Universe

11/14/2011 Helmut Katzgraber
Texas A&M University
Frustrating Frustrated Problems
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<th>Topic</th>
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<tr>
<td>10/13/2011</td>
<td>Anatoli Polkovnikov</td>
<td>Boston University</td>
<td>Universal Dynamics in Driven Thermally Isolated Systems</td>
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<td>10/21/2011</td>
<td>Valery Pokrovsky</td>
<td>Texas A&amp;M University</td>
<td>Unusual Domain Walls and Other Topological Defects in Helical Magnets</td>
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<tr>
<td>10/28/2011</td>
<td>Oleg Tretiakov</td>
<td>Texas A&amp;M University</td>
<td>Magnetization Dynamics in Translationally Non-invariant Nanowires and Ohmic Losses</td>
</tr>
<tr>
<td>11/1/2011</td>
<td>Klaus Jäger</td>
<td>Delft University of Technology</td>
<td>Improving the Comprehension and Performance of Thin Film Silicon Solar Cells with Scattering Models</td>
</tr>
<tr>
<td>Date</td>
<td>Name</td>
<td>Affiliation</td>
<td>Title</td>
</tr>
<tr>
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<tr>
<td>1/21/2011</td>
<td>Linus Wulff</td>
<td>Texas A&amp;M University</td>
<td>Corrections to Maximally Supersymmetric Yang-Mills</td>
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<tr>
<td>1/28/2011</td>
<td>Sera Cremonini</td>
<td>Texas A&amp;M University</td>
<td>The Story of the Shear Viscosity Bound</td>
</tr>
<tr>
<td>2/7/2011</td>
<td>Fang Chen</td>
<td>McGill University</td>
<td>Supersymmetric Configurations, New Non-Kahler Manifolds and Geometric Transitions as Small Instanton Transition</td>
</tr>
<tr>
<td>2/11/2011</td>
<td>Tianjun Li</td>
<td>Texas A&amp;M University</td>
<td>Gauge Coupling Unification in the Standard Model</td>
</tr>
<tr>
<td>2/18/2011</td>
<td>Dan Xie</td>
<td>Texas A&amp;M University</td>
<td></td>
</tr>
<tr>
<td>2/21/2011</td>
<td>Silviu Pufu</td>
<td>Princeton University</td>
<td>Matrix Models and Einstein Spaces</td>
</tr>
<tr>
<td>2/25/2011</td>
<td>Hong Lu</td>
<td>Texas A&amp;M University</td>
<td>Fake Killing Spinors, Pseudo-supersymmetric p-branes, Bubbling and Less-bubbling AdS Spaces</td>
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<td>2/28/2011</td>
<td>Elena Caceres</td>
<td>University of Texas, Austin</td>
<td>Heating up the Baryonic Branch with U Dualities</td>
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<tr>
<td>3/4/2011</td>
<td>Sean Downes</td>
<td>Texas A&amp;M University</td>
<td>Catastrophic Inflation</td>
</tr>
<tr>
<td>3/7/2011</td>
<td>Amos Yarom</td>
<td>Princeton University</td>
<td>Holographic d-wave Superconductors</td>
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<tr>
<td>3/11/2011</td>
<td>Dan Robbins</td>
<td>Texas A&amp;M University</td>
<td></td>
</tr>
<tr>
<td>3/28/2011</td>
<td>Vijay Kumar</td>
<td>University of California, Santa Barbara</td>
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</tbody>
</table>
Supersymmetric Sigma Models in AdS4

4/4/2011  **Lara Anderson**  
*University of Pennsylvania*  
Geometric Moduli Stabilization in Heterotic Calabi-Yau Vacua

4/11/2011  **Alejandra Castro**  
*McGill University*  
A de Sitter Farey Tail

4/18/2011  **David Morrissey**  
*TRIUMF*  
Signals of Hidden Antibaryonic Dark Matter

4/25/2011  **Phillip Szepietowski**  
*University of Michigan*  
Consistent Massive Truncations of IIB Supergravity

5/9/2011  **Eric Sharpe**

9/9/2011  **David Chow**  
*Texas A&M University*  
How to Discover AdS Black Hole Solutions in Guuged Supergravity

9/19/2011  **Robert Wimmer**  
*Institut Universitaire de France*  
Quantum Energies and Tensorial Central Charges of Confined Monopoles

9/26/2011  **Ben Burrington**  
*University of Toronto*  
Black Hole Thermodynamics in Theories with Lifshitz Regimes

9/30/2011  **Malcolm Perry**  
*Cambridge University*  
Some Generalized Geometry for M-Theory

10/3/2011  **Balt van Rees**  
*C.N. Yang Institute for Theoretical Physics, State University of New York*  
A Natural Language for AdS/CFT Correlators

10/7/2011  **Yi Pang**  
*Texas A&M University*

10/10/2011  **Dionysios Anninos**  
*Stanford University*  
Future Infinity, Solipsism and de Sitter Holography

10/14/2011  **Linus Wulff**  
*Texas A&M University*

10/17/2011  **Ergin Sezgin**  
*Texas A&M University*
(1,0) Superconformal Models in Six Dimensions

10/24/2011  Arnab Kundu  
*University of Texas, Austin*  
Minimal Holographic Superconductors from Maximal Supergravity

10/31/2011  Omid Saremi  
*University of California, Berkeley*  
Holography and Transport Phenomena

11/7/2011  Henning Samtleben  
*Institut Universitaire de France*  
On the Structure of String States on AdS5 x S5

11/11/2011  Andrey Zayakin  
*Università di Perugia*  
Exact One-loop Strong Coupling Results for String Spectrum in AdS4 x CP3 Versus the All-loop Bethe Ansatz

11/11/2011  Andrey Zayakin  
*Università di Perugia*  
Exact One-loop Strong Coupling Results for String Spectrum in AdS4 x CP3 Versus the All-loop Bethe Ansatz

11/14/2011  Simone Giombi  
*Perimeter Institute*  
Chern-Simons Theory with Vector Fermion Matter

11/18/2011  Andrew Neitzke  
*University of Texas, Austin*

11/21/2011  Roberto Percacci  
*Scuola Internazionale Superiore di Studi Avanzati*

12/2/2011  Dhagash Mehta  
*Syracuse University*

12/2/2011  Dhagash Mehta  
*Syracuse University*

12/5/2011  Michael Gutperle  
*University of California, Los Angeles*  
Higher Spin Black Holes

12/12/2011  Scott Watson  
*Syracuse University*  
Higher Spin Black Holes
Nuclear Physics

1/11/2011 Megan Bennett
University of Nevada
Extraction Chromatographic Studies of Rf (Z=104) Homologs Using Crown Ether Based Resins

1/18/2011 N. Nica
Texas A&M University
How to Draw a Level Scheme?

1/21/2011 Jun Xu
Triangular Flow and Dihadron Azimuthal Correlations in Heavy Ion Collisions

2/15/2011 Aldo Bonasera
Texas A&M University
Probing the Nuclear Equation of State

2/22/2011 Roy Wada
Texas A&M University
Hot Nuclear Matter Properties and Reaction Dynamics in Intermediate Heavy Ion Reactions

3/8/2011 Sakir Ayik
Tennessee Tech University
A Stochastic Mean-Field Approach For Nuclear Dynamics

3/15/2011 L.G. Sobotka
Washington University, St. Louis
The Asymmetry Enthalpy- Hasy

3/23/2011 Robert Atcher
US Department of Energy
The US Isotope Production Program

4/15/2011 Michael Strickland
Gettysburg College
Dynamics of an Anisotropic Quark Gluon Plasma

4/21/2011 Pibero Djawotho
Texas A&M University
Gluon Polarization Measurements with STAR

4/29/2011 Paul Hohler
University of Illinois, Chicago
Bulk Spectral Function Sum Rule in QCD-like Theories with a Holographic Dual

5/10/2011 J. Stone
Oxford University
Nuclear Matter and Giant Resonance Constraints on Models of Nucleon-Nucleon Interaction

5/11/2011 N. Stone
Oxford University

SEC. 5. COLLOQUIUM AND SEMINAR SPEAKERS
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/19/2011</td>
<td>Vitaly Efimov</td>
<td>University of Washington</td>
<td>Giant Quantum Few-body Systems</td>
</tr>
<tr>
<td>5/26/2011</td>
<td>Igal Talmi</td>
<td>Weizmann Institute of Science</td>
<td>The Nuclear Shell Model - Older than 60 Years</td>
</tr>
<tr>
<td>6/8/2011</td>
<td>Woosuk Bang</td>
<td>University of Texas, Austin</td>
<td>Cluster Fusion Experiment on the Texas Petawatt</td>
</tr>
<tr>
<td>6/13/2011</td>
<td>Dennis McNabb</td>
<td>Lawrence Livermore National Laboratory</td>
<td></td>
</tr>
<tr>
<td>8/2/2011</td>
<td>Marco Mazzocco</td>
<td>Sezione di Padova</td>
<td>Reaction Dynamics Studies with the Facility EXOTIC at LNL</td>
</tr>
<tr>
<td>8/16/2011</td>
<td>George Souliotis</td>
<td>Texas A&amp;M University</td>
<td>Production of Neutron-rich Nuclei towards the r-process Path in Peripheral Heavy-ion Collisions at 15 MeV/nucleon</td>
</tr>
<tr>
<td>9/13/2011</td>
<td>Kenneth Nollett</td>
<td>Argonne National Laboratory</td>
<td>Ab Initio Nuclear Widths, Real and Virtual</td>
</tr>
<tr>
<td>9/20/2011</td>
<td>Andrzej Wieloch</td>
<td>Jagiellonian University</td>
<td>Critical-like Behavior in a Lattice Gas Model</td>
</tr>
<tr>
<td>9/27/2011</td>
<td>Gerd Roepke</td>
<td>Rostock University</td>
<td>Cluster Formation in Nuclear Systems</td>
</tr>
<tr>
<td>10/31/2011</td>
<td>Claudio Dorso</td>
<td>University of Buenos Aires</td>
<td>From Nuclei to Neutron Stars</td>
</tr>
<tr>
<td>11/7/2011</td>
<td>Charles Folden, III</td>
<td>Texas A&amp;M University</td>
<td>Introduction to the Heaviest Elements</td>
</tr>
</tbody>
</table>
6. Faculty*, 2011

Artem G. Abanov ............................................. Associate Professor
Thomas W. Adair ........................................... Professor
Glenn Agnolet ............................................... Professor
Roland E. Allen ........................................... Professor
Richard L. Arnowitt ................................... Distinguished Professor Emeritus (A)
William H. Bassichis ................................... Professor
Katrin Becker ............................................... Professor
Melanie Becker ........................................... Professor
Alexey A. Belyanin ........................................ Professor
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 ............................................ Associate Professor
Edward S. Fry ............................................. Distinguished Professor
Stephen A. Fulling ......................................... Professor (J)
Carl A. Gagliardi .......................................... Professor
John C. Hardy ............................................. Distinguished Professor
Harlan R. Harris ......................................... Assistant Professor (J)
Dudley Herschbach .................................... Distinguished 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
Vitaliy V. Kocharovsky ................................ Professor
Kevin Krisciunas .......................................... Lecturer
Jaan Laane ................................................. Professor (J)
David M. Lee ............................................. Professor
Igor F. Lyuksyutov ...................................... Professor
Lucas Macri ............................................... Assistant Professor
Rupak Mahapatra ........................................ Assistant Professor
Peter M. McIntyre ........................................ Professor
Dan G. Melconian ........................................ Assistant Professor
Saskia Mioduszewski ............................. Associate Professor
Dimitri V. Nanopoulos ................................ Distinguished Professor
Donald G. Naugle ......................................... Professor
Casey Papovich ........................................... 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. Salonov ........................................ 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 2011 (01/01/2011-12/31/2011).
6.1 Professional Activities, 2011

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2011.

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 2011.
▷ 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 2011.
▷ 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 2011

International
▷ Event: Finkel’stein Seminar (Organizer)
▷ Editorial/Board: Research Council of Romania (Review: Proposals), Various International Journals (Referee: Journals)

National

Department
▷ Event: Condensed Matter Lunch (Organizer), Condensed Matter Seminar (Organizer), Newspin2 Conference (Organizer), Physics Festival (Contributor)
▷ Committee/Panel: Admission Committee (Member), Qualifying Exam (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 208. — Electricity and Optics (total enrollment: 95)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

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

• RESEARCH PROJECTS DURING 2011

Federal
▷ Laplacian Growth, Stochasticity, and Selection, National Science Foundation

Private
▷ (REN) Quantum Coherent Synthesis and Decomposition, The Robert A. Welch Foundation, coworkers: O. Tretiakov (P), Y. Liu (G), J. Liu (G)
▷ Quantum Coherent Synthesis and Decomposition, The Robert A. Welch Foundation, coworkers: O. Tretiakov (P), Y. Liu (G), J. Liu (G)

• PRESENTATIONS DURING 2011
“Current Driven Domain-Wall Dynamics,” Physics Seminar; Texas Christian University, Fort Worth, TX, January, 2011. (Invited)


“Large Thermoelectric Figure of Merit for 3D Topological Anderson Insulators via Line Dislocation Engineering,” Condensed Matter Seminar; University of California, San Diego, CA, January, 2011. (Invited)

“Topological Thermoelectrics,” Joint MSE and Physics Colloquium; University of California, Riverside, CA, January, 2011. (Invited)

“Dynamics of Topologically Protected Domain Walls,” Condensed Matter Theory Seminar; University of Massachusetts, Amherst, MA, February, 2011. (Invited)


“Large Thermoelectric Figure of Merit for Three-dimensional Topological Anderson Insulators via Line Dislocation Engineering,” APS March Meeting, Dallas, TX, March, 2011. (Contributed)

“Minimization of Ohmic Losses for Domain Wall Motion in Ferromagnetic Nanowires,” APS March Meeting, Dallas, TX, March, 2011. (Contributed)

“Topological Thermoelectrics,” Joint Meeting of the Texas Section of the American Physical Society and TSAAPT, Nacogdoches, TX, March, 2011. (Contributed)

“How to Manipulate Magnetic Domain Walls by Current,” Physics Department Colloquium; Towson University, Towson, MD, May, 2011. (Invited)


“Holey and Dirty Topological Thermoelectrics,” Physics Department, Massachusetts Institute of Technology, Cambridge, MA, August, 2011. (Invited)


“Topological Thermoelectrics,” Institute for Quantum Computing, University of Waterloo, Canada, September, 2011. (Invited)

“Topological Thermoelectrics,” Physics, Chemistry, and Nanosciences Colloquium; Sandia National Labs, Albuquerque, NM, September, 2011. (Invited)

“Topological Thermoelectrics,” Southwest Academy of Nanoelectronics, Austin, TX, September, 2011. (Poster Contributed)

“Topological Thermoelectrics,” TECHCON 2011, Austin, TX, September, 2011. (Contributed)

“Control of Magnetization Dynamics,” Physics Department Colloquium; Montana State University, Bozeman, MT, October, 2011. (Invited)

“Magnetization Dynamics in Translationally Non-invariant Nanowires and Ohmic Losses,” Texas A&M University, College Station, TX, October, 2011. (Invited)


“How to Manipulate Magnetization with Current,” Newspin2 International Conference, College Station, TX, December, 2011. (Individual)


“Thermoelectric Efficiency of Dirty and Holey Topological Insulators,” Newspin2 International Winter School and Workshop; Texas A&M University, College Station, TX, December, 2011. (Contributed)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011

National
▷ Professional Affiliation: NCAA Faculty (Athletic Representative)
▷ Committee/Panel: NCAA Academic/Eligibility/Compliance Cabinet (Member), NCAA Continuing Eligibility Sub-Committee of Cabinet (Chair)

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)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 192)
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 192)

Fall
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 127)
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 127)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2011
  
  **State**
  ▶ Event: Low Temperature Physics Extravaganza Joint Meeting of the Texas Section APS (Speaker)

  **College**
  ▶ Event: Low Temperature Demonstrations for Texas Junior Science and Humanities Symposium (Presenter)

  **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 2011

  **Spring**
  ▶ PHYS 607. — Statistical Mechanics (total enrollment: 56)

  **Fall**
  ▶ PHYS 221. — Optics and Thermal Physics (total enrollment: 31)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2011**
  **College**
  - Committee/Panel: Tenure and Promotion Advisory Committee (Member)

  **Department**
  - Event: Physics and Astronomy Library (Representative), Physics Festival (Organizer)

• **TEACHING ASSIGNMENTS DURING 2011**
  **Summer**
  - PHYS 201. — **College Physics** (total enrollment: 51)
  - PHYS 202. — **College Physics** (total enrollment: 43)

  **Fall**
  - PHYS 408. — **Thermodynamics and Statistical Mechanics** (total enrollment: 23)
  - PHYS 607. — **Statistical Mechanics** (total enrollment: 30)

• **PRESENTATIONS DURING 2011**
  - “Response of Materials and Molecules to Fast Intense Laser Pulses,” Workshop on Large Scale Simulations in Materials Science and Biophysics Arizona State University, Tempe, AZ, January, 2011.( Invited)
  - “Optimizing Laser Pulses for Controlled Excitation of Materials and Molecules,” Meeting of the American Physical Society, Dallas, TX, March, 2011.( Individual)
  - “Mechanism for Family Replication in Supersymmetric SO(10),” Meeting of the American Physical Society, Anaheim, April, 2011.( Individual)

• **PUBLICATIONS DURING 2011**
Physics Beyond the Standard Models of Particles, Cosmology and Astrophysics, ed. Klapdor-Kleingrothaus, H.V.; Krivosheina, I.V.; Viollier, R.
• CHAIRS/PROFESSORSHIPS
  ▷ Presidential Professor for Teaching Excellence [2003]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Undergraduate Advisor, Physics Undergraduate Advising Office, Physics and Astronomy, [2007]

• TEACHING ASSIGNMENTS DURING 2011
  
  Spring
  ▷ PHYS 101. — Topics in Contemporary Physics (total enrollment: 53)
  ▷ PHYS 208. — Electricity and Optics (total enrollment: 179)
  ▷ PHYS 485. — Directed Studies (total enrollment: 1)
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 1)

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

  Fall
  ▷ PHYS 218. — Mechanics (total enrollment: 236)
  ▷ PHYS 691. — Research (total enrollment: 1)
• SERVICE DURING 2011
  National
  ▷ Editorial/Board: *JHEP Nuclear Physics B* (Referee: Journals)
  Department
  ▷ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ PHYS 615. — *Methods of Theoretical Physics I* (total enrollment: 16)
  ▷ PHYS 691. — *Research* (total enrollment: 3)
  Summer
  ▷ PHYS 691. — *Research* (total enrollment: 2)
  Fall
  ▷ PHYS 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  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 2011
  ▷ University of Michigan, Ann Arbor, MI, February, 2011.( Individual)
  ▷ “Topological Heterotic Strings and (0,2) Mirror Symmetry Conference,” Erwin Schroedinger Institute, Vienna, June, 2011.( Individual)
  ▷ String-Math, PA, June, 2011.( Contributed)

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Professor (J), Physics (Qatar), Texas A&M University - Qatar, /2010/

• SERVICE DURING 2011
  International
  ▶ Committee/Panel: International Advisory Committee of the String-Math Conference
    (Member)
  National
  ▶ Editorial/Board: *Major Physics Journals, JHEP and Nuclear Physics* (Referee: Journals)
  ▶ Committee/Panel: National Science Foundation (Panelist)
  Department
  ▶ Event: Generalized Geometries in String Theory (Organizer), String Theory and Calibrated Geometry (Organizer)
  ▶ Committee/Panel: Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ PHYS 208(H) — *Electricity and Optics* (total enrollment: 30)
  ▶ PHYS 208. — *Electricity and Optics* (total enrollment: 15)
  Summer
  ▶ PHYS 685. — *Directed Studies* (total enrollment: 1)
  ▶ PHYS 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ FRG: Collaborative Research: Generalized Geometries in String, *National Science Foundation*
  ▶ (REN) Strings, Branes, and the Search for Unification, *National Science Foundation*
  ▶ Strings, Branes, and the Search for Unification, *National Science Foundation*

• PUBLICATIONS DURING 2011

598  2011 physics and astronomy annual report
• SERVICE DURING 2011

International
▷ Event: Annual International Conferences Novel In-Plane Semiconductor Lasers (Organizer)
▷ Committee/Panel: Annual International Conferences Novel In-Plane Semiconductor Lasers (Chair)

National
▷ Service Position: Society of Physics Students (Advisor)
▷ Event: Aspen Summer Workshop (Participant)
▷ Editorial/Board: National Science Foundation (Panelist), National Science Foundation (Review: Proposals), PRL, PRA, PRB, Optics Letters, Nano Letters, APL, AJP, Optics Express, IEEE Journal of Quantum Electronics, and other Journals (Referee: Journals)

Department
▷ Event: Physics Festival (Presenter)
▷ Committee/Panel: Department Head Search Committee (Member), Program Committee (Member), PTA (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 649. — Physics of Optoelectronic Devices (total enrollment: 11)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 218. — Mechanics (total enrollment: 45)
▷ PHYS 691. — Research (total enrollment: 3)

Fall
▷ PHYS 302. — Advanced Mechanics (total enrollment: 22)
▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011

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, coworkers: Y. Wang (G)

Engineering Research Center (ERC) on Mid-Infrared Technologies for Health and Environment (MIRTHE), National Science Foundation, coworkers: A. Wojcik (P), F. Xie (G)

(REN) PIRE: US-Japan Cooperative Research and Education on Terahertz Dynamics in Nanostructures, National Science Foundation, coworkers: X. Yao (G)

PIRE: US-Japan Cooperative Research and Education: Ultrafast and Nonlinear Optics in 6.1-Angstrom Semiconductors, National Science Foundation, coworkers: V. Chaganti (G), Y. Wang (G)

State

Room-Temperature Electrically-Pumped Semiconductor Sources of THz Radiation, Texas Higher Education Coordinating Board, coworkers: Y. Cho (G), Y. Wang (G)

PRESENTATIONS DURING 2011

- “Theory and Design of Smith-Purcell Semiconductor THz Sources,” Proceeding 36th International Conference IRMMW-THz, 2011. (Contributed)
- “Mode Locking and Synchronization in Quantum Cascade Lasers,” Texas A&M University, College Station, TX, January, 2011. (Invited)
- “Smith-Purcell Semiconductor THz Sources,” SPIE Photonics West, San Francisco, CA, January, 2011. (Contributed)
- “Room-Temperature Semiconductor Sources of Coherent THz Smith-Purcell Radiation,” Santa Barbara, CA, March, 2011. (Contributed)
- “Stimulated Terahertz Smith-Purcell Radiation in Planar Gunn Diodes,” APS March Meeting, Dallas, TX, March, 2011. (Contributed)
- “Nonlinear Optical Interactions in Quantum Cascade Lasers: Intracavity Frequency Conversion, Phase Synchronization, and Mode Locking,” Purdue University, Lafayette, IN, April, 2011. (Individual)
- “Physics and Applications of Semiconductor Nanostructures,” University of Jena, Jena, Germany, June, 2011. (Individual)
- “Nanooptics and Optics of Nanostructures,” Rice University, Houston, TX, July, 2011. (Invited)
- “Terahertz Studies of Collective Excitations in InSb Magneto-plasma,” 15th Int. Conference on Narrow Gap Semiconductors NGS15, Virginia Tech, Blacksburg, VA, August,
2011. (Invited)
▷ “Ultrafast Phenomena and Superfluorescence in a Dense Semiconductor Plasma,” Physics Department at the University of Alabama, Tuscaloosa, AL, November, 2011. (Individual)
▷ “Ultrafast Phenomena and Superfluorescence in Semiconductors,” Texas A&M University, College Station, TX, November, 2011. (Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

Department
  ▷ Committee/Panel: Awards Committee (Member)

*Retired 01/14/2011.*

*No report received from faculty member.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Undergraduate Advisor, Physics and Astronomy, //

• SERVICE DURING 2011

  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 2011

  Spring
  ▶ PHYS 401. — Computational Physics (total enrollment: 20)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Summer
  ▶ PHYS 222. — Modern Physics for Engineers (total enrollment: 40)
  ▶ PHYS 222. — Modern Physics for Engineers (total enrollment: 40)
  ▶ PHYS 691. — Research (total enrollment: 2)

  Fall
  ▶ PHYS 601. — Analytical Mechanics (total enrollment: 16)
  ▶ PHYS 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2011
  ▶ “Path Integral Monte Carlo, the Sign Problem and Quantum Dots,” The State University of New York, Buffalo, NY, April, 2011. (Individual)
  ▶ “Path Integral Monte Carlo, the Sign Problem and Quantum Dots,” Texas A&M University, College Station, TX, May, 2011. (Individual)
“Path Integral Monte Carlo, the Sign Problem and Quantum Dots,” Kepler University, Linz, Austria, May, 2011. (Individual)


- PUBLICATIONS DURING 2011
• SERVICE DURING 2011

National

Department
▷ Committee/Panel: Awards Committee (Chair)

*Retired 01/15/2011.*
DARREN L. DEPOY
PROFESSOR
PHYS-Astronomy
depoy@physics.tamu.edu

- CHAIRS/PROFESSORSHIPS
  - Rachal/Mitchell/Heep Endowed Professorship in Physics [2008]

- SERVICE DURING 2011
  
  **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 2011

  **Spring**
  - ASTR 685. — Directed Studies (total enrollment: 5)
  - PHYS 491. — Research (total enrollment: 1)

  **Summer**
  - ASTR 685. — Directed Studies (total enrollment: 3)
  - PHYS 485. — Directed Studies (total enrollment: 1)

  **Fall**
  - ASTR 685. — Directed Studies (total enrollment: 2)
  - PHYS 485. — Directed Studies (total enrollment: 3)

- RESEARCH PROJECTS DURING 2011

  **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)

  *No report received from faculty member.*

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No report received from faculty member.
BHASKAR DUTTA

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• SERVICE DURING 2011

National

Department
▷ Event: Workshop on Aspects of Inflation (Organizer)
▷ Committee/Panel: Graduate Admission Committee (Member), Graduate Curriculum Committee (Chair), Promotion and Tenure Committee (Chair), Subcommittee in the Undergraduate Curriculum Committee (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 689. — Special Topics in (total enrollment: 19)
▷ PHYS 691. — Research (total enrollment: 5)

Summer
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 685. — Directed Studies (total enrollment: 2)
▷ PHYS 691. — Research (total enrollment: 4)

Fall
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy, coworkers: K. Sinha (P), S. Campbell (G), A. Krislock (G), K. Wang (G), S. Downes (U)

• PRESENTATIONS DURING 2011
▷ “Inflation and Supersymmetry Breaking in the Landscape,” University of New Mexico, NM, March, 2011. (Postdoc)
$\triangleright$ “Bi-Event Subtraction Technique,” PHENO, Madison, WI, May, 2011. (Graduate, A. Krislock)


$\triangleright$ “Particle Velocity Effects in the Anisotropy of Extragalactic Diffuse Gamma-rays from Dark Matter Annihilation,” DM Workshop, Albuquerque, NM, May, 2011. (Graduate, S. Campbell)

$\triangleright$ “Particle Velocity Effects in the Anisotropy of Extragalactic Diffuse Gamma-rays from Dark Matter Annihilation,” PHENO, Madison, WI, May, 2011. (Graduate, S. Campbell)


$\triangleright$ “Catastrophic Inflation at XXXIX SLAC Summer Institute,” SLAC National Accelerator Laboratory, Menlo Park, CA, July, 2011. (Poster Individual)

$\triangleright$ “Catastrophic Inflation,” The State University of New York, New York, NY, August, 2011. (Postdoc)

$\triangleright$ “Cosmological Connection of SUSY Models at the LHC,” 19th International Conference on Supersymmetry and Unification Fundamental Interactions, August, 2011. (Individual)


$\triangleright$ “Clues for Identifying Dark Matter Through Indirect Detection,” University of New Mexico, NM, October, 2011. (Individual)

$\triangleright$ “Universal Behavior in Inflationary Cosmology,” Joint Fall Meeting of the Texas Sections of the APS, October, 2011. (Poster Graduate, S. Downes)

$\triangleright$ “Proton Decay and a Minimal SO(10) Model Fundamental Physics,” The Intensity Frontier, Rockville, MD, November, 2011. (Individual)


**PUBLICATIONS DURING 2011**


Dutta, B.; Mimura, Y.; Santoso, Y. (2011) $B_{s} \rightarrow \mu + \mu^{-}$ in Supersymmetric Grand Unified Theories *Physics Letters B*, vol. 706, 188.
• SERVICE DURING 2011

Regional
▷ Event: Physics Camp for the Youth Adventure Program (Organizer)

Department
▷ Event: 22 Physics Shows (Demonstration Coordinator), Physics Festival (Organizer), Shadow Program (Organizer)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 208. — Electricity and Optics (total enrollment: 94)

Summer
▷ ENGR 289. — Special Topics in (total enrollment: 32)

Fall
▷ PHYS 218. — Mechanics (total enrollment: 196)

• PUBLICATIONS DURING 2011

RICARDO EUSEBI

ASSISTANT PROFESSOR
PHYS-High Energy Physics

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• CHAIRS/PROFESSORSHIPS
  ▷ Mitchell-Heep-Munnerlyn Endowed Career Enhancement Professorship in Physics or Astronomy /2010/

• SERVICE DURING 2011
  National
  ▷ Editorial/Board: Internal Proposal Grants in Sam Houston University (Reviewer), PLT Project at CMS (Reviewer), Proceedings for the TIP2011 Conference (Reviewer)
  Department
  ▷ Committee/Panel: Graduate Records Committee (Member), High Energy Physics Representative (Member), High Energy Physics Seminar Organizer (Chair)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ PHYS 218. — Mechanics (total enrollment: 122)
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  Fall
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)

• PRESENTATIONS DURING 2011
  ▷ “Software Implementation for the Characterization of Silicon Pixel Detector,” APS Meeting, 2011.(Poster Individual)
  ▷ “Beam Quality Monitoring with the CDF BCM Diamonds,” University of Toronto, Canada, September, 2011.(Individual)

• PUBLICATIONS DURING 2011
• AWARDS DURING 2011
  International
  › Humboldt Senior Scientist Award, Alexander von Humboldt-Stiftung/Foundation

• SERVICE DURING 2011
  International
  › Event: International Winter School and Workshop (Co-Organizer)
  National
  › Editorial/Board: National Science Foundation (Review: Proposals)
  Department
  › Event: Condensed Matter Seminars (Co-Organizer)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  › PHYS 208. — Electricity and Optics (total enrollment: 59)
  › PHYS 691. — Research (total enrollment: 2)
  Summer
  › PHYS 691. — Research (total enrollment: 2)
  Fall
  › PHYS 208. — Electricity and Optics (total enrollment: 167)
  › PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011
  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 2011
  › “Transverse Transport in Superconducting Films,” University of Utah, Salt Lake City, UT, April, 2011.( Individual)
“Effects of Interaction and Nonlinearity for Propagation in Disordered Medium,” APCTP Conference on Localization POSCO International Center, Pohang, South Korea, August, 2011. (Invited)


A. LEWIS FORD

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- **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Associate Department Head, Physics and Astronomy, [1993]

- **SERVICE DURING 2011**
  
  **College**
  - Event: Science Bowl (Reviewer), Texas Junior Science and Humanities Symposium (Judge)
  - Ad Hoc Committee: COS Institutional Effectiveness Committee (Member)
  - Committee/Panel: Qatar Advisory Committee (Member), Teaching Lab Safety Committee (Member)

  **Department**
  - Event: Chemistry Open House (Participant), Physics Festivals (Participant)
  - Ad Hoc Committee: Budget Reduction Committee (Chair), TA Reduction Committee (Member)
  - Committee/Panel: Graduate Credentials and Records Committee (Chair)

- **TEACHING ASSIGNMENTS DURING 2011**
  
  **Spring**
  - PHYS 202. — **College Physics** (total enrollment: 249)
  - PHYS 285. — **Directed Studies** (total enrollment: 7)

  **Fall**
  - PHYS 201. — **College Physics** (total enrollment: 264)
  - PHYS 285. — **Directed Studies** (total enrollment: 5)
• SERVICE DURING 2011

National
▷ Editorial/Board: Department of Energy (Review: Proposals), Physical Review C and Nuclear Physics A (Referee: Journals)

Department
▷ Research Group: Collaboration Executive Committee (Member), Recombination Working Group in the JET Collaboration; (Convener)
▷ Event: Saturday Morning Physics (Organizer)
▷ Committee/Panel: Cyclotron Institute Space Allocation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 601. — Analytical Mechanics (total enrollment: 20)
▷ PHYS 691. — Research (total enrollment: 1)

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

Fall
▷ PHYS 218. — Mechanics (total enrollment: 153)
▷ PHYS 685. — Directed Studies (total enrollment: 2)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ A Topical Collaboration on Quantitative Jet and Electromagnetic Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions, Department of Energy, coworkers: G. Chen (G)
▷ New Theoretical Developments in High Energy Nuclear Collisions, National Science Foundation, coworkers: M. He (P), S. Somananthan (G)

• PRESENTATIONS DURING 2011
▷ “Heavy Quark Diffusion and Hadronization in Dense Matter.” Workshop on Heavy-Quark Production in Heavy-Ion Collisions, Purdue University, West Lafayette IN, January, 2011. (Invited)
“Quark Recombination and Heavy Quarks,” 6th Workshop on High-PT Physics at LHC, Utrecht, The Netherlands, April, 2011. (Invited)
“Quark Recombination and Heavy Quarks,” Nuclear Physics Seminar, University of Minnesota, Minneapolis, MN, April, 2011. (Individual)
“Quark Recombination and Heavy Quark Diffusion,” Quark Matter, Annecy, France, May, 2011. (Contributed)
“Heavy Flavor Diffusion and Hadronization in Quark-Gluon Plasma,” RHIC & AGS Annual Users’ Meeting, Brookhaven National Laboratory, Upton NYU, June, 2011. (Invited)
“Quark-Gluon Plasma: From QCD Thermodynamics to Heavy Ion Collision Phenomenology,” Shanghai Jiaotong University, Shanghai, China, October, 2011. (Individual)
“Quark-Gluon Plasma: From QCD Thermodynamics to Heavy Ion Collision Phenomenology,” Tsinghua University, Beijing, China, October, 2011. (Individual)
“Quark-Gluon Plasma: From QCD Thermodynamics to Heavy Ion Collision Phenomenology,” Nanjing University, Nanjing, China, November, 2011. (Individual)
“Quark-Gluon Plasma: From QCD Thermodynamics to Heavy Ion Collision Phenomenology,” University of Science & Technology of China, Hefei, China, November, 2011. (Individual)
“Toward a Complete Description of Heavy Flavor Transport in Medium,” 7th International Workshop on the Critical Point and Onset of Deconfinement, Wuhan, China, November, 2011. (Invited)

PUBLICATIONS DURING 2011

Fries, R.J. (2011) Quark Recombination in Heavy Ion Collisions.


EDWARD S. FRY
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• CHAIRS/PROFESSORSHIPS
  ▶ George P. Mitchell ’40 Chair in Experimental Physics [2005/]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Associate Head for Development, Physics and Astronomy, [2012]

• SERVICE DURING 2011
  National
  University
  ▶ Committee/Panel: Texas Institute for Advanced Studies (Deputy Director)
  College
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ PHYS 691. — Research (total enrollment: 2)
  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011
  Private
  ▶ 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 2011


“Determinism, Einstein, and Quantum Mechanics,” Saturday Morning Physics, Texas A&M University, College Station, TX, February, 2011. (Invited)

“The Department of Physics & Astronomy at Texas A&M,” Chancellor’s Century Council, Texas A&M University, College Station, TX, April, 2011. (Invited)

“Einstein and Action-at-a-Distance or Determinism, Einstein, and Quantum Mechanics,” Texas A&M University-Princeton Summer School on Quantum Optics, Jackson Hole, WY, July, 2011. (Invited)

“Instrumentation Concepts to Measure the Inherent Optical Properties - Absorption and Backscattering,” Texas A&M University, College Station, TX, August, 2011. (Invited)

“Determinism, Einstein, and Quantum Mechanics,” Tulane University, New Orleans, LA, September, 2011. (Invited)

“Determinism, Einstein, and Quantum Mechanics,” NSBP and NSHP Joint Annual Conference, Austin, TX, September, 2011. (Invited)


PUBLICATIONS DURING 2011


• SERVICE DURING 2011

National
▷ Editorial/Board: Department of Energy, National Science Foundation (Review: Proposals)
▷ Committee/Panel: Annual RHIC & AGS Users’ Group Meeting Organizing Committee (Co-Chair), Brookhaven National Laboratory Nuclear and Particle Physics Program Advisory Committee (Panel Member), DOE/NSF Nuclear Science Advisory Committee (Member), RHIC and AGS Thesis Prize Selection Committee (Member), RHIC & AGS Users Group Executive Committee (Past Chair), STAR Decadal Plan Committee (Chair), STAR Tigger Board, Spring (Member)

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

Department
▷ Ad Hoc Committee: Physics 218/208 Textbook Selection (Member), Qualifying Exam Committee (Member)
▷ Committee/Panel: Cyclotron Institute Computer Committee (Chair), Cyclotron Institute Injury Reduction Committee (Member), Performance Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 606. — Quantum Mechanics (total enrollment: 17)
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 218. — Mechanics (total enrollment: 109)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy
▷ (REN) Fundamental Studies in Nuclear Science, Department of Energy, coworkers: P. Djawotho (P), Z. Chang (G), 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 2011
  ▶ “Exploring the Proton Spin with STAR,” Physics Department, Yale University, New Haven, CT, February, 2011. (Individual)
  ▶ “Gluon Polarization and Jet Production at STAR,” Department of Physics and Astronomy, Stony Brook University, Stony Brook, NY, February, 2011. (Postdoc)
  ▶ “Exploring the Proton Spin with STAR,” Physics Department, University of Houston, Houston, TX, March, 2011. (Individual)
  ▶ “Exploring the Proton Spin with STAR,” Physics Department, Penn State University, State College, PA, April, 2011. (Individual)
  ▶ “Gluon Polarization Measurements with STAR,” 4th Workshop APS Topical Group on Hadronic Physics, Anaheim, CA, April, 2011. (Postdoc)
  ▶ “π^{0}—Charged Particle Correlations at 2.5 < \eta < 4.0 from p+p Collisions at \sqrt{s} = 200 GeV,” Annual Meeting DNP, East Lansing, MI, October, 2011. (Graduate)

• PUBLICATIONS DURING 2011
  ▶ Aggarwal, M.M.; et al. (2011) K^{*0} Production in Cu+Cu and Au+Au Collisions at \sqrt{s}_{NN} = 62.4 and 200 GeV Physical Review C: Nuclear Physics, vol. 84, 034909.

• SERVICE DURING 2011

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: Fundamental Physics with Neutrons (Member), Local Organizing Committee, Nucleus-Nucleus Collisions Conference (Member), Program Advisory Committee, ATLAS Facility, Argonne National Laboratory (Chair)

Regional
▷ Committee/Panel: Jefferson Science Associates Programs Committee (Member)

University
▷ Committee/Panel: Ad hoc Committees (Member), Reactor Safety Board (Member)

Department
▷ Ad Hoc Committee: Budget Committee (Member)
▷ Committee/Panel: Distinguished Professor Committee (Member), Promotions, Tenure and Appointments (Member), Senior Nuclear Physicist Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 208. — Electricity and Optics (total enrollment: 242)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 691. — Research (total enrollment: 2)
Fall
▷ PHYS 691. — **Research** (total enrollment: 1)

**RESEARCH PROJECTS DURING 2011**

**Federal**
▷ (REN) NNDC: Contract for Cyclotron Institute, *Brookhaven National Laboratory*
▷ (REN) Cyclotron-Based Nuclear Science, *Department of Energy*

**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)

**PRESENTATIONS DURING 2011**
▷ “The Search for Nuclear Molecules in Isobaric Analog States of $^{10}B$,” 2011.( Individual)
▷ “How to Draw a Level Scheme,” Cyclotron Institute, College Station, TX, January, 2011.( Invited)
▷ “How to Draw a Level Scheme or About the Nature of Gamma-ray Spectroscopy Data Evaluation,” 19th Meeting of the Nuclear Structure and Decay Data (NSDD) Network, IAEA, Vienna, Austria, April, 2011.( Contributed)
▷ “A Study of the Superallowed $\beta^+$ Decay of $^{38}Ca$,” APS Meeting, Anaheim, California, April, 2011.( Contributed)
▷ “Application of a High Speed Digitizer to High-precision Nuclear $\beta$-decay Lifetime Measurement,” APS Meeting, Anaheim, California, April, 2011.( Contributed)
▷ “Further Test of Internal Conversion Theory with a Measurement in $^{119m}Sn$,” 19th Meeting of the Nuclear Structure and Decay Data (NSDD) Network, IAEA, Vienna, Austria, April, 2011.( Contributed)
▷ “Precise Lifetime Measurement of $^{37}K$,” APS Meeting, Anaheim, California, April, 2011.( Contributed)
▷ “Precision Measurements and Significance Assessment in Gamma-ray Spectroscopy Data Evaluation,” Horia Hulubei National Institute of Physics and Nuclear Engineering, Bucharest, Romania, April, 2011.( Invited)
“Ernest Rutherford and the Origins of Nuclear Physics,” Annual Congress of the Canadian Association of Physicists, St John’s, Newfoundland, Canada, June, 2011. (Invited)

“High-precision Measurements of the Superallowed $0^{+} \rightarrow 0^{+}$ Beta Decays of $^{38}{\text{Ca}}$ and $^{46}{\text{V}}$,” Argonne National Laboratory, Argonne, IL, June, 2011. (Invited)

“How Idiosyncratic is the Weak Force?,” Cyclotron Institute, College Station, TX, July, 2011. (Invited)

“Do Radioactive Half-lives Vary With the Earth-to-sun Distance?,” 18th International Conference on Radionuclide Metrology and its Applications, Tsukuba, Japan, September, 2011. (Invited)


“A Further Measurement to Test Electron Conversion Theory: Transitions Produced Following the $\beta$-decay of $^{116}{\text{In}}$,” APS Meeting, East Lansing, MI, October, 2011. (Poster Invited)

“High-precision Digital $\beta$ Counting for Superallowed $\beta$-decay Studies,” APS Meeting, East Lansing, Michigan, October, 2011. (Contributed)

“Superallowed Branching Ratio in the $\beta$ Decay of $^{34}{\text{Ar}}$,” APS Meeting, East Lansing, Michigan, October, 2011. (Contributed)

“Further Test of Internal-conversion Theory With a Measurement in $^{119}{\text{Sn}}^m$,” US Nuclear Data Program annual meeting, Brookhaven National Laboratory, Upton, NY, November, 2011. (Contributed)

“Probing Fundamental Electroweak Physics with Superallowed $\beta$-decay Experiments,” Triangle Universities Nuclear Laboratory, Durham, NC, November, 2011. (Invited)

“Probing Fundamental Electroweak Physics with Superallowed $\beta$-decay Experiments,” Argonne National Laboratory, Argonne, IL, December, 2011. (Invited)

“Probing Fundamental Electroweak Physics with Superallowed $\beta$-decay Experiments,” Indiana University, Bloomington, IN, December, 2011. (Invited)

**PUBLICATIONS DURING 2011**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Professor (J), Chemistry, /2006/

• AWARDS DURING 2011

  National
  ▶ Gold Medal, American Institute of Chemists

  University
  ▶ Honorary Doctorate, Harvard University
  ▶ Phi Beta Kappa Award for Outstanding Teaching, Harvard University

• SERVICE DURING 2011

  National
  ▶ Professional Affiliation: National Academy of Sciences (Member)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▶ Chemical Dynamics of Hox Free Radicals and Slow H Atoms, National Science Foundation

• PRESENTATIONS DURING 2011

  ▶ “Creativity Institute Lecturer,” Hong Kong Baptist University, Hong Kong, 2011.(Invited)
  ▶ “Theoretical Chemistry Lecturer,” Purdue University, West Lafayette, IN, 2011.(Invited)
  ▶ “From Bones to Brains and Batteries,” Texas A&M University, College Station, TX, October, 2011.(Individual)
  ▶ “Molecular Thermodynamics Visualized,” Texas A&M University, College Station, TX, October, 2011.(Individual)
  ▶ “Group Theory and Molecular Gymnastics,” Texas A&M University, College Station, TX, November, 2011.(Individual)

• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

International
▷ Editorial/Board: Hong Kong Government (Review: Proposals), Central Europe Journal of Physics (Referee: Journals), Europhysics Letters (Referee: Journals)

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 2011

Spring
▷ PHYS 632. — Condensed Matter Theory (total enrollment: 9)

• PRESENTATIONS DURING 2011

Retired 08/31/2011.
• AWARDS DURING 2011
  International
  ▶ Fellow, DESY/University of Hamburg

• SERVICE DURING 2011
  International
  ▶ Event: University of Tsukuba (Judge), University of Tsukuba (Speaker)
  ▶ Committee/Panel: 5th International Workshop on the Interconnection between Particle Physics and Cosmology (1) Organization Committee (Member)

  National
  ▶ Committee/Panel: CMS Missing Transverse Energy (MET) Group (Co-convener), SUSY 2nd Reference Analysis Working Group for Tau (Co-convener)

  University
  ▶ Committee/Panel: Texas A&M Reactor Safety Board (Member)

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

  Department
  ▶ Event: Physics and Engineering Festival (Participant)
  ▶ Committee/Panel: Mitchell Institute Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 2)
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy
  ▶ Development of Physics Analysis Tool for Inclusive Jets+Missing FT+TAUS Events at CMS, FERMI National Accelerator Laboratory
• PRESENTATIONS DURING 2011

▷ “Determination of Non-Universal SUGRA Models at the Large Hadron Collider,” 48th Winter Nuclear and Particle Physics Conference, Banff, Alberta, Canada, February, 2011. (Individual)

▷ “Search for $B_{s(d)} \rightarrow \mu\mu$ Decays at CDF,” KPS Meeting, Daejun, Korea, April, 2011. (Postdoc)

▷ “Validation of Tau Lepton Identification using the CMS Detector at the Large Hadron Collider,” KPS April Meeting, Daejun, Korea, April, 2011. (Postdoc)

▷ “Bi-Event Subtraction Technique,” Phenomenology 2011 Symposium, University of Wisconsin, Madison, WI, May, 2011. (Graduate, A. Matotta)

▷ “Cosmological Connection at Colliders,” HEP Seminar, University of Tsukuba, Japan, June, 2011. (Individual)

▷ “Hunt for Dark Matter Particle,” Graduate School of Pure and Applied Sciences, University of Tsukuba, Japan, June, 2011. (Invited)

▷ “SUSY Search at CMS,” National Central University, Taiwan, June, 2011. (Invited)

▷ “Bi-Event Subtraction Technique,” SFB/HEP Seminar, DESY/University of Hamburg, Germany, August, 2011. (Individual)

▷ “Dark Matter SUSY Search at CMS,” APCTP 2011 LHC Physics Workshop at Korea, Konkuk University, Seoul, Korea, August, 2011. (Postdoc)

▷ “Search for Supersymmetry in Jets + MET + Taus Final State Using the CMS Detector,” Pre-SUSY 2011 Summer School, University of Chicago, Chicago, IL, August, 2011. (Poster Graduate, A. Matotta)


▷ “First Two-sided Limit on the $B_s \rightarrow \mu\mu$ Decay Rate,” KPS Fall Meeting, Busan, Korea, October, 2011. (Individual)

▷ “Interconnection between Particle Physics and Cosmology at the LHC,” KPS Fall Meeting, Busan, Korea, October, 2011. (Invited)

▷ “Search for Supersymmetry in Jets + MET + Taus Final State Using the CMS Detector,” Joint Fall 2011 Meeting Texas Section of APS and AAPT and Zone 13 SPS, Commerce, TX, October, 2011. (Graduate, A. Matotta)

▷ “SUSY Search in All-hadronic Mode, Including Taus,” KPS Fall Meeting, Busan, Korea, October, 2011. (Postdoc)

▷ “SUSY Results from CMS,” US LHC Users Organization Annual Meeting, Argonne National Laboratory, IL, November, 2011. (Postdoc)

• PUBLICATIONS DURING 2011


▷ Aaltone, T.; et al. (2011) Search for New Heavy Particles Decaying to ZZ → $\ell\ell\ell\ell, \ell\ell jj$ in pp Collisions at $\sqrt{s} = 1.96$ TeV Physical Review D: Particles and Fields, vol. 83, 112008.
Aaltone, T.; et al. (2011) Search for $B^0 \rightarrow \mu^+\mu^-$ and $B^0 \rightarrow \mu^+\mu^-$ Decays with CDF II Physical Review Letters, vol. 107, 191801.
Aaltone, T.; et al. (2011) Search for Heavy Bottom-like Quarks Decaying to an Electron or Muon and Jets in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV Physical Review Letters, vol. 106, 141803.
Aaltonen, T.; et al. (2011) Search for Resonant Production of $t\bar{t}$ Decaying to Jets in $pp$ Collisions at $\sqrt{s} = 1.96$ TeV Physical Review D: Particles and Fields, vol. 84, 072003.
Aaltonen, T.; et al. (2011) A Search for Resonant Production of $t\bar{t}$ pairs in 4.8 $FB^{-1}$ of Integrated Luminosity of $pp$ Collisions at $\sqrt{s} = 1.96$ TeV Physical Review D: Particles and Fields, vol. 84, 072004.
Aaltonen, T.; et al. (2011) Evidence for $t\bar{t}\gamma$ Production and Measurement of $\sigma_{t\bar{t}\gamma}/\sigma_{t\bar{t}}$ Physical Review D: Particles and Fields, vol. 84, 031104.
Aaltonen, T.; et al. (2011) Measurement of Branching Ratio and $B^0$ Lifetime in the Decay $B^0_s \rightarrow J / \psi f^0$ at CDF Physical Review D: Particles and Fields, vol. 84, 052012.
Aaltonen, T.; et al. (2011) Measurements of the Properties of $\Lambda_c(2595)$, $\Lambda_c(2625)$, $\Sigma_c(2455)$, and $\Sigma_c(2520)$ and Baryons Physical Review D: Particles and Fields, vol. 84, 012003.
Aaltonen, T.; et al. (2011) Measurement of the $t\bar{t}$ Production Cross Section in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV Using Events with Large Missing Transverse Energy and Jets Physical Review D: Particles and Fields, vol. 84, 032003.

SEC. 6.1 PROFESSIONAL ACTIVITIES 631


Aaltonen, T.; et al. (2011) Limits on Anomalous Trilinear Gauge Couplings in $Z\gamma$ Events from $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV. Physical Review Letters, vol. 107, 051802.


Chatrchyan, S. et al. (2011) Measurement of the Underlying Event Activity at the LHC with $\sqrt{s} = 7$ TeV and Comparison with $\sqrt{s} = 0.9$ TeV. Journal of High Energy Physics,


Chatrchyan, S.; et al. (2011) Measurement of the $t\bar{t}$ Production Cross Section and the Top Quark Mass in the Dilepton Channel in pp Collisions at $\sqrt{s} = 7$ TeV Journal of High Energy Physics, vol. 1107, 049.


Momentum Resolution in CMS Journal of Instrumentation , vol. 6, P11002.


Chatrchyan, S.; et al. (2011) Search for $B^0_s \rightarrow \mu^+\mu^-$ and $B^0 \rightarrow \mu^+\mu^-$ Decays in pp Collisions at 7 TeV Physical Review Letters , vol. 107, 191802.


Chatrchyan, S.; et al. (2011) Search for Supersymmetry in pp Collisions at $\sqrt{s} = 7$ TeV in


Khachatryan, V.; et al. (2011) Inclusive b-hadron Production Cross Section with Muons in pp Collisions at \( \sqrt{s} = 7 \) TeV. Journal of High Energy Physics, vol. 1103, 090.

Khachatryan, V.; et al. (2011) Search for Heavy Stable Charged Particles in pp Collisions at \( \sqrt{s} = 7 \) TeV. Journal of High Energy Physics, vol. 1103, 024.

Khachatryan, V.; et al. (2011) Strange Particle Production in pp Collisions at \( \sqrt{s} = 0.9 \) and 7 TeV. Journal of High Energy Physics, vol. 1105, 064.


Khachatryan, V.; et al. (2011) Inclusive b-hadron Production Cross Section With Muons in pp Collisions at \( \sqrt{s} = 7 \) TeV. Journal of High Energy Physics, vol. 1105, 029.


Khachatryan, V.; et al. (2011) Measurement of the Forward-Backward Asymmetry in the \( B \to K^{(*)}\mu^+\mu^- \) Decay and First Observation of the \( B_s \to \phi\mu^+\mu^- \) Decay. Physical Review


On leave.
• AWARDS DURING 2011
  State
  ▷ Distinguished Texas Scientist, Texas Academy of Science

• SERVICE DURING 2011
  National

  Department
  ▷ Event: Physics Festival (Participant), Postdoc Roundtable Discussion on Graduate School at the Cyclotron REU (Host)
  ▷ Committee/Panel: Astronomy Committee (Member), Computer Committee (Member), Graduate Student Admissions and Appointments Committee (Chair)

  Interdisciplinary/Intercollegiate
  ▷ Research Group: Grant Proposal Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ PHYS 221. — Optics and Thermal Physics (total enrollment: 39)
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 2)

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

  Fall
  ▷ PHYS 218(H) — Mechanics (total enrollment: 74)
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011

  SEC. 6.1 PROFESSIONAL ACTIVITIES 637
Three-Dimensional Polarized Radiative Transfer in a Dynamic Atmosphere-Ocean System, *Department of Defense*, coworkers: D. Sun (P)

Ultrashort Laser Pulse Propagation in Water, *Department of Defense*, coworkers: M. Springer (G), Y. Wang (G), W. Yang (G)

Collaborative Research: Development of A High-Resolution Real-Time Polarization Image Sensor for Marine Deployment, *National Science Foundation*, coworkers: D. Chen (G)

Study Dust Optical and Radiative Properties Using Optimal Morphological Sets, *National Science Foundation*, coworkers: X. Huang (G), Z. Meng (G)


(REN) Graduate Research Fellowship, *Sandia National Laboratories*, coworkers: B. Strycker (G)

(REN) Graduate Research Fellowship, *Sandia National Laboratories*, coworkers: B. Strycker (G)

Biological Response to the Dynamic Spectral-Polarized Underwater Light Field, *University of Texas*, coworkers: S. Dagach (G), M. Gao (G)

**PRESENTATIONS DURING 2011**

“How Cephalopods Use Optics for Camouflage,” Institute for Quantum Science and Engineering Workshop, College Station, TX, January, 2011. (Invited)

“Energy Transfer Between Laser Filaments in Liquid Methanol,” Texas Academy of Science Annual Meeting, Austin, TX, March, 2011. (Individual)

“How Cephalopods Use Optics to Camouflage,” Texas Academy of Science Annual Meeting, Austin, TX, March, 2011. (Invited)


“Polarized Light in Nature,” Texas Academy of Science 114th Annual Meeting, Austin, TX, March, 2011. (Invited)

“Polarimetric Properties of Airborne Dust Particles and Ice Crystals: Fundamentals and Downstream Applications,” Workshop on Depolarization, Boulder, CO, April, 2011. (Invited)


“Optical Properties of Dust Aerosols and Ice Crystals Fundamentals and Downstream Applications,” Meteorological Institute Munich, Ludwig-Maximilians-University Munich, Munich, Germany, September, 2011. (Individual)


“Polarized Light in Nature,” Texas A&M UniversityCommerce, College Station, TX, October, 2011. (Individual)
“3D Monte Carlo for Aquarium Studies,” MURI Workshop on Camouflage in Cephalopods, University of Texas, Austin, TX, November, 2011. (Poster Individual)

“3D Time Dependent Radiative Transfer in an Atmosphere-Ocean System,” MURI Workshop on Camouflage in Cephalopods, University of Texas, Austin, TX, November, 2011. (Invited)

“A Hybrid Matrix Operator-Monte Carlo Method For Solving The 3D Vector Radiative Transfer Equation In A Dynamic Ocean,” MURI Workshop on Camouflage in Cephalopods, University of Texas, Austin, TX, November, 2011. (Poster Individual)


“Modeling Chromatophores in Cephalopod Skin,” MURI Workshop on Camouflage in Cephalopods, University of Texas, Austin, TX, November, 2011. (Poster Individual)

“Modeling Chromatophores, Iridophores, and Leucophores,” MURI Workshop on Camouflage in Cephalopods, University of Texas, Austin, TX, November, 2011. (Invited)

“Numerical Study of Structural Color of the Skin of Cephalopods,” MURI Workshop on Camouflage in Cephalopods, University of Texas, Austin, TX, November, 2011. (Poster Individual)


**PUBLICATIONS DURING 2011**


• SERVICE DURING 2011

National

University
▷ Committee/Panel: Supercomputing Steering Committee (Member)

Department
▷ Service Position: PHYS 201/202 Textbook Selection Committee (Member)
▷ Event: Physics Festival (Presenter), VizPhys (Organizer)
▷ Committee/Panel: Colloquium Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 681. — Seminar (total enrollment: 5)
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 202. — College Physics (total enrollment: 186)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ 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 2011

“Do Spin Glasses Order in a Field?,” Johannes-Gutenberg-University, Mainz, Germany, January, 2011. (Individual)


“Chaos, Broken Hyperscaling, and Nonuniversality in a Spin Glass,” APS March Meeting, Dallas, TX, March, 2011. (Individual)


“Spin Glasses on Scale-free Networks: Simple Models to Study Opinion Formation,” March Meeting of the American Physical Society, Dallas, TX, March, 2011. (Contributed)

“Stability of Topological Codes to Depolarization,” APS March Meeting, Dallas TX, March, 2011. (Individual)

“Thermodynamics of the Two-dimensional Random-bond Ising Model,” APS March Meeting, Dallas, TX, March, 2011. (Individual)

“Do Spin Glasses Order in a Field? And Why We Should Care. . . .,” Physics Department, Emory University, Atlanta GA, April, 2011. (Individual)


“Spin Glasses on Scale-free Networks: Simple Models to Study Opinion Formation?,” Texas A&M University, College Station, TX, April, 2011. (Individual)

“Disordered Ising Models: Where is all the CPU Time Going?,” Texas A&M Supercomputing Facility Users Meeting, College Station, TX, May, 2011. (Individual)

“Monte Carlo Methods,” Ben Gurion University, Beer Sheva, Israel, May, 2011. (Individual)


“Resilience of Topological Codes to Depolarization,” Joint Annual Meeting of the SPS and OePG, Switzerland, June, 2011. (Individual)


“Advanced Monte Carlo Methods,” Third Summer School on Modern Computational Science, Oldenburg Germany, August, 2011. (Invited)

“Introduction to Monte Carlo Methods,” Third Summer School on Modern Computational Science, Oldenburg Germany, August, 2011. (Invited)


“Software Engineering in a Nutshell,” Third Summer School on Modern Computational Science, Oldenburg Germany, August, 2011. (Invited)


Summer School for Numerical Methods in Condensed Matter Physics, Taipei, Taiwan, September, 2011. (Invited)

“Frustrating Frustrated Magnets,” Physics Department, Sam Houston State University, Huntsville TX, November, 2011. (Individual)

“Frustrating Frustrated Problems,” Physics and Astronomy Department, Texas A&M University, College Station, TX, November, 2011. (Individual)

**PUBLICATIONS DURING 2011**

• SERVICE DURING 2011
  
  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 2011

  Spring
  ▶ PHYS 650. — *Kinetics of Electronic Processes* (total enrollment: 10)

  *On leave.*

  *No report received from faculty member.*
• SERVICE DURING 2011

International
▷ Editorial/Board: Chinese Journal of Physics (Associate Editor), International Journal of Modern Physics (Referee: Journals)

National

Department
▷ Event: Nuclear Physics Program (Lecturer)
▷ Committee/Panel: Graduate Student Admissions and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 412. — Quantum Mechanics I (total enrollment: 33)
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 414. — Quantum Mechanics II (total enrollment: 22)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ A Topical Collaboration on Quantitative Jet and Electromagnetic Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions, Department of Energy, coworkers: K. Han (G)
▷ (REN) Theoretical Nuclear Physics, National Science Foundation, coworkers: T. Song (G)
▷ (REN) Theoretical Nuclear Physics, National Science Foundation, coworkers: T. Song (P)

Private
▷ (REN) Theoretical Studies of Heavy Ion Collisions, The Robert A. Welch Foundation, coworkers: J. Xu (P), K. Han (G), F. Li (G)
• PRESENTATIONS DURING 2011
  ▶ “Hadronization by Quark Coalescence,” Jet and Electromagnetic Tomography Summer School, Duke University, Durham, NC, June, 2011. (Invited)
  ▶ “Probing High Density Matter in Heavy Ion Collisions,” Colloquium at Texas A&M University at Commerce, College Station, TX, March, 2011. (Invited)
  ▶ “Quarkonia Production in HIC,” International Symposium on Non-Equilibrium Dynamics, Crete, Greece, August, 2011. (Invited)
  ▶ “Anisotropic Flows and Dihadron Correlations in Heavy Ion Collisions,” International Workshop on Particle Correlations and Femtoscopy, Tokyo, Japan, September, 2011. (Invited)
  ▶ “Quarkonia Production in Heavy Ion Collisions,” International Conference on Primordial QCD Matter in LHC Era, Cairo, Egypt, December, 2011. (Invited)

• PUBLICATIONS DURING 2011


OLGA A. KOCHAROVSKAYA
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• SERVICE DURING 2011

International
▷ Event: 20th International Workshop on Laser Physics (Co-Chair)
▷ Editorial/Board: Israel Science Foundation (Review: Proposals)
▷ Committee/Panel: European Research Council Panels (Member)

National
▷ Event: 41th Winter Colloquium Physics of Quantum Electronics (Organizer)

Department
▷ Event: South Central Conference for Undergraduate Women in Physics (Speaker)
▷ Committee/Panel: IQSE Advisory Committee (Chair), Promotion, Tenure and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 208. — Electricity and Optics (total enrollment: 257)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Control of Atoms-Light and Nuclei-X-ray Photons Interactions in Solids via Quantum Interference, National Science Foundation

• PRESENTATIONS DURING 2011


“Control of Light by Light in the Resonant Medium,” Colloquium at Physics Department, University of California, Berkeley, CA, April, 2011. (Invited)


“Coherent Control of Refractive Index with Zero Absorption for the New Types of Photonic Structures and Quantum Memories,” 20th International Laser Physics Workshop, Sarajevo, Bosnia and Herzegovina, July, 2011. (Invited)

“Efficient Regime of Electromagnetically Induced Transparency in Pr$^{3+}:LaF_3$ Crystal,” 20th International Laser Physics Workshop, Sarajevo, Bosnia and Herzegovina, July, 2011. (Invited)

“EIT at Pair Ion Lines of Nd$^{3+}$ Doped into LaF$_3$,” 1st International Conference on Quantum Technologies, Moscow, Russia, July, 2011. (Invited)

“Electromagnetically Induced Transparency on Isolated and Pair Ion Lines of Nd$^{3+}$ Doped into LaF$_3$,” 20th International Laser Physics Workshop, Sarajevo, Bosnia and Herzegovina, July, 2011. (Poster Invited)


“Superradiance from Nihility,” 20th International Laser Physics Workshop, Sarajevo, Bosnia and Herzegovina, July, 2011. (Invited)

“Principles of the Control of the Single Photon Radiation Field in the Optically Dense Resonant Medium,” XI International Workshop on Quantum Optics, Volgograd, Russia, September, 2011. (Invited)

“Short bunch of Attosecond Bursts from Resonant Radiation in Hydrogenlike Atoms,” International Conference Nonlinear Optics East-West Reunion (NLO-50), Suzdal, Russia, September, 2011. (Invited)

“Superradiance in the Medium with Close to Zero Refractive Index,” XI th International Workshop on Quantum Optics, Volgograd, Russia, September, 2011. (Invited)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011

National

Department
▷ Committee/Panel: Theoretical AMO Search Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 218. — Mechanics (total enrollment: 222)

• PRESENTATIONS DURING 2011


• PUBLICATIONS DURING 2011

▷ Kocharovsky, V.V.; Kocharovsky, V.V. (January 2011) Microscopic Theory of Phase Transitions, 41st Winter Colloquium on the Physics of Quantum Electronics 158.
▷ Kocharovsky, V.V.; Kocharovsky, V.V.; Martyanov, J.; Tarasov, S.V. (2011) Self-consistent Magnetostatic Structures in Astrophysical Plasmas with Arbitrary Energy Distribution of Particles, European Week of Astronomy and Space Science 123.
KEVIN KRISCIUNAS

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• SERVICE DURING 2011

State
▷ Event: Regional Siemens Competition in Math, Science, and Technology (Judge)

Regional
▷ Event: South Knoll Elementary School to talk to Kindergarteners about Astronomy (Speaker)

Department
▷ Event: Astronomical Imaging Workshop at Mitchell Ranch (Organizer), Physics Festival (Participant)
▷ Committee/Panel: Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ ASTR 101. — Basic Astronomy (total enrollment: 84)
▷ PHYS 685. — Directed Studies (total enrollment: 1)

Summer
▷ ASTR 101. — Basic Astronomy (total enrollment: 31)

Fall
▷ ASTR 101. — Basic Astronomy (total enrollment: 99)
▷ ASTR 111. — Overview of Modern Astronomy (total enrollment: 80)
▷ PHYS 485. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, National Science Foundation

• PRESENTATIONS DURING 2011

▷ “Cosmology with Type Ia Supernovae,” Joint Meeting of the American Astronomical Society/AAVSO, Boston, MA, May, 2011.(Individual)
▷ “The Usefulness of Type Ia Supernovae for Cosmology,” Louisiana State University, Baton Rouge, LA, August, 2011.(Individual)
▷ “The Usefulness of Type Ia Supernovae for Cosmology,” Trinity University, San Antonio, TX, November, 2011.(Individual)
“The Usefulness of Type Ia Supernovae for Cosmology,” University of Texas, San Antonio, TX, December, 2011.( Individual)

• PUBLICATIONS DURING 2011
• **TEACHING ASSIGNMENTS DURING 2011**

**Spring**
- PHYS 309. — **Modern Physics** (total enrollment: 35)
- PHYS 691. — **Research** (total enrollment: 1)

**Fall**
- PHYS 685. — **Directed Studies** (total enrollment: 1)
- PHYS 691. — **Research** (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2011**

**Federal**
- Physics of High Energy Density System in Condensed Helium, *National Science Foundation*

**State**
- Atomic Free Radicals in Nanoclusters Immersed in Superfluid Helium, *Texas Higher Education Coordinating Board*

• **PRESENTATIONS DURING 2011**

- “Domain Walls in Spin Polarized $^3$He-$^4$He Mixtures,” Institute for Quantum Science and Engineering Workshop, College Station, TX, January, 2011.( Individual)
- “Exotic Behavior of H Atoms in $H_2$ Films at $T < 1$ K,” Institute for Quantum Science and Engineering Workshop, College Station, TX, January, 2011.( Individual)
- “Exotic Behavior of H Atoms in $H_2$ Films at $T < 1$ K,” Condensed Matter Seminar, Department of Physics and Astronomy, College Station, TX, March, 2011.( Invited)
- “Magnetic Resonance Study of H Atoms in H2 at Temperatures Below 1 K,” 26th International Conference on Low Temperature Physics, Beijing, China, August, 2011.(Poster Individual)
- “Spectroscopic Studies of Impurity-helium Condensates, Containing Stabilized N and O Atoms,” 26th International Conference on Low Temperature Physics, Beijing, China, August, 2011.(Poster Individual)
- “Spin Waves and Moving Domain Walls in Dilute Spin Polarized $^3$He-$^4$He Mixture,” Abstracts of 26th International Conference on Low Temperature Physics, Beijing, China, August, 2011.(Poster Individual)
- “Spin Waves Resonances Exited by Moving Domain Walls in Polarized Dilute Liquid $^3$He-$^4$He Mixtures,” 26th International Conference on Low Temperature Physics, Beijing, China, August, 2011.( Invited)
“Effects of Domain Walls in Dilute Spin Polarized Solution of $^3$He in Superfluid $^4$He Newspin2,” Spin Physics and Topological Effects in Cold Atoms, Condensed Physics and Beyond, College Station, TX, December, 2011.(Individual)

**PUBLICATIONS DURING 2011**

• SERVICE DURING 2011

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: The Budget Information Committee (Member)

Department
▷ Event: Chemistry Show (Participant), Physics Show (Participant)
▷ Committee/Panel: Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 202. — *College Physics* (total enrollment: 122)
▷ PHYS 485. — *Directed Studies* (total enrollment: 1)
▷ PHYS 691. — *Research* (total enrollment: 1)

Summer
▷ PHYS 208. — *Electricity and Optics* (total enrollment: 103)
▷ PHYS 485. — *Directed Studies* (total enrollment: 1)
▷ PHYS 691. — *Research* (total enrollment: 1)

Fall
▷ PHYS 485. — *Directed Studies* (total enrollment: 1)
▷ PHYS 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Emergent Behavior in Magnet-Superconductor Hybrids, *Department of Energy*, coworkers: D. Rathnayaka (P), W. Bang (G), Z. Wei (G)
▷ Emergent Behavior in Magnet-Superconductor Hybrids, *Department of Energy*, coworkers: K. Kim (P), D. Rathnayaka (P), 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)

Private
> (REN) Chemical Dynamics of Ultracold Molecules and Atomic Hydrogen, *The Robert A. Welch Foundation*, coworkers: D. Rathnayaka (P), V. Krasovitskiy (G), L. Sheffield (Staff)

> Chemical Dynamics of Ultracold Molecules and Atomic Hydrogen, *The Robert A. Welch Foundation*, coworkers: D. Rathnayaka (P), K. Krasovitskiy (G), L. Sheffield (G)

**PRESENTATIONS DURING 2011**

> “Magnetic Nanorod-Superconductor Hybrid Near Superconducting Transition Temperature,” APS Meeting, Dallas, TX, March, 2011. (Poster Contributed)

> “Pulsed Counter Rotating Source of Slow, Cold Molecules,” APS Meeting, Dallas, TX, March, 2011. (Contributed)

> “Strongly Anisotropic Flux Pinning in Superconducting PbBi Thin Films Covered by Periodic Ferromagnet Stripes,” APS Meeting, Dallas, TX, March, 2011. (Contributed)

> “Superconducting Properties of Lead-Bismuth Films Controlled by Ferromagnetic Nanowire Arrays,” APS Meeting, Dallas, TX, March, 2011. (Contributed)

> “Controlling Superconducting Film with Magnetic Nanostructures,” New3SC-8 International Conference, Chongqing, China, June, 2011. (Invited)

> “Superconducting Film with Embedded Cobalt Nanorods,” New3SC-8 International Conference, Chongqing, China, June, 2011. (Invited)

> “Controlling Superconducting Film Magnetic Nanostructures,” 13th International Workshop on Vortex Matter in Superconductors, Chicago, IL, August, 2011. (Invited)


> “Cold Molecular Beams,” Institute for Solid state Physics, Leibnitz University, Hannover, Germany, August, 2011. (Individual)

> “Controlling Superconducting Film with Magnetic Nanostructures,” Seventh International Conference on Vortex Matter in Nanostructured Superconductors, Rhodes, Greece, September, 2011. (Invited)

> “Strong Increase of Critical Current in Magnetic Nanorod-Superconductor Hybrids Superconducting Centennial Conference,” The Netherlands, September, 2011. (Contributed)

**PUBLICATIONS DURING 2011**


LUCAS MACRI
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• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell-Heep-Munnerlyn Endowed Career Enhancement Professorship in Physics or Astronomy [2010]

• SERVICE DURING 2011
  National
  ▶ Committee/Panel: NSF/NOAO ReSTAR Committee (Member)
  Department
  ▶ Event: Cosmic Surveys of the Current Decade (Participant), Physics Open House (Participant)
  ▶ Committee/Panel: Astronomy Committee (Member), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 273)
  ▶ ASTR 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
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 259)
  ▶ ASTR 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ Measuring the Hubble-flow Hubble Constant, *National Aeronautics and Space Administration*, coworkers: S. Hoffmann (G)
  ▶ Narrowing in on the Hubble Constant and Dark Energy, *Space Telescope Science Institute*, coworkers: S. Hoffmann (G)
• PRESENTATIONS DURING 2011
  ▶ “Cosmological Time,” Spring Meeting of the Sigma Xi Society, Texas A&M University, College Station, TX, March, 2011. (Invited)
  ▶ “The Extragalactic Distance Scale in the Era of Precision Cosmology,” Joint Annual Conference of the National Society of Black Physicists and the National Society of Hispanic Physicists, Austin, TX, September, 2011. (Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011
  
  Department
  ▶ Committee/Panel: Particle, Astrophysics, and Cosmology Seminar Series (Member)

• TEACHING ASSIGNMENTS DURING 2011
  
  Spring
  ▶ PHYS 691. — Research (total enrollment: 3)

  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)

  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 137)
  ▶ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011
  
  Federal
  ▶ Memorandum of Understanding Between Texas A&M University and Fermi National Accelerator Laboratory for the Super CDMS Soudan Project, Department of Energy, coworkers: A. Jastram (G), K. Koch (G), K. Prasad (G)

  ▶ Ton Scale Germanium: Beyond Zeptobarn WIMP Cross-Section, Department of Energy, coworkers: A. Aryasomayajula (G), A. Jastram (G), K. Koch (G), K. Prasad (G), S. Upadhyayula (G)

  ▶ CAREER: Ton Scale Germanium Beyond Zeptobarn WIMP Cross-section, National Science Foundation, coworkers: M. Platt (Research Assistant), J. Phillips (Technician), J. Sander (P)

  Private
  ▶ Tonne-Scale Germanium Dark Matter Search, California Institute of Technology

• PRESENTATIONS DURING 2011
  
  ▶ “Particle, Astrophysics and Cosmology Seminar,” Texas A&M University, College Station, TX, March, 2011 (Individual)

  ▶ “Dark Matter Searches Seminar,” Cyclotron Institute, Texas A&M University, College Station, TX, July, 2011 (Individual)

  ▶ “Possible Dark Matter Technologies for a Ton-scale Experiment in India,” Tata Institute of Fundamental Research, Mumbai, India, August, 2011 (Individual)


“Research Topics Seminar,” Texas A&M University, College Station, TX, November, 2011. (Individual)

PUBLICATIONS DURING 2011


• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell/Heep Chair in Experimental High Energy Physics [2004]

• SERVICE DURING 2011
  College
  ▶ Committee/Panel: International Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ ASTR 109(H) — Big Bang and Black Holes (total enrollment: 2)
  ▶ ASTR 109. — Big Bang and Black Holes (total enrollment: 59)
  ▶ ASTR 289. — Special Topics in (total enrollment: 16)
  ▶ PHYS 109(H) — Big Bang and Black Holes (total enrollment: 2)
  ▶ PHYS 109. — Big Bang and Black Holes (total enrollment: 18)
  ▶ PHYS 225. — Electronic Circuits and Applications (total enrollment: 31)
  ▶ PHYS 289. — Special Topics in (total enrollment: 1)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 4)

  Summer
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 4)

  Fall
  ▶ PHYS 685. — Directed Studies (total enrollment: 5)
  ▶ PHYS 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) New Technology for Future Colliders, Department of Energy, coworkers: R. Blackburn (Technician), R. Blackburn (Technician), N. Diaczenko (Technician), N. Diaczenko (Technician), T. Elliott (Technician), A. Jaisle (Technician), A. McInturff (P), A. Sattarov (P), 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 2011


“ADS Fission in a Molten Salt Core: Fission Power for the Next Millennium,” Sungkyunkwan University, Seoul, Korea, October, 2011. (Individual)


PUBLICATIONS DURING 2011


Aaltonen, T.; et al. (2011) Search for Resonant Production of $t\bar{t}$ Pairs in 4.8 $fb^{-1}$ of Integrated Luminosity of $p\bar{p}$ Collisions at $\sqrt{s}=1.96$ TeV Physical Review D: Particles and Fields, vol. 84, 072004.


Aaltonen, T.; et al. (2011) Search for Resonant Production of $t(t)\overline{t}$ Decaying to Jets in $p\bar{p}$ Collisions at $\sqrt{s}=1.96$ TeV Physical Review D: Particles and Fields, vol. 84, 072003.


Aaltonen, T.; et al. (2011) Evidence for $t\bar{t}\gamma$Production and Measurement of $\sigma(t\bar{t}\gamma)/\sigma(t\bar{t})$ Physical Review D: Particles and Fields, vol. 84, 031104.

Aaltonen, T.; et al. (2011) Measurement of the $t\bar{t}$ Production Cross Section in $p\bar{p}$ Collisions at $\sqrt{s}=1.96$ TeV Using Events With Large Missing Transverse Energy and Jets Physical Review D: Particles and Fields, vol. 84, 032003.

Aaltonen, T.; et al. (2011) Improved Determination of the Sample Composition of Dimuon Events Produced in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV Physical Review D: Particles and Fields, vol. 84, 031101.

Aaltonen, T.; et al. (2011) Measurements of the Properties of $\Lambda_c$ (2595), $\Lambda_c$ (2625), $\Sigma_c$ (2455), $\Sigma_c$ (2520) Baryons Physical Review D: Particles and Fields, vol. 84, 012003.

Aaltonen, T.; et al. (2011) Search for New Heavy Particles Decaying to $ZZ \to l^+l^-l'^+l'^-$ and $Z\gamma Z$ in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV Physical Review D: Particles and Fields, vol. 83, 112008.


Aaltonen, T.; et al. (2011) Observation of $B^0_s \to J/\Psi K^0_s(892)$ and $B^0_s \to J/\Psi K^0_s$ Physical Review D: Particles and Fields, vol. 83, 052012.


Aaltonen, T.; et al. (2011) Search for $B^0_s \to \mu^+\mu^-$ and $B^0 \to \mu^+\mu^-$ Decays with CDF II Physical Review Letters, vol. 107, 239903.


Aaltonen, T.; et al. (2011) Search for Production of Heavy Particles Decaying to Top Quarks and Invisible Particles in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV Physical Review Letters, vol. 106, 191801.

Aaltonen, T.; et al. (2011) Observation of the Baryonic Flavor-changing Neutral Current Decay $\Lambda_b^0 \to \Lambda\mu^+\mu^-$ Physical Review Letters, vol. 107, 201802.


Aaltonen, T.; et al. (2011) Measurement of the Forward-backward Asymmetry in the $B^- \rightarrow K^{-}\pi^+\mu^-\mu^+$ Decay and First Observation of the $B^0_s \rightarrow \phi\mu^+\mu^-$ Decay Physical Review Letters , vol. 106, 161801.


Holik, E.; et al. (March 2011) Nb$_3$Sn Block-coil Dipole for High-field Substitution in the LHC Lattice, Proceeding Particle Accelerator Conference .

Klimas, R.J.; et al. (June 2011) Large Volume Liquid Helium Relief Device Verification Apparatus for the Alpha Magnetic Spectrometer, Proceeding International Cryogenic Materials Conference .
• AWARDS DURING 2011
  National
  ▷ Early Career Research Award, Department of Energy

• SERVICE DURING 2011
  International
  ▷ Committee/Panel: TRIUMF Users Executive Committee (Member)

  National
  ▷ Editorial/Board: APS journal Physical Review Letters (Referee: Journals)

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

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ PHYS 691. — Research (total enrollment: 2)

  Summer
  ▷ PHYS 685. — Directed Studies (total enrollment: 3)

  Fall
  ▷ PHYS 685. — Directed Studies (total enrollment: 2)
  ▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: P. Shidling (P), S. Behling (G), B. Fenker (G), M. Mehlman (G)
  ▷ Fundamental Electroweak Interaction Studies Using Trapped Atoms and Ions, Department of Energy, coworkers: P. Shidling (P), P. Shidling (P), M. Mehlman (G)
  ▷ Laser Trapping and Cooling Facility for Weak Interaction Experiments with Francium Isotopes at TRIUMF, Department of Energy

• PRESENTATIONS DURING 2011
  ▷ “Probing Symmetries of the Weak Interaction via the β Decay of Laser-cooled, Polarized $^{37}$K,” Indiana University Cyclotron Facility Seminar, Indiana University, Bloomington, IN, April, 2011. (Invited)
“Production of Short-lived $^{37}K$,” APS April Meeting, Anaheim, CA, April, 2011.(Poster Individual)

$^{37}K$ Asymmetry Measurement Experiment,” National Nuclear Physics Summer School, University of North Carolina, Chapel Hill, NC, June, 2011.(Poster Individual)

“Precise Lifetime Measurements in T=1/2 Mirror Nuclei,” National Nuclear Physics Summer School, University of North Carolina, Chapel Hill, NC, June, 2011.(Poster Individual)


“Isospin Symmetry Breaking in the Decay of $^{32}Cl$,” XXXII Mazurian Lakes Conference on Physics, Piaski, Poland, September, 2011.(Invited)

“Optimization of a Scintillator for the Measurement of Positrons from Trapped, Radioactive $^{37}K$,” APS Division of Nuclear Physics Meeting, Michigan State University, East Lansing, MI, October, 2011.(Poster Individual)

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**PUBLICATIONS DURING 2011**


• SERVICE DURING 2011
  National
  ▷ Committee/Panel: STAR God Parent Committee (Member), STAR Physics Working
    Group (Convener), STAR Scientific Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ PHYS 691. — Research (total enrollment: 1)

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

  Fall
  ▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  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)
• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell-Heep Chair in High Energy Physics [2002]

• SERVICE DURING 2011
  International
  ▶ Committee/Panel: High Power Laser Energy Research (HiPER) European Consortium (Member), Onassis International Foundation (Member)

  National
  ▶ Event: Journals, Newspapers, Radio and TV Channels, World ERT/NET, SKY TV, Alpha TV, Antenna TV (Speaker)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ PHYS 634. — Relativistic Quantum Field Theory (total enrollment: 9)
  ▶ PHYS 691. — Research (total enrollment: 4)

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

  Fall
  ▶ PHYS 638. — Quantum Field Theory II (total enrollment: 6)
  ▶ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy, coworkers: T. Li (P)
  ▶ (REN) High Energy Physics at Texas A&M University, Department of Energy, coworkers: J. Maxin (P), C. Burton (G), D. Hu (G), S. Hu (G), T. Leggett (G), D. Xie (G)

• PRESENTATIONS DURING 2011
  ▶ “From Cosmogony to Glossogony,” Cultural Center, Heraclion, Crete, Greece, March, 2011. (Individual)
International Conference on German Literature, Athens, Greece, July, 2011. (Individual)
“Humanities and Science,” Onassis Cultural Centre, Athens, Greece, November, 2011. (Individual)

PUBLICATIONS DURING 2011


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering

• SERVICE DURING 2011

  National
  ▷ Advisory Board: Advances in Condensed Matter Physics (Member)
  ▷ Editorial/Board: Research Corporation (Review: Proposals)

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

  Department
  ▷ Committee/Panel: Head Search Committee (Member)

  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Nominations Committee for MSEN Program (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ MSEN 684. — Professional Internship (total enrollment: 1)
  ▷ PHYS 425. — Physics Laboratory (total enrollment: 17)
  ▷ PHYS 485. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 2)

  Summer
  ▷ MSEN 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 485. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 2)

  Fall
  ▷ MSEN 604. — Quantum Mechanics for Materials Scientist (total enrollment: 38)
  ▷ MSEN 691. — Research (total enrollment: 1)
  ▷ PHYS 485. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▷ RFQ-Army Research Laboratory, Department of Defense, coworkers: K. Raraji (G), V. Vasquez (G), S. Grant (U), J. Schuster (U)
Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: K. Kim (P), S. Grant (U)

Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: K. Kim (P), S. Grant (U)

Private

The Influence of Surfaces, Reduced Dimensionally and Disorder on the Properties of Solids, The Robert A. Welch Foundation, coworkers: S. Rodriguez (P), J. Chen (G), K. Mader (G), T. Morrison (G), L. Smith (G)

**PRESENTATIONS DURING 2011**

“Magnetic Nanorod-Superconductor Hybrid near Superconducting Transition Temperature,” APS Meeting, Dallas, TX, March, 2011.(Poster Individual)

“Strongly Anisotropic Flux Pinning in Superconducting PbBi Thin Films Covered by Periodic Ferromagnet Stripes,” APS Meeting, Dallas, TX, March, 2011.(Poster Individual)

“Superconducting Properties of Lead-Bismuth Films Controlled by Ferromagnetic Nanowire Arrays,” APS Meeting, Dallas, TX, March, 2011.(Poster Individual)

**PUBLICATIONS DURING 2011**


• SERVICE DURING 2011

National
▷ Committee/Panel: Multimission Archive at the Space Telescope Science Institute (MAST) Users Group Committee (Member)

Department
▷ Event: Various Particle, Astrophysics and Cosmology Seminar (Organizer)
▷ Committee/Panel: Astronomy Committee (Member), Colloquium Committee (Member), Graduate Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ ASTR 681. — Astronomy Seminar (total enrollment: 11)
▷ ASTR 685. — Directed Studies (total enrollment: 2)
▷ ASTR 691. — Research (total enrollment: 1)

Summer
▷ ASTR 685. — Directed Studies (total enrollment: 5)

Fall
▷ ASTR 314. — Survey of Astronomy (total enrollment: 49)
▷ ASTR 685. — Directed Studies (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

Federal
▷ 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, coworkers: P. Williams (U)
IRS Observations of a Strongly Lensed L1 RG Behind the Bullet 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 2011**

  - “Pioneering into the Extragalactic Frontier with the GMT,” International Conference, College Station, TX, March, 2011. (Invited)
  - “When Did the Universe Urbanize? The Formation of Galaxy Clusters,” Chancellor’s Century Council, College Station, TX, April, 2011. (Invited)
  - “The Formation of Galaxies and its Relation to the Cosmos,” Department of Physics and Astronomy, Texas A&M University, College Station, TX, October, 2011. (Individual)
  - “Cosmology and Astrophysics at Texas A&M University,” Humboldt Association Meeting, Round Top, TX, November, 2011. (Individual)

- **PUBLICATIONS DURING 2011**


SEC. 6.1 PROFESSIONAL ACTIVITIES


• SERVICE DURING 2011

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 2011

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

• RESEARCH PROJECTS DURING 2011

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. Frumker (P)

• PUBLICATIONS DURING 2011


SEC. 6.1 PROFESSIONAL ACTIVITIES


On leave.

No report received from faculty member.
• SERVICE DURING 2011

International

National

Department
▷ Committee/Panel: Distinguished Professors Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 689. — Special Topics in (total enrollment: 10)
▷ PHYS 691. — Research (total enrollment: 1)

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

Fall
▷ PHYS 606. — Quantum Mechanics (total enrollment: 88)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) Theory of Magnetic Heterostructures on the Nanometer Scale, Department of Energy

• PRESENTATIONS DURING 2011
▷ “Quantum Hall Effect,” High School, Schwabisch Gmünd, Germany, 2011.( Individual)
▷ “Interaction Induced Delocalization in Bose Gas,” Colloquium at Boston University, Boston, MA, February, 2011.( Individual)
▷ “Spin Resonance in Quantum Wires,” APS Meeting, Dallas, TX, March, 2011.( Individual)
▷ “Domain Walls and other Topological Defects in Helical Magnets, Condensed Matter Seminar,” Department of Physics and Astronomy Texas A&M University, College Station, TX, March, 2011.( Individual)

**PUBLICATIONS DURING 2011**

- **CHAIRS/PROFESSORSHIPS**
  - Stephen Hawking Chair in Fundamental Physics [2002]

- **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Director, George P. & Cynthia Woods Mitchell Institute for Fundamental Physics & Astronomy, Physics and Astronomy, [2002]

- **AWARDS DURING 2011**
  - University
    - Distinguished Achievement Award - Teaching, The Association of Former Students

- **SERVICE DURING 2011**
  - **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 2011**
  - **Spring**
    - PHYS 603. — Electromagnetic Theory (total enrollment: 50)
    - PHYS 691. — Research (total enrollment: 1)

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

  - **Fall**
    - PHYS 615. — Methods of Theoretical Physics I (total enrollment: 82)
    - PHYS 691. — Research (total enrollment: 1)

- **RESEARCH PROJECTS DURING 2011**
  - Federal

SEC. 6.1  PROFESSIONAL ACTIVITIES  681
• PRESENTATIONS DURING 2011
  ▶ "Critical Gravity and Supergravity," Centre for Mathematical Sciences, University of Cambridge, United Kingdom, May, 2011. (Individual)
  ▶ "Pseudo-Supergravity," Seminar, KITPC, Beijing, China, June, 2011. (Individual)
  ▶ "Unitary Higher-Derivative Gravity and Supergravity?," String Theory, Benasque, Spain, July, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
  ▶ Event: 11th International Conference on Nucleus-Nucleus Collisions Organizing Committee (Member)
  ▶ Committee/Panel: Organizing Committee of Int. Workshop on Resonance Production in Heavy-Ion and Elementary Collisions (Member)

National
  ▶ Event: Heavy-Quark Production in Heavy-Ion Collisions (Co-Organizer)

University
  ▶ Committee/Panel: Nuclear Solutions Institute Executive Committee (Member)

Department
  ▶ Event: Nuclear Theory Seminar Series (Co-Organizer), Saturday Morning Physics (Director), Saturday Morning Physics (Organizer)
  ▶ Committee/Panel: Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ PHYS 625. — Nuclear Physics (total enrollment: 18)
  ▶ PHYS 691. — Research (total enrollment: 2)

Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

Fall
  ▶ PHYS 201. — College Physics (total enrollment: 110)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
  ▶ Electromagnetic and Heavy-Quark Probes of QCD Matter, National Science Foundation, coworkers: M. He (P), P. Hohlev (P), N. Holt (G), K. Huggins (G)
• PRESENTATIONS DURING 2011

▶ “Heavy Quark Diffusion and Hadronization in Dense Matter,” Workshop on Heavy-Quark Production in Heavy-Ion Collisions, Purdue University, West Lafayette, IN, January, 2011. (Graduate, M. He)
▶ “Medium Effects in Charmonium Transport,” Workshop on Heavy-Quark Production in Heavy-Ion Collisions, Purdue University, West Lafayette, IN, January, 2011. (Graduate, X. Zhao)
▶ “Heavy Flavor Diffusion and Hadronization in Quark-Gluon Plasma,” RHIC&AGS Annual Users’ Meeting, BNL, Upton, NY, June, 2011. (Graduate, M. He)
▶ “Many-Body Approach to Heavy Flavor in QGP,” Brookhaven Summer Program on Quarkonium in Hot Media, BNL, Upton, NY, June, 2011. (Invited)
▶ “Overview of Open and Hidden Heavy Flavor in Hot Matter,” 486th Heraeus Seminar on Characterizing the QGP with Heavy Quarks, Physikzentrum Bad Honnef, Bad Honnef, Germany, July, 2011. (Invited)
▶ “Thermal Dileptons: A Versatile Meter of Quark-Hadron Matter in Heavy-Ion Collisions,” STAR Analysis Meeting, University of California, Davis, CA, August, 2011. (Invited)
▶ “Heavy Flavor in Medium,” Quarkonium Theory Workshop, TRIUMF, Vancouver, Canada, October, 2011. (Invited)
▶ “Quark-Gluon Plasma: From QCD Thermodynamics to Heavy-Ion Collision Phenomenology,” Shanghai Jiaotong University, Shanghai, China, October, 2011. (Graduate, M. He)
▶ “Quark-Gluon Plasma: From QCD Thermodynamics to Heavy-Ion Collision Phenomenology,” Tsinghua University, Beijing, China, October, 2011. (Graduate, M. He)
▶ “Quark-Gluon Plasma: From QCD Thermodynamics to Heavy-Ion Collision Phenomenology,” Nanjing University, Nanjing, China, November, 2011. (Graduate, M. He)
▶ “Quark-Gluon Plasma: From QCD Thermodynamics to Heavy-Ion Collision Phenomenology,” National University of Defense Technology, Changsha, China, November, 2011. (Graduate, M. He)
▶ “Quark-Gluon Plasma: From QCD Thermodynamics to Heavy-Ion Collision Phenomenology,” University of Science&Technology of China, Hefei, China, November, 2011. (Graduate, M. He)
PUBLICATIONS DURING 2011

• SERVICE DURING 2011

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

University
▷ Committee/Panel: Academic Appeals Panel (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 201. — College Physics (total enrollment: 95)
▷ PHYS 205. — Concepts of Physics (total enrollment: 17)

Summer
▷ PHYS 201. — College Physics (total enrollment: 51)
▷ PHYS 202. — College Physics (total enrollment: 43)

Fall
▷ PHYS 201. — College Physics (total enrollment: 244)
• SERVICE DURING 2011

National
- Committee/Panel: Joint 12th MMM-Intermag Conference - Program Committee (Member)

University
- Event: Aggie Swing Cats Classes/Workshop (Organizer)

Department
- Committee/Panel: IT Committee (Member)

Interdisciplinary/Intercollegiate
- Committee/Panel: MSEN Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
- PHYS 489. — Special Topics in (total enrollment: 25)
- PHYS 691. — Research (total enrollment: 1)

Summer
- PHYS 685. — Directed Studies (total enrollment: 1)

Fall
- PHYS 485. — Directed Studies (total enrollment: 1)
- PHYS 489. — Special Topics in (total enrollment: 34)
- PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

State
- Origin and Role in Exchange Bias of Uncompensated Magnetization in Antiferromagnets, Texas A&M University, coworkers: K. Badgley (G), D. Kaya (G), P. Lapa (G), A. King (U)

• PRESENTATIONS DURING 2011
- “Uncompensated Moments in Antiferromagnets and Intrinsic Exchange Bias,” Nebraska Center for Materials and Nanoscience, University of Nebraska, Lincoln, NE, January, 2011. (Individual)
“Uncompensated Moments in Antiferromagnets and Intrinsic Exchange Bias,” Condensed Matter Seminar, Department of Physics and Astronomy, Texas A&M University, College Station, TX, February, 2011.( Individual)

“Intrinsic Exchange Bias and Origin of Uncompensated Magnetization in FeF₂,” APS March Meeting, Dallas, TX, March, 2011.( Individual)

“Magnetic Nanodots: Vortex Core Measured and Calculated,” Texas A&M University-CONACyT Research Symposium, College Station, TX, March, 2011.( Individual)

“Uncompensated Magnetization and Structure of FeF₂,” Texas A&M University-CONACyT Research Symposium, College Station, TX, March, 2011.(Poster Individual)


“The Art of Science of Magnetism at the Nanoscale,” Materials Science and Engineering Seminar, Texas A&M University, College Station, TX, April, 2011.( Individual)

“Uncompensated Moments in Antiferromagnets and Intrinsic Exchange Bias,” Hitachi Global Storage Technologies, San Jose, CA, April, 2011.( Individual)

“Uncompensated Moments in Antiferromagnets and Intrinsic Exchange Bias,” Moscow International Symposium on Magnetism, Moscow, Russia, August, 2011.( Individual)

“Effect of Cu Layer on FeMn Magnetic Properties,” Meeting of the Texas Sections of the APS, AAPT, and Zone 13 of the SPS, Commerce, TX, October, 2011.( Graduate, . Kaya)

“Micromagnetic Simulations of the Transition Between Vortex and Single-domain Magnetization States in sub-100 nm Nanodots,” Meeting of the Texas Sections of the APS, AAPT, and Zone 13 of the SPS, Commerce, TX, October, 2011.( Graduate, A. King)

“New Magnetic State and Origin of Uncompensated Magnetization in FeF₂,” 56th MMM Meeting, Scottsdale, AZ, November, 2011.( Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ 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 2011

  National
  ▷ Editorial/Board: National Science Foundation (Review: Proposals), Physical Review, J. Applied Physics (Referee: Journals)
  ▷ Committee/Panel: MSEN Qualifier Committees (Member)

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

  Department
  ▷ Event: Physics Festival (Organizer)
  ▷ Committee/Panel: Graduate Credentials Committee (Member), Graduate Records Committee (Member)

  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Materials Science and Engineering Curriculum Committee (Member), Materials Science and Engineering Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ MSEN 691. — Research (total enrollment: 1)
  ▷ PHYS 305. — Advanced Electricity and Magnetism II (total enrollment: 25)
  ▷ PHYS 485. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 5)

  Summer
  ▷ MSEN 691. — Research (total enrollment: 1)
  ▷ PHYS 208. — Electricity and Optics (total enrollment: 102)
  ▷ PHYS 222 — Modern Physics for Engineers (total enrollment: 41)
  ▷ PHYS 691. — Research (total enrollment: 7)

  Fall
  ▷ MSEN 691. — Research (total enrollment: 1)
  ▷ PHYS 304. — Advanced Electricity and Magnetism I (total enrollment: 26)
PHYS 681. — Seminar (total enrollment: 26)
PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

Federal
▷ IGERT: New Mathematical Tools for Next Generation Materials, National Science Foundation, coworkers: A. Nandyala (G), E. Sooby (G)
▷ Materials World Network: Microstructural Design for Enhanced Efficiency in Solid State Energy Conversion, National Science Foundation, coworkers: J. Chen (G), L. Saribaev (G), X. Zheng (G)

Private
▷ (REN) Magnetism in Silicon Clathrates: New Nanostructured Magnetic Materials, The Robert A. Welch Foundation, coworkers: J. Chen (G), S. Rodriguez (G), L. Sarybaev (G), X. Zheng (G), R. Sandstrom (U)

• PRESENTATIONS DURING 2011
▷ “NMR Relaxation and Phonon Rattling in Type-I Ba$_8$Ga$_{16}$Sn$_{30}$ Clathrates,” March Meeting of American Physical Society, Dallas, TX, March, 2011. (Individual)
▷ “Zintl Stabilization and Site Preference in Ba-Cu-Ge Clathrates,” March Meeting of American Physical Society, Dallas, TX, March, 2011. (Individual)
▷ “Experimental and Theoretical Study of Fe$_4$Al$_{11-x}$Zn$_y$,” Intermag 2011 International Conference, Taipei, Taiwan, April, 2011. (Poster Individual)
▷ “Magnetic and Electronic Properties of Materials,” Texas A&M University, College Station, TX, September, 2011. (Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

National
▷ Editorial/Board: Department of Energy National Science Foundation (Review: Proposals), *Phys. Rev. Lett.* (Referee: Journals)
▷ Committee/Panel: CMS Collaboration Board (Member), CMS EMU and US CMS EMU Institutional Board (Representative), CMS Analysis Review Committees (Member), US CMS Elections Committee (Member)

University
▷ Committee/Panel: US CMS for TAMU (Representative)

Department
▷ Committee/Panel: Graduate Admissions Committee (Member), Qualifying Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 218. — Mechanics (total enrollment: 99)
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 218. — Mechanics (total enrollment: 242)
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) High Energy Physics at Texas A&M University, *Department of Energy*
▷ (REN) High Energy Physics at Texas A&M University, *Department of Energy*
▷ 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*

• PRESENTATIONS DURING 2011
“High Luminosity LHC Era: SLHC and Detector Upgrade Plans,” Aspen Winter Confer-
ence on Particle Physics, Aspen, CO, February, 2011. (Invited)
“CMS Muon Alignment,” APS Meeting, April, 2011. (Poster Invited)
“New Trends in Hadronic Tau Reconstruction at Hadron Colliders,” The Tau Portal Work-
shop, Davis, CA, April, 2011. (Invited)
“Searches for Dark SUSY at CMS,” APS Meeting, April, 2011. (Contributed)
“Searches for Lepton Jets at CMS as Signals For Dark SUSY,” BOOST-2011 Conference,
“CMS Trigger Motherboard (TMB) Design and Plans,” CMS Upgrade Workshop, Novem-
ber, 2011. (Invited)

- PUBLICATIONS DURING 2011
  Altheimer, A.; et al. (2011) Jet Substructure at the Tevatron and LHC: New results,
Elagin, A.; Murat, P.; Pranko, A.; Safonov, A. (2011) A New Mass Reconstruction Tech-
nique for Resonances Decaying to tau tau Nuclear Instruments and Methods in Physics
654, 481-489.
Safonov, A.N. (2011) Search for Light Resonances Decaying into Pairs of Muons as a Signal
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2011**
  - **National**
  - **College**
    - Committee/Panel: Undergraduate Program Committee (Member)
  - **Department**
    - Event: Physics Fair and related Fairs (Presenter)
    - Committee/Panel: Undergraduate Curriculum Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2011**
  - **Spring**
    - PHYS 303. — Advanced Mechanics II (total enrollment: 20)
    - PHYS 691. — Research (total enrollment: 1)
  - **Summer**
    - PHYS 691. — Research (total enrollment: 1)
  - **Fall**
    - PHYS 101. — Topics in Contemporary Physics (total enrollment: 65)
    - PHYS 611. — Electromagnetic Theory (total enrollment: 32)
    - PHYS 685. — Directed Studies (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2011**
  - **Federal**
    - (REN) Theory of Magnetic Heterostructures on the Nanometer Scale, *Department of Energy*, coworkers: M. Sears (G), P. Zhou (G)

• **PRESENTATIONS DURING 2011**
• PUBLICATIONS DURING 2011
• CHAIRS/PROFESSORSHIPS
  > Schuessler/Mitchell/Heep Chair in Experimental Optical and Biomedical Physics [2004]

• SERVICE DURING 2011
  National
  Department
  > Committee/Panel: AMO Search Committee (Member), Award Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Summer
  > PHYS 685. — Directed Studies (total enrollment: 1)
  > PHYS 691. — Research (total enrollment: 2)
  Fall
  > PHYS 201. — College Physics (total enrollment: 96)
  > PHYS 685. — Directed Studies (total enrollment: 2)
  > PHYS 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2011
  Federal
  > Development of a Phase-Coherent Laser System for Attosecond Science and Precision Spectroscopy, National Science Foundation, coworkers: A. Kolomenskii (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, coworkers: J. Perkins (G), S. Peng (U)

  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. Navas (U)
  > Optical Studies of Cold Molecular Ions Using Femtosecond and XUV Laser Radiation, The Robert A. Welch Foundation, coworkers: G. Kaya (G), C. Perkins (G)
(REN) Preparation of Ultracold Molecular Ions and Their Optical Studies Using Femtosecond Laser Pulses and High Harmonic Generation, *The Robert A. Welch Foundation*, coworkers: J. Strohaber (P), C. Perkins (G)

**PRESENTATIONS DURING 2011**

- “Attosecond Laser Physics and Precision Laser Spectroscopy at Texas A&M University,” Hans Schuessler at the PQE follow-on Workshop, College Station, TX, January, 2011. (Individual)
- “Precision Spectroscopies with Femtosecond Laser Frequency Combs,” University of Jena, Jena, Germany, June, 2011. (Individual)
- “Ion Trapping Experiments at Texas A&M University,” Max Planck Institute for Quantum Optics, Garching, Germany, July, 2011. (Individual)
- “Laser-induced Reactions Between a Ca+ Coulomb Crystal and Polar Molecules,” 17th International Conference on Photonic, Electronic and Atomic Collisions, Northern Ireland, United Kingdom, July, 2011. (Poster Individual)
- “Precision Spectroscopies with Femtosecond Frequency Combs,” University of Mainz, Mainz, Germany, July, 2011. (Individual)
- “Dynamics of Sympathetic Cooling for Mixed Ion Crystals,” International Workshop on Coherence and Decoherence at Ultracold Temperatures, Munich, Germany, September, 2011. (Poster Individual)
“Measuring of Methane and Carbon Dioxide Concentrations in Sea Waters,” 16th International Conference on Photoacoustic and Photothermal Phenomena, Merida, Mexico, November, 2011. (Poster Individual)

“Spectrally Resolved, Ultra Fast and Simultaneous Measurements of Methane and Carbon Dioxide Concentrations in Sea Waters with a Mid-IR Frequency Comb Laser,” 16th International Conference on Photoacoustic and Photothermal Phenomena, Merida, Mexico, November, 2011. (Poster Individual)


- PUBLICATIONS DURING 2011


• CHAIRS/PROFESSORSHIPS
  ▷ Distinguished Research Chair (TEES) [2000]
  ▷ Hershel E. Burgess Chair in Physics (Non-High Energy Physics) [1997]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ 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 2011
  International
  ▷ Herbert Walther Award, Deutsche Physikalische Gesellschaft (DPG) and the Optical Society (OSA)

• SERVICE DURING 2011
  National
  ▷ Professional Affiliation: American Physical Society (Fellow), Optical Society of America (Fellow)
  ▷ Committee/Panel: National Academy of Science Review Panels (Member), NIH, NSF, PRL, PNAS, Foundations of Physics Review Committees, etc (Member)

  University
  ▷ Committee/Panel: Academicians Executive Committee (Member)

  College
  ▷ Committee/Panel: Distinguished Professors Executive Committee (Member), Executive Committee (Member), Trotter Prize, Steering Committee (Chair)

  Center, Institute or Program
  ▷ Ad Hoc Committee: TIAS Ad Hoc Working Committee (Member)

  Department
  ▷ Committee/Panel: Colloquium Committee (Member), Executive Engineering Chair Committee (Member), AMO Search Committee (Member), Thesis/Dissertation Committees (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
PHYS 691. — Research (total enrollment: 8)

Summer
PHYS 691. — Research (total enrollment: 9)

Fall
PHYS 685. — Directed Studies (total enrollment: 1)
PHYS 691. — Research (total enrollment: 8)

• RESEARCH PROJECTS DURING 2011

Federal
Engineering Research Center (ERC) on Mid-Infrared Technologies for Health and Environment (MIRTHE), National Science Foundation, coworkers: K. Dorfman (P), M. Kim (P), D. Voronine (P), A. Wojcik (P), H. Xia (P)
Princeton/Texas A&M UniversityLasing Without Inversion in He and He-like Ions in XUV and X-Ray Regions, National Science Foundation
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), P. Genevet (P), M. Kim (P), D. Voronine (P), H. Xia (P), Q. Xia (P), J. Zou (P), G. Zhang (G)
Single Molecule Spectroscopy and Microscopy via Quantum Coherent Raman Spectroscopy, Office of Naval Research

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), H. Li (G), D. Sun (G), A. Traverso (G), Z. Yi (G)
Quantum Coherence and Decoherence in Atomic Molecular and Solid State Systems: Continuation and Extensions, The Robert A. Welch Foundation, coworkers: K. Dorfman (P), P. Genevet (P), Q. Wei (P), S. Woelk (P), P. Jha (G), J. Thompson (G), A. Traverso (G)

• PRESENTATIONS DURING 2011

“Standoff Spectroscopy via Remote Generation of Backward Lasing and/or Gain Swept Superradiance in Air,” CLEO Europe/OSA/DPG, Munich, Germany, May, 2011. (Invited)
“VIRTUAL PHOTONS: From Lamb’s Shift and Unruh’s Radiation to Superradiance and Solar Cells,” European Workshop on Quantum Optics, Madrid, Spain, May, 2011. (Invited)


“Quantum Science and Engineering,” Baylor University, Waco, TX, October, 2011. (Invited)

“Stimulated and Spontaneous Emission Revisited,” Texas A&M University, College Station, TX, October, 2011. (Invited)

“Using Quantum Thermodynamics to Enhance the Efficiency of Lasers and Solar Cells,” APS, Boston Section, Boston, MA, October, 2011. (Invited)

“Using Quantum Thermodynamics to Enhance the Efficiency of Lasers and Solar Cells,” University of Alaska, Fairbanks, AK, October, 2011. (Invited)

“A Simple Picture of the Chemical Bond via Bohr’s Old Quantum Mechanics,” Baylor University, Waco, TX, November, 2011. (Invited)

**PUBLICATIONS DURING 2011**


Jha, P.K.; Li, H.B.; Sautenkov, V.A.; Rostovtsev, Y.V.; Scully, M.O. (2011) Phase Dependent Interference Effects on Atomic Excitation *Optics Communications*, vol. 284, 2538-2541.


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Co-Director, George P. & Cynthia Woods Mitchell Institute for Fundamental Physics & Astronomy, Physics and Astronomy, /2002/

• SERVICE DURING 2011
  National
  Department
  ▷ Event: Conference on Strings, Branes and Supergravity (Organizer)
  ▷ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ PHYS 331. — Theoretical Methods for Physicists I (total enrollment: 31)
  ▷ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▷ PHYS 332. — Theoretical Methods for Physicists II (total enrollment: 18)
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ (REN) Strings, Branes, and the Search for Unification, National Science Foundation, coworkers: K. Sinha (P)
  ▷ Strings, Branes, and the Search for Unification, National Science Foundation, coworkers: K. Sinha (P)

• PRESENTATIONS DURING 2011
  ▷ “Aspects of Higher Spin Gravity,” Texas A&M University, College Station, TX, April, 2011. (Invited)
“(1,0) Superconformal Models in Six Dimensions,” Texas A&M University, College Station, TX, October, 2011. (Individual)

**PUBLICATIONS DURING 2011**
TORSTEN SIEBERT
ASSISTANT PROFESSOR
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siebert@physics.tamu.edu

Resigned 08/31/2011.

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT,

• AWARDS DURING 2011
  University
  ▷ Distinguished Achievement Award - Research, The Association of Former Students

• SERVICE DURING 2011
  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: Advisory Committee (Member), Budget Committee (Co-Chair), Promotion, Tenure, and Appointment Committee (Member), Qualifying Examination Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ PHYS 218. — Mechanics (total enrollment: 222)
  ▷ PHYS 691. — Research (total enrollment: 5)
  Summer
  ▷ PHYS 691. — Research (total enrollment: 4)
  Fall
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011
Federal
▶ (REN) Spin-Dependent Transport and Thermoelectric Phenomena in Multi-Band Systems, National Science Foundation, coworkers: X. Pan (P), X. Liu (G)
▶ Winter School and Workshop on Spin Physics and Topological Effects in Cold Atoms, Condensed Matter, and Beyond, National Science Foundation
▶ Winter School and Workshop on Spin Physics and Topological Effects in Cold Atoms, Condensed Matter, and Beyond, U.S. Navy - Office of Sponsored Research

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
▶ Spin-Hall Effect in Semiconductors and Related Phenomena in Nano-Spintronics, Research Corporation, coworkers: A. Kovalev (P)

Other
▶ Towards Spin-reserving Heterogeneous Spin Networks, Ohio State University

• PRESENTATIONS DURING 2011
▶ “Spin Hall Effect and Devices: Anomalous and Spin Hall Effect, Spin-helix Transistors, and Beyond,” APS March Meeting, Dallas, TX, March, 2011. (Invited)
▶ “Spin-injection Hall Effect: A New Member of the Spintronics Hall Family and its Implications in Nano-spintronics,” Hamburg, Germany, May, 2011. (Individual)
▶ “Echoes of Special Relativity in Condensed Matter Physics: Anomalous Hall Effect, Spin-helix Transistors, and Topological Thermoelectrics,” Texas A&M University, College Station, TX, September, 2011. (Individual)

• PUBLICATIONS DURING 2011


ALEXEI V. SOKOLOV

PROFESSOR (979) 845-7733
PHYS-At. and Mol. Phys., Quantum Optics sokol@physics.tamu.edu

- CHAIRS/PROFESSORSHIPS
  - Stephen E. Harris Professorship in Quantum Optics [2006]

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  - Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

- AWARDS DURING 2011
  University
  - Jo Ann Treat Research Excellence Award, Texas A&M Research Foundation

- SERVICE DURING 2011
  National
  - Event: Division of Atomic, Molecular and Optical Physics American Physical Society Conference (Participant), Nomination Material for NSERC Brockhouse Prize (Reviewed)
  - Advisory Board: Journal of Raman Spectroscopy (Member)

  College
  - Event: Texas Junior Science and Humanities Symposium (Judge)

  Department
  - Event: 41st Physics of Quantum Electronics (Co-Organizer), Molecular Modulation and Sky Laser Physics at the 42nd PQE Conference (Organizer), Physics Festival (Participant), Workshop on Quantum Science and Engineering/ Townes Fest (Organizer)
  - Committee/Panel: AMO Search Committee (Chair), Colloquium Committee (Member), Graduate Admissions Committee (Member), Graduate Student Credentials and Records Committee (Member), The Shop Committee (Member)

- TEACHING ASSIGNMENTS DURING 2011
  Spring
  - PHYS 691. — Research (total enrollment: 8)

  Summer
  - PHYS 691. — Research (total enrollment: 5)

  Fall
  - PHYS 426. — Physics Laboratory (total enrollment: 66)
  - PHYS 689. — Special Topics in (total enrollment: 9)
• PHYS 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011

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
  ▶ Development of a Phase-Coherent Laser System for Attosecond Science and Precision Spectroscopy, National Science Foundation, coworkers: A. Kolomenskii (Research Scientist)

State
  ▶ 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)

Private
  ▶ (REN) Applications of Molecular Coherence in Ultrafast Optics, The Robert A. Welch Foundation, coworkers: K. Dorfman (P), X. Wang (P), P. Jha (G), H. Xia (G)
  ▶ Applications of Molecular Coherence in Ultrafast Optics, The Robert A. Welch Foundation, coworkers: M. Zhi (P), X. Wang (G), K. Wang (G)

Other
  ▶ Attosecond Optical Technology Based on Recollision and Gating, Kansas State University, coworkers: K. Lee (P), C. Zhang (P), M. Zhi (P), H. Xia (G)

• PRESENTATIONS DURING 2011

  ▶ “Controlled Femtosecond Laser Filaments for Remote Sensing,” Texas A&M University-Physics of Quantum Electronics Workshop, College Station, TX, January, 2011. (Poster Graduate, B. Strycker)
  ▶ “Pulse-shaper-assisted Phase Optimization of an Ultrabroadband Spectral Comb,” 41th Winter Colloquium on the Physics of Quantum Electronics, Snowbird, UT, January, 2011. (Graduate)
  ▶ “Pulse-shaper-enabled Phase Control of Nonresonant Background for Heterodyne Detection of CARS Signal,” 41st Winter Colloquium on the Physics of Quantum Electronics, Snowbird, UT, January, 2011. (Graduate, B. Strycker)
  ▶ “Energy Transfer Between Laser Filaments in Liquid Methanol,” Texas Academy of Science Annual Meeting, Austin, TX, March, 2011. (Graduate, B. Strycker)
  ▶ “Molecular Coherence in Gasses and Solids: Physics and Applications,” International Laser Center, Physics Department, Lomonosov Moscow State University, Moscow, Russia,
May, 2011. (Invited)
▷ “Energy Transfer Between Laser Filaments in Liquid Methanol,” Texas A&M University/Princeton Workshop on Quantum Science and Engineering, Jackson, WY, July, 2011. (Poster Graduate, B. Strycker)
▷ “Heterodyne Coherent Anti-Stokes Raman Scattering by the Phase Control of its Intrinsic Background,” TAMU/Princeton Workshop on Quantum Science and Engineering, Jackson, WY, July, 2011. (Postdoc)
▷ “Remote sub-diffraction Imaging with Femtosecond Laser Filaments,” Physics of Quantum Electronics Summer School, Jackson, WY, July, 2011. (Poster Graduate, B. Strycker)
▷ “Femtosecond Laser Pulses Interacting with Molecules: Physics and Applications,” University of Texas, Dallas, TX, October, 2011. (Invited)
▷ “Pulse-shaper-assisted Phase Control of a Coherent Broadband Spectrum of Raman Sidebands,” Attosecond Science MURI Workshop, Army Research Lab, Adelphi, MD, December, 2011. (Postdoc, M. Zhi)
▷ “Understanding Ionization by Aligning Molecules,” Attosecond Science MURI Workshop, Army Research Lab, Adelphi, MD, December, 2011. (Postdoc)

- PUBLICATIONS DURING 2011


• **CHAIRS/PROFESSORSHIPS**
  - Mitchell-Heep-Munnerlyn Endowed Chair in Observational Astronomy [2006]

• **SERVICE DURING 2011**
  **International**
  - Committee/Panel: Las Cumbres Observatory Global Telescope (Board Member)

  **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)

  **Regional**
  - Committee/Panel: Brazos County Museum of Natural History (Board Member)

  **University**
  - Committee/Panel: Giant Magellan Project (Representative)

  **Department**
  - Committee/Panel: AMO Faculty Search Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2011**
  **Spring**
  - PHYS 691. — Research (total enrollment: 3)

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

  **Fall**
  - ASTR 681. — Astronomy Seminar (total enrollment: 7)
  - ASTR 689. — Special Topics in (total enrollment: 8)
  - PHYS 691. — Research (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2011**
  **Federal**
  - Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, National Science Foundation

  **State**
The Infrared and Bolometric Properties of Type 1a Supernovae: Improving the Standard Candle, *Texas Higher Education Coordinating Board*

**PUBLICATIONS DURING 2011**


*No report received from faculty member.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2011
  
  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: International Programs (Member), Faculty Senate: The Research Committee (Chair), University Research Council (Member)

  Department
  ▷ Committee/Panel: Graduate Curriculum Committee (Member), Head Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  
  Spring
  ▷ MSEN 602. — Advanced Materials Science and Engineering (total enrollment: 38)
  ▷ MSEN 691. — Research (total enrollment: 1)
  ▷ PHYS 485. — Directed Studies (total enrollment: 2)
  ▷ PHYS 491. — Research (total enrollment: 2)
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 3)

  Summer
  ▷ MSEN 684. — Professional Internship (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 2)

  Fall
  ▷ MSEN 691. — Research (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011
University
▷ (REN) Center for Nanoscale Science and Technology, College of Science, coworkers: W. Bang (G), S. Oh Woo (G)
▷ (REN) Center for Nanoscale Science and Technology, College of Science, coworkers: W. Bang (G), S. Woo (G)

International
▷ Revolving Operational Funds for Biomolecular Motility and Single Molecule Magnet Studies, WPI Research Initiative Advanced Institute for Materials Research, coworkers: K. Kim (P), D. Oliveira (P), A. Sikora (P), A. Liao (G), K. Reaves (G)
▷ Equipment for Biomolecular Motility Studies, WPI Research Initiative Advanced Institute for Materials Research
▷ (REN) Seed funds for Fusion-Research Project: Single Molecule Magnets and Their Use in Logic Devices,: WPI Research Initiative Advanced Institute for Materials Research, coworkers: K. Kim (P), K. Reaves (G), K. Iwaya (Staff)

• PRESENTATIONS DURING 2011
▷ “Biomotility of Motorproteins when Surfaces and Biosystems Meet,” Interdisciplinary Nano-Interfaces Group, Sendai, Japan, 2011. (Invited)
▷ “Construction of Molecular Shuttles Based on Kinesin Motor Proteins and Microtubules,” WPI-AIMR Workshop, Sendai, Japan, 2011. (Poster Invited)
▷ “STM Studies of Mn_{12} Ligand Variants,” Global Center of Excellence Workshop, Sendai, Japan, 2011. (Invited)
▷ “Study of Microtubule and Motor Protein Motion,” Global Center of Excellence Workshop, Sendai, Japan, 2011. (Invited)

• PUBLICATIONS DURING 2011
DAVID TOBACK
PROFESSOR
PHYS-High Energy, Experimental
toback@tamu.edu

• SERVICE DURING 2011

National
▷ Editorial/Board: Search for Heavy Bottom-like Quarks Decaying to an Electron or Muon and Jets (Chair)

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)
▷ Committee/Panel: CDF Supersymmetry Working (Co-convener), CDF Very Exotics Physics (Co-convener), Head Search Committee (Member), High Energy Representative to the Advisory Committee (Member), Long Range Planning Committee (Member), Nuclear Solutions Institute Faculty Search Committee (Member), Texas A&M University/CDF group leader (Group Leader)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 3)

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: 20)
▷ ASTR 109. — Big Bang and Black Holes (total enrollment: 44)
▷ ASTR 119(H) — Big Bang and Black Holes (total enrollment: 13)
▷ ASTR 119. — Big Bang and Black Holes (total enrollment: 28)
▷ PHYS 109(H) — Big Bang and Black Holes (total enrollment: 10)
▷ PHYS 109. — Big Bang and Black Holes (total enrollment: 13)
▷ PHYS 119. — Big Bang and Black Holes: Laboratory Methods (total enrollment: 8)
▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2011

Federal
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy
(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 2011


“The Big Bang, Dark Matter and Searching for New Particles at the Large Hadron Collider,” Adult Education Series, Congregation Beth Shalom, April, 2011. (Individual)


“Fun Things to Watch for During a Football Game.. Physics in Motion,” 7th Annual International Aggie Football Symposium, October, 2011. (Invited)

PUBLICATIONS DURING 2011


Aaltonen, T.; et al. (2011) Search for Heavy Bottomlike Quarks Decaying to an Electron or Muon and Jets in $p\bar{p}$ at $\sqrt{s}=1.96$ TeV Physical Review Letters, vol. 106, 141803.


• SERVICE DURING 2011

National
▷ Committee/Panel: Hubble Space Telescope Review Panel (Member)

Regional
▷ Event: Graduation Ceremony, Houston Vietnamese Community Center (Speaker)

University
▷ Event: Star Parties (Volunteer)
▷ Committee/Panel: ADVANCE Leadership Committee (Member)

Department
▷ Event: Physics Festival (Participant)
▷ Committee/Panel: Graduate Student Credentials and Records Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ ASTR 111. — *Overview of Modern Astronomy* (total enrollment: 91)
▷ ASTR 685. — *Directed Studies* (total enrollment: 1)
▷ PHYS 685. — *Directed Studies* (total enrollment: 1)

Summer
▷ ASTR 685. — *Directed Studies* (total enrollment: 2)

Fall
▷ ASTR 111(H) — *Overview of Modern Astronomy* (total enrollment: 19)
▷ ASTR 111. — *Overview of Modern Astronomy* (total enrollment: 153)
▷ ASTR 685. — *Directed Studies* (total enrollment: 1)
▷ ASTR 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ 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 2011

▷ "A Census of Mid-Infrared Selected AGN in Massive Galaxy Clusters at 0 \(\leq \) z \(\leq\) 1.2," American Astronomical Society Winter Meeting, Seattle, WA, January, 2011.(Poster Individual)
▷ "How Do Galaxies in Massive Clusters Form Their Stars?,” Department of Physics & Astronomy, McGill University, Quebec, Canada, January, 2011.( Individual)
▷ "Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Department of Astronomy, University of Texas, Austin, TX, February, 2011.( Individual)
▷ "Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Max Planck Institute for Extra-terrestrial Physics, February, 2011.( Individual)
▷ “Astronomy, Visualization, & Education,” VizPhys Meeting, Cooks Branch, TX, March, 2011.( Contributed)
▷ “Environmental Drivers of Galaxy Evolution,” Pioneering the Extragalactic Frontier with the Giant Magellan Telescope, Texas A&M, College Station, TX, March, 2011.( Invited)
▷ "How Do Galaxies in Massive Clusters Form Their Stars?,” Institute of Astronomy, University of Vienna, Vienna, Austria, April, 2011.( Individual)
▷ “Vinh Quy Day,” Vietnamese Civic Center, Houston, TX, June, 2011.( Individual)
▷ “A Census of Mid-Infrared Selected AGN in Massive Galaxy Clusters at 0 \(\leq \) z \(\leq\) 1.2,” Structure in Clusters and Groups of Galaxies in the Chandra Era, Boston, MA, July, 2011.(Poster Individual)
▷ “Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Galaxy Formation Conference, Durham University, Durham, England, July, 2011.( Contributed)
▷ “Star Formation in Galaxy Clusters Over the Past 10 Billion Years,” Australian Astronomical Observatory, Epping, Australia, August, 2011.( Individual)
▷ “How Do Galaxies in Massive Clusters Form Their Stars?,” Department of Physics & Astronomy, Texas A&M University, College Station, TX, September, 2011.( Individual)
▷ “How Do Galaxies in Massive Clusters Form Their Stars?,” Department of Physics, Baylor University, Waco, TX, September, 2011.( Individual)
▷ “Intergalactic Gas in Groups of Galaxies,” Department of Astronomy, Indiana University, Bloomington, IN, September, 2011.( Individual)
▷ “Building Massive Galaxies Over Cosmic Time: A How-To Manual,” Department of Physics & Astronomy, Texas A&M University, College Station, TX, October, 2011.( Individual)

• PUBLICATIONS DURING 2011

vol. 740, 54.

Tomczak, A.; Tran, K.; Saintonge, A. (2011) A Census of Mid-Infrared Selected Active Galactic Nuclei in Massive Galaxy Clusters at 0 \( \leq z \leq 1.3 \) (SMIRCS III) *Astrophysical Journal*, vol. 738, 65.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Director, Nuclear Solutions Institute, Vice President for Research, [2010]
  ▶ Director, Cyclotron Institute, College of Science, [2003]

• SERVICE DURING 2011

  International
  ▶ Editorial/Board: Review of Progress in Physics (Member)
  ▶ Committee/Panel: 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 (Chair), DNP Dissertation Award Committee (Chair), DNP Education Committee (Member), DNP Program Committee (Chair), Facility for Rare Isotope Beams Science Advisory Committee (Member), Ion Collider Advisory Committee (Elected 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), Nuclear Solutions Institute Advisory Board (Chair), Program Review and Advisory Committee for Fundamental Neutron Physics Beamline at the SNS (Chair)

  University
  ▶ Committee/Panel: Visiting Committee, Colorado School of Mines (Member)

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

  Department
  ▶ Committee/Panel: Department Head Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 6)

  Summer
PHYS 491. — Research (total enrollment: 10)
PHYS 685. — Directed Studies (total enrollment: 1)
PHYS 691. — Research (total enrollment: 4)

Fall
PHYS 691. — Research (total enrollment: 6)

- RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: V. Goldberg (Research Scientist), L. Trache (Research Scientist), A. Zhanov (Research Scientist), G. Pizzone (P), B. Roeder (P), R. Chyzh (G), M. Dag (G), M. McCleskey (G), E. Simmons (G), A. Spiridon (G)
  ▶ (REN) Fundamental Studies in Nuclear Science, Department of Energy, coworkers: 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), A. Zhanov (P), M. McCluskey (G)

- PRESENTATIONS DURING 2011
  ▶ “ANC’s and (or?) Spectroscopic Factors from Transfer Reactions,” ECT Workshop on Transfer Reactions, Trento, Italy, May 2011. (Invited)
  ▶ “Current Topics in Nuclear Astrophysics,” XLIX International Winter Meeting on Nuclear Physics, Bormio, Italy, 2011. (Invited)
  ▶ “Astrophysical Reaction Rates that are Important for $^{18}F$ and $^{22}Na$ in Stellar Explosions,” Astronomy with Radioactivities VII, Phillip Island, Victoria, Australia, March, 2011. (Invited)
  ▶ “The Worldwide Effort to Understand the Visible Matter in the Universe,” Texas Section APS, Commerce, TX, October, 2011. (Invited)

**PUBLICATIONS DURING 2011**


SEC. 6.1  PROFESSIONAL ACTIVITIES 723


• SERVICE DURING 2011

International
  ▶ Editorial/Board: Chinese National Science Foundation (Review: Proposals)
  ▶ Committee/Panel: SoC of the Meeting on KDUSTand the DES, Institute of High Energy
      Physics (Member), SoC of the Shanghai Particle Physics and Cosmology Symposium on
      Dark Matter, Dark Energy, and LHC Physics (Member)

National
  ▶ Editorial/Board: ApJ (Referee: Journals)
  ▶ Committee/Panel: Steering Committee of Astronomy & Astrophysics from Antarctica of
      the Scientific Committee on Antarctic Research (Member)

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

Department
  ▶ Committee/Panel: The 1st George Mitchell Institute Workshop on Astronomy Cosmic
      Surveys of the Current Decade (Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
  ▶ ASTR 101. — Basic Astronomy (total enrollment: 49)
  ▶ PHYS 691. — Research (total enrollment: 1)

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

Fall
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
  ▶ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining
      Models with Observations, National Science Foundation, coworkers: A. Wagers (G),
      S. Gooding (G)

• PRESENTATIONS DURING 2011
  ▶ “Astronomy with the Antarctica Survey Telescopes,” Qinghua University, Beijing, China,
      March, 2011. (Invited)
  ▶ “Astronomy Cosmic Surveys of the Current Decade,” The 1st George Mitchell Institute
      Workshop, Cook’s Brach, Texas, April, 2011. (Invited)
- “Antarctica Astronomy and the Next Stage of Supernova Cosmology,” Shanghai Jiaotong University, Shanghai, China, May, 2011. (Invited)
- “Science Opportunities with the Antarctica Survey Telescopes and Beyond,” Astronomical Observations from Antarctica, University of Science and Technology of China, Hefei, China, May, 2011. (Invited)
- “Wide Field Astronomical Surveys from Antarctica,” Astronomy and Astrophysics from Antarctica, Sydney, Australia, June, 2011. (Invited)
- “The Dark Universe Illuminated by Supernovae Explosions,” Beijing Planetarium, Beijing, China, October, 2011. (Invited)

**PUBLICATIONS DURING 2011**
• **CHAIRS/PROFESSORSHIPS**
  ▶ Ed Rachal Chair in High Energy Physics /2007/

• **SERVICE DURING 2011**
  National
  ▶ Editorial/Board: National Science Foundation, Department of Energy (Review: Proposals)

  University
  ▶ Committee/Panel: CIRTL Steering Committee (Chair)

  College
  ▶ Committee/Panel: Diversity Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2011**
  Fall
  ▶ PHYS 208. — *Electricity and Optics* (total enrollment: 144)

• **RESEARCH PROJECTS DURING 2011**
  Federal
  ▶ (REN) High Energy Physics at Texas A&M University, *Department of Energy*
  ▶ Center for the Integration of Research, Teaching and Learning (CIRTL) Network: Lead Institution, University of Wisconsin, *National Science Foundation*, coworkers: M. Oren (G), G. Rathore (G), B. Herbert (Staff)

  Other
  ▶ The CIRTL Network-Shaping, Connecting, and Supporting the Future National STEM Faculty, *University of Wisconsin*, coworkers: R. Autenrieth (G), K. Butler-Purry (G)G, B. Rathore (G)

• **PUBLICATIONS DURING 2011**
  ▶ Adamson, P.; et al. (2011) Measurement of the Underground Atmospheric Muon Charge


• SERVICE DURING 2011

University
▷ Committee/Panel: Conflict of Interest Policy Review Committee (Member), Texas A&M Research Foundation Advisory Committee (Member)

Department
▷ Committee/Panel: Graduate Curriculum Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 201. — College Physics (total enrollment: 180)
▷ PHYS 691. — Research (total enrollment: 3)

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

Fall
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 617. — Physics of the Solid State (total enrollment: 21)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

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)
▷ (REN) Nanoscale Characterization of Bandgap Engineered III-V Semiconductor Superlattices and Quantum Wells, Sandia National Laboratories, coworkers: K. Kanedy (G), F. Lopez (G), M. Wood (G), K. Underwood (U)
GEORGE R. WELCH

PROFESSOR

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  - Department Head, Physics and Astronomy, [2011]

- SERVICE DURING 2011
  - 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 2011
  - Spring
    - PHYS 327. — Experimental Physics (total enrollment: 21)
  - Fall
    - PHYS 218. — Mechanics (total enrollment: 137)

- PUBLICATIONS DURING 2011
  - Wang, X.; Wang, K.; Welch, G.R.; Sokolov, A.V. (2011) Heterodyne Coherent Anti-Stokes Raman Scattering by the Phase Control of its Intrinsic Background Physical Review A: Atomic Molecular and Optical Physics , vol. 84, 

No report received from faculty member.
JAMES T. WHITE
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PHYS-High Energy Physics white@physics.tamu.edu

• SERVICE DURING 2011

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 2011

Spring
▷ PHYS 491. — Research (total enrollment: 1)
▷ PHYS 666. — Scientific Instrument Making (total enrollment: 18)
▷ PHYS 691. — Research (total enrollment: 3)

Summer
▷ PHYS 485. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 3)

Fall
▷ PHYS 218. — Mechanics (total enrollment: 223)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Development of Quartz Structures for Ultralow Background High Pressure Phototubes, Department of Energy
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy
▷ (REN) High Energy Physics at Texas A&M University, Department of Energy, coworkers: R. Mannino (G), C. Sofka (G), T. Stiegler (G), T. Crockett (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

SEC. 6.1 PROFESSIONAL ACTIVITIES 731
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. Robert (U)

PRESENTATIONS DURING 2011

- “Plans for a Light WIMP Search,” UNM Mini-Workshop on Dark Matter, its Origin, Models and Detection, New Mexico Center for Particle Physics, University of New Mexico, Albuquerque, NM, May, 2011. (Invited)
- “The LUX Dark Matter Search Experiment and the SIGN Low Mass WIMP Search,” University of Texas, Austin, TX, September, 2011. (Individual)
- “LUX Dark Matter Search Experiment,” Texas Section of APS, Commerce, TX, October, 2011. (Individual)
- “Measuring Low Energy Quenching Factors for Nuclear Recoils in NaI(Tl),” Texas Section of APS, Commerce, TX, October, 2011. (Individual)

PUBLICATIONS DURING 2011

- Akerib, D.S.; et al. (2011) Radio-assay of Titanium Samples for the LUX Experiment.
- Alvarez, V.; et al. (2011) SiPMs Coated with TPB: Coating Protocol and Characterization for NEXT.
- Malling, D.C.; et al. (2011) After LUX: The LZ Program.
WENHAO WU
ASSOCIATE PROFESSOR (979) 845-7737
PHYS-Condensed Matter www@physics.tamu.edu

• SERVICE DURING 2011

International
▷ Editorial/Board: Israel Science Foundation, United States-Israel Binational Science Foundation (Review: Proposals)

National

Department
▷ Committee/Panel: Graduate Admissions Committee (Member), Qualifying Exam Committee (Member)

Interdisciplinary/Intercollegiate
▷ Committee/Panel: MSEN Committee on Qualification Procedures (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ PHYS 202. — College Physics (total enrollment: 93)
▷ PHYS 691. — Research (total enrollment: 2)

Summer
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 40)
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 40)
▷ PHYS 691. — Research (total enrollment: 2)

Fall
▷ PHYS 218. — Mechanics (total enrollment: 91)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

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 2011
  ▶ “Strongly Anisotropic Flux Pinning in Superconducting PbBi Thin Films Covered by Periodic Ferromagnet Stripes,” Meeting of the American Physical Society, Dallas, TX, March, 2011. (Individual)
  ▶ “Superconducting Properties of Lead-Bismuth Films Controlled by Ferromagnetic Nanowire Arrays,” Meeting of the American Physical Society, Dallas, TX, March, 2011. (Individual)
  ▶ “Long-range Superconducting Proximity Effect in Template-fabricated Single-crystal Nanowires,” 26th International Conference on Low-Temperature Physics, Beijing, China, August, 2011. (Individual)

• PUBLICATIONS DURING 2011
  ▶ Ye, Z.; Lyuksyutov, I.F.; Wu, W.; Naugle, D.G. (2011) Superconducting properties of \( \text{Pb}_82\text{Bi}_{18} \) Films Controlled by Ferromagnetic Nanowire Arrays *Superconductor Science and Technology*, vol. 24, 024019.
• SERVICE DURING 2011
  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), Physical Review C and Physical Review Letters (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 119)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 108)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: Y. Lui (Research Scientist), F. Krishichayan (P), J. Button (G), J. Schaeffer (U)

• PRESENTATIONS DURING 2011
  ▶ “Systematics of Giant Monopole Resonance and Recent Results,” Heavy Ion Research Facility, Lanzhou, China, September, 2011.( Individual)
  ▶ “Experiment at Research Center for Nuclear Physics,” Osaka University, Osaka, Japan, November, 2011.( Individual)
  ▶ “Recent Results of the Giant Monopole Resonance Measurements and Their Implications,” Konan University, Kobe Japan, November, 2011.( Individual)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
▷ Committee/Panel: Journal of Raman Spectroscopy, Laser Physics Letters, Laser Physics, Journal of European Optical Society, and Nanotechnologies in Russia (Member)

National
▷ Editorial/Board: Nature, Optics Letters, Optics Express, and many other journals (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2011
Fall
▷ PHYS 624 — Quantum Mechanics (total enrollment: 34)

• PRESENTATIONS DURING 2011
▷ “Nonlinear Optics of Fast-ionizing Media: From the Nanosecond to Attosecond Time Scale,” Institute for Quantum Science and Engineering Workshop, Texas A&M University, College Station, TX, January, 2011. (Individual)
▷ “Ultrafast Science and Technology,” Tianjin University, China, June, 2011. (Individual)
▷ “Bioinspiration, Neurophotonics and New Ways to See the Invisible,” Kattawarfest Workshop, Texas A&M University, College Station, TX, August, 2011. (Individual)
▷ “First Experimental Results in Mid-infrared Filamentation in Gases,” Ultrafast Optics, Monterey, CA, September, 2011. (Individual)
“Ultrabroadband Mid-infrared Source Based on Four-wave Rectification in Gases,” Ultrafast Optics, Monterey, CA, September, 2011. (Invited)


“Ultrashort Pulses in Fast Ionizing Media,” General Physics Institute, Russian Academy of Sciences, Moscow, Russia, December, 2011. (Individual)

PUBLICATIONS DURING 2011


M. SUHAIL ZUBAIRY

• CHAIRS/PROFESSORSHIPS
  ▶ Munnerlyn-Heep Endowed Chair in Quantum Optics [2010]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Associate Director, Institute for Quantum Science and Engineering (IQSE), [2001]

• SERVICE DURING 2011
  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 2011
  Spring
  ▶ PHYS 648. — Quantum Optics and Laser Physics (total enrollment: 8)
  ▶ PHYS 691. — Research (total enrollment: 5)
  Summer
  ▶ PHYS 691. — Research (total enrollment: 3)
  Fall
  ▶ PHYS 221. — Optics and Thermal Physics (total enrollment: 51)
  ▶ PHYS 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011
  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 2011
  ▶ “Sub-wavelength Optical Lithography,” Quantum Optics and New Materials, Beijing Computational Science Research Center, Beijing, China, January, 2011.( Invited)
  ▶ “Beyond the Rayleigh Limit in Optical Lithography and Microscopy,” 18th Central European Workshop on Quantum Optics, Madrid, Spain, May, 2011.( Invited)
  ▶ “Sub-wavelength Lithography,” KACST 3rd Meeting on Quantum Optics and Informatics, Riyadh, Saudi Arabia, May, 2011.( Invited)
  ▶ “Sub-wavelength Lithography,” Tongji University, Shanghai, China, July, 2011.( Invited)
  ▶ “Sub-wavelength Lithography,” 5th International Symposium on Quantum Optics and Lasers, Islamabad, Pakistan, July, 2011.( Invited)
  ▶ “Beyond the Rayleigh Limit in Optical Lithography,” OSA’s 95th Annual Meeting, San Jose, CA, October, 2011.( Invited)
  ▶ “Beyond the Rayleigh Limit in Optical Lithography,” University of Maryland, College Park, MD, October, 2011.( Invited)

• PUBLICATIONS DURING 2011
7. **Research Activity, 2011**

This section contains information on all funded research activity for the calendar year 2011. 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 2011 = # Days 2011 × Daily Grant Award
### 7.1 Summary of Research Support, 2011

<table>
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<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
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<th>Indirect</th>
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<td>Federal Agencies</td>
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</tbody>
</table>

**Brookhaven National Laboratory**

- Hardy, J.C. (REN) NNDC: Contract for Cyclotron Institute, (with: J. Hardy, N. Nica)  
  10/1/2011 9/30/2012 5,971 0 5,971

**Subtotal: Brookhaven National Laboratory** 5,971 0 5,971

**Department of Defense**

- Kattawar, G.W. Three-Dimensional Polarized Radiative Transfer in a Dynamic Atmosphere-Ocean System  
  10/1/2010 9/30/2012 50,000 0 50,000

- Kattawar, G.W. Ultrashort Laser Pulse Propagation in Water, (with: G. Kattawar, A. Sokolov)  
  10/1/2007 9/30/2011 30,528 12,053 42,581

- Naugle, D.G. RFQ-Army Research Laboratory  

- Sokolov, A.V. Ultrashort Laser Pulse Propagation in Water, (with: G. Kattawar, A. Sokolov)  
  10/1/2007 9/30/2011 30,528 12,053 42,581

**Subtotal: Department of Defense** 126,884 31,313 158,207

**Department of Energy**

  5/1/2010 4/30/2011 28,224 9,917 38,141

  5/1/2011 4/30/2012 57,268 20,278 77,545

- Fries, R.J. A Topical Collaboration on Quantitative Jet and Electromagnetic Tomography (IFT) of Extreme Phases of Matter in Heavy-Ion Collisions, (with: R. Fries, C. Ko)  
  6/1/2010 5/31/2015 12,837 1,163 14,000

  1/1/2011 12/31/2013 363,243 35,661 398,904

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2011 Physics and Astronomy Annual Report
<table>
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<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>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>5/31/2015</td>
<td>12,837</td>
<td>1,163</td>
<td>14,000</td>
</tr>
<tr>
<td>Mahapatra, R.</td>
<td>Memorandum of Understanding Between Texas A&amp;M University and Fermi National Accelerator Laboratory for the Super CDMS Soudan Project</td>
<td>10/1/2009</td>
<td>9/30/2011</td>
<td>93,278</td>
<td>37,311</td>
<td>130,590</td>
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<tr>
<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>125,400</td>
<td>24,600</td>
<td>150,000</td>
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<tr>
<td>McIntyre, P.M.</td>
<td>(REN) New Technology for Future Colliders</td>
<td>12/1/2009</td>
<td>11/30/2012</td>
<td>1,702,062</td>
<td>252,500</td>
<td>1,954,562</td>
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<tr>
<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>132,537</td>
<td>23,797</td>
<td>156,333</td>
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<tr>
<td>Grantee</td>
<td>Title</td>
<td>Start</td>
<td>End</td>
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<tr>
<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>102,500</td>
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<td>Mioduszewski, S.</td>
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* Subtotal: Department of Energy

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* ETH Zurich

Katzgraber, H.G. Brutus Cluster Expansion

1/1/2009 11/1/2011 52,175 0 52,175

* Subtotal: ETH Zurich

52,175 0 52,175

* FERMILAB National Accelerator Laboratory


6/1/2010 9/30/2011 117,641 0 117,641

Kamon, T. Development of Physics Analysis Tool for Inclusive Jets+Missing FT+TAUS Events at CMS

10/1/2008 9/30/2011 35,889 5,489 41,378

Kamon, T. US CMS Upgrade R and D M and O, (with: T. Kamon, A. Safonov)

10/1/2008 9/30/2011 25,065 3,961 29,026

Safonov, A.N. US CMS Upgrade Endcap Muon M&O Subsystem

10/1/2008 9/30/2011 37,178 9,899 47,077

Safonov, A.N. US CMS Upgrade R and D M and O, (with: T. Kamon, A. Safonov)

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Toback, D. (REN) Supporting the CDF Run II Operation by the Texas A&M University

2/1/2011 1/31/2012 27,445 0 27,445

* Subtotal: FERMILAB National Accelerator Laboratory

268,283 23,310 291,593

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<td>CAREER: Active Integrated Nanostructure Devices for Infrared Photonics and Femtosecond Pulse Generation</td>
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<td>Schuessler, H.A.</td>
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* Office of Naval Research

752 2011 Physics and Astronomy Annual Report
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**Subtotal:** Office of Naval Research 299,014 111,242 410,256

**Sandia National Laboratories**

- Kattawar, G.W. (REN) Graduate Research Fellowship 9/1/2010 8/31/2011 26,593 0 26,593
- Kattawar, G.W. (REN) Graduate Research Fellowship 9/1/2011 8/31/2012 13,260 0 13,260

**Subtotal:** Sandia National Laboratories 55,734 6,220 61,955

**Space Telescope Science Institute**

- Papovich, C. Cosmic Assembly Near-IR Deep Extragalactic Survey (CANDELS) - I 11/1/2010 10/31/2014 11,428 5,068 16,497

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* Subtotal: VPI Research Initiative Advanced Institute for Materials Research 350,079 0 350,079

* Subtotal: INTERNATIONAL AGENCIES 419,241 8,150 427,391

**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 40,756 17,466 58,222

* Subtotal: Ohio State University 40,756 17,466 58,222

* University of Wisconsin

* Subtotal: University of Wisconsin 32,607 0 32,607

* Subtotal: OTHER GOVERNMENT 228,656 17,466 246,122

**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 49,315 0 49,315

* Subtotal: Brown University 49,315 0 49,315

* California Institute of Technology

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* Subtotal: The Robert A. Welch Foundation 634,667 0 634,667

* Subtotal: Private/Non-Profit Agencies 1,604,991 173,759 1,778,750

SEC. 7. RESEARCH ACTIVITY 757
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**STATE AGENCIES**

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  - Roshchin, I.V. Origin and Role in Exchange Bias of Uncompensated Magnetization in Antiferromagnets 12/1/2010 11/30/2011 10,978 0 10,978
  - Subtotal: Texas A&M University 10,978 0 10,978

- **Texas Higher Education Coordinating Board**
  - Belyanin, A.A. Room-Temperature Electrically-Pumped Semiconductor Sources of THz Radiation 7/1/2010 8/31/2012 26,750 0 26,750
  - Lee, D.M. Atomic Free Radicals in Nanoclusters Immersed in Superfluid Helium 7/1/2010 8/31/2012 55,303 0 55,303
  - Sokolov, A.V. Subfemtosecond Laser Pulse Compression by Coherent Oscillations in Raman-Active Crystals 9/1/2008 1/31/2011 5,102 0 5,102
  - Suntzeff, N.B. The Infrared and Bolometric Properties of Type 1a Supernovae: Improving the Standard Candle 8/1/2010 7/31/2012 74,980 0 74,980
  - Toback, D. Discovery of the Dark Matter Using High Performance Computing and LHC Data at Texas A&M 7/1/2010 8/31/2012 46,086 0 46,086
  - Subtotal: Texas Higher Education Coordinating Board 275,096 0 275,096

- **University of Texas**
  - Kattawar, G.W. Biological Response to the Dynamic Spectral-Polarized Underwater Light Field 4/1/2009 9/30/2014 179,703 0 179,703
  - Sinova, J. Southwest Academy for Nanoelectronics (SWAN) 9/1/2006 12/31/2012 15,465 6,628 22,093
  - Subtotal: University of Texas 195,168 6,628 201,796

* Subtotal: State Agencies 481,242 6,628 487,870

**University AGENCIES**

758
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SEC. 7.  
RESEARCH ACTIVITY  
759
## 7.2 Summary of Individual Support, 2011

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772 2011 PHYSICS AND ASTRONOMY ANNUAL REPORT
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<td>U.S. Navy - Office of Sponsored Research</td>
<td>Winter School and Workshop on Spin Physics and Topological Effects in Cold Atoms, Condensed Matter, and Beyond</td>
<td>7/1/2011</td>
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<td>Ohio State University Research Corporation</td>
<td>Towards Spin-reserving Heterogeneous Spin Networks</td>
<td>5/1/2010</td>
<td>8/31/2014</td>
<td>40,756</td>
<td>17,466</td>
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<td>University of Texas</td>
<td>Southwest Academy for Nanoelectronics (SWAN)</td>
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<td>12/31/2012</td>
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- **Subtotal Sinova, J.** 140,474 38,663 179,137

- **Sokolov, A.V.**
  
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<tr>
<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>
<td>10/1/2010</td>
<td>9/30/2013</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>
<td>5/1/2007</td>
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<td>Applications of Molecular Coherence in Ultrafast Optics</td>
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<td>The Robert A. Welch Foundation</td>
<td>(REN) Applications of Molecular Coherence in Ultrafast Optics</td>
<td>6/1/2011</td>
<td>5/31/2013</td>
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<td>Subfemtosecond Laser Pulse Compression by Coherent Oscillations in Raman-Active Crystals</td>
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- **Subtotal Sokolov, A.V.** 248,068 12,053 260,121

SEC. 7. RESEARCH ACTIVITY 773
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<td>Collaborative Research: Three-Dimensional Simulations of Type Ia</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>National Science Foundation</td>
<td>Supernovae Constraining Models with Observations, (with: K. Krisciunas, N. Suntzeff, L. Wang)</td>
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<td>Texas Higher Education Coordinating Board</td>
<td>The Infrared and Bolometric Properties of Type Ia Supernovae: Improving the Standard Candle</td>
<td>8/1/2010</td>
<td>7/31/2012</td>
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<td>WPI Research Initiative Advanced Institute for Materials Research</td>
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<td>College of Science</td>
<td>(REN) Center for Nanoscale Science and Technology</td>
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<td>8/31/2011</td>
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<td>8/31/2012</td>
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<td>FERMI National Accelerator Laboratory</td>
<td>(REN) Supporting the CDF Run II Operation by the Texas A&amp;M University</td>
<td>2/1/2011</td>
<td>1/31/2012</td>
<td>27,445</td>
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<td>Texas Higher Education Coordinating Board</td>
<td>Discovery of the Dark Matter Using High Performance Computing and LHC Data at Texas A&amp;M</td>
<td>7/1/2010</td>
<td>8/31/2012</td>
<td>46,086</td>
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- **Subtotal Toback, D.**  
  224,397  48,795  273,192

- **Tran, K.**

National Science Foundation  
The Four Star Galaxy Evolution Survey: Opening a New Window into Galaxy Formation, (with: C. Papovich, K. Tran)  
1/1/2011    12/31/2013   37,074     15,281   52,355

Swiss National Science Foundation  
Stellar Assembly & Galaxy Evolution in the Distant Universe  
1/1/2009    10/31/2011   140,626    140,626

- **Subtotal Tran, K.**  
  177,700  15,281  192,981

- **Tribble, R.E.**

Department of Energy  
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  
10/1/2009    9/30/2013   88,867     0        88,867

Department of Energy  
1/1/2011    12/31/2013   363,243    35,661   398,904

Department of Energy  
(REN) Fundamental Studies in Nuclear Science, (with: C. Gagliardi, R. Tribble)  
12/1/2008    11/30/2011   71,190     21,782   92,972

SEC. 7.  
RESEARCH ACTIVITY 775
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<td>National Science Foundation</td>
<td>Collaborative Research: Three-Dimensional Simulations of Type la 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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<td>44,332</td>
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<td>National Science Foundation</td>
<td>Center for the Integration of Research, Teaching and Learning (CIRTL) Network; Lead Institution, University of Wisconsin</td>
<td>1/1/2008</td>
<td>12/31/2011</td>
<td>24,932</td>
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<td>University of Wisconsin</td>
<td>The CIRTL Network-Shaping, Connecting, and Supporting the Future National STEM Faculty</td>
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<td>Development of Quartz Structures for Ultralow Background High Pressure Phototubes</td>
<td>9/1/2010</td>
<td>8/31/2011</td>
<td>22,691</td>
<td>10,551</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>
<td>8/8/2007</td>
<td>8/7/2011</td>
<td>22,737</td>
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<td>Brown University</td>
<td>Construction of the LUX Dark Matter Experiment at the Sanford Underground Science and Engineering Laboratory</td>
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<td>Case Western Reserve University</td>
<td>L20 Development: The LUX-ZEPLIN 20 Tonne Dark Matter Experiment Technical Development Plan for DUSEL</td>
<td>10/1/2009</td>
<td>9/30/2011</td>
<td>80,916</td>
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<td>National Science Foundation</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>
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<td></td>
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<td><strong>363,243</strong></td>
<td><strong>35,661</strong></td>
<td><strong>398,904</strong></td>
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<tr>
<td>Qatar Foundation</td>
<td>Quantum Entanglement for Secure Communication</td>
<td>4/1/2008</td>
<td>3/31/2011</td>
<td>18,885</td>
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<td>Qatar National Research Fund</td>
<td>Applications of Quantum Interferometry and Coherence to Precision Sensing, Microscopy and Lithography</td>
<td>9/1/2009</td>
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<td>*** Total: All Faculty</td>
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<td><strong>1,988,343</strong></td>
<td><strong>14,614,830</strong></td>
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Annual Report, 2011

THE DEPARTMENT OF STATISTICS
TEXAS A&M UNIVERSITY

College Station, Texas
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2011 Statistics annual report
1. Foreword from the Department Head

This annual report summarizes the activities during 2011 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.

▷ Raymond J. Carroll was selected to present the 2011 Ivey and Nell Gentry Lectures at Wake Forest University.

▷ Alan Dabney was awarded a 2011 Association of Former Students Distinguished Achievement College Level Teaching Award.

▷ Omer Jenkins, Professor Emeritus of Statistics, was one of four recipients of the 2011 Jefferson Award for Public Service. This award is presented at a national and local level and the nominees must have outstanding personal acts and community impact.

▷ Michael Longnecker was named the winner of the 2011 National Mu Sigma Rho Statistical Education Award. Mu Sigma Rho is the national honor society for statistics.

▷ William B. Smith was selected as the recipient of the American Statistical Association Founder’s award. Smith is Professor Emeritus of Statistics, former Department Head and former Executive Associate Dean for the College of Science.

▷ Webster West received an Award of Excellence from Tech & Learning Magazine for his data analysis package, STATCrunch.

Current Student Awards

The graduate students of the department were recognized with numerous honors and awards.

▷ Tanya Garcia- was named the recipient of the 2011 Gertrude M Cox Scholarship. This award is given annually by the ASA Committee on Women in Statistics.

▷ Quifan Sang - 2011 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.

▷ Ganggang Xu- has been selected to receive the 2011 Parzen Graduate Research Fellowship Award. The award was created to recognize students who have demonstrated exemplary research, above and beyond what is expected for graduation. Former Student Awards

▷ Kyle Flessner-was named a Vice President of Worldwide Quality and Semiconductor Packaging at Texas Instruments Incorporated. He received a Master’s in statistics under the direction of Michael Longnecker in 1993.

▷ Michelle Pfueger- was selected as the recipient of the 2011 Margaret Sheather Memorial Award in Statistics for her masters project entitled "Electrical Submersible Pump Survival Analysis". This award was established in 2010 by Simon Sheather in honor and memory of his mother. Michelle received her Master’s degree in May 2011 under the advisement of Jianhua Huang.

▷ Eileen King - was the recipient of the 2011 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. King received her Ph.D in statistics from Texas A&M University under the direction of Drs. Jeff Hart and Tom Wehrly. She is currently an Associate Professor in the Division of Biostatistics and Epidemiology at the Cincinnati Children’s Medical Hospital. She also serves as as Acting Director if the Data Management Center.

Michael Kutner- was the recipient of the 2011 Charles R. Hatcher, Jr. MD Award from Emory University, Rollins School of Public Health. This award honors faculty members from Emory’s Woodruff Health Sciences Center who, through their lifetime of work, exemplify excellence in public Health. Dr. Kutner received his Ph.D. in 1971 under advisement of our founding director, H.O. Hartley.

Bo Li- was awarded the 2011 ENVR Young Investigator Award. This award is in recognition of outstanding contributions to the development of methods, issues, convepts, applications, and initiatives of environmental statistics. Dr. Li received her Ph.D. under the advisement of Michael Sherman and Raymond Carroll in 2006. She is currently an Assistant Professor at Purdue University.

Jeff Morris- was awarded the 2011 Myrto Lefkopoulou Distinguished Lectureship from Harvard University School of Public Health. This award was established in memory of Dr Myrto Lefkopoulou, a faculty member and graduate who died of cancer at the age of 34. This award is given annually to a promising statistician who has made contributions to either collaborative or methodological research in the applications of statistical methods to biology or medicine, and/or who has shown excellence in the teaching of biostatistics. Dr. Morris graduated with his Ph.D. in statistics under the advisement of Raymond J. Carroll.

Departmental Events

The department hosted the 2011 Conference of Texas Statisticians (COTS). This event was led by Webster West as President of COTS. Speakers of the conference included Jane Harvill (Baylor University), Ronald Butler (Southern Methodist University), Marina Vannucci (Rice University), Roberto Gutierrez (Stata Corp), Peng Qiu (MD Anderson), and others.

The Department hosted the 16th Annual Advanced Placement Statistics Workshop July 11-14, 2011. 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 2011 Aggie Reunion was held at the Joint Statistical Meetings (JSM) in Miami, Florida.

The 7th Annual New Graduate Student Orientation was held on August 25th in Blocker, We welcomed 12 new students to our program.

The 2011 Faculty Retreat was held on Friday, August 27th at The Greenbranch. The faculty heard presentations and participated in team-building exercises while enjoying a day away from the office.

The 5th Annual Stata Corp Social was held in September in an effort to continue the collaborative relationship between the Department of Statistics and Stata Corp. Stata Corp generously hosted dinner for the department which included all faculty, staff and students, along with their spouses.

The Raymond J. Carroll Young Investigator Award was awarded to Marc A. Suchard- Professor of Biostatistics, Biomathematics and Human Genetics from the University of California, Los Angeles. Suchard presented a talk entitled “Ridiculously Parallel, Serial Algorithms for Statistical Inference” for the award ceremony in November. He was chosen to receive this
award for his wide-ranging and influential contributions to computational statistics, Bayesian
modeling and computing, evolutionary medicine and biology.

Faculty Updates

▷ Alan Dabney was promoted to Associate Professor.
▷ Yanyuan Ma was promoted to Professor.
▷ Bani Mallick was promoted to Distinguished Professor.
▷ Thomas Wehrly was recognized for 35 years of service to Texas A&M.
2. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyList_FINAL.

Non-Tenure-Track Faculty

▷ Queried from the College, Dean Database (Fall 2010, Fall 2011) FacultyListNonTTF_FINAL.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2010, Fall 2011) 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, Fall 2011) 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

- **Tenured and Tenure-Track Faculty**
  - Professor: 18\(\quad\)18
  - Assistant Professor: 6\(\quad\)5
  - Associate Professor: 7\(\quad\)7
  - Distinguished Professor: 2\(\quad\)3

- **Non-Tenure-Track Faculty**
  - Visiting Professor: 1\(\quad\)3
  - Visiting Assistant Professor: 0\(\quad\)1
  - Visiting Associate Professor: 0\(\quad\)0
  - Lecturer: 1\(\quad\)1
  - Senior Lecturer: 4\(\quad\)4

- **Postdoctoral Fellows**: 17\(\quad\)7

- **Graduate Majors**: 170\(\quad\)184

- **Undergraduate Majors**: 0\(\quad\)0

- **Support Staff**: 18\(\quad\)18

#### II. Instructional Activities

- **Graduate Semester Credit Hours**: 5,962\(\quad\)5,688
- **Undergraduate Semester Credit Hours**: 14,571\(\quad\)14,599

#### III. Research Activities

- **Research Publications**: 99\(\quad\)80
- **Research Presentations**: 129\(\quad\)143
- **Federal**: 3,726,479\(\quad\)4,049,321
- **State**: 0\(\quad\)135,434
- **University**: 0\(\quad\)0
- **Private/Non-Profit**: 185,024\(\quad\)173,888
- **Industrial/Corporate**: 0\(\quad\)0
- **International**: 1,749,042\(\quad\)1,749,042
- **Other Govt**: 42,445\(\quad\)28,142

**Total**: 5,702,990\(\quad\)6,135,826

*Last year’s annual report included a duplicate record for a grant, resulting in an inflated total reported for Mathematics, Statistics and the overall College of Science. The 2011 report reflects the corrected 2010 totals. We apologize for this error.*
3. Honors & Awards, 2011

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2011.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2011.
### 3.1 Honors & Awards Received by Faculty, 2011

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Dabney</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>M. Longnecker</td>
<td>Statistics Education Award, Mu Sigma Rho</td>
</tr>
<tr>
<td>R. West</td>
<td>Tech and Learning Award of Excellence, STATCrunch</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2011

Graduate

- Gertride Cox Scholarship
  Tanya Garcia

- JSM Student Paper Award
  Abhra Sarkar

- NASA GSRP Fellowship
  Robyn Ball

- Parzen Graduate Research Fellowship
  Ganggang Xu

- Sheather Memorial Award
  Michelle Pfueger

- William S. Connor Award
  Qifan Song
4. Students, 2011

This section contains all degrees awarded, as reported by the department, during the calendar year 2011.
4.1 Graduate Degrees Awarded, 2011

Fall

▷ M.S.

- Michael James Alzubaydi
  Advisor(s): A. Dabney
- Clark Raymond Andersen
  Advisor(s): F. Speed
- Qing Chang
  Advisor(s): R. Fan
- Jennifer Skoumal Goldsby
  Advisor(s): M. Longnecker
- Zhuoya He
  Advisor(s): J. Huang
- Simon J King
  Advisor(s): J. Perrett
- Bryce Patrick Little
  Advisor(s): D. Dahl
- Christopher T Phillips
  Advisor(s): A. Dabney
- Jinfei Sheng
  Advisor(s): J. Huang
- Xincheng Tang
  Advisor(s): A. Dabney

▷ Ph.D.

- Nai-wei Chen
  Goodness-of-Fit Test Issues in Generalized Linear Mixed Models
  Advisor(s): T. Wehrly
- Bledar Konomi
  Bayesian Spatial Molding of Complex and High Dimensional Data
  Advisor(s): B. Mallick

Spring

▷ M.S.

- Gregory Joseph Cepluch
  Advisor(s): J. Hart
- William Gene Finch
  Advisor(s): F. Speed
- Jason O’Neal Greenfield
  Advisor(s): J. Perrett

792 2011 Statistics annual report
Karl Bruce Gregory  Advisor(s): F. Speed
Manxi Gu  Advisor(s): R. Fan
Ronnie Joe Massey  Advisor(s): F. Speed
Minkyung Oh  Advisor(s): S. Sinha
Michelle Loretta Pflueger  Advisor(s): J. Huang

▷ Ph.D.
Daniel Laurence Glab  Testing Lack-of-Fit of Generalized Linear Models via Laplace Approximation  Advisor(s): T. Wehrly

Summer

▷ M.S.
Justin Andrew Chown  Advisor(s): U. Mueller-Harknett
Cheku Dorji  Advisor(s): K. Dahm
Robert Steven Krutsick  Advisor(s): A. Dabney
Ian Richard Levine  Advisor(s): F. Speed
Li Yun Zhang  Advisor(s): A. Dabney

▷ Ph.D.
Bradley John Barney  Bayesian Joint Modeling of Binomial and Rank Response Data  Advisor(s): S. Sheather, Valen E. Johnson
Tanya Pamela Garcia  Efficient Semiparametric Estimators for Biological, Genetic, and Measurement Error Applications  Advisor(s): Y. Ma
Ick Hoon Jin  Statistical Inferences for Models with Intractable Normalizing Constants  Advisor(s): F. Liang
Mehdi Maadooliat  Dimension Reduction and Covariance Structure for Multivariate Data, Beyond Gaussian Assumption  Advisor(s): J. Huang, Jianhua Hu

SEC. 4.1  GRADUATE DEGREES  793
Anirban Mondal  Bayesian Uncertainty Quantification for Large Scale Spatial Inverse Problems  
Advisor(s): B. Mallick

Trihya Singh  Efficient Small Area Estimator in the Presence of Measurement Error in Covariates  
Advisor(s): R. Carroll

Ying Sun  Inference and Visualization of Periodic Sequences  
Advisor(s): J. Hart

Rajesh Talluri  Bayesian Gaussian Graphical Models Using Sparse Selection Priors and Their Mixtures  
Advisor(s): B. Mallick, Veerabhadran Baladandayuthapani
## 5. Colloquium and Seminar Speakers, 2011

**Colloquium and Seminar Speakers**

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Affiliation</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/20/2011</td>
<td>Ehsan Soofi</td>
<td>University of Wisconsin, Milwaukee</td>
<td>Sample Information about the Parameter and Parameter and Prediction, and Predictability of Stochastic Process</td>
</tr>
<tr>
<td>1/27/2011</td>
<td>Nikolay Bliznyuk</td>
<td>Texas A&amp;M University</td>
<td>Nonlinear Latent Process Models for Integrating Spatio-Temporal Exposure Data from Multiple Sources</td>
</tr>
<tr>
<td>2/17/2011</td>
<td>Renato Assunção</td>
<td>Universidade Federal de Minas Gerais</td>
<td>Surveillance for Emerging Space-Time Clusters</td>
</tr>
<tr>
<td>2/24/2011</td>
<td>Xiao-Li Meng</td>
<td>Harvard University</td>
<td>What’s the H in H-Likelihood: A Holy Grail or an Achilles’ Heel?</td>
</tr>
<tr>
<td>3/24/2011</td>
<td>Wolfgang Härdle</td>
<td>Humboldt-Universität zu Berlin</td>
<td>Pricing of Asian Temperature Risk</td>
</tr>
<tr>
<td>3/30/2011</td>
<td>Jeffrey Hart</td>
<td>Texas A&amp;M University</td>
<td>A Hodgepodge of Statistics Problems</td>
</tr>
<tr>
<td>3/31/2011</td>
<td>Clifford Spiegelman</td>
<td>Texas A&amp;M University</td>
<td>A Nonparametric Approach Based on a Markov Like Property for Classification</td>
</tr>
<tr>
<td>4/7/2011</td>
<td>Pradeep Ravikumar</td>
<td>University of Texas, Austin</td>
<td>Dirty Statistical Models: M-Estimators and High-Dimensional Analysis</td>
</tr>
<tr>
<td>4/14/2011</td>
<td>Arne Bathke</td>
<td>University of Kentucky</td>
<td>Nonparametric Methods for Multivariate Data and Repeated Measures Design</td>
</tr>
<tr>
<td>4/21/2011</td>
<td>Yuanjia Wang</td>
<td>Columbia University</td>
<td>Analysis of Multilevel Genetic and Medical Studies by Penalized Splines: Marginal versus Conditional Approach</td>
</tr>
<tr>
<td>4/28/2011</td>
<td>Deborah Nolan</td>
<td>University of California, Berkeley</td>
<td>New Development in R for Information Visualization</td>
</tr>
<tr>
<td>9/8/2011</td>
<td>Christopher Field</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dalhousie University
Bootstrapping Robust Hierarchical Models

9/15/2011  David Hitchcock
University of South Carolina
Limited-Information Modeling of Loggerhead Turtle Population Size

9/22/2011  Michele Guindani
MD Anderson Cancer Center
Generalized Species Sampling Priors with Latent Beta Reinforcements

9/29/2011  Jean Opsomer
Colorado State University
Analytic Inference for Data from Complex Surveys

10/6/2011  Emanuel Parzen
Texas A&M University
Classification of High Dimensional Data, Fundamental Statistical Methods

10/13/2011  Karabi Nandy
University of California, Los Angeles
Optimal Designs for Non-Monotone Dose-Response Models

10/20/2011  Peng Qiu
MD Anderson Cancer Center
Understanding Cellular Heterogeneity Using Single-Cell Cytometric Data

10/27/2011  Dongseok Choi
Oregon Health and Science University
Detecting Subclusters in Outliers

11/3/2011  Kai-Sheng Song
University of North Texas
Nonparametric Estimation of Roc Curve Via Bernstein Expansion and Non-Asymptotic Order Selection

11/10/2011  Peng Wei
University of Texas School of Public Health
Network-Based Statistical Methods for Genetic and Genomic Data

11/14/2011  Marc Suchard
University of California, Los Angeles
Ridiculously Parallel, Serial Algorithms for Statistical Inference

11/17/2011  Samuel Müller
University of Sydney, Australia
Graphical Tools for Model Selection

12/1/2011  Bani Mallick
Texas A&M University
Bayesian Inference and Uncertainty Quantification in Large Scale Inverse Problems

12/12/2011  Len Stefanski
North Carolina State University
Research Agenda 2012-2014
6. Faculty*, 2011

Derya G. Akleman ........................................ Senior Lecturer
James A. Calvin ......................................... Professor
Raymond J. Carroll ...................................... Distinguished Professor
Julie H. Carroll .......................................... Senior Lecturer
Willa W. Chen ........................................... Associate Professor
Daren B.H Cline .......................................... Professor
Alan R. Dabney ........................................... Associate 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 ................................................ Professor
Bani K. Mallick .......................................... Distinguished 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
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 2011 (01/01/2011-12/31/2011).
6.1 Professional Activities, 2011

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2011.

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 2011.
▶ 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 2011.
▶ 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 2011

University
▷ Committee/Panel: 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 2011

Spring
▷ STAT 651. — Statistics in Research I (total enrollment: 59)
▷ STAT 652. — Statistics in Research II (total enrollment: 59)

Summer
▷ STAT 642 — The Methods of Statistics II (total enrollment: 18)
▷ STAT 652 — Statistics in Research II (total enrollment: 34)

Fall
▷ STAT 651. — Statistics in Research I (total enrollment: 74)
▷ STAT 652. — Statistics in Research II (total enrollment: 42)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ 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 2011
  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)

On leave.
No report received from faculty member.
• SERVICE DURING 2011
  
  University
  ▷ Service Position: Corps of Cadets Academic Advisor F-2 (Mentor)

  Department
  ▷ Committee/Panel: Undergraduate Service Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ STAT 303. — Statistical Methods (total enrollment: 272)

  Fall
  ▷ STAT 303. — Statistical Methods (total enrollment: 370)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Director, Institute for Applied Mathematics and Computational Science (IAMCS), College of Science, [2011]
  ▷ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▷ Member, Interdisciplinary Faculty, Nutrition, [2006]
  ▷ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2011
  International
  ▷ Committee/Panel: International Alliance of Messianic Congregations and Synagogues (Director)

  National
  ▷ Editorial/Board: Statistica Sinica (Associate Editor), Journal of the American Statistical Association (Associate Editor)
  ▷ Committee/Panel: Training Program in Biostatistics, Bioinformatics and Nutrition (Director)

  University
  ▷ Committee/Panel: Recruiting Committee for IUMRI Hire in Computer Science and Engineering (Member), Recruiting Committee for IUMRI Hire in Mathematics (Member)

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

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ STAT 689. — Special Topics in (total enrollment: 13)

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

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

• RESEARCH PROJECTS DURING 2011
  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
Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

Other
Genome-Wide Structured Association Testing and Regional Admixture Mapping, University of Alabama-Birmingham

**PRESENTATIONS DURING 2011**

- Biostatistics, Harvard University, Cambridge, MA, 2011. (Invited)
- Biostatistics, University of Michigan, Ann Arbor, MI, 2011. (Invited)
- ENAR, Miami, FL, 2011. (Invited)
- Gentry Lectures, Wake Forest University, Winston-Salem, NC, 2011. (Invited)
- Institute for Radiation Protection, Kiev, Ukraine, 2011. (Invited)
- Joint Statistical Meetings, 2011. (Invited)
- King Abdullah University of Science and Technology, Saudi Arabia, 2011. (Invited)
- North Carolina State University, Raleigh, NC, 2011. (Invited)
- Portland State University, Portland, OR, 2011. (Invited)
- Statistics, University of Michigan, Ann Arbor, MI, 2011. (Invited)
- University of Galway, Galway, Ireland, 2011. (Invited)
- University of Kiev, Ukraine, 2011. (Invited)
- University of Mannheim, Germany, 2011. (Invited)

**PUBLICATIONS DURING 2011**


• SERVICE DURING 2011

National

Department
▷ Committee/Panel: Recruiting Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 651. — *Statistics in Research I* (total enrollment: 38)

Fall
▷ STAT 303. — *Statistical Methods* (total enrollment: 198)
▷ STAT 651. — *Statistics in Research I* (total enrollment: 57)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Restriction Likelihood in Time Series: Applications to Moderate and Near Integrated Autoregressions, Conintegration, Panel Data and Nonlinear Time Series, *National Science Foundation*
• SERVICE DURING 2011

National

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 621. — Advanced Stochastic Processes (total enrollment: 10)
▷ STAT 630. — Overview of Mathematical Statistics (total enrollment: 39)

Fall
▷ STAT 303. — Statistical Methods (total enrollment: 100)
▷ STAT 615. — Stochastic Processes (total enrollment: 6)

• PUBLICATIONS DURING 2011

ALAN R. DABNEY
ASSOCIATE PROFESSOR (979) 862-7581
STAT-Bioinformatics, Applied Statistics adabney@stat.tamu.edu

• AWARDS DURING 2011
  College
  ➢ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2011
  National
  ➢ Editorial/Board: Bioinformatics, Annals of Applied Statistics (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ➢ STAT 211 — Principles of Statistics I (total enrollment: 20)
  ➢ STAT 646. — Statistical Bioinformatics (total enrollment: 20)
  ➢ 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 645. — Applied Biostatistics and Data Analysis (total enrollment: 15)
  ➢ STAT 685. — Directed Studies (total enrollment: 2)
  ➢ STAT 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011
  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
  ➢ Integrated Program for Reducing Bovine Respiratory Disease Complex in Beef and Dairy Cattle, National Institute of Food and Agriculture
  ➢ Epigenetics of the Aging Astrocyte: Implications for Stroke, National Institutes of Health
  ➢ (REN) UBM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation
  ➢ 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*

**PUBLICATIONS DURING 2011**

• SERVICE DURING 2011

National
▶ Committee/Panel: ASA Section on Bayesian Statistical Science Student Award Selection Committee (Member), Institute of Mathematical Statistics Committee on New Researchers (Member)

Department
▶ Committee/Panel: Bioinformatics Faculty Committee (Member), Computing Committee (Member), Publicity Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▶ STAT 689. — Special Topics in (total enrollment: 13)
▶ STAT 691. — Research (total enrollment: 1)

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

Fall
▶ STAT 689. — Special Topics in (total enrollment: 7)
▶ STAT 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2011
▶ “Random Partition Distributions Indexed by Pairwise Information for Bayesian Nonparametric Models,” Eighth Workshop on Bayesian Nonparametrics, Veracruz, Mexico, June, 2011. (Invited)
▶ “Exploiting Scala’s Parallel Collections and Actors for Parallel Bayesian Computations,” Joint Statistical Meetings, Miami, FL, August, 2011. (Invited)

• PUBLICATIONS DURING 2011
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  ▷ Graduate Advisor, Statistics Graduate Advising Office, Statistics, [1989]

• **SERVICE DURING 2011**
  **International**
  ▷ Committee/Panel: International Advisory Committee (Member)

  **National**
  ▷ Editorial/Board: *Various Journals* (Referee: Journals)

  **University**
  ▷ Committee/Panel: Chapter of Mu Sigma Rho (Member)

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

  **Department**
  ▷ Committee/Panel: Admissions and Recruiting Committee (Chair), Awards Committee (Member), CONACYT Admissions Review Committee (Member), Merit Fellowship Review Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2011**
  **Spring**
  ▷ STAT 685. — **Directed Studies** (total enrollment: 1)
  ▷ STAT 691. — **Research** (total enrollment: 3)

  **Summer**
  ▷ STAT 651. — **Statistics in Research I** (total enrollment: 77)

  **Fall**
  ▷ STAT 212. — **Principles of Statistics II** (total enrollment: 50)
  ▷ STAT 643. — **Biostatistics I** (total enrollment: 4)
  ▷ STAT 685. — **Directed Studies** (total enrollment: 1)
  ▷ STAT 691. — **Research** (total enrollment: 2)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• **SERVICE DURING 2011**
  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 2011**
  Spring
  ▶ STAT 652. — *Statistics in Research II* (total enrollment: 64)
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)
  ▶ STAT 691. — *Research* (total enrollment: 2)

  Summer
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2011**
  Federal
  ▶ Genetic Basis for Exercise Training Responses, *National Institutes of Health*

• **PUBLICATIONS DURING 2011**

*On leave.*

No report received from faculty member.
• SERVICE DURING 2011

  International
  ▷ Editorial/Board: Chilean National Science Foundation (Review: Proposals), *Chilean Journal of Statistics* (Associate Editor), *Chilean Journal of Statistics* (Guest Editor), *ISI Journal* (Editor)

  National
  ▷ Committee/Panel: ENVR Awards Committee (Member)

  University
  ▷ Committee/Panel: IAMCS Executive Committee (Member), IAMCS Innovation Awards Committee (Chair), IUMR Hiring Committee (Member), IAMCS Workshop on Data Visualization Organizing Committee (Member), Research in the IAMCS (Deputy Director)

  Department
  ▷ Event: IAMCS Workshop on Statistics and Ecology (Organizer), Program in Spatial Statistics (Director)
  ▷ Committee/Panel: Promotion and Tenure Committee (Member), Parzen Award Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▷ STAT 616. — Multivariate Analysis (total enrollment: 7)
  ▷ STAT 691. — Research (total enrollment: 3)

  Summer
  ▷ STAT 685. — Directed Studies (total enrollment: 1)
  ▷ STAT 691. — Research (total enrollment: 2)

  Fall
  ▷ STAT 685. — Directed Studies (total enrollment: 1)
  ▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▷ Monte Carlo Methods for Analysis of Large Spatial Data, *National Science Foundation*
  ▷ Space-Time Statistics for Wind Power Forecasting, *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 2011**

- “A Heckman Selection-t Model,” ICORS, Valladolid, Spain, 2011. (Invited)
- “A Heckman Selection-t Model,” Shanghai University of Finance and Economics, Shanghai, China, 2011. (Invited)
- “A Valid Matern Class of Cross-covariance Functions for Multivariate Random Fields with any Number of Components,” ISI, Dublin, Ireland, 2011. (Invited)
- “Comparing Spatial Predictions,” Symposium on Statistical Space-Time Modelling of Wind Power Forecasts at Technische University Muenchen, Muenchen, Germany, 2011. (Invited)
- “Functional Boxplots for Complex Data Visualization,” ADVANCE Distinguished Lecture Series at Kansas State University, Manhattan, NY, 2011. (Invited)
- “Functional Boxplots for Complex Data Visualization,” COTS, College Station, TX, 2011. (Contributed)
- “Functional Boxplots for Complex Data Visualization,” Hong Kong Baptist University, Hong Kong, China, 2011. (Invited)
- “Functional Boxplots for Complex Data Visualization,” IAMCS Workshop, College Station, TX, 2011. (Invited)
- “Functional Boxplots for Complex Data Visualization,” JSM, Miami Beach, FL, 2011. (Invited)
- “Functional Boxplots for Complex Data Visualization,” Umea University, Umea, Sweden, 2011. (Invited)
- “Functional Boxplots for Visualization of Complex Curve/Image Data: An Application to Precipitation and Climate Model Output,” East China Normal University, Shanghai, China, 2011. (Invited)


“Functional Boxplots for Visualization of Complex Curve/Image Data: An Application to Precipitation and Climate Model Output,” Fudan University, Shanghai, China, 2011. (Invited)

“Functional Boxplots for Visualization of Complex Curve/Image Data: An Application to Precipitation and Climate Model Output,” Renmin University, Beijing, China, 2011. (Invited)


“Functional Boxplots for Visualization of Complex Curve/Image Data: An Application to Precipitation and Climate Model Output,” University of Neuchatel, Neuchatel, Switzerland, 2011. (Invited)


“Functional Boxplots,” XII EMR, Fortaleza, Brazil, 2011. (Invited)


“Power System Economic Dispatch with Spatio-temporal Wind Forecasts,” Symposium on Statistical Space-Time Modelling of Wind Power Forecasts at Technische University Muenchen, Muenchen, Germany, 2011. (Invited)

“Skew-elliptical Distributions and Their Applications: A Trip Beyond Normality,” Shanghai University of Finance and Economics, Shanghai, China, 2011. (Invited)

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**PUBLICATIONS DURING 2011**


• SERVICE DURING 2011

  National

  Department
  ▶ Committee/Panel: Raymond J. Carroll Young Investigator Award Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

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

  Summer
  ▶ STAT 626. — Methods in Time Series Analysis (total enrollment: 23)
  ▶ STAT 691. — Research (total enrollment: 1)

  Fall
  ▶ STAT 303. — Statistical Methods (total enrollment: 188)
  ▶ STAT 632. — Statistical Decision Theory (total enrollment: 13)
  ▶ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▶ New Methodology for Estimating Random Effects and for Statistical Simulation Studies, *National Science Foundation*

• PUBLICATIONS DURING 2011

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 211. — Principles of Statistics I (total enrollment: 219)

Fall
▷ STAT 211. — Principles of Statistics I (total enrollment: 359)

Resigned 05/31/2011.
• SERVICE DURING 2011

National

Department
▷ Committee/Panel: Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 691. — Research (total enrollment: 6)

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

Fall
▷ STAT 618. — Statistical Aspects of Machine Learning and Data Mining (total enrollment: 21)
▷ STAT 648. — Applied Statistics and Data Analysis (total enrollment: 11)
▷ STAT 691. — Research (total enrollment: 9)

• RESEARCH PROJECTS DURING 2011

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

International
▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2011

▷ Department of Statistics, Rice University, Houston, TX, April, 2011. (Invited)
▷ Applied Inverse Problems Conference, College Station, TX, May, 2011. (Invited)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011
  National
  ▶ Research Group: AdventGX in Developing Eco-tourism Project in Costa Rica (Assisted)
  State
  ▶ Event: Analytics Forums to the Houston & San Antonio Business Community (Organizer)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ STAT 684 — Professional Internship (total enrollment: 4)

• PRESENTATIONS DURING 2011

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
▷ Event: ENAR 2011 & IMS-APRM 2012 and ISBA 2012 (Organizer)
▷ Editorial/Board: *Journal of the Korean Statistical Society* (Associate Editor)

National

Department
▷ Research Group: Program in Spatial Modeling (Associate Director)
▷ Committee/Panel: Graduate Student Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 211. — *Principles of Statistics I* (total enrollment: 75)

Summer
▷ STAT 685. — *Directed Studies* (total enrollment: 1)

Fall
▷ STAT 211. — *Principles of Statistics I* (total enrollment: 78)
▷ STAT 647. — *Spatial Statistics* (total enrollment: 15)
▷ STAT 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Nonstationary Spatial-Temporal Covariance Models for Multivariate Processes on a Globe, *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 2011

▷ ENAR, Miami, FL, March, 2011. (Contributed)
▷ Department of Applied Statistics, Konkuk University, Korean, June, 2011. (Invited)
▷ Department of Financial Engineering, Ajou University, Seoul, South Korea, June, 2011. (Invited)
Department of Statistics, Korea University, Seoul, South Korea, June, 2011. (Invited)
Department of Applied Statistics, Yonsei University, Seoul, South Korea, July, 2011. (Invited)
Climate Modeling Opening Workshop of SAMSI UQ program, Pleasanton, CA, August, 2011. (Contributed)

PUBLICATIONS DURING 2011


• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Professor (J), Mathematics, [2010]

• **SERVICE DURING 2011**
  **International**
  - Committee/Panel: International Society for Nonparametric Statistics, Executive Committee (Member), IUMRI Search Committee (Member), Program Committee, The 22nd conference of the International Environmetrics Society (Member), Publication Committee, International Indian Statistical Association (Chair)

  **National**
  - Editorial/Board: *Annals of Statistics* (Associate Editor)
  - 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)

  **Department**
  - Committee/Panel: Curriculum Committee (Member), Promotion and Tenure Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2011**
  **Spring**
  - STAT 691. — Research (total enrollment: 2)

  **Summer**
  - STAT 685. — Directed Studies (total enrollment: 1)

  **Fall**
  - STAT 610. — Theory of Statistics I (total enrollment: 40)
  - STAT 614. — Probability for Statistics (total enrollment: 14)
  - STAT 691. — Research (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2011**
  **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*
• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

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)

Resigned 08/31/2012.
No report received from faculty member.
• SERVICE DURING 2011

International
▷ Editorial/Board: Canadian Journal of Statistics (Referee: Journals), International Journal of Operations Research and Information Systems (Member)

National

Department
▷ Committee/Panel: Bioinformatics Committee (Member), Statistical Computing Examination Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 605. — Advanced Topics in Computational Statistics (total enrollment: 20)
▷ STAT 691. — Research (total enrollment: 6)

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

Fall
▷ STAT 414. — Mathematical Statistics I (total enrollment: 37)
▷ STAT 652. — Statistics in Research II (total enrollment: 15)
▷ STAT 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Collaborative Research: Effective Probabilistic Approach Using Order Reduction and Hybrid Models - A New Paradigm for Structural Dynamic Analysis, National Science Foundation
▷ Monte Carlo Methods for Analysis of Large Spatial Data, National Science Foundation
▷ Sampling from Distributions with Intractable Integrals, National Science Foundation

International
▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology
• PRESENTATIONS DURING 2011
  ▶ “A Dynamically Weighted Particle Filter for Sea Surface Temperature Prediction,” IAMCS Workshop in Large-Scale Inverse Problems and Uncertainty, Texas A&M University, College Station, TX, February, 2011.( Invited)
  ▶ “A Marginal Inference Approach for Large Spatial Data,” San Diego, CA, February, 2011.( Invited)
  ▶ “Model-Free Inference for ChIP-Seq Data,” Division of Biostatistics and Human Genetics Center, School of Public Health University of Texas Health Science Center, Houston, TX, April, 2011.( Invited)
  ▶ “A Marginal Inference Approach for Large Spatial Data,” ICSA, NY, June, 2011.(Invited)
  ▶ “False Discovery Rate Control in Peak Calling for ChIP-Seq Data Analysis,” National Cancer Institute, NIH, July, 2011.( Invited)

• PUBLICATIONS DURING 2011
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Associate Department Head, Statistics, /2005/

• AWARDS DURING 2011
  National
  ▶ Statistics Education Award, Mu Sigma Rho

• SERVICE DURING 2011
  National
  ▶ Committee/Panel: American Statistical Association Academic Representative (Member),
    American Statistical Association Committee on Recruitment and Retention of Membership
    (Member)
  Department
  ▶ Service Position: Assistantship Duties Committee (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), Margaret Sheather Award
    Committee (Chairman), Methods Examination Committee (Chairman), Parzen Research
    Fellowship Award Committee (Chairman), Undergraduate Service Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ STAT 642. — The Methods of Statistics II (total enrollment: 45)
  ▶ STAT 684. — Professional Internship (total enrollment: 12)
  ▶ STAT 685. — Directed Studies (total enrollment: 3)
  Summer
  ▶ STAT 684. — Professional Internship (total enrollment: 13)
  ▶ STAT 685. — Directed Studies (total enrollment: 3)
  ▶ STAT 691. — Research (total enrollment: 1)
  Fall
  ▶ STAT 641. — The Methods of Statistics I (total enrollment: 57)
  ▶ STAT 685. — Directed Studies (total enrollment: 3)
  ▶ STAT 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2011

828 2011 Statistics annual report
› “Training Statisticians to Solve Large, Complex, Unstructured Problems,” JSM, 2011. (Invited)
• SERVICE DURING 2011
  
  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 2011

  Spring
  ▷ STAT 627. — *Nonparametric Function Estimation* (total enrollment: 6)
  ▷ STAT 691. — *Research* (total enrollment: 2)

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

  Fall
  ▷ STAT 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

  Federal
  ▷ Studies in Measurement Error Problems, *National Science Foundation*

  State
  ▷ Semiparametric Efficient Statistical Methods for Mixture Data, *Columbia University*

• PRESENTATIONS DURING 2011

  ▷ “Efficient Semiparametric Distribution Estimation in Mixed Samples,” Department Seminar, Hong Kong University, Hong Kong, January, 2011. (Invited)
  ▷ “Analysis on Censored Quantile Residual Life Model via Spline Smoothing,” Department Seminar, University of Texas Southwestern Medical Center, Dallas, TX, February, 2011. (Invited)

“Efficient Semiparametric Distribution Estimation in Mixed Samples,” Department Seminar, Southern Methodist University, Dallas, TX, February, 2011. (Invited)


“Locally Efficient Semiparametric Estimators for Functional Measurement Error Models,” IAMCS Seminar, Texas A&M University, College Station, TX, March, 2011. (Invited)

“A Semiparametrics Approach to Dimension Reduction,” IAMCS Conference on Inverse Problems, Texas A&M University, College Station, TX, May, 2011. (Invited)

“Efficient Semiparametric Distribution Estimation in Mixed Samples,” Inverse Problem Workshop, Texas A&M University, College Station, TX, May, 2011. (Poster Invited)


“A Semiparametrics Approach to Dimension Reduction,” Statistics Workshop, Technical University of Munich, Munich, Germany, June, 2011. (Invited)


“A Semiparametrics Approach to Dimension Reduction,” Department Seminar, Shanghai University of Finance and Economics, Shanghai, October, 2011. (Invited)

“A Semiparametrics Approach to Dimension Reduction,” Department Seminar, East China Normal University, Shanghai, November, 2011. (Invited)


“A Semiparametrics Approach to Dimension Reduction,” Department Seminar, Fudan University, Shanghai, November, 2011. (Invited)

“A Semiparametrics Approach to Dimension Reduction,” Department Seminar, Tilburg University, Tilburg, November, 2011. (Invited)

“A Semiparametrics Approach to Dimension Reduction,” Department Seminar, University of Neuchatel, Neuchatel, November, 2011. (Invited)

“A Semiparametrics Approach to Dimension Reduction,” Department Seminar, Zhejiang Agricultural and Forestry University, Linan, November, 2011. (Invited)


**PUBLICATIONS DURING 2011**


• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  ▶ Director, Center for Statistical Bioinformatics, Statistics, [2010]
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▶ Director, Bayesian Bioinformatics Lab, Statistics,

• **SERVICE DURING 2011**
  National
  ▶ Editorial/Board: *Biostatistics* (Associate Editor), *Journal of Computational and Graphical Statistics* (Associate Editor)
  College
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member)
  Department
  ▶ Research Group: Bioinformatics Committee (Chair)
  ▶ Committee/Panel: Hiring Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2011**
  Spring
  ▶ STAT 633. — **Advanced Bayesian Modeling and Computation** (total enrollment: 8)
  ▶ STAT 691. — **Research** (total enrollment: 7)
  Summer
  ▶ STAT 685. — **Directed Studies** (total enrollment: 1)
  ▶ STAT 691. — **Research** (total enrollment: 6)
  Fall
  ▶ STAT 691. — **Research** (total enrollment: 6)

• **RESEARCH PROJECTS DURING 2011**
  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 Cancer Institute*
  ▶ ATD: Bayesian Data Missing Approaches for Biological Threat Detection, *National Science Foundation*
  ▶ Multiscale Data Integration Using Facies Based Hierarchical Bayesian Models, *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 2011
▷ Fourth International IMS/ISBA Joint Meeting, UT, January, 2011. (Invited)
▷ “Large-scale Inverse Problems and Quantification of Uncertainty,” The Institute of Mathematics and its Application (IMA), University of Minnesota, Minneapolis, MN, June, 2011. (Invited)
▷ JSM, August, 2011. (Invited)
▷ “High Dimensional Problems in Statistics,” Zurich, September, 2011. (Invited)

• PUBLICATIONS DURING 2011
• SERVICE DURING 2011

International
▷ Editorial/Board: *Comptes rendus Mathematique* (Referee: Journals)

National
▷ Committee/Panel: Joint Statistical Meetings (Session Chair)

Department
▷ Event: Visits and Colloquium Talks (Host/Organizer)
▷ Committee/Panel: Promotion and Tenure Committee (Member), Faculty Recruitment Committee (Member), Graduate Student Theory Qualifying Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 620. — *Statistical Large Sample Theory* (total enrollment: 14)
▷ STAT 651. — *Statistics in Research I* (total enrollment: 30)
▷ STAT 681. — *Seminar* (total enrollment: 27)
▷ STAT 691. — *Research* (total enrollment: 1)

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

Fall
▷ STAT 630. — *Overview of Mathematical Statistics* (total enrollment: 20)
▷ STAT 651. — *Statistics in Research I* (total enrollment: 48)
▷ STAT 681. — *Seminar* (total enrollment: 32)
▷ STAT 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Efficient Estimation in Semiparametric Regression with Possibly Incomplete Data, *National Science Foundation*

• PRESENTATIONS DURING 2011
▷ “Effizientes Schätzen für Regressionsmodelle mit fehlenden Zielvariablen,” Technische Universität, Dortmund, Germany, June, 2011. (Invited)

**PUBLICATIONS DURING 2011**

H. JOSEPH NEWTON

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 2011
- Dean, Main Office, College of Science, [2002]

SERVICE DURING 2011
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.
JAMIS J. PERRETT
ASSISTANT PROFESSOR
STAT- Statistics Education
(979) 458-0897
jamis@stat.tamu.edu

• SERVICE DURING 2011

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)

Department
▷ Service Position: STAT 201 (Coordinator)
▷ Event: AP Statistics Summer Institute (Director), CAMT, TI3 Conferences (Departmental Representative)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 201. — Elementary Statistical Inference (total enrollment: 118)

Summer
▷ STAT 604. — Special Problems in Statistical Computations and Analysis (total enrollment: 62)
▷ STAT 667. — Statistics for Advanced Placement Teachers (total enrollment: 3)

Fall
▷ STAT 201. — Elementary Statistical Inference (total enrollment: 117)

• PRESENTATIONS DURING 2011

▷ “Preparing for the AP Statistics Exam,” A&M Consolidated High School, College Station, TX, April, 2011. (Invited)
▷ “Using a Student Advisory Board to Facilitate and Improve Development of a New Course,” United States Conference on Teaching Statistics (USCOTS), Raleigh, NC, May, 2011. (Contributed)
▷ “Analysis of Variance: A Primer,” AP Statistics Summer Institute, College Station, TX, July, 2011. (Invited)

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“Using Class Activities to Teach Statistics Appreciation Courses,” Joint Statistical Meetings, Miami, FL, August, 2011. (Contributed)


• PUBLICATIONS DURING 2011


• SERVICE DURING 2011

National

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

Department
▷ Committee/Panel: Faculty Recruiting (Chair), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 674. — *Time Series Analysis II* (total enrollment: 7)
▷ STAT 691. — *Research* (total enrollment: 2)

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

Fall
▷ STAT 610. — *Theory of Statistics I* (total enrollment: 50)
▷ STAT 612. — *Theory of Linear Models* (total enrollment: 14)
▷ STAT 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Generalized Linear Models for Large Correlation Matrices via Partial Autocorrelations, *National Science Foundation*

• PRESENTATIONS DURING 2011
▷ Department of Statistics, Pontificia Universidad Catholica, De Chile, May, 2011.(Invited)
▷ IV International Skew NormalWorkshop in Honour of Adelchi Azzalini’s 60th Birthday, Santiago, Chile, May, 2011.( Invited)
▷ Department of Statistics, University of Chicago, Chicago, IL, August, 2011.( Invited)

- PUBLICATIONS DURING 2011
• SERVICE DURING 2011
  International
  ▷ Editorial/Board: International Indian Statistical Association (Chair)

  National
  ▷ Editorial/Board: JABES, JCGS, Test (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ STAT 211. — Principles of Statistics I (total enrollment: 179)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▷ A New Approach of Statistical Modeling and Analysis of Massive Spatial Data Sets, National Science Foundation

  International
  ▷ Texas A&M University Institute for Applied Mathematics and Computational Science (IAMCS), King Abdullah University of Science and Technology

• PRESENTATIONS DURING 2011
  ▷ “Covariance Approximation for Large Multivariate Spatial Datasets with an Application to Multiple Climate Model Errors,” IISA Conference on Probability, Statistics, and Data Analysis, Raleigh, NC, April, 2011. (Invited)


• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

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)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2011**
  - Department Head, Statistics, /2005/

• **SERVICE DURING 2011**

  National
  - Committee/Panel: Interface 2011 Program Committee (Member)

  University
  - Committee/Panel: President’s Task Force on Faculty Evaluations (Member)

  College
  - Committee/Panel: Executive Committee (Member)

  Department
  - Service Position: Online Learning (Director)

• **TEACHING ASSIGNMENTS DURING 2011**

  Spring
  - STAT 685. — Directed Studies (total enrollment: 1)
  - STAT 691. — Research (total enrollment: 2)

  Summer
  - STAT 691. — Research (total enrollment: 2)

  Fall
  - STAT 691. — Research (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2011**

  Federal
  - (REN) Lipoprotein Density Profiling for Clinical Studies, *National Institutes of Health*

• **PRESENTATIONS DURING 2011**

  - Round Rock High School, Round Rock, TX, 2011. (Invited)
  - University of California, Riverside, CA, 2011. (Invited)
  - Joint Statistical Meetings, Miami, FL, 2011. (Invited)

• **PUBLICATIONS DURING 2011**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2011
  National
  Department
  ▶ Committee/Panel: Examinations Committee (Member), Awards Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ STAT 601. — *Statistical Analysis* (total enrollment: 33)
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)
  Summer
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)
  Fall
  ▶ STAT 407. — *Principles of Sample Surveys* (total enrollment: 18)
  ▶ STAT 601. — *Statistical Analysis* (total enrollment: 56)
  ▶ STAT 607. — *Sampling* (total enrollment: 36)

• RESEARCH PROJECTS DURING 2011
  Federal
  ▶ (REN) Fetal Alcohol Exposure and Neurodevelopment, *National Institutes of Health*
• SERVICE DURING 2011

National
▷ Event: ENAR Meeting 2010 (Organizer)
▷ Committee/Panel: ENAR 2011 Meeting (Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 611. — Theory of Statistics II (total enrollment: 26)
▷ STAT 685. — Directed Studies (total enrollment: 1)

Fall
▷ STAT 302. — Statistical Methods (total enrollment: 188)
▷ STAT 685. — Directed Studies (total enrollment: 3)

• RESEARCH PROJECTS DURING 2011

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

• PRESENTATIONS DURING 2011


• PUBLICATIONS DURING 2011

• SERVICE DURING 2011
  National
  ▶ Committee/Panel: ASA Advisory Groups (Member)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▶ STAT 641. — The Methods of Statistics I (total enrollment: 25)
  Fall
  ▶ STAT 636. — Methods in Multivariate Analysis (total enrollment: 57)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Associate Dean for Technology Mediated Instruction and Distance Education, Technology Office, College of Science, [2006]

• SERVICE DURING 2011
  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 2011
  Spring
  ▷ STAT 408. — Introduction to Linear Models (total enrollment: 9)
  ▷ STAT 608. — Least Squares and Regression Analysis (total enrollment: 51)
  ▷ STAT 653. — Statistics In Research III (total enrollment: 79)
  ▷ STAT 681. — Seminar (total enrollment: 19)
  ▷ STAT 684. — Professional Internship (total enrollment: 23)
  ▷ STAT 685. — Directed Studies (total enrollment: 9)
  ▷ STAT 691. — Research (total enrollment: 1)

  Summer
  ▷ STAT 608. — Least Squares and Regression Analysis (total enrollment: 26)
  ▷ STAT 651. — Statistics in Research I (total enrollment: 29)
  ▷ STAT 681. — Seminar (total enrollment: 7)
  ▷ STAT 685. — Directed Studies (total enrollment: 10)

  Fall
  ▷ STAT 681. — Seminar (total enrollment: 12)
  ▷ STAT 685. — Directed Studies (total enrollment: 17)

• PRESENTATIONS DURING 2011
  ▷ University of California, Los Angeles, CA, 2011. (Invited)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▶ Senior Research Scientist, Texas Transportation Institute, [2007]

• SERVICE DURING 2011

  International
  ▶ Committee/Panel: Committee on Publication Ethics (Member)

  National
  ▶ Advisory Board: *Journal of Transportation and Statistics* (Member)
  ▶ Editorial/Board: Encyclopedia of Environmetrics (Section Editor), *Chemometrics and Intelligent Laboratory Systems* (Co-Editor)
  ▶ Committee/Panel: AFS Award Committee (Member), NISS Affiliate Committee (Member), ASA AAAS Committee (Member), ASA Forensic Working Group (Member), ASA Transportation Interest Group (Member), National Institute of Statistical Sciences (Representative), National Institute of Statistical Sciences (Board of Trustees)

• TEACHING ASSIGNMENTS DURING 2011

  Spring
  ▶ STAT 685. — *Directed Studies* (total enrollment: 2)

  Summer
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)

  Fall
  ▶ STAT 651. — *Statistics in Research I* (total enrollment: 40)
  ▶ STAT 658. — *Transportation Statistics* (total enrollment: 11)

• PRESENTATIONS DURING 2011

  ▶ “Topic Contributed on Forensics (Firearm/Toolmarks),” Joint Statistical Meetings, Miami, FL, 2011. (Contributed)
  ▶ “Classification,” ISI in Dublin, 2011. (Invited)
  ▶ “Classification,” Department Colloquium, 2011. (Invited)
  ▶ “Firearm/Toolmarks,” NIJ, September, 2011. (Invited)

• PUBLICATIONS DURING 2011

• SERVICE DURING 2011

National

University
▷ Committee/Panel: Library Committee (Member)

College
▷ Committee/Panel: Grievance Committee (Elected Member), International Programs Committee (Member)

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

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 613. — Intermediate Theory of Statistics (total enrollment: 17)
▷ STAT 691. — Research (total enrollment: 2)

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

Fall
▷ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2011

Federal
▷ Beyond Stationarity: Statistical Inference for Nonstationary Processes, National Science Foundation
▷ Fourier Methods in the Analysis of Nonstationary and Nonlinear Stochastic Processes, National Science Foundation

• PRESENTATIONS DURING 2011

▷ “The Quantile Spectral Density and a Goodness of Fit Test for Nonlinear Time Series,” University of Manchester, United Kingdom, November, 2011.( Invited)

• PUBLICATIONS DURING 2011

SEC. 6.1 PROFESSIONAL ACTIVITIES 853
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  ▷ Undergraduate Advisor, Statistics Undergraduate Advising Office, Statistics, [2006]

• SERVICE DURING 2011
  College
  ▷ Committee/Panel: Faculty Advisory Council (Elected Member), Undergraduate Program Committee (Member)

  Department
  ▷ Service Position: STAT 302 (Coordinator)

• TEACHING ASSIGNMENTS DURING 2011
  Spring
  ▷ STAT 212. — Principles of Statistics II (total enrollment: 75)
  ▷ STAT 302. — Statistical Methods (total enrollment: 150)
  ▷ STAT 485. — Directed Studies (total enrollment: 1)

  Fall
  ▷ STAT 212. — Principles of Statistics II (total enrollment: 78)
  ▷ STAT 302. — Statistical Methods (total enrollment: 150)
SUOJIN WANG

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STAT-Applied Statistics

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- ADDITIONAL UNIVERSITY TITLES HELD DURING 2011
  - Member, Interdisciplinary Faculty, Bioinformatics, [2006]

- SERVICE DURING 2011
  National
  - Editorial/Board: Grant Proposals, Tenure and Promotion Case (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)

- TEACHING ASSIGNMENTS DURING 2011
  Spring
  - STAT 212. — Principles of Statistics II (total enrollment: 74)
  - STAT 302.(H) — Statistical Methods (total enrollment: 29)
  - STAT 691. — Research (total enrollment: 2)

  Summer
  - STAT 685. — Directed Studies (total enrollment: 2)
  - STAT 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2011
  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
  - Statewide Evaluation of Childhood Obesity Prevention in Texas: Texas Safe Routes to School and Increased Healthy Food Access for WIC Clients, Robert Wood Johnson Foundation

- PRESENTATIONS DURING 2011
  - Georgia State University, Atlanta, GA, 2011.( Invited)
International Summer School on Probability on Statistics, Hangzhou, China, 2011. (Invited)

King Abdullah University of Science and Technology Chapter of SIAM, Saudi Arabia, 2011. (Invited)

King Abdullah University of Science and Technology, Saudi Arabia, 2011. (Invited)

Zhejiang University, China, 2011. (Invited)

• PUBLICATIONS DURING 2011


• SERVICE DURING 2011

University
▷ Committee/Panel: Implementation Task Force for Athletics (Member), Kappa Chapter of Phi Beta Kappa (Treasurer), President’s Athletic Task Force (Member), University Athletic Council (Chair), University Disciplinary Appeals Panel (Member), Vsion 2020 - Mid-term Review Task Force: Imperative 4 Study Team (Member)

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

Department
▷ Committee/Panel: Examination Committee - Master’s Qualifying Exam (Member), Graduate Program Committee (Member), Graduate Service Committee (Member), Parzen Prize Committee (Chair), Promotion and Tenure Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2011

Spring
▷ STAT 659. — Applied Categorical Data Analysis (total enrollment: 51)
▷ STAT 685. — Directed Studies (total enrollment: 1)
▷ STAT 691. — Research (total enrollment: 3)

Summer
▷ STAT 630. — Overview of Mathematical Statistics (total enrollment: 46)
▷ STAT 659. — Applied Categorical Data Analysis (total enrollment: 38)
▷ STAT 691. — Research (total enrollment: 1)

Fall
▷ STAT 301. — Introduction to Biometry (total enrollment: 154)
▷ STAT 630. — Overview of Mathematical Statistics (total enrollment: 90)
▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2011

Federal
▷ URM Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation
• **SERVICE DURING 2011**

  **National**
  - Committee/Panel: American Statistical Association (Chair elect)

  **State**
  - Committee/Panel: SETCASA (President)

  **University**
  - Event: 2011 COTS (Organizer)

  **Department**
  - Service Position: STAT 211 (Coordinator)
  - Committee/Panel: Awards Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2011**

  **Spring**
  - STAT 211. — *Principles of Statistics I* (total enrollment: 66)
  - STAT 604. — *Special Problems in Statistical Computations and Analysis* (total enrollment: 35)
  - STAT 691. — *Research* (total enrollment: 1)

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

  **Fall**
  - STAT 201. — *Elementary Statistical Inference* (total enrollment: 92)
  - STAT 691. — *Research* (total enrollment: 1)

• **RESEARCH PROJECTS DURING 2011**

  **Federal**
  - Collaborative Research: INCIST Improving National Acceptance of Computing Intensive Statistical Techniques, *National Science Foundation*

• **PRESENTATIONS DURING 2011**

  - “StatCrunch Teaching Workshop,” COTS, Raleigh, NC, May, 2011. (Contributed)

“Textbooks 2.0,” Joint Statistical Meetings, Miami, FL, August, 2011. (Invited)

“StatCrunch Teaching Workshop,” Armstrong Atlantic University, Savannah, GA, October, 2011. (Contributed)

“StatCrunch Teaching Workshop,” University of North Florida, Jacksonville, FL, October, 2011. (Contributed)

“Computationally Intensive Methods in Teaching Introductory Statistics,” AMATYC Workshop, Austin, TX, November, 2011. (Contributed)

“StatCrunch Teaching Workshop,” AMATYC, Austin, TX, November, 2011. (Contributed)

• PUBLICATIONS DURING 2011
LAN ZHOU

ASSISTANT PROFESSOR
STAT-Functional Data Analysis
lzou@stat.tamu.edu

• SERVICE DURING 2011
  
  International
  ▷ Editorial/Board: *An International Journal* (Referee: Journals)
  
  National

• TEACHING ASSIGNMENTS DURING 2011
  
  Spring
  ▷ STAT 302. — *Statistical Methods* (total enrollment: 384)
  
  Fall
  ▷ STAT 302. — *Statistical Methods* (total enrollment: 293)

• RESEARCH PROJECTS DURING 2011
  
  Federal
  ▷ Statistical Methods for Complex Functional Data, *National Science Foundation*

• PRESENTATIONS DURING 2011
  
  ▷ NISS 2011 Affiliates Annual Meeting., College Station, TX, April, 2011.( Invited)

• PUBLICATIONS DURING 2011
  
7. Research Activity, 2011

This section contains information on all funded research activity for the calendar year 2011. 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 2011 = # Days 2011 × Daily Grant Award
### 7.1 Summary of Research Support, 2011

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<td>Quantifying Protein Abundance from Mass Spectrometry Experiments Using the AMT Tag Pipeline</td>
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<td>Mallick, B.K.</td>
<td>Bayesian Uncertainty Quantification in Predictions of Flows in Highly Heterogeneous Media and its Applications to the CO2 Sequestration, (with: Y. Efendiev, B. Mallick)</td>
<td>9/1/2010</td>
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<td>Dabney, A.R.</td>
<td>Increasing Electrocardiography (ECG) Predictive Power by Using the Random Forest Technique</td>
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862 2011 Statistics annual report
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**Subtotal:** National Cancer Institute  
113,401 51,139 164,540

**National Institute of Food and Agriculture**


**Subtotal:** National Institute of Food and Agriculture  
696,186 99,865 796,051

**National Institute of Mental Health**


**Subtotal:** National Institute of Mental Health  
166,362 0 166,362

**National Institutes of Health**

| Fan, R.       | Genetic Basis for Exercise Training Responses                         | 4/1/2008    | 3/31/2012   | 154,363 | 71,779   | 226,141 |
| Sherman, M.   | (REN) Fetal Alcohol Exposure and Neurodevelopment                      | 7/1/2008    | 6/30/2013   | 75,000  | 32,986   | 107,986 |
| Wang, S.      | The Program for Rural and Minority Health Disparity Research            | 10/1/2007   | 5/31/2012   | 642,606 | 0        | 642,606 |

**Subtotal:** National Institutes of Health  
1,243,966 171,926 1,415,892

**National Science Foundation**


SEC. 7.  
RESEARCH ACTIVITY  
863
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<td>Genton, M.G.</td>
<td>Space-Time Statistics for Wind Power Forecasting</td>
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<td>6/30/2013</td>
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<td>Huang, J.Z.</td>
<td>A New Approach of Statistical Modeling and Analysis of Massive Spatial Data Sets, (with: J. Huang, H. Sang)</td>
<td>7/1/2010</td>
<td>6/30/2013</td>
<td>27,332</td>
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<td>Huang, J.Z.</td>
<td>Conference on Resampling Methods and High Dimensional Data, (with: J. Huang, S. Lahiri)</td>
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<td>Jun, M.</td>
<td>Nonstationary Spatial-Temporal Covariance Models for Multivariate Processes on a Globe</td>
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<td>Lahiri, S.N.</td>
<td>Long Range Dependence and Resampling Methodology for Spatial Data</td>
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<td>Liang, F.</td>
<td>Sampling from Distributions with Intractable Integrals</td>
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<td>30,323</td>
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<td>Ma, Y.</td>
<td>Studies in Measurement Error Problems</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>
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<td>4/30/2013</td>
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**SEC. 7.** RESEARCH ACTIVITY 865
Grantee Title Start End Direct Indirect Total

* National Science Foundation

Dabney, A.R. Statistical Methods for Protein Identification and Quantitation in Protein Mass Spectrometry 9/1/2008 8/31/2011 77,422 0 77,422

* Pacific Northwest National Laboratory

77,422 0 77,422

* Subtotal: Federal Agencies

3,449,569 599,751 4,049,321

International Agencies

* King Abdullah University of Science and Technology


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* Subtotal: King Abdullah University of Science and Technology

1,749,042 0 1,749,042

* Subtotal: International Agencies

1,749,042 0 1,749,042

Other Government

- University of Alabama-Birmingham

SEC. 7. RESEARCH ACTIVITY 867
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<td>Carroll, R.J.</td>
<td>Genome-Wide Structured Association Testing and Regional Admixture Mapping</td>
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<td>8/31/2011</td>
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<td>990</td>
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**PRIVATE/NON-PROFIT AGENCIES**

- **American Institute for Cancer Research**

  Dabney, A.R. Ability of n-3 Fatty Acids to Influence Colon Tumor Formation by Modulating Estrogen Action
  1/1/2008 4/30/2011 5,387 0 5,387

  * Subtotal: American Institute for Cancer Research 5,387 0 5,387

- **Baylor College of Medicine**

  Wang, S. Maintaining Musculoskeletal Health in the Lunar Environment
  6/1/2008 5/31/2012 48,464 20,037 68,501

  * Subtotal: Baylor College of Medicine 48,464 20,037 68,501

- **Robert Wood Johnson Foundation**

  Wang, S. Statewide Evaluation of Childhood Obesity Prevention in Texas: Texas Safe Routes to School and Increased Healthy Food Access for WIC Clients
  7/15/2008 7/14/2013 89,265 10,735 100,000

  * Subtotal: Robert Wood Johnson Foundation 89,265 10,735 100,000

  * Subtotal: Private/Non-Profit Agencies 143,116 30,772 173,888

**STATE AGENCIES**

- **Columbia University**

  Ma, Y. Semiparametric Efficient Statistical Methods for Mixture Data
  7/1/2011 6/30/2015 135,434 0 135,434

  * Subtotal: Columbia University 135,434 0 135,434

- **University of Texas MD Anderson Cancer Center**

  Sheather, S.J. Educational Experience Program Affiliation Agreement
  10/1/2009 5/31/2012 80,111 0 80,111

  * Subtotal: University of Texas MD Anderson Cancer Center 80,111 0 80,111

  * Subtotal: State Agencies 215,544 0 215,544
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**SEC. 7.**

**RESEARCH ACTIVITY**

869
7.2 Summary of Individual Support, 2011

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<td>(REN) Training Program in Biostatistics, Bioinformatics, and Nutrition</td>
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<td>ATD: Bayesian Data Missing Approaches for Biological Threat Detection, (with: R. Carroll, B. Mallick)</td>
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<td>National Science Foundation</td>
<td>Cluster Computing for Mathematical Sciences at Texas A&amp;M University, (with: W. Bangerth, R. Carroll, F. Sottile, Z. Teitler)</td>
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<td>8/31/2011</td>
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**Subtotal Carroll, R.J.**

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**Subtotal Chen, W.W.**

- **Daube, A.K.**

2011 Statistics annual report
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<tr>
<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>
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- **Subtotal Dabney, A.R.** 1,019,318 154,649 1,173,967

- **Fan, R.**

  National Institutes of Health | Genetic Basis for Exercise Training Responses | 4/1/2008 | 3/31/2012 | 154,363 | 71,779   | 226,141 |

- **Subtotal Fan, R.** 154,363 71,779 226,141

- **Genton, M.G.**

  National Science Foundation | Monte Carlo Methods for Analysis of Large Spatial Data, (with: M. Genton, F. Liang) | 8/1/2011 | 7/31/2014 | 3,549  | 9,638    | 13,187  |
  National Science Foundation | Space-Time Statistics for Wind Power Forecating | 7/15/2010 | 6/30/2013 | 53,413 | 7,364    | 60,777  |

SEC. 7. RESEARCH ACTIVITY

871
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872 2011 STATISTICS ANNUAL REPORT
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- **Liang, F.**

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SEC. 7. RESEARCH ACTIVITY  

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2011 Statistics Annual Report
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- **Sherman, N.**
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- **Sinha, S.**
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- **Subba Rao, S.**
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    Beyond Stationarity: Statistical Inference for Nonstationary Processes  
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- **Wang, S.**
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