Annual Report, 2007

THE COLLEGE OF SCIENCE
TEXAS A&M UNIVERSITY

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

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

I am pleased to report that, at a time when our nation is rightfully concerned about its global future in science and technology, the Texas A&M College of Science continues to deliver on its 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 $40 million in sponsored research projects responsible for creating new knowledge and driving economies around the world.

In 2007 our teaching, research and service highlights were many and magnified. To name but a representative few, Chemistry’s John Hogg became the third college faculty member to earn a Presidential Professor for Teaching Excellence Award, Texas A&M’s highest recognition for excellence in the classroom. A record five faculty were promoted to distinguished professor, Texas A&M’s highest faculty rank reserved for those deemed by their peers as among the top five percent of scientists worldwide in their field. For the second consecutive year, three college staff members were honored with President’s Meritorious Service Awards, the university’s top recognition for staff excellence.

Mathematics’ Laura Matusevich and Wolfgang Bangerth received Sloan Foundation awards, earning Texas A&M distinction as the only math department nationwide to merit multiple selections. Nick Suntzeff earned a share in the $500,000 Gruber Prize, widely acknowledged as second only to the Nobel Prize in terms of importance in cosmology. Marlan Scully was selected as a Morris Loeb Lecturer in Physics at Harvard University, an honor previously bestowed on no less than 40 Nobel laureates that brings even greater visibility to the quantum science initiative underway across Texas A&M, the Texas A&M System and the entire state of Texas. In addition, the Board of Regents approved the new Center for Statistical Bioinformatics, a joint activity of Texas A&M, the Texas Agricultural Experiment Station (TAES) and the Texas Engineering Experiment Station (TEES) that builds upon our phenomenally successful National Cancer Institute-funded Biostatistics, Bioinformatics and Nutrition Training Program led by Ray Carroll.

In the midst of such impressive achievement, I would be remiss not to acknowledge the bad with the good - all-too-painfully personified in the loss of three of the college’s most prominent faculty: chemists Al Cotton and Ian Scott and mathematician Dick Ewing. We continue to mourn them even as we work to recruit new faculty of similar caliber, not as their replacements but, rather, out of reverence for each of them and their respective dreams for Texas A&M, their students and their professions.

As we commemorate landmark accomplishment and reflect on another year’s worth of life experiences, I challenge each of you to respect and, if necessary, rediscover your own dreams. Remember that as individuals and as a college, we owe it to ourselves to make a lasting difference. Anything less is a disservice to the ultimate scientific dream.
B. Statistical Snapshots

The following statistics are cited as follows:

Faculty
▷ Office of Institutional Studies and Planning (OISP). (Fall 2003, Fall 2004) *TAMU Faculty as Reported by Academic Departments, Summary by TAMU Rank/Ethnicity by Tenure/Gender.*
▷ Compiled from the College of Science Faculty Database. (Fall 2005, Fall 2006, Fall 2007) *Baselines, 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 2003, Fall 2004, Fall 2005, Fall 2006, Fall 2007) *Enrollment Profile, Headcount by Major by Level, Fall for [Year].*

Teaching
▷ **SCH: Undergraduate and Graduate** - Office of Institutional Studies and Planning (OISP). (Spring 2003 - Fall 2007) *SCH Summaries by College for [Semester] [Year].*

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

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### Graduate Majors (Fall)

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## Teaching Snapshot

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

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Annual Report, 2007

THE DEPARTMENT OF BIOLOGY
TEXAS A&M UNIVERSITY

College Station, Texas
Contents

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1. Foreword from the Department Head

The year 2007 will be remembered as both an end and a beginning for me as department head and for the department as a whole. For me, this is the last of these forewords I will ever write, since I have decided to step down as department head to take another position, a new beginning for me as well. For the department, 2007 marks the official end of the reinvestment plan, which was an immensely successful program for Biology in which we hired some 17 new faculty members. This year, we welcomed two outstanding microbiologists: Dr. Xiaorong Lin and Dr. Matthew Sachs. Dr. Lin, who was hired as an Assistant Professor, studies factors that influence virulence in the fungus Cryptococcus, while Dr. Sachs, who was hired as a Full Professor, is a very well known microbiologist who studies mechanisms by which RNA is processed and regulated. We also hired ecologist Dr. Charles Criscione, who studies parasite host interactions in, among other things, schistosomiasis. Finally, while he will not arrive until 2009, when the Life Sciences Building opens, we have completed negotiations with Dr. Richard Gomer of Rice University, where he currently studies Dictyostelium development and also wound-healing processes in mammals. Thus, while these hires represent the end of the reinvestment plan, they mark incredible strides in both the quantity and quality of scholars gracing the halls of Butler, BSBW and BSBE.

We are also very excited about the honors bestowed upon our faculty this past year and continuing through this year. First, Dr. Paul Hardin has been promoted to Distinguished Professor as of this coming September 2008. Dr. Hardin’s groundbreaking research on the molecular clockworks that govern the sense of time in the fruitfly Drosophila melanogaster has led to a renaissance for the study of biological timing in other organisms, including humans. He has also shown how the fly’s sense of time modulates the animal’s sense of smell, no small feat (Wait, flies smell with their feet, too!). Secondly, Dr. L. Rene Garcia, who will be promoted to Associate Professor in September 2008, has been named a 2008 Howard Hughes Medical Institute investigator. This is a first for the Department of Biology and Texas A&M University and signals great things to come for this institution, if the University can keep its eye on the ball by rewarding excellence and hard work.

This year, the department underwent an Academic Program Review, led by Dr. Ralph Quartraro of Washington University, Sandy Parkinson of the University of Utah, Michael Ryan of the University of Texas and Loren Snyder of Michigan State University. These highly regarded scientists affirmed the great strides Biology has made in the past 10 years and made some very astute recommendations that will further improve the department. Among these are, of course, more money, more faculty and more, better graduate students! I think they may be on to something.

There are many other exciting things happening in the Department of Biology, and it is with true bittersweet emotions that I have decided to leave. Still, all good things must come to an end in order for a new beginning to begin! So long and thanks for the fish!
2. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty

▷ Compiled from the College of Science Faculty Database. (Fall 2006, Fall 2007) Baselines_Title, Gender, Ethnicity.

Non-Tenure-Track Faculty

▷ Compiled from the College of Science Faculty Database Faculty_List.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2006, Fall 2007) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff

▷ Compiled from the College of Science Dean Database Baselines_Staff.

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours

▷ SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2007) SCH Summaries by College for [Semester] [Year].

PhD Degrees/Masters Degrees

▷ Queried from COGNOS and calculated through the College of Science Dean Database Degrees_Grad.

Undergraduate Degrees

▷ Queried from COGNOS and calculated through the College of Science Dean Database Degrees_Undergrad.

III. Research Activities

Research Publications

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

Research Presentations

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

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

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

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<td>f. Support Staff</td>
<td>33</td>
<td>52</td>
</tr>
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<table>
<thead>
<tr>
<th>II. Instructional Activities</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>a. Graduate Semester Credit Hours</td>
<td>2,124</td>
<td>2,285</td>
</tr>
<tr>
<td>b. Undergraduate Semester Credit Hours</td>
<td>35,673</td>
<td>37,169</td>
</tr>
<tr>
<td>c. PhD Degrees</td>
<td>8</td>
<td>10</td>
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<tr>
<td>d. Masters Degrees</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>e. Undergraduate Degrees</td>
<td>239</td>
<td>285</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>III. Research Activities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Research Publications</td>
<td>91</td>
<td>104</td>
</tr>
<tr>
<td>b. Research Presentations</td>
<td>80</td>
<td>99</td>
</tr>
<tr>
<td>c. Federal</td>
<td>5,985,231</td>
<td>5,224,633</td>
</tr>
<tr>
<td>d. State</td>
<td>98,311</td>
<td>76,504</td>
</tr>
<tr>
<td>e. University</td>
<td>6,263</td>
<td>4,164</td>
</tr>
<tr>
<td>f. Private/Non-Profit</td>
<td>285,205</td>
<td>283,498</td>
</tr>
<tr>
<td>g. Industrial/Corporate</td>
<td>191,696</td>
<td>10,450</td>
</tr>
<tr>
<td>h. International</td>
<td>659</td>
<td>4,864</td>
</tr>
<tr>
<td>i. Other Govt</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>6,567,365</td>
<td>5,604,114</td>
</tr>
</tbody>
</table>
3. Honors & Awards, 2007

By Faculty

▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2007.

By Students

▷ This section contains all honors and awards, as reported by the department, during the calendar year 2007.
### 3.1 Honors & Awards Received by Faculty, 2007

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
</tr>
</thead>
</table>

---

2007 Biology annual report
3.2 Honors & Awards Received by Students, 2007

Graduate

▷ Biology Doctoral Merit Awards
  Partha Krishnan
  Robert Pratt

▷ Graduate Student Teaching Award
  Richard Jones
  Anand Narayanan

▷ Lawrence S. Dillon Distinguished Graduate Student Award
  Ramona Aldea

Undergraduate

▷ George Reichel ’70 Endowed Scholarship in Science
  Shannon Stohlgren

▷ H.R. Lewis Scholarship
  Elizabeth R. Drone
  Audra Fuller
  Blake Hoedebecke
  Kyle Westbrook
  Chester Wu

▷ Howard Gravett Endowed Scholarship
  Amanda Howe

▷ Hugo F. Elmendorf, Jr. MD ’44 Lifelines Scholarship
  Ashley Barrett
  Brady Steven

▷ J. W. Birdwell ’28 Endowed Scholarship in Science
  Maura Holcomb

▷ Jessica Jon Chancellor Memorial Lifelines Scholarship
  Chelsea Hook

▷ John Todd Willis ’44 Endowed Memorial Scholarship in Biology
  Veronica Alanis

▷ Julia Ball Lee Scholarship
  Russell Landry
  Jung Lee
  Amy Monholland
  Lori Rollo

▷ Katherine Anne Keller Endowed Memorial Scholarship
  Leyla Choobineh
  Brittney Probst
- Lifelines Endowed Scholarship Program
  Patrick Armstrong
  Chelsey Dankenbring

- Lola Mae & Charles LaMotte Memorial Endowed Scholarship
  Karan Patel

- Lucille Dougherty Endowed Scholarship in Science
  Van N. Hoang

- Patricia & William Gordon ’67 Scholarship in Science
  Jennifer Caero

- Richard B. Grant, Jr. ’29 Endowed Scholarship
  Michelle Lee

- William A. Triche and Homer A. Triche Endowed Scholarship Fund in Engineering, Science and Medicine
  Bethany Nicely
  Robert Orchard, II
  Gregory Whitaker
  Rachel Wright

- Woodie Bennett Mike Scholarship
  Hannah Wheeless
4. Students, 2007

This section contains all degrees awarded, as reported by the department, during the calendar year 2007.
4.1 Graduate Degrees Awarded, 2007

Fall

▷ M.S.
Kimberly Yvonne Cox  Melatonin Modulates Intercellular Communication Among Immortalized Rat Suprachiasmatic Nucleus Cells
Advisor(s): M. Zoran
Malcolm Thomas McLaughlin  A Dicer-Like Protein is Essential for Normal Sexual Development and Meiotic Silencing in the filamentous Fungus Neurospora Crassa
Advisor(s): R. Aramayo

▷ Ph.D.
George William Christos Savva  Structural Studies of the Bacteriophage Lambda Holin and in the M. Tuberculosis Seca Translocase
Advisor(s): A. Holzenburg

Spring

▷ M.S.
Saroochi Agarwal
Advisor(s): H. Qin
Jodi Lee Bollinger
Advisor(s): J. Golden
Haitao Guo  Genetic and Biochemical Analyses of Hypothetical Protein 1: An Interacting Partner of Cika in Synechococcus Elongatus Pcc 7942
Advisor(s): S. Golden

▷ Ph.D.
Archie Wood Ammons  Macrofaunal Community Structure on the Gulf of Mexico Continental Slope: The Role of Disturbance and Habitat Heterogeneity at Local and Regional Scales
Advisor(s): M. Wicksten, Rowe, Gilbert T
Roger Russell Draheim  The Role of Protein-Membrane Interactions in Modulation of Signaling by Bacterial Chemoreceptors
Advisor(s): M. Manson
Edan Robert Hosking  Assembly of the Mot Protein Complex into the Escherichia Coli Flagellar Motor
Advisor(s): M. Manson
Runzhi Lai  Signal Processing Within and Between Bacterial Chemoreceptors
Advisor(s): M. Manson

22  2007 Biology annual report
Gus John Menger  
Comparison of Circadian Gene Expression Among Different Oscillator Models: Identification of Critical Output Signals of the Scn Pacemaker  
Advisor(s): D. Earnest

Michael William Vitalini  
Uncovering the Circadian Output Pathways of Neurospora Crassa  
Advisor(s): D. Bell-Pedersen

Summer

▷ M.S.

Frances Karels Noe  
Advisor(s): C. Patterson

Lin Zhang  
Advisor(s): D. Earnest

▷ Ph.D.

You Chen  
Functional Genomics of the Unicellular Cyanobacterium Synechococcus Elongatus Pcc 7942  
Advisor(s): S. Golden

Kenyon Brice Mobley  
Geographic and Temporal Variation in the Genetic Mating Systems of Pipefish  
Advisor(s): A. Jones

Tao Wang  
Characterization of Atsuvr3 Functions in Arabidopsis Thaliana Using Rna Interference  
Advisor(s): T. Hall
4.2 Undergraduate Degrees Awarded, 2007

Fall

▷ B.A.
Daniel Glen Lewis
Ryan Chunho Ng
Steven Joseph Norman
Michelle Suzanne Perkins

▷ B.S.
Laura Katherine Alexander
Joseph Robert Allison
Carlo Gustavo Aranibar
Ashley Elizabeth Barrett
Gregory Frank Beal
Rachel Stephanie Bonner
Rachel Aruna Boyalapalli
Jason Terrell Boyd
Lauren Christine Brown
Marion Keum Ja Carlile
Brandon Cole Childers
Brittany Anne Cornish
Nicole Elizabeth Corso
Chase Anthony Crawford
Cody Scott Cruz
John David Daniels
Chelsey Ann Dankenbring
Janna Brooke Dudark
Kalli Grace Elliott
Lauren Lea Evans
Zachary Alan Falgout
James Brent Foreman
Nicole Renee Frank
Mary Martha Franklin
Audra Jane Fuller
Blake Ryan Galler
Stanton Lee Gardenhire
Jennifer Nichole Gilmore
Lauren Michelle Gray
Justin Dwain Hancock
Lisa M Hawkins
Jennifer Suzanne Henson
Lindsey Rachel Jarrett
Stacy Marie Jennings
Aaron Benjamin Jones
Nicholas Aaron Jones
Sonny Augusta Kazen
Andrew Allen Klueh
Keith Adam Kutac
Christopher Anthony Lauhoff
Leah Anne Lockard
Amanda Dale Lytle
Joshua Jed Martin
Michelle Marie Martin
Steve Jacob Mathew
Christopher Edward Miller
Richard David Eisdell Moore
Karen H Nguyen
Ashleigh Danielle Oeth
Andrew Joseph Owens
Meredith Lee Pinto
Rosanna Erika Puente
Sena Rayos
Kylee Brooke Richard
Lizet Sanchez
Hilary Fay Schmitt
Alex Richard Schriver
Spencer Myers Selvidge
Kara Rae Sides
Jennifer Marie Singleton
Joshua Steven Sosa
Kristen Anne Svoboda
Wade Walker Swanson
Ngoc Bich Le Than
Jason Michael Thompson
Jacob Scott Towns
Christopher Daniel Venegas
Lyndie Leeanne Vickrey
Ruben David Villanueva
Stephanie Kitt Walkup-Birkhead
Keith Anthony White
Aaron Kyle Wilkinson
Ryan James Williams
Erica Renee Williams
Rachel Hope Wright

Spring

▷ B.A.

Elizabeth Alice Baker
Brittany Elise Burns
Estela Maria Cardenas
Sri Devi Chalasani
Andrew Thomas Farmer
Nathan Boydston Haile
Emily Elizabeth Jasek
Maria Lee
Paige Nicole Mericle
Alicia Leigh Moore
Robert Tyler Morris
Alex Reese Reeder
Petra Elena Rodriguez
Amanda D'Anne Schultz
Amanda Gayle Steinmann

▷ B.S.

Jenna Leigh Aldinger
Cristina Ann Alvarez
Ananth Kumar Arjunan
Marcus Lane Asby
Aubree M Ashley
Jamie Elizabeth Avalos
Lauren Ilene Baber
Kaku Barkoh
Shannon Lynn Barnicott
Lindsey Nicole Battaglia
Jeremy Kyle Bell
Brett Robert Bensmiller
Rachel Ann Berry
Anna A Bradley
Hetal Bharat Brahmbhatt
Lauren Michelle Braswell
Nicole Jeanann Brown
Jessica Ann Bartik Brummett
Ashley Elizabeth Buschman
Erica Elizabeth Bush
Brandon Martin Byford
Dorottyn Linn Cabrera
Haley Nicole Caldwell
Ryan Alan Carmichael
Vanessa Nicole Carr
Megan Kara Carrier
Joseph Anthony Cerrato
Derek Jensen Chang
Amanda Kathryn Clauson
Valerie Crystal Cortez
Leslie Alison Daniel
Joseph Henry Dannenbaum
Christopher Paul Danos
Leslie Acock Dickinson
Michael Dustin Douglas
Raechel Pauline Duerr
Peter Nadim Fata
Crystal Ann Fields
Matthew Taylor Fields
Richard William Flesher
Hannah Therese Fox
Deborah Lynn Vaughn
Amanda Leigh Verhoeven
Dmitriy Verkhoturov
Katharine Sarah Vonfeldt
Lindsey Alaine Waymer
Rami Sue Weaver
Elizabeth Marie Weber
Lauren Kaye Wells
Katie Lynn Wheat
Kendra Gail Wheeler
Matthew Cooper White
Hayley Suzanne Wilson
Brittany Louise Winkler
Avery Colleen Wright
Oliver Wu
Yuan Xing
Matthew Scot Young
Qasim Hasan Zaidi
Kelly Zhao

Summer

▷ B.A.

Charles Bryan Ackerman
Giannina Victori Bregon-Morris
Keely Britt Carlson
Daniel Charles Foster
Lauren Ilona Wikholm

▷ B.S.

Clara Abiola Adeyemi
Michelle Elizabeth Bentley
Andrew Richard Carrillo
Aaron Collier Clawson
William Andrew Cozart
Dora Csuha
David Michael Dominguez
Sarah Elizabeth Furney
Cynthia Lauren Giggleman
Kendra Michelle Grove
Jonathan James Hart
Lucretia Janette Herridge
Brandon J Hill
Amy Christine Huffman
Andrea Michelle Jackson
Whitney Lanfranco
Jessica Veronica Lopez-Silva
Meghan Carmen McCaffrey
Holly Marie Murray
Timothy Blake Palculict

SEC. 4.2 UNDERGRADUATE DEGREES 29
### Colloquium and Seminar Speakers

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>1/16/2007</td>
<td>Gary Gorbsky</td>
<td>University of Oklahoma</td>
<td>Backpedaling the Cell Division Cycle, the Reversibility of Mitosis and Cytokinesis</td>
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<tr>
<td>1/23/2007</td>
<td>Julia Kubanek</td>
<td>Georgia Tech</td>
<td>Chemical Cues in the Ocean: The Role of Red Tide Toxins in Food Webs</td>
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<tr>
<td>2/6/2007</td>
<td>Maureen Barr</td>
<td>University of Wisconsin</td>
<td>Sensation, Cilia, and Cystic Kidney Disease</td>
</tr>
<tr>
<td>2/13/2007</td>
<td>Reinhard Burger</td>
<td>University of Vienna</td>
<td>On the Conditions for Speciation Through Intraspecific Competition</td>
</tr>
<tr>
<td>2/27/2007</td>
<td>Toto Olivera</td>
<td>University of Utah</td>
<td>Venomous Cone Snails, Ion Channels and Receptors</td>
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<tr>
<td>3/6/2007</td>
<td>Mike Iuvone</td>
<td>Emory University</td>
<td>Neuromodulators and Circadian Clocks in Retina</td>
</tr>
<tr>
<td>3/20/2007</td>
<td>Hopi Hoekstra</td>
<td>University of California, San Diego</td>
<td>The Genetics of Adaptation: From Mice to Molecules</td>
</tr>
<tr>
<td>4/3/2007</td>
<td>Martin Wikelski</td>
<td>Princeton University</td>
<td>The Physiology of Life Histories - Why Tropical Birds Live a Slow Pace of Life</td>
</tr>
<tr>
<td>4/10/2007</td>
<td>Tom Clandinin</td>
<td>Stanford School of Medicine</td>
<td>Toward a Genetic Dissection of Visual Behavior in the Fruit Fly</td>
</tr>
<tr>
<td>4/17/2007</td>
<td>Lila Solnica-Krezel</td>
<td>Vanderbilt University</td>
<td>Genetic Regulation of Gastrulation Movements in Zebrafish</td>
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<tr>
<td>4/24/2007</td>
<td>Stephen Osmani</td>
<td>Ohio State University</td>
<td>Mitotic Regulation of Nuclear Structure in Aspergillus Nidulans</td>
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<tr>
<td>9/4/2007</td>
<td>Seth Coleman</td>
<td>Texas A&amp;M University</td>
<td>Beauty is in the Eye of the Beholder: Variable Female Preferences and the Evolution of Complex Male Sexual Displays</td>
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<tr>
<td>9/11/2007</td>
<td>Jin Xion</td>
<td>Texas A&amp;M University</td>
<td>Experimental and Evolutionary Analysis of Anoxyogenic Photosynthetic Bacteria</td>
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</table>
9/18/2007  Douglas Portman  
*University of Rochester Medical Center*  
Sex and the Single Worm: Genetic Regulation of Sex Differences in C. Elegans Development and Behavior

9/25/2007  Luis Rene Garcia  
*Texas A&M University*  
Molecular Regulation of Motivated Behaviors in the Nematode C. Elegans

10/2/2007  Michael Greene  
*UCDHS College of Liberal Arts & Sciences*  
Chemical Recognition Cues Inform the Decisions Made by Ants

10/9/2007  John Doebly  
*University of Wisconsin*  
The Evolution of Plant form: An Example from Maize

10/11/2007  John S. Parkinson  
*University of Utah*  
Bacterial Chemotaxis: Dissecting the Three-Protein Brain of E. Coli

10/23/2007  Karen Carleton  
*University of Maryland*  
Visual Communication in Cichlid Fishes: Using Opsin Genes to get a Cichlid Eye View

10/30/2007  Rosie Redfield  
*University of British Columbia*  
Do Bacteria Have Sex

11/6/2007  Graeme Mardon  
*Baylor College of Medicine*  
Genome-Wide Identification and Characterization of New Genes Required for Drosophila Eye Development

11/13/2007  Hans Hofman  
A Molecular Systems Analysis of Social Behavior in a Neuroendocrine Integration Center

11/27/2007  Jing Zhou  
Primary Cilia and Polycystic Kidney Disease
Frontiers Lecture Series

3/27/2007 Cynthia Kenyon  
University of California, San Francisco

3/28/2007 Cynthia Kenyon  
University of California, San Francisco
6. Faculty, 2007

Rodolfo D. Aramayo ................................................. Associate Professor
Karl J. Auferheide ...................................................... Associate Professor
Meray Basturkmen ...................................................... Research Assistant Professor
Deborah Bell-Pedersen .................................................. Professor
Michael J. Benedik ...................................................... Professor
Lisa Campbell ............................................................ Associate Professor (J)
Ginger E. Carney ........................................................... Assistant Professor
Vincent M. Cassone ...................................................... Professor
William Cohn ............................................................. Lecturer
Sumana Datta ............................................................. Associate Professor (J)
David Earnest ............................................................ Associate Professor (J)
James W. Erickson ...................................................... Associate Professor
Rene Garcia ............................................................... Assistant Professor
James W. Golden ........................................................ Professor
Susan S. Golden .......................................................... Distinguished Professor
Ira F. Greenbaum ............................................................ Professor
Lawrence R. Griffing ...................................................... Associate Professor
Linda Guarino ............................................................. Professor (J)
Timothy C. Hall ........................................................... Distinguished Professor
Paul E. Hardin ............................................................. Professor
Andreas K. Holzenburg .................................................. Professor
Rodney Honeycutt ......................................................... Professor (J)
Carol B. Johnson ............................................................ Senior Lecturer
Adam G. Jones ............................................................ Assistant Professor
Walter M. Kemp .......................................................... Professor
Run-Zhi Lai ................................................................. Lecturer
Arne C. Lekven ........................................................... Associate Professor
Thierry Lints ............................................................... Assistant Professor
Robyn Lints ................................................................. Assistant Professor
Duncan S. MacKenzie ...................................................... Associate Professor
Shannon Mackey .......................................................... Lecturer
Keith A. Maggert .......................................................... Assistant Professor
James R. Manhart ........................................................ Associate Professor
Michael D. Manson ...................................................... Professor
Thomas D. McKnight ..................................................... Professor
Gus J. Menger ............................................................. Lecturer
Louis Morgan ............................................................. Lecturer
Rita B. Moyes ............................................................. Senior Lecturer
Wang Ng ................................................................. Research Assistant Professor
Comer O. Patterson ...................................................... Professor
Alan E. Pepper ............................................................ Associate Professor
Brian D. Perkins .......................................................... Assistant Professor
Hongmin Qin .............................................................. Assistant Professor
Bruce B. Riley ............................................................ Professor
Peter J. Rizzo ............................................................. Associate Professor
Gil G. Rizzo ............................................................... Assistant Professor
Kathryn J. Ryan ........................................................... Assistant Professor
Matthew S. Sachs ................................................................. Professor
Helmut W. Sauer .............................................................. Professor
Timothy P. Scott ............................................................. Senior Lecturer
Deborah A. Siegle ............................................................ Associate Professor
Michael Smotherman ...................................................... Assistant Professor
Thomas A. Stidham ......................................................... Assistant Professor
Max Summers .............................................................. Professor (J)
Andrew Tag ................................................................. Lecturer
Lathrop Taylor .............................................................. Lecturer
Terry L. Thomas ............................................................ Professor
R. Kathryn Vaughan ........................................................ Lecturer
Wayne Versaw ............................................................. Assistant Professor
Wei Wan ................................................................. Senior Lecturer
Mary K. Wicksten .......................................................... Professor
Hugh D. Wilson ............................................................ Professor
Leslie K. Winemiller ......................................................... Senior Lecturer
Thomas K. Wood .......................................................... Professor (J)
Jin Xiong ................................................................. Assistant Professor
Philip A. Youderian .......................................................... Professor
Ry Young ................................................................. Professor (J)
Mark J. Zoran ............................................................. Associate Professor

*For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2007 (01/01/2007-12/31/2007).
6.1 Professional Activities, 2007

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2007.

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 2007.
▷ 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 2007.
▷ 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 2007
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007
  International
  ▶ Editorial/Board: Israel Science Foundation (Ad hoc Reviewer), Public Library of Science (Editor), CONACYT-DAIC. Mexico, D.F., Mexico (Review: Proposals), International Journal of Biological Sciences (Review: Proposals), The International Journal of Biological Sciences (Member)

  National
  ▶ Editorial/Board: Fungal Genetics Newsletter, Fungal Genetics and Biology, PLoS ONE, Genetics, The Open Mycology Journal (Review: Proposals), The Open Mycology Journal (Member), Fungal Genetics Newsletter (Member)

  Department
  ▶ Committee/Panel: Annual Review & Awards Committee (Elected Member), Computer Committee (Member), Graduate Faculty of the Health Science Center (Member), Graduate Recruitment Committee (Chair)

  Interdisciplinary/Intercollegiate
  ▶ Research Group: Intercollegiate Program in Genetics (Member), Program for the Biology of Filamentous Fungi (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 5)
  ▶ BIOL 691. — Research (total enrollment: 6)
  ▶ GENE 691 — Research (total enrollment: 1)

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

  Fall
  ▶ BIOL 450. — Introduction to Genomics (total enrollment: 19)
  ▶ BIOL 485. — Directed Studies (total enrollment: 2)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 650. — Genomics (total enrollment: 16)
• RESEARCH PROJECTS DURING 2007
  Federal
  ◦ (REN) Genetic and Molecular Study of Meiotic Trans-sensing and, National Institutes of Health, coworkers: D. Whan Lee (P), R. Millimaki (G), R. Pratt (G)

• PUBLICATIONS DURING 2007
• **SERVICE DURING 2007**

**National**
- Editorial/Board: Nature, Paramecium Genome Wequence Report MS, Protoplasma, MS (Review: Proposals)

**University**
- Advisory Board: University Student Fiscal Appeals Panel (Member)
- Committee/Panel: Blinn College/Texas A&M University Liaison Committee (Member), Core Curriculum Council (Faculty Senate) (Member), Faculty Senate (Faculty Senator - 06), Faculty Senate Committee on Committees (Member), Faculty Senate Planning Committee (Member), Security Awareness Committee (Member)

**College**
- Service Position: College of Science, Office of the Vice-President for Research (Research Standards Officer)

**Department**
- Committee/Panel: Annual Review & Awards Committee (Elected Member), Biological Instrumentation Laboratory Oversight Committee (Member), Graduate Recruiting and Admissions Committee (Elected Member), Lower Division Advisory Committee (Member), Microscopy Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2007**

**Spring**
- BIOL 112. — **Introductory Biology II** (total enrollment: 94)
- BIOL 413. — **Cell Biology** (total enrollment: 54)
- BIOL 491. — **Research** (total enrollment: 3)

**Summer**
- BIOL 112. — **Introductory Biology II** (total enrollment: 59)
- BIOL 491. — **Research** (total enrollment: 3)

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

• **PUBLICATIONS DURING 2007**

DEBORAH BELL-PEDERSEN

PROFESSOR
BIOL-Microbiology, Cellular and Mol. Biol.
dpedersen@mail.bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007

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

  National
  ▷ Editorial/Board: National Science Foundation, National Institutes of Health (Review:
    Proposals), Fungal Genetics and Biology (Associate Editor)
  ▷ Committee/Panel: National Institutes of Health, Neurogenesis and Cell Fate (Panel Mem-
    ber)

  University
  ▷ Research Group: Center for Environmental and Rural Health (Member)
  ▷ Committee/Panel: Council of Principal Investigations Executive Committee (Member),
    Council of Principal Investigators (Member)

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

  Department
  ▷ Committee/Panel: Executive Committee (Appointed), Graduate Programs Committee
    (Member), Promotion and Tenure Committee (Member)

  Interdisciplinary/Intercollegiate
  ▷ Research Group: Center for Research on Biological Clocks (Member), Program for Micro-
    bial Genetics and Genomics (Member)
  ▷ Committee/Panel: Program for Biology of Filamentous Fungi (Member), UBM Integrated
    Undergraduate Research Experiences in Biological and Mathematical Sciences (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 691. — Research (total enrollment: 1)
  ▷ MICR 685. — Directed Studies (total enrollment: 1)
  ▷ MICR 691. — Research (total enrollment: 2)

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

SEC. 6.1  PROFESSIONAL ACTIVITIES  41
Gene 691. — Research (total enrollment: 1)
MICR 491. — Research (total enrollment: 1)
MICR 691. — Research (total enrollment: 1)

Fall
BIOL 291. — Research (total enrollment: 1)
BIOL 445 — Biology of Viruses (total enrollment: 61)
BIOL 491. — Research (total enrollment: 3)
BIOL 691. — Research (total enrollment: 1)
GENE 691. — Research (total enrollment: 1)
MICR 491 — Research (total enrollment: 1)
MICR 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2007

Federal
- (REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health
- (REN) Molecular Genetic Analysis of Fungal Circadian Rhythms, National Institutes of Health
- Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation

- PRESENTATIONS DURING 2007
- KAVLI Institute for Theoretical Physics, Santa Barbara, CA, 2007. (Individual)
- University of Oregon, Biochemistry Department, Eugene, OR, 2007. (Individual)
- University of Stavanger, Biology Department, Norway, 2007. (Individual)

- PUBLICATIONS DURING 2007
**ADDITIONAL UNIVERSITY TITLES HELD DURING 2007**
- Member, Interdisciplinary Faculty, Genetics, [2006]
- Graduate Advisor, Biology Graduate Advising Office, [2006]

**SERVICE DURING 2007**

**International**
- Editorial/Board: Georgian Bilateral Grants Program of the CRDF (Review: Proposals)

**National**
- Editorial/Board: *Applied and Environmental Microbiology, FEMSLE, Open Biotechnology, Journal of Bacteriology* (Referee: Journals)

**University**
- Committee/Panel: Faculty of Genetics (Vice Chair), Faculty of Genetics - Membership Committee (Chair), Faculty Senate (Faculty Senator - 11), Faculty Senate Research Subcommittee (Member), Genetics Program - Executive Committee (Member), Honors Advisory Committee (Member), University Grievance Committee (Chair)

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

**TEACHING ASSIGNMENTS DURING 2007**

**Spring**
- BIOL 285. — Directed Studies (total enrollment: 7)
- BIOL 691. — Research (total enrollment: 2)
- MICR 691. — Research (total enrollment: 3)

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

**Fall**
- BIOL 406 — Bacterial Genetics (total enrollment: 21)
- BIOL 606 — Microbial Genetics (total enrollment: 7)
- BIOL 681. — Seminar (total enrollment: 15)
- BIOL 685. — Directed Studies (total enrollment: 14)
- GENE 406 — Bacterial Genetics (total enrollment: 15)
- MICR 691. — Research (total enrollment: 3)

**RESEARCH PROJECTS DURING 2007**
State
▷ Cyanide Remediation: Enzyme Modification and Immobilization, Texas Hazardous Waste Research Center

Private
▷ Substrate Recognition Amongst Oligmeric Nitrilases, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2007

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

University
▷ Committee/Panel: Faculty of Neuroscience (Member), Women’s Faculty Network (Vice President)

Department
▷ Event: ACS Chemistry Open House (Participant)
▷ Committee/Panel: Graduate Review and Admissions Committee (Member), Head Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 489. — Special Topics in (total enrollment: 62)
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 691. — Research (total enrollment: 2)

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

Fall
▷ BIOL 291. — Research (total enrollment: 1)
▷ BIOL 401 — Critical Writing in Biology (total enrollment: 88)
▷ BIOL 491. — Research (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Characterizing a Target Locus of Behavioral Genetic Hierarchy, National Science Foundation, coworkers: K. Boltz (Technician), L. Ellis (G), J. Gage (U), S. Hanlon (U), C. Hinkley (U), M. Pinto (U)

• PRESENTATIONS DURING 2007

▷ “Genes and Behavior: Using Drosophila Melanogaster to Answer Fundamental Questions About Genetic Control of Behavior,” Behavior and Cellular Neuroscience Program, Department of Psychology, Texas A&M University, College Station, TX, March, 2007. (Invited)
“Genes and Behavior: Using Drosophila Melanogaster to Answer Fundamental Questions About Genetic Control of Behavior,” Department of Molecular Genetics, University of Texas, M.D. Anderson Cancer Center, Houston, TX, May, 2007. (Invited)


“Genes and Behavior: Using Drosophila Melanogaster to Answer Fundamental Questions About Genetic Control of Behavior,” Department of Biology, Baylor University, Waco, TX, November, 2007. (Invited)


• PUBLICATIONS DURING 2007


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Professor (J), Psychology, [2007]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2006]
  ▶ Department Head, Biology, [2003]

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: National Institutes of Health (Review: Proposals), National Science
    Foundation (Review: Proposals), Journal of Biological Rhythms, Journal of Neuroscience,
    PloS One, Experimental Eye Research, Physiological Genomics (Referee: Journals)
  ▶ Committee/Panel: Math-Biology Center Panel, NSF (Member), Minority Institution
    Study Section, NINDS (Chair), Journal of Biological Rhythms (Editorial Advisory Board)
  University
  ▶ Service Position: ATMentors (Member)
  ▶ Committee/Panel: Life Science Building Committee (Member)
  College
  ▶ Committee/Panel: Executive Committee (Member)
  Department
  ▶ Committee/Panel: Executive Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BIOL 112. — Introductory Biology II (total enrollment: 88)
  ▶ BIOL 285. — Directed Studies (total enrollment: 24)
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 485. — Directed Studies (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 691. — Research (total enrollment: 4)
  Summer
  ▶ BIOL 691. — Research (total enrollment: 3)
  Fall
  ▶ BIOL 285. — Directed Studies (total enrollment: 15)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 3)
• RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health
▷ Role of Clock Genes in Colonic Motility, National Institutes of Health
▷ Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation
▷ TRACK1, GK-12: Fellows Integrate Science/Math In Rural Middle Schools, National Science Foundation

• PRESENTATIONS DURING 2007
▷ “Biological Evolution or Intelligent Design?,” Blinn College Distinguished Lecture Series, Blinn College, Bryan, TX, March, 2007. (Individual)
▷ “Time’s Arrow Flies Like a Bird (or a Mammal or a Cell): Molecular Adventures in Circadian Clock Biology,” Department of Biology, University of Kentucky, Lexington, KY, March, 2007. (Individual)
▷ “Circadian Clocks in the Post-Genomic World,” Department of Gastroenterology, University of Michigan, Ann Arbor, MI, May, 2007. (Individual)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007
  National
  ▷ Editorial/Board: Cell, Development, Genetics, Molecular and Cellular Biology, Current Biology, Mechanisms of Development, Developmental Cell, Biotechniques (Ad hoc Reviewer)
  Department
  ▷ Committee/Panel: Award Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ BIOL 213. — Molecular Cell Biology (total enrollment: 62)
  ▷ BIOL 691. — Research (total enrollment: 3)
  Summer
  ▷ BIOL 691. — Research (total enrollment: 3)
  Fall
  ▷ BIOL 213. — Molecular Cell Biology (total enrollment: 69)
  ▷ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Chromosome Counting Mechanisms in Sex Determination, National Institute of General Medical Sciences, coworkers: M. Sharvani (Technician), G. Mahesh (P), F. Avila (G), A. Gonzalez (G), E. Kozhina (G)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Genetics, [2003]
  ▶ Member, Interdisciplinary Faculty, Neuroscience, [2003]

• SERVICE DURING 2007
  National
  ▶ Committee/Panel: NIGMS 5 Year Strategic Planning Conference (Member)

  Department
  ▶ Event: Undergraduate Poster Competition (Organizer)
  ▶ Committee/Panel: Graduate Programs Committee (Member), Head Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BIOL 615 — Signaling Behavior & Development (total enrollment: 9)
  ▶ BIOL 691 — Research (total enrollment: 2)
  ▶ GENE 691 — Research (total enrollment: 1)

  Summer
  ▶ BIOL 691 — Research (total enrollment: 2)
  ▶ GENE 691 — Research (total enrollment: 1)

  Fall
  ▶ BIOL 111 — Introductory Biology I (total enrollment: 94)
  ▶ BIOL 691 — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Genetic Regulation of Mating Behavior in *C. Elegans* Males, *National Institutes of Health*, coworkers: T. Gruninger (G), D. Gualberto (G), Y. Liu (G)

• PRESENTATIONS DURING 2007

• PUBLICATIONS DURING 2007

50  2007 Biology annual report


• **SERVICE DURING 2007**

  **National**
  ▶ Editorial/Board: National Institutes of Health (Review: Proposals), National Science Foundation (Review: Proposals), *J. Bacteriology, Molecular Microbiology, Microbiology, ISME* (Referee: Journals)

  **College**
  ▶ Committee/Panel: Information Technology Committee (Member)

  **Department**
  ▶ Committee/Panel: Ad hoc LDIP Director Search Committee (Chair), Computer Committee (Member), Executive Committee (Appointed), Graduate Recruiting and Admissions Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2007**

  **Spring**
  ▶ MICR 681. — *Sem In Microbial Gene* (total enrollment: 6)
  ▶ MICR 685. — *Directed Studies* (total enrollment: 2)
  ▶ MICR 691. — *Research* (total enrollment: 3)

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

  **Fall**
  ▶ BIOL 111. — *Introductory Biology I* (total enrollment: 78)
  ▶ BIOL 285. — *Directed Studies* (total enrollment: 2)
  ▶ BIOL 491. — *Research* (total enrollment: 1)
  ▶ BIOL 681. — *Seminar* (total enrollment: 5)
  ▶ MICR 691. — *Research* (total enrollment: 3)

• **RESEARCH PROJECTS DURING 2007**

  **Federal**
  ▶ (REN) Regulation of Development and Nitrogen Fixation in Anabaena, *Department of Energy*, coworkers: S. Saha (P), X. Zhang (P), K. Kumar (G), C. Reyna (U)
  ▶ Regulation of Cyanobacterial Multicellular Development, *National Institute of General Medical Sciences*, coworkers: R. Aldea (G), R. Mella (G), T. Sprott (G), W. Bussey (U), L. Weil (U)

  **Private**

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2007 Biology annual report
Techniques to Improve Efficiencies of Coal Fired Industrial Plants, Harizan Farms

- **PRESENTATIONS DURING 2007**
  - “Cell-to-Cell Signaling and Regulation in Cyanobacterial Heterocyst Development,” KNU BK21 Life Sciences and Biotechnology Annual Workshop, Daegu, South Korea, February, 2007. (Invited)
  - “Cell-to-Cell Signaling and Regulation in Cyanobacterial Heterocyst Development,” KNU BK21 Life Sciences and Biotechnology Annual Workshop, Gyeong-Ju, South Korea, February, 2007. (Invited)
  - “Cell-to-Cell Signaling and Regulation in Cyanobacterial Heterocyst Development,” John Innes Centre, Department of Molecular Microbiology, Norwich, UK, March, 2007. (Invited)
  - 9th Cyanobacterial Molecular Biology Workshop, Lake Delavan, WI, June, 2007. (Individual)

- **PUBLICATIONS DURING 2007**
• SERVICE DURING 2007

International
▷ Editorial/Board: German-Israel Foundation (Review: Proposals)

National
▷ Service Position: Beckman Scholars Program (Mentor)
▷ Professional Affiliation: Scientific Advisory Board, NIMH Silio O. Conte Center for Neuroscience Research for a Project Entitled Chemical and Genetic Manipulation of Circadian Systems (Member)
▷ Editorial/Board: National Science Foundation Plant Cyberinfrastructure (Review: Proposals), North Carolina Biotechnology Center Biotechnology Research Grant Program (Review: Proposals), Molecular Microbiology, PNAS, J. Biological Rhythms (Referee: Journals)
▷ Committee/Panel: American Academy of Microbiology Committee (Member), National Science Foundation Plant Cyberinfrastructure Collaborative (Member)

University
▷ Event: Phi Kappa Phi Induction Ceremony (Speaker)
▷ Committee/Panel: Distinguished Professor Promotion Committee (Member), Honorary Degree Committee (Member), Life Science Advisory Committee (Member), Quality Enhancement Plan Committee (Member)

College
▷ Ad Hoc Committee: Distinguished Professor Committee (Chair)

Department
▷ Event: Freshman Convocation (Speaker)

Interdisciplinary/Intercollegiate
▷ Committee/Panel: Chemistry Biology Interface Program (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 291. — Research (total enrollment: 1)
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 691. — Research (total enrollment: 3)
▷ MICR 360. — Microbial Biotechnology (total enrollment: 32)

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

Fall

BIOL 111. — Introductory Biology I (total enrollment: 92)
BIOL 491. — Research (total enrollment: 2)
BIOL 681. — Seminar (total enrollment: 7)
BIOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal

Global Functional Analysis of the Genome of *Synechococcus Elongatus* PCC 7942, Department of Energy, coworkers: R. Gil (Technician), K. Holtman (P), C. Holtman (P), Y. Chen (G), J. Amaning (U), W. Bussey (U), R. Gil (U), D. Verkhoturov (U)

(REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health, coworkers: C. Holtman (P), G. Dong (G), R. Fernandez (U), C. Reyna (U)

(REN) The Pathway That Sets the Cyanobacterial Circadian Clock, National Institutes of Health

• PRESENTATIONS DURING 2007

Department of Molecular Genetics and Microbiology, University Mass Medical School, Worcester, MA, 2007. (Invited)

Department of Microbiology and Molecular Genetics, Harvard Medical School, Boston, MA, February, 2007. (Invited)

Southwestern Medical School, Dallas, TX, March, 2007. (Invited)

The John Innes Centre, Norwich, United Kingdom, March, 2007. (Invited)

Department of Biochemistry, University of Missouri, Columbia, MO, May, 2007. (Invited)


9th Cyanobacterial Molecular Biology Workshop, Lake Lawn Resort, WI, June, 2007. (Invited)


Brazilian Society for Microbiology General Meeting, Brasilia, Brazil, October, 2007. (Invited)

“Redox Proteins: Catalytic and Regulatory Roles,” 62nd Southwest Regional American Chemical Society Meeting, Houston, TX, November, 2007. (Invited)

• PUBLICATIONS DURING 2007


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007

  National
  ▶ Advisory Board: Cytogenetics and Genome Research (Editorial Board)
  ▶ Editorial/Board: BioMed Central Evolutionary Biology, Cytogenetics and Genome Research, Journal of Heredity (Referee: Journals)

  State
  ▶ Committee/Panel: Texas Society of Mammalogy, Board of Governors (Member)

  University
  ▶ Committee/Panel: University Faculty Advisory Committee to the Vice President for Student Affairs (Member)

  Department
  ▶ Committee/Panel: Lower Division Instruction (Director), Lower Division Instruction Advisory Committee (Chair)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Faculty of Genetics Membership Committee (Member), Faculty of Genetics Nominating Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ BIOL 112. — Introductory Biology II (total enrollment: 88)
  ▶ BIOL 285. — Directed Studies (total enrollment: 3)
  ▶ BIOL 466. — Principles of Evolution (total enrollment: 32)

  Summer
  ▶ BIOL 466. — Principles of Evolution (total enrollment: 18)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

• SERVICE DURING 2007

  International
  ▶ Editorial/Board: *International Cell Biology* (Referee: Journals)

  National
  ▶ Editorial/Board: National Science Foundation, BRSC (Review: Proposals), *In Vitro*
    (Member), *Journal of Microscopy* (Referee: Journals)
  ▶ Committee/Panel: Education Committee, American Society of Plant Biologists (Member),
    Executive Committee, American Society of Plant Biologists (Member), Steering
    Committee, Planting Science Program for K-16 Education Outreach, Botanical Society
    of America and American Society of Plant Biologists (Member)

  University
  ▶ Committee/Panel: Information Technology in Science, Center for Teaching and Learning
    (Co-Director), Seminar Committee, MEPS Program (Member)

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

  Department
  ▶ Committee/Panel: Undergraduate Programs Committee (Elected Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 1)

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

  Fall
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)

• PRESENTATIONS DURING 2007
  ▶ “FRET Analysis of Trans-Membrane Flipping of FM 4-64 in Plants,” Royal Microscopy
    Society Meeting, Salzburg, Austria, March, 2007. (Poster Individual)

“The Secret Lives of Bears,” Texas A&M University, Zoology Club, College Station, TX, April, 2007. (Invited)

“FRET Analysis of Trans-Membrane Flipping of FM 4-64 in Plants,” American Society of Plant Biology, Chicago, IL, July, 2007. (Poster Individual)

“Using Bear Databases in Scientific Research,” Texas A&M University, Department of Teaching and Learning, College Station, TX, July, 2007. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ◮ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ◮ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ◮ Member, Interdisciplinary Faculty, Genetics, [2006]
  ◮ Director, Rice Biotechnology Laboratory (part of IDMB), //
  ◮ Director, Gene Technologies Laboratory (part of IDMB), //
  ◮ Director, Institute of Developmental and Molecular Biology (IDMB), //

• SERVICE DURING 2007

International
  ◮ Editorial/Board: University Grants Committee, Hong Kong (Review: Proposals)

National
  ◮ Editorial/Board: A Compendium of Transgenic Crop Plants (Editor), National Science Foundation (Review: Proposals), Ohio Plant Biotechnology, California Department of Food and Agricultural, AFMNet STAR Program (Review: Proposals), BBA, BMC Plant Biology, Plant Cell, Plant Journal (Referee: Journals)
  ◮ Committee/Panel: Marine Ecology Progress Series (Member), National Science Foundation (Panel)

University
  ◮ Committee/Panel: Council of Principal Investigators (Member), Distinguished Professors Executive Committee (Member), Faculty Senate (Faculty Senator - 05), Faculty Senate Legislative Affairs Committee (Member), Faculty Senate Research Committee (Co-Chair)

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

Department
  ◮ Committee/Panel: Gene Technologies Committee (Chair), Plant Care Committee (Chair)

Interdisciplinary/Intercollegiate
  ◮ Committee/Panel: Faculty of Genetics Seminar Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ◮ BIOL 491. — Research (total enrollment: 1)
  ◮ BIOL 691. — Research (total enrollment: 3)

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

- BIOL 101 — **Botany** (total enrollment: 216)
- BIOL 491. — **Research** (total enrollment: 1)
- BIOL 691. — **Research** (total enrollment: 2)

**RESEARCH PROJECTS DURING 2007**

Federal

- (REN) Chromatin Potentiation and ABA Activation of Phaseolin Transcripts, *National Science Foundation*, coworkers: R. Pettway (Research Associate), W. Ng (P), X. Shi (G), A. Crawley (U), D. Grunspan (U), L. Lozano (U), T. Markham (U), C. Martin (U), B. Praslicka (U), D. Verkhoturov (U)

**PRESENTATIONS DURING 2007**

- “Epigenetic and Transcription Factor Interactions in the Spatial and Developmental Regulation of the Phaseolin (phas) Promoter,” Mahidol University, Bangkok, Thailand, January, 2007. (Invited)
- “Genetic Engineering,” Mahidol University, Department of Science Lecture, Bangkok, Thailand, January, 2007. (Invited)
- “Molecular Mechanisms Regulating Expression from Seed-Specific Promoters,” Department of Plant Science, Mahidol University, Bangkok, Thailand, January, 2007. (Invited)
- “Gene Silencing,” Mahidol University, Department of Science Lecture, Bangkok, Thailand, February, 2007. (Invited)
- “Transposons,” Mahidol University, Department of Science Lecture, Bangkok, Thailand, February, 2007. (Invited)
- “Silencing in Rice Says a lot,” Department of Biology, The Chinese University of Hong Kong, Hong Kong, March, 2007. (Invited)
- “Silencing in Rice Speaks Volumes,” Department of Biotechnology (Biotec), Kasetsart University, Chatuchak, Bangkok, March, 2007. (Invited)
- “Update of AoE Research Progress and Discussion,” Department of Biology, The Chinese University of Hong Kong, Department of Biology, The Chinese University of Hong Kong, March, 2007. (Invited)

**PUBLICATIONS DURING 2007**

SEC. 6.1 PROFESSIONAL ACTIVITIES

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

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, Center for Biological Clocks Research, [2006]

• SERVICE DURING 2007

  National
  ▶ Committee/Panel: NIH, Neurobiology of Motivated Behavior (Review: Proposals), NIH, Neurogenesis and Cell Fate (Chair), NIH, Neurogenesis and Cell Fate (Review: Proposals)

  University
  ▶ Committee/Panel: 1st Year Genetics Graduate Student Advising Committee (Member), ILSB Scientific Leaders Committee (Member), Materials Characterization Facility Advisory Committee (Member)

  Department
  ▶ Committee/Panel: Annual Review Committee (Member), Business Administrator Search Committee (Member), Executive Committee (Member), Graduate Program Committee (Chair), Search Committee for Department Head (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ BIOL 491. — Research (total enrollment: 2)
  ▶ BIOL 681. — Seminar (total enrollment: 7)
  ▶ BIOL 682. — Research Seminar (total enrollment: 10)
  ▶ BIOL 691. — Research (total enrollment: 2)

  Summer
  ▶ BICH 691 — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)
  ▶ GENE 691 — Research (total enrollment: 1)

  Fall
  ▶ BICH 691 — Research (total enrollment: 1)
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 97)
  ▶ BIOL 691. — Research (total enrollment: 2)
GENE 691 — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal

> Circadian Regulatory Circuits in Drosophila, National Institutes of Health, coworkers: G. Mahesh (P), F. Ng (P), W. Yu (P), J. Benito (G), J. Houl (G), Y. Liu (U), P. Taylor (U)
> Regulation of Circadian Transcription, National Institutes of Health, coworkers: Y. Liu (P), W. Yu (P), J. Houl (G), X. Tao (G), P. Taylor (G)

• PRESENTATIONS DURING 2007

> “Regulation of Olfactory Responses by the Drosophila Circadian Clock,” 24th Annual Houston Conference on Biomedical Engineering Research, Houston, TX, February, 2007. (Invited)
> “Doubletime Kinase Plays Multiple Roles to Regulate Circadian Transcription in Drosophila,” University of Heidelberg, Department of Biochemistry, Heidelberg, Germany, July, 2007. (Invited)
> “Pathways from Circadian Oscillator to Rhythmic Outputs,” University of Massachusetts Medical School, Department of Neurobiology, Worcester, MA, November, 2007. (Invited)

• PUBLICATIONS DURING 2007

ANDREAS K. HOLZENBURG

PROFESSOR

BIOL-Botany, Cellular & Molecular Biology

 holzen@mic.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▷ Director, Microscopy and Imaging Center, [2000]
  ▷ Professor (J), Biochemistry and Biophysics, []
  ▷ Director, Materials Characterization Facility, []

• SERVICE DURING 2007

International
  ▷ Advisory Board: *Subcellular Biochemistry* International Advisory Board (Member)
  ▷ Editorial/Board: "Micron", the International Research and Review Journal for Microscopy (Member)
  ▷ Committee/Panel: TX-UK Steering Committee (Member)

National
  ▷ Committee/Panel: Education Committee of the Microscopy Society of America (Member), USAF/AFRL Directorate (Associate Director)

State
  ▷ Professional Affiliation: Texas Chapter of the Alexander von Humboldt Association of America (President)

University
  ▷ Committee/Panel: Environmental Management Committee (Member), Life Sciences Building Committee and Subcommittees (Member), SAXS User Committee (Member), University Research Council (Member)

Department
  ▷ Service Position: ORP, Biochemistry & Biophysics (Mentor & Examiner)
  ▷ Committee/Panel: Materials Science and Engineering Admission Committee (Member)

Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: MIC Electron Microscopy Advisory Committee (Member), MIC Light Microscopy Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

SEC. 6.1  PROFESSIONAL ACTIVITIES  65
Spring
  ▶ BIOL 604 — Fundamental SEM/ESEM (total enrollment: 12)
  ▶ BIOL 689. — Special Topics in (total enrollment: 6)
  ▶ BIOL 691. — Research (total enrollment: 3)

Summer
  ▶ BIOL 603 — Advanced TEM (total enrollment: 12)
  ▶ BIOL 691. — Research (total enrollment: 3)

Fall
  ▶ BIOL 602. — Transmission Electron Microscopy (total enrollment: 12)
  ▶ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

Federal
  ▶ Graduate Training in Molecular Biophysics, National Institutes of Health
  ▶ Acquisition of a Combined Raman and Infrared Microscope With nano-scale Spatial Resolution, National Science Foundation
  ▶ (REN) Phages of Agronomic Bacteria: A Student Based Genomics Approach, National Science Foundation
  ▶ REU Site: Nanotechnology and Materials Systems, National Science Foundation

• PRESENTATIONS DURING 2007
  ▶ “Optimizing Confocal Imaging and FRAP Analysis of Biological Samples,” Microscopy and Microbiological 2007, Fort Lauderdale, FL, August, 2007. (Poster Individual)
  ▶ “How to Win Instrumentation Grants,” Texas A&M University, College Station, TX, September, 2007. (Invited)

• PUBLICATIONS DURING 2007


• SERVICE DURING 2007

Regional
▷ Event: Texas Junior Science & Humanities Symposium (Judge)

Department
▷ Service Position: 2007 Instructional Technology Symposium (Participant), Laboratory Experience for Summer Honors Invitational Program (Presenter)
▷ Event: TA Workshop Sessions, Developing Good Exams and Writing Good Test Questions (Presenter), Texas Science Olympiad (Coordinator)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 113. — Introductory Biology (total enrollment: 226)

Fall
▷ BIOL 113. — Introductory Biology (total enrollment: 269)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2007

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

  National

  Department
  ▷ Committee/Panel: Faculty Search Committee (Member), Graduate Recruiting Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 85)
  ▷ BIOL 291. — Research (total enrollment: 1)
  ▷ BIOL 491. — Research (total enrollment: 1)
  ▷ BIOL 685. — Directed Studies (total enrollment: 2)
  ▷ BIOL 691. — Research (total enrollment: 5)

  Summer
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 691. — Research (total enrollment: 5)

  Fall
  ▷ BIOL 291. — Research (total enrollment: 1)
  ▷ BIOL 491. — Research (total enrollment: 4)
  ▷ BIOL 681. — Seminar (total enrollment: 9)
  ▷ BIOL 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▷ A Simulation Approach to the Evolution of the G-Matrix, National Science Foundation, coworkers: K. Mobley (G), M. Arian (U)
Egg Competition and Cryptic Male Choice in Pipefish, *National Science Foundation*, coworkers: K. Mobley (G), C. Patrtridge (G), K. Paczolt (U), C. Small (U)

University

The Effect of Non-Point Source Pollution on Gulf Pipefish Populations in and Around Weeks Bay Reserve, *Department of Chemistry*, coworkers: C. Partridge (U)

**PRESENTATIONS DURING 2007**

- “Male Pregnancy and Sexual Selection in Pipefishes and Seahorses,” Texas A&M University, Anthropology Department, College Station, TX, January, 2007. (Invited)
- “Sexual Selection and Mating Systems in Seahorses and Pipefishes,” University of Houston, Houston, TX, April, 2007. (Invited)
- “Male Pregnancy and the Evolutionary Legacy of Pipefishes and Seahorses,” University of Chicago, Chicago, IL, May, 2007. (Invited)
- “Bateman’s Principles and Sexual Selection in Sex-Role Reversed Pipefishes,” University of Texas, Austin, TX, December, 2007. (Invited)

**PUBLICATIONS DURING 2007**

SERVICE DURING 2007

National
▷ Professional Affiliation: Northern Arizona University - Research Administration and Compliance (Consultant), Southern Methodist University - Establishing Academic Research Administration (Consultant), Tarleton State University - Issues Related to Campus Expansion (Consultant)

PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International
▷ Editorial/Board: Israel Science Foundation (Review: Proposals), National University of Singapore Office of Research (Reviewed), International Journal of Developmental Biology (Referee: Journals)

National
▷ Editorial/Board: National Science Foundation (Review: Proposals), Developmental Biology, Developmental, Dynamics (Referee: Journals)

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

Department
▷ Committee/Panel: Graduate Recruiting and Admissions Committee (Member), Light Microscopy Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 681. — Seminar (total enrollment: 18)
▷ BIOL 691. — Research (total enrollment: 3)

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

Fall
▷ BIOL 111. — Introductory Biology I (total enrollment: 84)
▷ BIOL 491. — Research (total enrollment: 1)
▷ BIOL 681. — Seminar (total enrollment: 6)
▷ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Role of WNT Signaling in Vertebrate Embryonic Patterning, National Science Foundation, coworkers: K. Baker (G), C. Kelton (G), A. Narayanan (G), G. Roddy (U), S. Rogers (U)

Private
▷ WNT Regulation Vertebrate Mesoderm Differentiation, American Cancer Society, coworkers: K. Baker (G), C. Kelton (G), A. Narayanan (G), A. Butler (U), J. Lee (U)

• PRESENTATIONS DURING 2007

72 2007 Biology annual report
THIERRY LINTS
ASSISTANT PROFESSOR (979) 862-4143
BIOL-Behavior, Cellular & Molecular Biology tlints@mail.bio.tamu.edu

- SERVICE DURING 2007
  Department
    ▶ Event: Seminar Series (Organizer)

- TEACHING ASSIGNMENTS DURING 2007

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

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

  Fall
    ▶ BIOL 112 — Introductory Biology II (total enrollment: 61)
    ▶ BIOL 491. — Research (total enrollment: 1)
    ▶ BIOL 691. — Research (total enrollment: 3)
• SERVICE DURING 2007

National
▷ Editorial/Board: Developmental Biology (Review: Proposals)

University
▷ Committee/Panel: Faculty Senate (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 112. — Introductory Biology II (total enrollment: 83)
▷ BIOL 285. — Directed Studies (total enrollment: 2)
▷ BIOL 691. — Research (total enrollment: 1)

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

Fall
▷ BIOL 112. — Introductory Biology II (total enrollment: 62)
▷ BIOL 291. — Research (total enrollment: 1)
▷ BIOL 691. — Research (total enrollment: 1)

• PUBLICATIONS DURING 2007

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Reproductive Biology, [2006]
  ▶ Director, BioAquatics Facility, []

• SERVICE DURING 2007
  National
  ▶ Event: AD Instruments Power Lab Teaching Systems Workshop (Participant), Ecological Integration Symposium (Judge)
  ▶ Editorial/Board: National Science Foundation (Review: Proposals)

  University
  ▶ Event: Student Research Week (Poster Judge/Event Coordinator)
  ▶ Committee/Panel: CPR WALS Project (Participant), IACUC Executive Committee (Member), Radiological Safety Committee (Member)

  Department
  ▶ Service Position: Biology BioAquatics Facility (Director), Zoological Society (Advisor)
  ▶ Committee/Panel: Animal Care Committee (Chair), Executive Committee (Member), Teaching Laboratory Safety Committee (Chair), Undergraduate Programs Committee (Chair)

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

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
  ▶ ZOOL 388 — Principles of Animal Physiology (total enrollment: 44)
  ▶ ZOOL 491 — Principles of Animal Physiology (total enrollment: 1)
  ▶ ZOOL 691. — Research (total enrollment: 2)

  Summer
  ▶ ZOOL 319. — Integrated Human Anatomy and Physiology I (total enrollment: 119)
  ▶ ZOOL 685. — Directed Studies (total enrollment: 1)
  ▶ ZOOL 691. — Research (total enrollment: 2)

  Fall
• BIOL 481. — Seminar in Biology (total enrollment: 11)
• BIOL 491. — Research (total enrollment: 1)
• ZOOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

International

▷ Arginine and glutamine metabolism in cultured fish: growth, biosynthesis and homeostasis, Consejo Nacional de Ciencia y Tecnología- (CONACYT)

• PUBLICATIONS DURING 2007

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007

  National
  ▶ Editorial/Board: Genetics (Referee: Journals), PLoS Genetics, PLoS One (Referee: Journals)

  University
  ▶ Service Position: ATMentors (Member), Center for Teaching Excellence (Member)
  ▶ Committee/Panel: Council of Principal Investigators (Member)

  Department
  ▶ Service Position: Regents Scholar-Paulo Leal (Advisor)
  ▶ Committee/Panel: Seminars Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 73)
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 1)

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

  Fall
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 46)
  ▶ BIOL 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ DNA Methylation in Drosophila, National Institutes of Health, coworkers: D. Welch (Technician), P. Guerrero (G), P. Leal (U)

  Private
  ▶ Targets of Cytosine Methylation in Drosophila, March of Dimes - Birth Defects Foundation

• PRESENTATIONS DURING 2007
“The Y, rDNA Locus is a Chromation Buffer,” 8th International Conference on Drosophila Heterochromatin, Italy, June, 2007. (Poster Individual)

“Understanding Whole-Genome Regulation,” Wayne State University, Detroit, MI, September, 2007. (Invited)
• SERVICE DURING 2007

National
▷ Editorial/Board: Plant Systematics (Referee: Journals)

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

Department
▷ Committee/Panel: IEEF, Undergraduate Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BOTN 301. — Taxonomy Flowering Plant (total enrollment: 62)
▷ BOTN 491(H) — Research (total enrollment: 1)
▷ BOTN 491. — Research (total enrollment: 2)
▷ BOTN 691. — Research (total enrollment: 2)

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

Fall
▷ BIOL 214. — Genes, Ecology and Evolution (total enrollment: 96)
▷ BIOL 491. — Research (total enrollment: 2)
▷ BIOL 691. — Research (total enrollment: 2)
▷ BOTN 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ 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 (G)

State
▷ Populations Structure and Dynamics of the Navasota Ladies Tresses, an Endangered Orchid of East-Central Texas, Texas Parks and Wildlife
• SERVICE DURING 2007

National
▷ Editorial/Board: Journal of Bacteriology (Advisory Board), PO1, NIH, ARD Process (Review: Proposals), Journal of Bacteriology, Molecular Microbiology, Biophysical Journal, Proceedings of the National Academy of Sciences (Referee: Journals)

College
▷ Committee/Panel: Diversity Committee (Member)

Department
▷ Committee/Panel: Annual Review & Awards Committee (Elected Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 112. — Introductory Biology II (total enrollment: 121)
▷ BIOL 291. — Research (total enrollment: 2)
▷ BIOL 485. — Directed Studies (total enrollment: 2)
▷ BIOL 491. — Research (total enrollment: 5)
▷ BIOL 691. — Research (total enrollment: 3)
▷ MICR 406. — Bacterial Genetics (total enrollment: 20)

Summer
▷ BIOL 485. — Directed Studies (total enrollment: 1)
▷ BIOL 491. — Research (total enrollment: 3)
▷ MICR 351. — Fundamentals of Microbiology (total enrollment: 36)

Fall
▷ BIOL 111. — Introductory Biology I (total enrollment: 94)
▷ BIOL 285. — Directed Studies (total enrollment: 1)
▷ BIOL 485. — Directed Studies (total enrollment: 2)
▷ BIOL 491. — Research (total enrollment: 3)
▷ MICR 438 — Bacterial Physiol (total enrollment: 41)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Chemoreception and Signal Amplification in Bacteria, National Institute of General Medical Sciences, coworkers: R. McAndrew (Research Scientist), A. Bormans (G), B. Cantwell (G), R. Draheim (G), R. Lai (G), S. Ward (G), G. Wright (G), K. White (U)
• PRESENTATIONS DURING 2007
  ▶ Graduate Research Day, University of North Texas, Denton, TX, April, 2007. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]
  ▶ Associate Department Head, Biology, [2003]

• SERVICE DURING 2007

  National
  ▶ Editorial/Board: National Science Foundation, USDA (Review: Proposals), *Plant Cell*, *Plant Journal*, *Journal Biological Chemistry*, *Tissue and Organ Culture* (Referee: Journals)

  University
  ▶ Committee/Panel: Gene Technologies Laboratory User’s Committee (Member)

  College
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Member), Research Advisory Committee (Member)

  Department
  ▶ Committee/Panel: Annual Retreat Committee (Chair), Annual Review Committee (Chair), Executive Committee (Appointed), Undergraduate Curriculum Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: MEPS Annual Symposium Organizing Committee (Member), MEPS Internal Review Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 29)
  ▶ BIOL 491(H) — Research (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 13)
  ▶ BIOL 691. — Research (total enrollment: 4)

  Summer
  ▶ BIOL 484. — Internship (total enrollment: 12)
  ▶ BIOL 491. — Research (total enrollment: 5)
  ▶ BIOL 691. — Research (total enrollment: 2)

  Fall
  ▶ BIOL 213. — Molecular Cell Biology (total enrollment: 86)
- BIOL 484. — Internship (total enrollment: 1)
- BIOL 491.(H) — Research (total enrollment: 11)
- BIOL 691. — Research (total enrollment: 2)
- BIOL 697. — Methods in Teaching Biology Laboratory (total enrollment: 18)

- RESEARCH PROJECTS DURING 2007
  Federal
  - Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, \textit{National Science Foundation}
  - Regulation of Telomerase and Telomeres in Arabidopsis, \textit{National Science Foundation}, coworkers: S. Ren (P), K. Manadi (G), K. Mekala (G), A. Misra (G), T. Morgan (U)

- PRESENTATIONS DURING 2007
  - “Regulation of Telomerase Activity and Hormone Responses in Arabidopsis by the BT2 Ubiquitin Ligase,” Donald Danforth Plant Science Center, St Louis, MO, October, 2007. (Individual)
  - “Regulation of Telomerase Activity and Hormone Responses in Arabidopsis by the BT2 Ubiquitin Ligase,” Department of Genetics and Biochemistry, Clemson University, Clemson, SC, November, 2007. (Individual)

- PUBLICATIONS DURING 2007
RITA B. MOYES

SENIOR LECTURER
BIOL-Microbiology, Immunology

• SERVICE DURING 2007

National
▷ Professional Affiliation: American Society for Microbiology (Member)
▷ Editorial/Board: Journal of Microbiology Education (Editorial Advisory Board)

University
▷ Committee/Panel: IEEF Committee (Member), Senate Subcommittee for Lecturers (Member), University Disciplinary Appeals Panel (Member), Women’s Faculty Network (Member)

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

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 491. — Research (total enrollment: 3)
▷ MICR 454. — Immunology (total enrollment: 96)

Summer
▷ MICR 352. — Diagnostic Bacteriology (total enrollment: 28)
▷ MICR 491 — Research (total enrollment: 2)

Fall
▷ BIOL 206 — Introductory Microbiology (total enrollment: 44)
▷ BIOL 456 — Medical Microbiology (total enrollment: 54)
▷ BIOL 491. — Research (total enrollment: 2)

• PRESENTATIONS DURING 2007

▷ “Microbiology Education Venues through the American Society of Microbiology,” American Society of Microbiology Texas Branch Conference, Huntsville, TX, November, 2007. (Individual)

• PUBLICATIONS DURING 2007

COMER O. PATTERSON

PROFESSOR (979) 845-2187
BIOL-Algae, Botany cop@mail.bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▷ Member, Interdisciplinary Faculty, Biotechnology, [2006]

• SERVICE DURING 2007

  National
  ▷ Event: Siemens-Westinghouse Science Talent Search Competition (Judge)
  ▷ Advisory Board: National Advisory Board for the College-Level Examination Program (Chair)
  ▷ Committee/Panel: Phi Beta Kappa Society (Delegator)

  State
  ▷ Committee/Panel: Governor’s Commission for a College-Ready Texas (CCRT) (Member), Vertical Team Committee for Success in College Initiative, Science Committee (Chair)

  University
  ▷ Professional Affiliation: Kappa of Texas Chapter, Phi Beta Kappa (Secretary)
  ▷ Advisory Board: Office of Professional School Advising (Member)
  ▷ Committee/Panel: Scholarship and Assessment Think Tank (Member), University Council on Teacher Education (Member)

  College
  ▷ Committee/Panel: College Quality Enhancement Plan Council (Member)

  Department
  ▷ Committee/Panel: Advisor Committee for Freshman Biology (Member), Search Committee for Director of Lower Division Instruction (Member), Search Committee for Head (Member)

  Interdisciplinary/Intercollegiate
  ▷ Committee/Panel: Advisory Council/Steering Committee - Center for Math and Science Education (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ BIOL 214. — *Genes, Ecology and Evolution* (total enrollment: 140)
  ▷ BIOL 685. — *Directed Studies* (total enrollment: 1)

  Fall
  ▷ BIOL 351 — *Fund of Microbiol* (total enrollment: 183)
• RESEARCH PROJECTS DURING 2007

Federal
▷ Writing for Assessment and Learning in the Natural and Mathematical Sciences, National Science Foundation

State
▷ Development of College Readiness Standards for Texas High School Curriculum (Vertical Teams), Texas Higher Education Coordinating Board

Private
▷ Techniques to Improve Efficiencies of Coal Fired Industrial Plants, Harizan Farms
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007

  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), Petition to de-list Caulanthus Stenocarpus, California Department of Fish and Game (Reviewer), Gene, Plant Physiology (Referee: Journals)
  ▶ Committee/Panel: National Cotton Microsatellite Database Advisory Committee (Member), 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 (Member)

  University
  ▶ Committee/Panel: College of Agriculture and Life Sciences Graduate Program Committee (Member), Executive Committee (Member), Graduate Advising Committee (Member), Laboratory for Crop Transformation Advisory Committee (Member), Laboratory for Plant Genome Technologies Advisory Committee (Member)

  Department
  ▶ Committee/Panel: Annual Review and Awards Committee (Member), Gene Technologies Laboratory Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ BOTN 635. — Plant Molecular Biology (total enrollment: 12)
  ▶ BOTN 691. — Research (total enrollment: 1)
  ▶ GENE 691 — Research (total enrollment: 1)
  ▶ MEPS 691 — Research (total enrollment: 3)

  Summer
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 2)
  ▶ BOTN 691. — Research (total enrollment: 1)
  ▶ GENE 691 — Research (total enrollment: 1)
MEPS 691 — Research (total enrollment: 2)

Fall
- BIOL 214. — Genes, Ecology and Evolution (total enrollment: 107)
- BIOL 691. — Research (total enrollment: 2)
- BOTN 691. — Research (total enrollment: 1)
- GENE 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2007

Federal
- Genetics of Serpentine Adaptation and Endemism, National Science Foundation, coworkers: R. Clements (Technician), M. Burrell (G), K. Taylor (U)
- Investigation of Population Genetics of Arundo Donax and Insect Herbivores in Support of the Biological Control Program, U.S. Department of Agriculture

State
- A Preliminary Assessment of the Genetic Status of the Bracted Twistflower Streptanthus bracteatus (Brassicaceae), An Imperiled Species of the Balcones canyonlands, Texas Parks and Wildlife, coworkers: R. Williams (U)
- Population Structure and Habitat Requirements of the Bracted Twistflower, Streptanthus Bracteatus (Crassicaceae), a Rare Plant, Texas Parks and Wildlife
- Populations Structure and Dynamics of the Navasota Ladies Tresses, an Endangered Orchid of East-Central Texas, Texas Parks and Wildlife

Industrial
- (REN) Utilization and Dissemination of New Dinulceotide Microsatellite Marker Resources for Cotton, Cotton Incorporated, coworkers: S. Hoffman (G), K. Taylor (U)

- PRESENTATIONS DURING 2007


- PUBLICATIONS DURING 2007


SEC. 6.1 PROFESSIONAL ACTIVITIES
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Neuroscience, /2004/

• SERVICE DURING 2007

  National
  ▶ Editorial/Board: Investigative Ophthalmology and Visual Science, Genesis (Referee: Journals)

  Regional
  ▶ Committee/Panel: Visiting Committee, Department of Chemistry, Abilene Christian University (Member)

  University
  ▶ Service Position: ATMentors (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Faculty of Neuroscience Curriculum Committee (Member), Program in Genetics Seminar Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ BIOL 113. — Introductory Biology (total enrollment: 54)
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
  ▶ BIOL 691. — Research (total enrollment: 3)

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

  Fall
  ▶ BIOL 689. — Special Topics in (total enrollment: 12)
  ▶ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Cilia Assembly and Transport in the Vertebrate Retina, National Institutes of Health
  ▶ Transgenic Studies of Vertebrate Retinal Development, National Institutes of Health

  International
  ▶ Photoreceptor Survival and Function in a Zebrafish Model of Choroideremia, Chori¬
eremia Research Foundation Canada, Inc.
• PUBLICATIONS DURING 2007
• SERVICE DURING 2007
  Department
    ▶ Committee/Panel: Graduate Recruiting/Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
    ▶ BIOL 491. — Research (total enrollment: 1)
  Summer
    ▶ BIOL 491. — Research (total enrollment: 1)
    ▶ GENE 685 — Directed Studies (total enrollment: 1)
    ▶ GENE 691 — Research (total enrollment: 1)
  Fall
    ▶ BIOL 491. — Research (total enrollment: 1)
    ▶ BIOL 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2007
  ▶ “Chlamydomonas DYF-1 is an IFT Particle Complex B Protein,” Texas A&M University, College Station, TX, 2007. (Individual)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  > Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007

  International
  > Editorial/Board: MRC, United Kingdom (Review: Proposals)

  National
  > Editorial/Board: Experimental Design and Research in Molecular Biology (Reviewed), National Institutes of Health (Review: Proposals), Development, Developmental Biology, FEBS Letters, Genetics, Mechanisms of Development (Referee: Journals), Developmental Dynamics (Editorial Advisory Board)
  > Committee/Panel: Developmental Dynamics (Editorial Advisory Board)

  University
  > Committee/Panel: Selection Committee for Searle Scholars Nominations (Member)

  College
  > Committee/Panel: Faculty Advisory Council (Chair)

  Department
  > Committee/Panel: Biology Lab Animal Care Committee (Member), Department Head Search Committee (Chair), Faculty Search Committee (Chair), Graduate Program Committee (Member), IEEF Committee (Chair)

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

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  > BIOL 491. — Research (total enrollment: 2)
  > BIOL 691. — Research (total enrollment: 5)
  > ZOOL 344. — Embryology (total enrollment: 21)

  Summer
  > BIOL 691. — Research (total enrollment: 5)

  Fall
  > BIOL 491. — Research (total enrollment: 2)
  > BIOL 611. — Molecular Biology of Differentiation and Development (total enrollment: 8)
• BIOL 681. — Seminar (total enrollment: 7)
• BIOL 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2007

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

• PRESENTATIONS DURING 2007
  ▶ “Fgf Signaling Coordinates Development of Sensory Hair Cells and Neurons in the Inner Ear,” Department of Neuroscience and Behavior, State University of New York, Albany, NY, 2007. (Invited)
  ▶ “Fgf Signaling Regulates Placode Formation and Sensory-Neural Development in the Zebrafish Inner Ear,” Barcelona, Spain, 2007. (Invited)
  ▶ “Zebrafish as a Genetic Model System for Development and Disease,” Vet School, Texas A&M University, College Station, TX, 2007. (Invited)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

• SERVICE DURING 2007
  International
  ▶ Editorial/Board: European Journal of Phycology (Referee: Journals)

  National

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 444)
  ▶ BIOL 285. — Directed Studies (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 1)

  Summer
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 65)
  ▶ BIOL 285. — Directed Studies (total enrollment: 1)

  Fall
  ▶ BIOL 111. — Introductory Biology I (total enrollment: 544)
  ▶ BIOL 285. — Directed Studies (total enrollment: 1)
  ▶ BIOL 491. — Research (total enrollment: 4)

• PRESENTATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2007

  International
  ▶ Professional Affiliation: Organization of Tropical Studies (Resource Professor)
  ▶ Committee/Panel: Casa Verde Curriculum Development Committee (Member), Casa Verde Steeing Committee (Member), Public Affairs Committee, Animal Behavior Society (Chair)

  National

  University
  ▶ Committee/Panel: Faculty of Genetics (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: ABS-IGERT Admissions Committee (Member), ABS-IGERT Faculty (Member), Communications Committee, EEB IRG (Chair), Executive Committee, EEB IRG (Member)

• TEACHING ASSIGNMENTS DURING 2007

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

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

  Fall
  ▶ BIOL 291. — Research (total enrollment: 1)
  ▶ BIOL 489. — Special Topics in (total enrollment: 20)
  ▶ BIOL 491. — Research (total enrollment: 7)
  ▶ BIOL 685. — Directed Studies (total enrollment: 3)
  ▶ ZOOL 691. — Research (total enrollment: 2)
• RESEARCH PROJECTS DURING 2007

Federal
▷ Evolutionary Genetics of Visual Communication, National Institutes of Health, coworkers: S. Coleman (P)
▷ Recombinant Traits and Recombinant Mating Preferences in Hybrid Zones, National Science Foundation, coworkers: S. Coleman (P), H. Fisher (P), M. Verzijden (P), Z. Cress (G), Z. Culumber (G), J. Johnson (G), N. Ratterman (G), C. Wat (G), J. Christopher (U), C. Dobbs (U), M. Gaona (U), A. Gray (U), R. McCreary (U), A. Ratley (U), S. Townsend (U)

• PRESENTATIONS DURING 2007
▷ “Mate Choice and Evolutionary Genetics in Hybrid Zones,” Trinity University, San Antonio, TX, February, 2007. (Invited)
▷ “Natural Hybrids and Mate Choice in Xiphophorus,” American Livebearer Association, Cleveland, OH, May, 2007. (Invited)
▷ “Conservación y medio ambiente en la Huasteca Hidalguense,” 1st annual Cervantino Indgena, Calnali, Mexico, June, 2007. (Invited)
▷ “Chemical Communication in Xiphophorus Fishes,” University of Texas, Austin, TX, September, 2007. (Invited)
▷ “Mate Choice and Evolutionary Genetics in Swordtail Fish,” University of Toronto, Toronto, ON, Canada, October, 2007. (Invited)

• PUBLICATIONS DURING 2007
SERVICE DURING 2007

University
▷ Event: Biochemistry/Biophysics Graduate Symposium (Judge)

Department
▷ Committee/Panel: Graduate Recruitment Committee (Member)

Interdisciplinary/Intercollegiate
▷ Committee/Panel: Chemistry/Biology Interface Program (Member), Genetics (Member)

TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 491. — Research (total enrollment: 1)
▷ BIOL 613. — Cell Biology (total enrollment: 16)

Fall
▷ BIOL 413. — Cell Biology (total enrollment: 48)

PRESENTATIONS DURING 2007

PUBLICATIONS DURING 2007
• SERVICE DURING 2007
  
  International
  ▶ Editorial/Board: Israeli Science Foundation (Review: Proposals)

  National
  ▶ Advisory Board: Fungal Genetics Stock Center Advisory Board, Fungal Genome Initiative (Chair)
  ▶ Editorial/Board: Eukaryotic Cell, Faculty of 1000, Fungal Genetics and Biology, Genetics (Editorial Advisory Board), Fungal Genetics Newsletter (Editor-in-Chief), Eukaryotic Cell, FEBS Letters, Fungal Genetics and Biology, Genes and Development, Molecular Cell, Molecular Cell Biology (Referee: Journals)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Control of Arg-2 Gene Expression in Neurospora, National Institutes of Health, coworkers: V. Zeenko (P), S. McEldowney (G), C. Wu (G)
  ▶ Comparative fungal genomes, National Science Foundation, coworkers: K. Moore (G)
  ▶ Functional Analysis of a Model Filamentous Fungus, National Science Foundation, coworkers: M. Basturkmen (P), H. Hood (P)

• PRESENTATIONS DURING 2007

  ▶ 24th Fungal Genetics Conference, 2007.( Individual)
  ▶ Annual Meeting, American Society for Microbiology, 2007.( Individual)
  ▶ Oregon Health Sciences University, Department of Molecular Microbiology and Immunology, Portland, OR, 2007.( Individual)
  ▶ Oregon State University, Corvallis, OR, 2007.( Individual)
  ▶ Texas A&M University, College Station, TX, 2007.( Individual)

• PUBLICATIONS DURING 2007


Faculty member hired 11/01/2007
• TEACHING ASSIGNMENTS DURING 2007

  Spring

  ▷ BIOL 330. — *Molecules and Life* (total enrollment: 28)

*Retired 05/31/2007.*
DEBORAH A. SIEGELE
ASSOCIATE PROFESSOR (979) 862-4022
BIOL-Endocrinology, Gene Expression siegele@mail.bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), Applied &
    Environ. Microbiology, Journal of Bacteriology, Microbiology, Molecular Microbiology
    (Reviewer: Journals), Journal of Bacteriology (Editorial Advisory Board)
  University
  ▶ Committee/Panel: Graduate Appeals Panel (Member)
  College
  ▶ Committee/Panel: Faculty Advisory Council (Representative-at-large)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BIOL 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ BIOL 351 — Fund of Microbiol (total enrollment: 146)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Development of the EcoliCommunity.org Information Resource, National Institute of
    General Medical Sciences, coworkers: G. Knapp (G), A. Venkatraman (G), A. Zweifel (G), M.
    Belen (U), M. Ratcliffe (U)

• PRESENTATIONS DURING 2007
  ▶ “Molecular Genetics of Bacteria and Phage Conference,” EcoliWiki Workshop, Madison,
    WI, August, 2007.( Individual)

Retired 05/31/2007.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Neuroscience, [2006]/

• SERVICE DURING 2007

  National

  Department
  ▷ Committee/Panel: Ad Hoc Graduate Recruiting Committee (Member), Animal Care Committee (Member), Neuroscience Senior Faculty Search Committee (Member), Undergraduate Program Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

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

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

  Fall
  ▷ BIOL 434. — Regulatory and Behavioral Neuroscience (total enrollment: 44)
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ ZOOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▷ A Neural Interface for Coordinating Speech and Breathing, *National Institutes of Health*, coworkers: C. Schwartz (G), J. Tressler (G), K. Baeza (U), S. Ezell (U), S. Whinery (U)

• PRESENTATIONS DURING 2007

> “BCN Talks,” Texas A&M University, Psychology Department, College Station, TX, February, 2007. (Invited)
> “Sensory Feedback Control of Vocalizations,” University of Virginia, Biology Department, Charlottesville VA, April, 2007. (Invited)
> Texas A&M University Zoology Club, College Station, TX, October, 2007. (Invited)
> South Knoll Elementary School (2nd Grade). College Station ISD, College Station, TX, November, 2007. (Invited)

- PUBLICATIONS DURING 2007
THOMAS A. STIDHAM

ASSISTANT PROFESSOR (979) 845-4660
BIOL-Ecology, Evolution, Zoology tstidham@mail.bio.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Ecology and Evolutionary Biology, [2006]

• SERVICE DURING 2007
  International
  ▶ Editorial/Board: *Neues Jahrbuch fur Geologie und Palaeontologie, South African Archaeological Assoc. Monograph* (Referee: Journals)
  National
  ▶ Editorial/Board: *Journal of Vertebrate Paleontology* (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BIOL 214. — *Genes, Ecology and Evolution* (total enrollment: 15)
  ▶ BIOL 485. — *Directed Studies* (total enrollment: 1)
  ▶ BIOL 491. — *Research* (total enrollment: 2)
  Summer
  ▶ BIOL 285. — *Directed Studies* (total enrollment: 5)
  Fall
  ▶ BIOL 491. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Non Destructive High Resolution CT-Scanning of a Crocodilian Bearing Vertebrate Fossil Lagerstatte in a 110 Ma Mid-Pacific Drowned Atoll, ODP Site 865, *National Science Foundation*

• PUBLICATIONS DURING 2007
27, 152A-152A.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]
  ▷ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▷ Director, Shared Instrumentation Facility, []
  ▷ Director, Laboratory for Functional Genomics, []

• SERVICE DURING 2007
  National

  University
  ▷ Committee/Panel: Life Sciences Building Committee (Member), Research Foundation PI Advisory Committee (Member)

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

  Department
  ▷ Committee/Panel: Computer Committee (Chair), Space Committee (Chair), Web Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ BIOL 481. — Seminar in Biology (total enrollment: 26)
  ▷ BIOL 491. — Research (total enrollment: 2)
  ▷ BIOL 691. — Research (total enrollment: 1)

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

  Fall
  ▷ BIOL 213. — Molecular Cell Biology (total enrollment: 95)
  ▷ BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ (REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health
PUBLICATIONS DURING 2007


No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  > Member, Interdisciplinary Faculty, Molecular and Environmental Plant Sciences, [2006]

• SERVICE DURING 2007

National
  > Editorial/Board: National Science Foundation (Review: Proposals), Eukaryotic Cell, Plant Cell, Plant Physiology, Botanical Studies (Referee: Journals)

Department
  > Research Group: Molecular and Cell Biology Training Program (Member)
  > Committee/Panel: Faculty Search Committee (Member)

Interdisciplinary/Intercollegiate
  > Research Group: Molecular and Environmental Plant Sciences Program (Member), Program for Microbial Genetics and Genomics (Member), Program for the Biology of Filamentous Fungi (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
  > BIOL 491. — Research (total enrollment: 4)
  > BIOL 635 — Plant Molecular Biology (total enrollment: 12)
  > BIOL 681. — Seminar (total enrollment: 7)
  > BIOL 691. — Research (total enrollment: 3)

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

Fall
  > BIOL 213. — Molecular Cell Biology (total enrollment: 76)
  > BIOL 491. — Research (total enrollment: 1)
  > BIOL 681. — Seminar (total enrollment: 12)
  > BIOL 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

Federal
  > Molecular Physiology of Phosphate Transport in Arabidopsis, National Science Foundation, coworkers: T. Fowler (G), B. Guo (G), S. Irigoyen (G), H. Belveal (U), D. Chen (U)

• PRESENTATIONS DURING 2007

SEC. 6.1 PROFESSIONAL ACTIVITIES
• PUBLICATIONS DURING 2007
• TEACHING ASSIGNMENTS DURING 2007
  Fall
  ▶ BIOL 111. — *Introductory Biology I* (total enrollment: 562)
MARY K. WICKSTEN

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

• SERVICE DURING 2007

International
▷ Editorial/Board: Journal of the Marine Biological Association of the UK, Biota Colombiana Journal of Natural History (Referee: Journals)

National
▷ Professional Affiliation: Sigma XI (Member)
▷ Editorial/Board: Marine Biology Grant Review Board, Explorers Club (Member), National Science Foundation (Review: Proposals), Journal of Crustacean Biology, Zootaxa, Proceedings of the Biological Society of Washington (Referee: Journals)
▷ Committee/Panel: Organizing Committee, 2008 Meeting Crustacean Society (Member)

University
▷ Event: Marine Invertebrates Display, Texas A&M, Texas Cooperative Wildlife Collection (Curator)
▷ Committee/Panel: Scientific Diving Safety Committee (Member), TAMU-Galveston Committee to Prepare Interdisciplinary Degree in Marine Biological Sciences (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 491. — Research (total enrollment: 5)
▷ ZOOL 335. — Invertebrate Zoology (total enrollment: 38)
▷ ZOOL 691. — Research (total enrollment: 5)

Summer
▷ BIOL 491. — Research (total enrollment: 2)
▷ ZOOL 691. — Research (total enrollment: 4)

Fall
▷ BIOL 440. — Marine Biology (total enrollment: 28)
▷ BIOL 491. — Research (total enrollment: 8)
▷ ZOOL 691. — Research (total enrollment: 3)

• PRESENTATIONS DURING 2007

• PUBLICATIONS DURING 2007
▷ Sallam, W.S.; Madkour, F.F.; Wicksten, M.K. (2007) Masking Behavior of the Spider Crab, Hyastenus hilgendorfi (De Man, 1887) (Brachyura, Majidae) from the Suez Canal,
Egypt *Crustaceana*, vol. 80, 235-245.

HUGH D. WILSON

PROFESSOR (979) 845-3354
BIOL-Botany, Evolution wilson@mail.bio.tamu.edu

• SERVICE DURING 2007

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

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ BOTN 328. — Plants and People (total enrollment: 50)
  ▷ BOTN 620 — Field Systematic Botany (total enrollment: 6)

  Fall
  ▷ BIOL 301 — Taxonomy of Flowering Plants (total enrollment: 74)
  ▷ BIOL 328 — Plants and People (total enrollment: 60)
• SERVICE DURING 2007
  University
    ▶ Event: Summer Honors Invitational, Lab Development and Demonstration (Participant)
  Department
    ▶ Service Position: TA Mentoring (Mentor)
    ▶ Event: Zoology Club (Speaker)
    ▶ Committee/Panel: Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
    ▶ ZOOL 107. — Zoology (total enrollment: 198)
  Fall
    ▶ ZOOL 107 — Zoology (total enrollment: 169)
• SERVICE DURING 2007

International
▶ Editorial/Board: Journal of Biotechnology, BMC Evolutionary Biology (Referee: Journals), Molecular Biology and Evolution, FEBS Letters (Referee: Journals)

Department
▶ Committee/Panel: Faculty Search Committee (Member), Seminar Committee (Elected Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▶ BIOL 651. — Bioinformatics (total enrollment: 8)
▶ MICR 691. — Research (total enrollment: 2)

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

Fall
▶ BIOL 481. — Seminar in Biology (total enrollment: 12)
▶ BIOL 682. — Research Seminar (total enrollment: 7)
▶ MICR 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Private
▶ Biohydrogen Production by Purple Photosynthetic Bacteria, The Robert A. Welch Foundation, coworkers: S. Fremgen (G), I. Nsa (G), L. Gray (U), M. Ramirez (U), Z. Ruihong (U), B. Spurr (U), R. Zhao (U)

• PUBLICATIONS DURING 2007

• SERVICE DURING 2007

National
▷ Editorial/Board: Journal of Bacteriology (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ BIOL 491. — Research (total enrollment: 1)
▷ MICR 351(H) — Fundamentals of Microbiology (total enrollment: 7)
▷ MICR 351. — Fundamentals of Microbiology (total enrollment: 217)

• PUBLICATIONS DURING 2007


No report received from faculty member.
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2007**
  - Associate Professor (J), Psychology, [2007]
  - Chair, Interdisciplinary Faculty, Neuroscience, [2006]
  - Associate Dean for Graduate Studies, Office of Graduate Studies, [2003]
  - Director, Real Time Imaging Labs: Cell Physiology and Molecular Imaging, [2001]

• **SERVICE DURING 2007**

  **National**
  - Editorial/Board: National Science Foundation (Review: Proposals), *Brain Research*, *Journal of Neuroscience*, *Journal of Neurobiology* (Referee: Journals)

  **University**
  - Committee/Panel: English Language Proficiency Certification Review Committee (Member), Graduate Admissions Processing Council (Member), Graduate Council/Graduate Operations Committee (Member), Graduate Fellowship Review Committee (Member), Special International Programs Committee on Bologna Process (Member), University Fiscal Appeals Panel (Member), Texas A&M University Center for Research on Biological Clocks (Member), Texas A&M University Chapter, Society for Neuroscience, Executive Committee (Member), Texas A&M University Director of Admissions Search Committee (Member)

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

  **Department**
  - Research Group: Cell Physiology and Molecular Imaging Core (Po1) (Director)
  - Committee/Panel: BioAquatics Laboratory Use Committee (Member), Biology Executive Committee (Member), Faculty Search Committee (Chair), Shared Facilities Advisory Committee (Member)

  **Interdisciplinary/Intercollegiate**
  - Committee/Panel: Faculty of Neuroscience Executive Committee (Chair)

• **TEACHING ASSIGNMENTS DURING 2007**

  **Spring**
  - BIOL 491. — Research (total enrollment: 1)
  - BIOL 681. — Seminar (total enrollment: 6)
  - BIOL 691. — Research (total enrollment: 3)
  - ZOOL 681. — Seminar (total enrollment: 5)
• ZOOL 691. — Research (total enrollment: 2)

Summer
• BIOL 491. — Research (total enrollment: 2)
• BIOL 691. — Research (total enrollment: 2)
• ZOOL 691. — Research (total enrollment: 2)

Fall
• BIOL 491. — Research (total enrollment: 2)
• BIOL 644. — Neural Development (total enrollment: 9)
• BIOL 681. — Seminar (total enrollment: 11)
• BIOL 691. — Research (total enrollment: 1)
• ZOOL 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
• (REN) Coordination of Circadian Physiology of Diverse Species, National Institutes of Health

• PRESENTATIONS DURING 2007

• “Intercellular Communication Among Hypothalamic Astrocytes: The Circadian Tripartite Synapse,” Department of Psychology, Behavioral and Cellular Neuroscience Division, Texas A&M University, College Station, TX, April, 2007.(Invited)

• PUBLICATIONS DURING 2007

7. Research Activity, 2007

This section contains information on all funded research activity for the calendar year 2007. 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 2007 = # Days 2007 × Daily Grant Award
7.1 Summary of Research Support, 2007

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<td><strong>Federal Agencies</strong></td>
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<td><strong>Department of Energy</strong></td>
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<tr>
<td>Golden, S.S.</td>
<td>Global Functional Analysis of the Genome of <em>Synechococcus Elongatus</em> PCC 7942</td>
<td>7/1/2004</td>
<td>6/30/2008</td>
<td>60,000</td>
<td>30,000</td>
<td>90,000</td>
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<tr>
<td>Golden, J.W.</td>
<td>(REN) Regulation of Development and Nitrogen Fixation in Anabaena</td>
<td>8/15/2004</td>
<td>8/14/2008</td>
<td>90,000</td>
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<td><strong>Subtotal: Department of Energy</strong></td>
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<td><strong>National Institute of General Medical Sciences</strong></td>
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<td>Manson, M.D.</td>
<td>Chemoreception and Signal Amplification in Bacteria</td>
<td>3/1/2002</td>
<td>2/28/2007</td>
<td>36,058</td>
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<td>Siegele, D.A.</td>
<td>Development of the EcoliCommunity.org Information Resource</td>
<td>6/1/2006</td>
<td>5/31/2009</td>
<td>50,000</td>
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<td><strong>Subtotal: National Institute of General Medical Sciences</strong></td>
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<td><strong>National Institute on Deafness and Other Communication Disorders</strong></td>
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<td><strong>National Institutes of Health</strong></td>
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<td>Aramayo, R.D.</td>
<td>(REN) Genetic and Molecular Study of Meiotic Trans-sensing and Meiotic Trans-sensing and</td>
<td>1/1/2006</td>
<td>12/31/2009</td>
<td>175,193</td>
<td>103,559</td>
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<td>Cassone, V.M.</td>
<td>Role of Clock Genes in Colonic Motility</td>
<td>5/15/07</td>
<td>3/31/09</td>
<td>5,029</td>
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<td>Datta, S.</td>
<td>Control of Neuroblast Proliferation in Drosophila</td>
<td>6/1/03</td>
<td>5/31/07</td>
<td>82,962</td>
<td>19,521</td>
<td>102,483</td>
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<tr>
<td>Earnest, D.</td>
<td>(REN) Coordination of Circadian Physiology of Diverse Species, (with: D. Bell-Pedersen, V. Cassone, D. Earnest, S. Golden, T. Thomas, M. Zoran)</td>
<td>7/1/06</td>
<td>6/30/11</td>
<td>139,000</td>
<td>6,401</td>
<td>145,401</td>
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<td>Garcia, R.</td>
<td>Genetic Regulation of Mating Behavior in C. Elegans Males</td>
<td>9/15/03</td>
<td>8/31/10</td>
<td>168,434</td>
<td>9,833</td>
<td>178,267</td>
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<tr>
<td>Golden, S.S.</td>
<td>(REN) Coordination of Circadian Physiology of Diverse Species, (with: D. Bell- Pedersen, V. Cassone, D. Earnest, S. Golden, T. Thomas, M. Zoran)</td>
<td>7/1/06</td>
<td>6/30/11</td>
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<td>Hardin, P.E.</td>
<td>Circadian Regulatory Circuits in Drosophila</td>
<td>1/1/04</td>
<td>12/31/08</td>
<td>166,409</td>
<td>80,709</td>
<td>247,117</td>
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<td>Hardin, P.E.</td>
<td>Regulation of Circadian Transcription</td>
<td>4/1/06</td>
<td>3/31/10</td>
<td>294,638</td>
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<td>Holzenburg, A.K.</td>
<td>Graduate Training in Molecular Biophysics, (with: P. Cremer, V. DeRose, P. Fitzpatrick, M. Hall, A. Holzenburg, A. Johnson, F. Raushel, D. Russell)</td>
<td>7/1/03</td>
<td>6/30/08</td>
<td>9,068</td>
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<td>Maggert, K.A.</td>
<td>DNA Methylation in Drosophila</td>
<td>1/1/06</td>
<td>12/31/10</td>
<td>270,386</td>
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<td>Perkins, B.D.</td>
<td>Cilia Assembly and Transport in the Vertebrate Retina</td>
<td>7/1/06</td>
<td>6/30/11</td>
<td>288,110</td>
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<td>Perkins, B.D.</td>
<td>Transgenic Studies of Vertebrate Retinal Development</td>
<td>1/1/05</td>
<td>6/30/07</td>
<td>37,414</td>
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<td>Rosenthal, G.G.</td>
<td>Evolutionary Genetics of Visual Communication</td>
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<td>1/31/09</td>
<td>47,813</td>
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<td>Sachs, M.S.</td>
<td>Control of Arg-2 Gene Expression in Neurospora</td>
<td>11/1/07</td>
<td>6/30/10</td>
<td>46,356</td>
<td>8,978</td>
<td>55,334</td>
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<td>Smotherman, M.</td>
<td>A Neural Interface for Coordinating Speech and Breathing</td>
<td>8/1/06</td>
<td>8/31/09</td>
<td>48,623</td>
<td>20,336</td>
<td>68,960</td>
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<td>Thomas, T.L.</td>
<td>(REN) Coordination of Circadian Physiology of Diverse Species, (with: D. Bell- Pedersen, V. Cassone, D. Earnest, S. Golden, T. Thomas, M. Zoran)</td>
<td>7/1/06</td>
<td>6/30/11</td>
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<tr>
<td>Grantee</td>
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<td>Zoran, M.J.</td>
<td>(REN) Coordination of Circadian Physiology of Diverse Species,</td>
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- **National Science Foundation**

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<td>Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, (with: D. Bell-Pedersen, V. Cassone, R. Honeycutt, T. McKnight, J. Walton, T. Wehrly)</td>
<td>9/1/2004</td>
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* Subtotal: National Science Foundation

**831,672** **114,250** **945,922**

* U.S. Department of Agriculture

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* Subtotal: U.S. Department of Agriculture

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* Subtotal: Federal Agencies

**4,431,226** **793,407** **5,224,633**

Industrial/Corporate Agencies
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**INTERNATIONAL AGENCIES**

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**PRIVATE/NON-PROFIT AGENCIES**

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**State Agencies**

| * Texas Hazardous Waste Research Center * | Subtotal: Texas Hazardous Waste Research Center | 11,244     | 0           | 11,244 |
| Benedik, M.J.                | Cyanide Remediation: Enzyme Modification and Immobilization         | 8/1/2007    | 7/31/2008   | 11,244 | 0        | 11,244 |
| * Texas Higher Education Coordinating Board | Subtotal: Texas Higher Education Coordinating Board | 25,000     | 0           | 25,000 |
| Patterson, C.O.              | Development of College Readiness Standards for Texas High School Curriculum (Vertical Teams) | 3/1/2007    | 12/31/2007  | 25,000 | 0        | 25,000 |
| * Texas Parks and Wildlife * | Subtotal: Texas Parks and Wildlife | 33,985     | 6,276       | 40,261 |
| Pepper, A.E.                 | A Preliminary Assessment of the Genetic Status of the Bracted Twistflower Streptanthus bracteatus (Brassicaceae), An Imperiled Species of the Balcones canyonslands | 1/1/2007    | 12/31/2008  | 16,408 | 2,540    | 18,948 |
| Pepper, A.E.                 | Population Structure and Habitat Requirements of the Bracted Twistflower, Streptanthus Bracteatus (Crassicaceae), a Rare Plant | 2/28/2007   | 11/30/2008  | 15,117 | 3,023    | 18,140 |
| * Subtotal: Texas Parks and Wildlife |                                                                 |             |             |        |          | 33,985 |

SEC. 7. RESEARCH ACTIVITY 127
**Grantee Title Start End Direct Indirect Total**

* Subtotal: State Agencies

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University Agencies

* Department of Chemistry

Jones, A.G. The Effect of Non-Point Source Pollution on Gulf Pipelfish Populations in and Around Weeks Bay Reserve

* Subsubtotal: Department of Chemistry

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* Subtotal: University Agencies

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<td>4,164</td>
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*** Total: All Grantees

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### 7.2 Summary of Individual Support, 2007

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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 | 6/30/2011 | 139,000 | 6,401    | 145,401 |
| National Science Foundation | Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, (with: D. Bell-Pedersen, V. Cassone, R. Honeycutt, T. McKnight, J. Walton, T. Wehrly) | 9/1/2004 | 8/31/2009 | 41,633  | 0        | 41,633  |
| **Subtotal Bell-Pedersen, D.** |                                                                       |         |         | 397,022 | 100,775  | **497,798** |

| **Benedik, M.J.** | Substrate Recognition Amongst Oligomeric Nitrilases | 6/1/2005 | 5/31/2008 | 50,000  | 0        | 50,000  |
| The Robert A. Welch Foundation | Cyanide Remediation: Enzyme Modification and Immobilization | 8/1/2007 | 7/31/2008 | 11,244  | 0        | 11,244  |
| Texas Hazardous Waste Research Center |                                                                       |         |         | **61,244** | 0        | **61,244** |
| **Subtotal Benedik, M.J.** |                                                                       |         |         | **61,244** | 0        | **61,244** |

<p>| <strong>Carney, G.E.</strong> | Characterizing a Target Locus of Behavioral Genetic Hierarchy | 9/1/2004 | 8/31/2007 | 94,065  | 26,643   | 120,708 |
| National Science Foundation |                                                                       |         |         | <strong>94,065</strong> | <strong>26,643</strong> | <strong>120,708</strong> |
| <strong>Subtotal Carney, G.E.</strong> |                                                                       |         |         | <strong>94,065</strong> | <strong>26,643</strong> | <strong>120,708</strong> |</p>
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<td>6/30/2011</td>
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</tr>
<tr>
<td></td>
<td>* Subtotal Zoran, M.J.</td>
<td>139,000</td>
<td>6,401</td>
<td></td>
<td></td>
<td>145,401</td>
</tr>
<tr>
<td></td>
<td>*** Total: All Faculty</td>
<td>4,791,795</td>
<td>812,319</td>
<td>5,604,114</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Contents

1. Foreword from Department Head ...................................................... 141
2. Departmental Statistics ............................................................... 143
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   7.2 By Faculty Member .............................................................. 338
1. Foreword from the Department Head

The Chemistry Department offers B.A. and B.Sc. undergraduate degrees and M.Sc. and Ph.D 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.

The University’s faculty reinvestment program has allowed us to expand our faculty during the last few years, with the successful recruiting of Professors John Gladysz and Janet Bluemel from the Universities of Erlangen and Heidelberg in Germany, respectively. In addition, at the junior ranks we added Wenshe Liu, and Jiong Yang. Our faculty continued to receive national and international recognition through awards and invited lectures. Three of our faculty (James Pennington, Michael Rosynke and Gyula Vigh) received 2007 College-Level Distinguished Achievement Awards in teaching from The Association of Former Students. In addition, John Fackler was selected to receive an Association of Former Students Distinguished Achievement Award in Research. Our external funding for both education and research is strong. Our National Science Foundation funded Research Experiences for Undergraduates has provided opportunities for nine undergraduates to carry out research projects in the department during the summer of 2007, and the Advancement Placement Teachers Workshops provide excellent opportunities for high school teachers to interact with faculty, improve their teaching skills and network with peers.

In addition, 20 graduate students from chemistry were recipients of National Science Foundation pre-doctoral Fellowships through a GK-12 grant. The department maintains a high level of funding for research through state and federal agencies, industrial companies, and private foundations, and these funding sources allow us to maintain a large number of undergraduate students, graduate students, and post-doctoral researchers. Our total number of undergraduate chemistry majors has grown to 274, and our total number of graduate students is 261. We were saddened by the death of Distinguished Professor F. Albert Cotton on February 20, 2007. Al was one of the world’s foremost inorganic chemists and one of the most honored faculty members in the history of Texas A&M University. On April 18, 2007 we mourned the loss of Distinguished Professor A. Ian Scott. Ian was a scholar of extraordinary achievement and truly a gentleman. The department, university, and the scientific community truly lost two “giants” in chemistry.

The coming year offers many new challenges as the enrollment in our classes continues to grow and as we recruit new students and faculty. I appreciate the continued support and confidence from my colleagues and staff in the department as we look to the future.
2. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty
- Compiled from the College of Science Faculty Database. (Fall 2006, Fall 2007) Baselines_Title, Gender, Ethnicity.

Non-Tenure-Track Faculty
- Compiled from the College of Science Faculty Database Faculty_List.

Postdoctoral Fellows
- Provided by the Department

Graduate Student/Undergraduate Majors
- Office of Institutional Studies and Planning (OISP). (Fall 2006, Fall 2007) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff
- Compiled from the College of Science Dean Database Baselines_Staff.

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours
- SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2007) SCH Summaries by College for [Semester] [Year].

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

Undergraduate Degrees
- Queried from COGNOS and calculated through 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>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Tenured and Tenure-Track Faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>8</td>
<td>9</td>
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<tr>
<td>Associate Professor</td>
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<td>3</td>
</tr>
<tr>
<td>Distinguished Professor</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>b. Non-Tenure-Track Faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting Professor</td>
<td>0</td>
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<tr>
<td>Visiting Assistant Professor</td>
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<td>Visiting Associate Professor</td>
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<td>0</td>
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<tr>
<td>Lecturer</td>
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<td>5</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>13</td>
<td>14</td>
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<tr>
<td>c. Postdoctoral Fellows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Graduate Students</td>
<td>264</td>
<td>261</td>
</tr>
<tr>
<td>e. Undergraduate Majors</td>
<td>272</td>
<td>274</td>
</tr>
<tr>
<td>f. Support Staff</td>
<td>69</td>
<td>70</td>
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#### II. Instructional Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td>a. Graduate Semester Credit Hours</td>
<td>5,606</td>
<td>5,410</td>
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<td>b. Undergraduate Semester Credit Hours</td>
<td>46,749</td>
<td>48,523</td>
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<tr>
<td>c. PhD Degrees</td>
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<td>36</td>
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<tr>
<td>d. Masters Degrees</td>
<td>11</td>
<td>10</td>
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<tr>
<td>e. Undergraduate Degrees</td>
<td>48</td>
<td>41</td>
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#### III. Research Activities

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<thead>
<tr>
<th>Category</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td>a. Research Publications</td>
<td>360</td>
<td>341</td>
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<tr>
<td>b. Research Presentations</td>
<td>342</td>
<td>279</td>
</tr>
<tr>
<td>c. Federal</td>
<td>12,689,536</td>
<td>11,365,069</td>
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<tr>
<td>d. State</td>
<td>144,067</td>
<td>159,309</td>
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<tr>
<td>e. University</td>
<td>63,060</td>
<td>0</td>
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<tr>
<td>f. Private/Non-Profit</td>
<td>2,215,432</td>
<td>2,510,235</td>
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<tr>
<td>g. Industrial/Corporate</td>
<td>149,779</td>
<td>258,073</td>
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<td>h. International</td>
<td>58,298</td>
<td>4,669</td>
</tr>
<tr>
<td>i. Other Govt</td>
<td>218,617</td>
<td>61,885</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>15,538,789</strong></td>
<td><strong>14,359,241</strong></td>
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</table>
3. Honors & Awards, 2007

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2007.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2007.
<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. Fackler</td>
<td>Distinguished Achievement Award - Research, The Association of Former Students</td>
</tr>
<tr>
<td>J. Gladysz</td>
<td>International Society of Fluorous Technology, University of Pittsburgh</td>
</tr>
<tr>
<td>J. Hogg</td>
<td>Presidential Professor for Teaching Excellence, Texas A&amp;M University</td>
</tr>
<tr>
<td>W. Keeney-Kennicutt</td>
<td>Excellence in Quality Enhancement Award, 7th Annual Texas A&amp;M Assessment Conference</td>
</tr>
<tr>
<td>J. Pennington</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>M. Rosyneck</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>M. Tichy</td>
<td>Teaching Award, Corps of Cadets</td>
</tr>
<tr>
<td>G. Vigh</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>S. Yennello</td>
<td>Regents Professor Award, Texas A&amp;M University System</td>
</tr>
<tr>
<td>R. Zhang</td>
<td>Outstanding Overseas Young Researcher Award, China National Science Foundation</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2007

Graduate

▷ A. E. Martell Graduate Student Enrichment Fund
Jeremy Andretta
B. J. Bench
Scott Brothers
Yun Cai
Ching-Wen Chiu
Christopher Dorsey
Shawn Fitch
Kerrie Gath
Jennifer Hess
Todd Hudnall
Jiney Jose
G. Thom Kelly
Veronica Pinnick
Sidhartharaja Rajagopalachary
Jinjun Shi
Kate Stumpo
Cliferson Thivierge
Jianhua Tian
Yuichiro Ueno
Vince Venditto
Liangxing Wu

▷ Distinguished Graduate Student Research Award
Thomas Taylor

▷ Distinguished Graduate Student Teaching Award
Jennifer Hirschi

Undergraduate

▷ Connie G. & Otto F. (Pete) Schumm ’45 Endowed Scholarship in Chemistry
Hannah Cook
Christopher Jones
Sean Lau
Ivey Royall
Abby Sisco

▷ Dow Aggie Endowed Scholarship in Science, Dow Chemical
James Delfeld
Ashlee Jahnke
Sandani Samarajeewa
Thu Ha Truong

▷ Dr. David W. Lipp ’66 Memorial Endowed Scholarship
Scott Johnsgard
Joshua Owens
Randall Suders

▷ Eileen & Harry Lewis Scholarship
  Kathy Webb

▷ Emile A. Schweikert Scholarship in Chemistry
  Katherine Popelka

▷ Emily & Robert Walker ’45 Endowed Scholarship
  Brittnay D. Amos

▷ George C. Bauer Memorial Scholarships for Chemistry Majors
  Omobalanle Gbadamosi
  Clayton Mercer

▷ Hach Scientific Foundation
  Whitney Becker
  Sallie Finklea
  Megan Stussi
  Crystal Young

▷ Liebhafsky Scholarship
  Alexander Pemba

▷ Lifelines Endowed Scholarship Program
  Timothy Picha

▷ Patsy Ruth & Delma P. Posey ’59 Endowed Scholarship
  Courtney Faubion

▷ Sharon Merritt Birtcher Scholarship
  Andrew Lindsey

▷ Tsutsui Endowed Scholarship
  Jeffery Karnes

▷ William A. Triche and Homer A. Triche Endowed Scholarship Fund in Engineering, Science and Medicine
  Joshua Owen
4. Students, 2007

This section contains all degrees awarded, as reported by the department, during the calendar year 2007.
4.1 Graduate Degrees Awarded, 2007

Fall

▷ M.S.

Lingling Li Water-Soluble Bodipys: Syntheses, Derivatization and Photophysical Studies

Advisor(s): K. Burgess

Nathan Prentice Rife Tacticity Control of Polypropylene using a C2-Symmetric Family of Catalysts

Advisor(s): S. Miller

▷ Ph.D.

Robert E Cable Synthesis and Characterization of Patterned Surfaces and Catalytically Relevant Binary Nanocrystalline Intermetallic Compounds

Advisor(s): R. Schaak

Richard Jeffrey Duffy I. Synthesis, Reactivity, Structure and Application of Spiroepoxy-B-Lactones: Studies Toward (-)-Maculalactone a II Metal Mediated Couplings of Dichloroolefins Applicable

Advisor(s): D. Romo

Kayla Nance Green Immobilized Metallodithiolate Ligand Supports for Construction of Bioinorganic Model Complexes

Advisor(s): M. Darensbourg

Ronald Rene Henriquez Fluorometric Sedimentation Equilibrium for Lipoprotein Sub-Class Analysis.

Advisor(s): R. Macfarlane

Jennifer Sue Hirschi Application of Kinetic Isotope Effects and Theoretical Calculations to the Study of Interesting Reaction Mechanisms

Advisor(s): D. Singleton

Ke Kong Studies Toward the Total Synthesis of the Marine Toxin, (-)-Gymnodimine

Advisor(s): D. Romo

Zhen Li Characterization of Surface and Layered Films with Cluster Secondary Ion Mass Spectrometry

Advisor(s): E. Schweikert

Aurore Loudet Design of Novel Dyes Towards the Near-Infrared

Advisor(s): K. Burgess

Mohamed Zuhair Mohamed Rishard Spectroscopic and Theoretical Investigation of Selected Cyclic and Bicyclic Molecules in Their Ground and Excited Electronic States

Advisor(s): J. Laane

150 2007 CHEMISTRY ANNUAL REPORT
Karlos X Moreno  
Nmr Studies of the Conformation of a Triazine Dendrimer and the Synthesis of a Platinated Triazine Dendrimer  
Advisor(s): E. Simanek

Denisse Ortiz-Acosta  
Phase Selectively Soluble Polymer Supports to Facilitate Homogeneous Catalysis  
Advisor(s): D. Bergbreiter

Eric Wade Reinheimer  
Hybrid Inorganic-Organic, Organic Charge Transfer, and Radical Based Compounds with Chalcalfvalene Donors and Organic Acceptors  
Advisor(s): K. Dunbar

Eric Dean Schwerdtfeger  
Single-Site Polymerization Catalysts: Branched Polyethylene and Syndiotactic Poly(Alpha-Olefins)  
Advisor(s): S. Miller

Wenjian Sun  
Development of a Maldi - Ion Mobility- Surface-Induced Dissociation - Time-of-Flight Mass Spectrometer with Novel Collision Source Configurations for High Throughput Peptide.  
Advisor(s): D. Russell

Zhen Yan  
Model Catalytic Studies of Single Crystal, Polycrystalline Metal, and Supported Catalysts  
Advisor(s): D. Goodman

Fan Yang  
Scanning Tunneling Microscopy Studies on the Structure and Stability of Model Catalysts  
Advisor(s): D. Goodman

Spring

Brandon Scott Chance  
Layer-By-Layer Assembly on Polyethylene Films via "Click" Chemistry  
Advisor(s): D. Bergbreiter

Francisco M. Franco-Torres  
Progress Toward the Synthesis of (+)-Dibromophakellin and Congeners: Proposed Final Stages for Palau’Amine Synthesis  
Advisor(s): D. Romo

Susan Elizabeth Hatfield  
Applications of Triazine Chemistry: Education, Remediation, and Drug Delivery  
Advisor(s): E. Simanek

Jennifer Ann Iglio  
Symmetry Energy and the Isoscaling Properties of the Fragments in Multifragmentation of 40Ca+58Ni, 40Ar+58Ni, and 40Ar+58Fe Reactions  
Advisor(s): S. Yennello
Andrea Diane Ilg  The Effect of Branch Density Polyoxymethylene Copolymers  Advisor(s): S. Miller

Tara Layne Sarvela  Advisor(s): V. Williamson

Ph.D.

Alfredo Milton Angeles Boza  A New Class of Dirhodium Compounds with an Electron Acceptor Ligand: Enhancing Chemotherapeutic Properties with Light  Advisor(s): K. Dunbar

Chad Fulton Christian  The Experimental and Theoretical Determination of Combinatorial Kinetic Isotope Effects for Mechanistic Analysis  Advisor(s): D. Singleton

Helen C Craver  Poly(Vinyl Alcohol)-Based Buffering Membranes for Isoelectric Trapping Separations  Advisor(s): G. Vigh

George Joseph Hager  Secondary Ion Emission from Single Massive Gold Cluster Impacts  Advisor(s): E. Schweikert

Patrick Neal Hamilton  The Behavior and Separation of Polystyrene in Mixed Solvent Systems  Advisor(s): D. Bergbreiter

August Lawrence Keksis  N/Z Equilibration in Deep Inelastic Collisions and the Fragmentation of the Resulting Quasiprojectiles  Advisor(s): S. Yennello

Brandi Lee Schottel  The Influence of Anion-Pi Interactions Between Multi-Atomic Anions and Pi-Acidic Ring Systems on the Self-Assembly of Coordination Compounds  Advisor(s): K. Dunbar

James Garrett Slaton  Structure-Property Relationships in Gas-Phase Protonated and Metalated Peptide Ions  Advisor(s): D. Russell

Thomas Jackson Taylor  Synthesis and Material Properties of Supramolecules Containing Fluorinated Organomercurials  Advisor(s): F. Gabbai

Erin Elizabeth Tullos  The Hydroxyl Radical Initiated Oxidation of Unsaturated Hydrocarbons in the Troposphere: A Theoretical and Experimental Approach  Advisor(s): S. North

Summer

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M.S.

Travis Scott Gilbreath  Advisor(s): V. Williamson

Jiayi Jin  Studies of Electronic Communication Between Dimolybdenum Cores Joined by Various Bridges  Advisor(s): F. Cotton

Ph.D.

Yu Li Angell  Triazole Based Peptidomimetics for Mimicking Protein-Protein Hot Spots  Advisor(s): K. Burgess

Wonsook Choi  Mechanistic Studies of the Metal Catalyzed Formation of Polycarbonates and Their Thermoplastic Elastomers  Advisor(s): D. Darensbourg

Zhong Li  Intramolecular Electronic Communication Between Dimetal Units with Multiple Metal-Metal Bonds  Advisor(s): J. Fackler

Jong Doo Lim  Design, Synthesis, and Evaluation of Dendrimers Based on Melamine as Drug Delivery Vehicles  Advisor(s): E. Simanek

Janel Renee Mclean  Biophysical Studies of Anhydrous Peptide Structure  Advisor(s): R. Russell

Craig Justin Price  Structure-Activity Relationships in Olefin Polymerization Catalysts  Advisor(s): S. Miller

Joseph Brian Montejo Sinajon  Preparative-Scale Isoelectric Trapping Separations in a Multicompartamental Electrolyzer: Implementation and Monitoring  Advisor(s): G. Vigh

Feng Wang  Structure-Based Drug Mechanism Study and Inhibitor Design Targeting Tuberculosis  Advisor(s): J. Sacchettini

Lakenya Flatreese Williams  Analysis of the Mechanism for Uronate Isomerase from E. Coli, Cobyric Acid A,C-Diamide synthetase from S. Typhimurium, and Cobyric Acid Synthetase from S. Typhimurium  Advisor(s): F. Raushel

Qinliang Zhao  Conformation and Electronic Configuration of Complexes with Multiple Dimetal Units  Advisor(s): M. Darensbourg
### 4.2 Undergraduate Degrees Awarded, 2007

#### Fall

<table>
<thead>
<tr>
<th>B.A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoa Thi Chau</td>
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<tr>
<td>James Nelson English</td>
</tr>
<tr>
<td>Amelia Wike Freeman</td>
</tr>
<tr>
<td>Benjamin Daniel Naberhaus</td>
</tr>
<tr>
<td>John Diarmuid Nicholson</td>
</tr>
<tr>
<td>Ashley Pilar Ogden</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Michael Anthony Donovan</td>
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<tr>
<td>Ashlee Anne Jahnke</td>
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<td>Angela Darlene Jones</td>
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<td>Melinda Suzanne Luetke</td>
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#### Spring

<table>
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<tbody>
<tr>
<td>Neil Joseph Boesl</td>
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<td>Leslie Marie Cobb</td>
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<tr>
<td>Erin Michele Elias</td>
</tr>
<tr>
<td>William Adlor Fortin</td>
</tr>
<tr>
<td>Eric Austin Heidt</td>
</tr>
<tr>
<td>Stephanie Marie Houlgrave</td>
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<tr>
<td>Elvia Esmeralda Martinez</td>
</tr>
<tr>
<td>Kimberly Jean Nash</td>
</tr>
<tr>
<td>Lauren Elise Nieto</td>
</tr>
<tr>
<td>Eric Samuel Nordt</td>
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<tr>
<td>Shyala Brooke Pisharodi</td>
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<tr>
<td>David Michael Pyle</td>
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<tr>
<td>Tabitha Lynn Roybal</td>
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<tr>
<td>Lauren Monique Spencer</td>
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<tr>
<td>Frances Leigh Varner</td>
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<td>Stephanie Jeanne Wetch</td>
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<table>
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<tr>
<td>Erin Leigh Cochran</td>
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<td>William Scott Foley</td>
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<td>Lauren Michelle Gehman</td>
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<td>Robert Joseph Harwell</td>
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<td>Nicole Rochelle Honesty</td>
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<tr>
<td>Breanna Christine Jatzlau</td>
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<td>Matthew Eric Keyser</td>
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<tr>
<td>Robert Byron Mitchell</td>
</tr>
<tr>
<td>Katherine Rita Regan</td>
</tr>
<tr>
<td>Sarah Marie Stranahan</td>
</tr>
<tr>
<td>Sarah Faye Swingle</td>
</tr>
</tbody>
</table>

#### Summer

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2007 CHEMISTRY ANNUAL REPORT
▷ B.A.
Liza Bright Crozier
Gregory Elidio Rivera
Joseph Vance Spencer

▷ B.S.
Michael Patrick Grubb
## 5. Colloquium and Seminar Speakers, 2007

**Frontiers Lecture Series**

<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Topic</th>
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<tbody>
<tr>
<td>2/5/2007</td>
<td>Mark A. Ratner</td>
<td>Northwestern University</td>
<td>Nanomaterials, Molecular Electronics and Physical Chemistry</td>
</tr>
<tr>
<td>2/6/2007</td>
<td>Mark A. Ratner</td>
<td>Northwestern University</td>
<td>Nanomaterials, Molecular Electronics and Physical Chemistry</td>
</tr>
<tr>
<td>2/26/2007</td>
<td>John W. Frost</td>
<td>Michigan State University</td>
<td>Biocatalysis and Natural Product Biosynthesis</td>
</tr>
<tr>
<td>2/27/2007</td>
<td>John W. Frost</td>
<td>Michigan State University</td>
<td>Biocatalysis and Natural Product Biosynthesis</td>
</tr>
<tr>
<td>2/28/2007</td>
<td>John W. Frost</td>
<td>Michigan State University</td>
<td>Biocatalysis and Natural Product Biosynthesis</td>
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<tr>
<td>3/19/2007</td>
<td>Harry Kroto</td>
<td>Florida State University</td>
<td>Science, Society and Sustainability</td>
</tr>
<tr>
<td>3/20/2007</td>
<td>Harry Kroto</td>
<td>Florida State University</td>
<td>Science, Society and Sustainability</td>
</tr>
<tr>
<td>3/21/2007</td>
<td>Harry Kroto</td>
<td>Florida State University</td>
<td>Science, Society and Sustainability</td>
</tr>
<tr>
<td>4/2/2007</td>
<td>John S. Blanchard</td>
<td>Albert Einstein College of Medicine</td>
<td>Molecular Mechanisms of Action of, and Resistance to, Antibiotics</td>
</tr>
</tbody>
</table>
*Albert Einstein College of Medicine*  
Molecular Mechanisms of Action of, and Resistance to, Antibiotics  

4/25/2007  Jackie Barton  
*California Institute of Technology*  

4/25/2007  Charles Harris  
*University of California, Santa Barbara*  

9/12/2007  Miquel Salmeron  
*Lawrence Berkeley National Laboratories*  
The Science of Surfaces: From Chemistry and Catalysis, to Friction, Wetting and Atomic Scale Manipulation  

9/13/2007  Miquel Salmeron  
*Lawrence Berkeley National Laboratories*  
The Science of Surfaces: From Chemistry and Catalysis, to Friction, Wetting and Atomic Scale Manipulation  

9/14/2007  Miquel Salmeron  
*Lawrence Berkeley National Laboratories*  
The Science of Surfaces: From Chemistry and Catalysis, to Friction, Wetting and Atomic Scale Manipulation  

11/5/2007  Heinz Gaeggeler  
*University of Berne*  
Chemistry with Single Atoms of Superheavy Elements  

11/6/2007  Heinz Gaeggeler  
*University of Berne*  
Chemistry with Single Atoms of Superheavy Elements  

11/7/2007  Heinz Gaeggeler  
*University of Berne*  
Chemistry with Single Atoms of Superheavy Elements  

11/12/2007  Hagan Bayley  
*University of Oxford*  
Engineered Protein Nanopores in Basic Science and Biotechnology  

11/13/2007  Hagan Bayley  
*University of Oxford*  
Engineered Protein Nanopores in Basic Science and Biotechnology  

11/14/2007  Hagan Bayley  
*University of Oxford*  
Engineered Protein Nanopores in Basic Science and Biotechnology  

11/26/2007  Karen Wooley  
*University of Washington, St. Louis*  
Synthetic Methodologies and Materials for Nanomedicine  

11/27/2007  Karen Wooley
11/28/2007  Karen Wooley

University of Washington, St. Louis
Synthetic Methodologies and Materials for Nanomedicine
<table>
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<tr>
<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
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<tr>
<td>1/22/2007</td>
<td>Hillary Agbo</td>
<td>Texas A&amp;M University</td>
<td>Novobiocin Biosynthesis</td>
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<td>1/22/2007</td>
<td>Liliya Lund</td>
<td>Texas A&amp;M University</td>
<td>Expanding the Genetic Code: The Use of Unnatural Amino Acids as Protein Building Blocks</td>
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<td>1/29/2007</td>
<td>Ren Miao</td>
<td>Texas A&amp;M University</td>
<td>Arsenic in Life: Uptake and Detoxification</td>
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<td>2/2/2007</td>
<td>C. Cheng Kao</td>
<td>Texas A&amp;M University</td>
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<td>2/5/2007</td>
<td>Scott Dempsey</td>
<td>Texas A&amp;M University</td>
<td>The Giant Magnetocaloriz Effect</td>
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<td>2/8/2007</td>
<td>Stuart Rowan</td>
<td>Case Western Reserve University</td>
<td>Supramolecular Polymerizations: Dynamic Materials from Dynamic Chemistry</td>
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<td>2/12/2007</td>
<td>Chris Chang</td>
<td>University of California, Berkeley</td>
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<td>2/12/2007</td>
<td>Ryan Jones</td>
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<td>Controlling Nanoparticle Shapes and Morphology</td>
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<td>2/12/2007</td>
<td>Haw-Lih Su</td>
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<td>Ultra-hydrophobic Surfaces</td>
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<td>2/16/2007</td>
<td>Katrina Miranda</td>
<td>University of Arizona</td>
<td>Design of New Nitroxy (HNO) Donors for Treatment of Heart Failure</td>
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<td>2/19/2007</td>
<td>Brady Dykema</td>
<td>Texas A&amp;M University</td>
<td>Lithium Ion Battery Cathode Materials</td>
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<td>2/21/2007</td>
<td>David Johnson</td>
<td>University of Oregon</td>
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2/22/2007  Wilson Francisco  
Arizona State University

2/26/2007  Fazale Rana  
Ohio University  
The Origin of Life: A Theory in Crisis

2/26/2007  Stacey Wark  
Texas A&M University  
Attosecond Spectroscopy

2/26/2007  Ye Zhu  
Asymmetric Hydrogenation on Ketones: Mechanism and Applications

3/2/2007  Rene Garcia  
Texas A&M University

3/5/2007  Jon Yong Kang  
A Few Case Studies in Natural Product Total Synthesis: Are Tandem Reactions Really More Efficient?

3/5/2007  Amanda Schuckman  
Characterization, Fabrication, and Applications of Nanoelectromechanical Systems (NEMs)

3/7/2007  Brian Frost  
University of Nevada, Reno  
Coordination Chemistry and Catalytic Activity of Transition Metal Complexes of Water-Soluble Phosphines

3/8/2007  Phil Baran  
Scripps Research Institute

3/19/2007  Chih-Hao Hsia  
Charge Transport Studies in Molecular Junctions

3/19/2007  Yu-Chin Li  
Combinatorial Syntheses and Testing of Enzyme Inhibitors

3/21/2007  Nicholas P. Farrell  
Virginia Commonwealth University

3/22/2007  Kyoko Nozaki

3/26/2007  Gang Liu

SEC. 5.  COLLOQUIUM AND SEMINAR SPEAKERS  161
Comparative Analysis of Total Synthesis of Saxtoxin

3/29/2007  Gerd Rabe  
Technische Universitat Munchen

3/30/2007  Chulborn Lee  
Princeton University

4/2/2007  Tai-Yen Chen  
Texas A&M University  
Time-Resolved THz Spectroscopy Applications in Photoconductivity in Quantum Dots

4/2/2007  Edward Funck  
Texas A&M University  
Anion Coordination Chemistry

4/5/2007  Stefan Bernhard  
Princeton University

4/9/2007  Alejandro Bugarin-Cervantes  
Texas A&M University  
Methods for the Formation of the Unusual Pyrroloquinoline Ring Systems: Selected Synthesis of Martinellinic Acid

4/9/2007  Paul Fitzpatrick  
Texas A&M University

4/9/2007  Albert Wan  
Modification of Carbon Nanotubes

4/11/2007  Julie Kovacs  
University of Washington  
How Does the Thiolate Contribute to the Function of the Non-Heme Iron Enzyme Superoxide Reductase?

4/16/2007  Yang-Hsiang Chan  
Supported Chiral Catalysts on Inorganic Materials

4/16/2007  Benjamin Duffus  
Recent Advances in Multilayer Organic Light Emitting Diodes

4/16/2007  Gulcin Gulten  
Ribosome Structure and Function

4/18/2007  Ged Parkin  
Columbia University
4/23/2007  Chin-Yuan Chang
Analytical Applications of Aptamers

4/23/2007  Houston Perry
Metal Membranes and Their Application to Hydrogen Purification

4/23/2007  Paul Zeits
Chemical Activation of Dinitrogen

4/30/2007  Kyle Cummins
The Chemistry of Drug Addiction: Studies by In Vitro Rat-Brain-Electrochemistry

4/30/2007  Ian Giles
Thermoelectric Materials: Syntheses and Applications

4/30/2007  Mathew Vetticatt
Texas A&M University
Organo-Cascade Catalysis: A Biometric Organic Synthesis Strategy

5/3/2007  Catherine L. Drennan
Massachusetts Institute of Technology

5/7/2007  Matthew Hilfiger
Texas A&M University
Preparation and Properties of Cyanide-Bridged Complexes Incorporating 2nd and 3rd Row Transition Metals

5/9/2007  Don Tilley
University of California, Berkeley

5/16/2007  Gregory Girolami
University of Illinois

6/27/2007  Cameron Jones
Monash University

9/3/2007  Xavier Bogl
Texas A&M University
The Complex Chemistry of Arylnitrenes

9/6/2007  Heinrich Lang
Technische Universität Chemnitz, Germany

9/7/2007  Vladimir Birman
Washington University

9/10/2007  Sean Bard
Ion Mobility Spectrometry in Sensor Applications

9/10/2007  Zach Kohley
The Production of Radioactive Ion Beams

9/12/2007  LeGrande Slaughter
Oklahoma State University

9/17/2007  Ollie James
1,5-Sigmatropic Hydrogen Shift Reactions. Evidence for Tunneling?

9/17/2007  Michael Singleton
Laccases and the Development of Biofuel Cells

9/20/2007  John Wolfe
University of Michigan

9/24/2007  Casey Wade
Transition Metal Borylenes: Synthesis, Structure, and Reactivity

9/26/2007  Susannah Scott
University of California, Santa Barbara

9/27/2007  John Wood
Colorado State University

10/1/2007  Jaibir Kherb
Nanowire Biosensors

10/1/2007  Michaella Levy
Zinc’s Role in DNA Repair: A Closer Look at the Ada/AGT Proteins

10/8/2007  Sean Bowen
Applications of Mass Spectrometry Based Upon Carbon Isotope Analysis

10/8/2007  Paul Chirik
Cornell University

10/8/2007  Hui Fu

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Site-Isolation Facilitated One-Pot Multistep Reactions

10/10/2007  Robert Crabtree
Yale University
Title
CH Activation, Carbenes and Molecular Recognition in Homogeneous Catalysis

10/15/2007  Sean Carroll
Non-Radical Reaction Pathways of Radical Intermediates

10/15/2007  Jennifer Hess
Mechanism, Reactivity, and Application of Surface Organometallic Chemistry and Heterogeneous Catalysis

10/22/2007  Kevin Kmiec
Nano SIMS as a Tool for Studying Extraterrestrial Materials

10/25/2007  Christopher W. Bielawski
University of Texas, Austin

11/1/2007  Mark Gordon
Iowa State University

11/1/2007  James Nowick
University of California, Irvine

11/2/2007  Adrianna Moncada
Texas A&M University
Metal Catalyzed Copolymerization Processes Involving Oxetanes and Carbon Dioxide as Substrates

11/5/2007  Liuxi Chen
Fluorescence Activated Cell Sorting

11/5/2007  Victor Suarez
Lantibiotics: Synthesis and Biological Activity

11/8/2007  Miguel Garcia-Garibay
University of Southern California

11/12/2007  Miguel Cruz-Quinones
Texas A&M University
Scanning Electrochemical Microscopy (SECM)

11/12/2007  Zhen Liu
Mammalian Fatty Acid Synthesis and Its Implication in Treatment of Human Cancer

11/15/2007  Chris Whitman
            University of Texas, Austin

11/19/2007  Li-Jung Chen

Ambient Mass Spectrometry: DESI and DART

11/19/2007  Esther Ocola
            Texas A&M University
            Near-Field Raman Microscopy
6. Faculty*, 2007

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>David P. Barondeau</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>James D. Batteas</td>
<td>Associate Professor</td>
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<tr>
<td>David E. Bergbreiter</td>
<td>Professor</td>
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<tr>
<td>John W. Bevan</td>
<td>Professor</td>
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<tr>
<td>Janet F. Bluemel</td>
<td>Professor</td>
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<tr>
<td>Lawrence S. Brown</td>
<td>Senior Lecturer</td>
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<tr>
<td>Kevin Burgess</td>
<td>Professor</td>
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<tr>
<td>Abraham Clearfield</td>
<td>Distinguished Professor</td>
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<tr>
<td>Brian T. Connell</td>
<td>Distinguished Assistant Professor</td>
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<td>F. Albert Cotton</td>
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<td>Paul S. Cremer</td>
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<td>Richard M. Crooks</td>
<td>Professor</td>
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<td>Marcetta Y. Darenbourg</td>
<td>Professor</td>
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<td>Donald J. Darenbourg</td>
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<td>Victoria J. DeRose</td>
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<td>Kim R. Dunbar</td>
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<td>John P. Fackler</td>
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<td>Paul Fitzpatrick</td>
<td>Professor (J)</td>
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<td>Francois P. Gabbai</td>
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<td>Holly C. Gaede</td>
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<td>Yi Qin Gao</td>
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<td>John A. Gladysz</td>
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<td>D. Wayne Goodman</td>
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<td>Ganesa Gopalakrishnan</td>
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<td>Michael B. Hall</td>
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<td>Kenn E. Harding</td>
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<td>Dudley Herschbach</td>
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<td>Christian B. Hilty</td>
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<td>John L. Hogg</td>
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<td>Timothy R. Hughbanks</td>
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<td>Arthur E. Johnson</td>
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<td>Jaan Laane</td>
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<td>Jack H. Lunsford</td>
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<td>Ronald D. Macfarlane</td>
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<td>Elmo J. Mawk</td>
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<td>Ahmed A. Mohamed</td>
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<td>Mysore S. Mohan</td>
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<td>Christine A. Mullen</td>
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<td>Carlos A. Murillo</td>
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<td>Joseph B. Natowitz</td>
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<tr>
<td>Simon W. North</td>
<td>Associate Professor</td>
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</table>
For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2007 (01/01/2007-12/31/2007).
6.1 Professional Activities, 2007

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2007.

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 2007.
▷ 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 2007.
▷ 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 2007

National
▷ Professional Affiliation: American Chemical Society (Treasurer)

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

Department
▷ Event: Biological Division Seminars (Coordinator)
▷ Committee/Panel: Information and Communications Technology (Representative)

• TEACHING ASSIGNMENTS DURING 2007

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

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

Fall
▷ BICH 691 — Research (total enrollment: 1)
▷ CHEM 627. — Principles of Biological Chemistry (total enrollment: 19)
▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

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

• PRESENTATIONS DURING 2007
▷ “Understanding Mechanisms for Biological Cofactor Biogenesis and Catalysis,” REU Program, College Station, TX, July, 2007. (Invited)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007

National
  ▶ Professional Affiliation: American Chemical Society (Chair elect)
  ▶ Event: Symposium on Processes at Functional Plasmonic and Electronic Devices (Chair), Symposium on Processes at Functional Plasmonic and Electronic Devices (Organizer)
  ▶ Advisory Board: Polymer Analysis Division, Society of Plastic Engineers (Board of Directors), Polymer Analysis Division, Society of Plastic Engineers (Chair)

University
  ▶ Committee/Panel: CIMS-Materials Characterization Facility (Chair), Materials Science and Engineering Faculty (Member), Microscopy Center (Member)

Department
  ▶ Committee/Panel: Faculty Search Committee - Analytical (Member), Graduate Admissions and Review Committee (Member), Graduate Recruiting (Coordinator)

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 16)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 6)

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

Fall
  ▶ CHEM 315. — Quantitative Analysis (total enrollment: 33)
  ▶ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 21)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 8)

• RESEARCH PROJECTS DURING 2007

State
  ▶ Scanned Probe Lithography Approaches for the Fabrication of Plasmon Enhanced Quantum Optics, Texas Higher Education Coordinating Board
Private

- Probing Molecular Interactions and Defect Nucleation in Nanoscopic Contacts, *The Robert A. Welch Foundation*, coworkers: R. Jones (U), N. Pearsall (U)

Industrial

- Loop Heat Pipe Failure Diagnosis, *The Boeing Company*
- Loop Heat Pipe Failure Diagnosis, *The Boeing Company*

- **PRESENTATIONS DURING 2007**
  - “Characterization of Thiol Tethered Porphyrin Derivatives on Gold,” Student Research Week, Texas A&M University, College Station, TX, March, 2007. (Poster Graduate, A. Schuckman)
  - “Effects of Surface Energy on the Size of Corrolazine Nanoparticles,” Student Research Week, Texas A&M University, College Station, TX, March, 2007. (Poster Graduate, A. Wan)
  - “Patterning of GaAs by Scanned Probe Lithography,” Student Research Week, Texas A&M University, College Station, TX, March, 2007. (Poster Graduate, Y. Chan)
  - “Tribological Properties of Organosilane Self Assembled Monolayers in Silica Asperity-Asperity Junctions,” Texas A&M Student Research Week, College Station, TX, March, 2007. (Poster Graduate, R. Jones)
  - “Tales from the Nanoscale: Organizing and Characterizing Molecular Assemblies for Nanodevices,” Angelo State University, San Angelo, TX, April, 2007. (Invited)
  - “Molecular Assembly and Charge Transport in Confined Geometries,” NSF Workshop on Molecular Electronics, June, 2007. (Invited)
  - “Fabrication of Nanoscale Test Arrays for Molecule Conduction,” Molecular Conduction Workshop, Purdue University, West Lafayette, IN, July, 2007. (Invited)
  - “Surface Organization of Thiol Tethered Tri-Pyridylporphyrin Derivatives on Gold,” Molecular Conduction Workshop, Purdue University, West Lafayette, IN, July, 2007. (Poster Graduate, A. Schuckman)
  - “Fabrication of Nanoscale Test Arrays for Molecule Conduction,” NanoSummit 2007, Texas A&M University, College Station, TX, August, 2007. (Invited)
  - “Soft Lithographic Approaches to Patterning of Metal Nanostructures on Surfaces,” 234th National ACS Meeting & Exposition, Boston, MA, August, 2007. (Contributed)
“Patterning of GaAs(100) and Self-assembled Monolayers on GaAs(100) by Scanning Probe Lithography,” Industry-University Cooperative Chemistry Program, Texas A&M University, College Station, TX, October, 2007.(Poster Graduate, Y. Chan)

“Surface Organization of Thiol Tethered Tri-Pyridylporphyrin Derivatives on Gold,” Industry-University Cooperative Chemistry Program, Texas A&M University, College Station, TX, October, 2007.(Poster Graduate, A. Schuckman)

“Tales from the Nanoscale: Organizing and Characterizing Molecular Assemblies for Nanodevices,” Texas Lutheran University, Seguin, TX, October, 2007.(Invited)

“Defect Nucleation and Wear in Nanoscopic Contacts,” Southwest Regional Meeting of the American Chemical Society, Lubbock, TX, November, 2007.(Invited)

PUBLICATIONS DURING 2007


• CHAIRS/PROFESSORSHIPS
  ▶ Eppright Professorship in Undergraduate Teaching Excellence [2002]
  ▶ Presidential Professor for Teaching Excellence [2006]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2004]

• SERVICE DURING 2007
  University
    ▶ Committee/Panel: University Writing Course Committee (Representative)
  Department
    ▶ Service Position: Graduate Admissions/Recruiting (Coordinator), National Science Foundation and Research Experiences for Undergraduates Program (Coordinator)
    ▶ Committee/Panel: Advisory Council (Member), Department Head Search Committee (Member), Executive Committee (Member), Graduate Admissions and Review Committee (Chair), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
    ▶ CHEM 491. — Research (total enrollment: 1)
    ▶ CHEM 610. — Organic Reactions (total enrollment: 12)
    ▶ CHEM 691. — Research (total enrollment: 7)
    ▶ CHEM 695. — Frontiers in Chemical Research (total enrollment: 57)
  Summer
    ▶ CHEM 691. — Research (total enrollment: 7)
  Fall
    ▶ CHEM 466. — Polymer Chemistry (total enrollment: 67)
    ▶ CHEM 491. — Research (total enrollment: 1)
    ▶ CHEM 691. — Research (total enrollment: 7)

• RESEARCH PROJECTS DURING 2007
  Federal
    ▶ Designing New Soluble Polymers to Facilitate Separations and Reactions, National Science Foundation, coworkers: H. Fu (P), L. Kang-Shyang (G)
Chayanant (G), C. Hobbs (G)

Private

- Phase Facilitated Catalysis and Synthesis, *The Robert A. Welch Foundation*, coworkers: H. Fu (G), C. Hobbs (G), K. Liao (G), H. Su (G)

**PRESENTATIONS DURING 2007**

- “Phase selective solubility of poly(N,N-dialkylacrylamides)s,” 233rd ACS National Meeting, Chicago, IL, March, 2007. (Graduate, N. Aviles)
- “Soluble Polymer-Bound ATRP Polymerization Catalysts,” 233rd ACS National Meeting, Chicago, IL, March, 2007. (Graduate, P. Hamilton)
- “Soluble Polymers as Tools for Synthesis and Catalysis,” Oklahoma State University, Stillwater, OK, April, 2007. (Invited)
- “Polyisobutylene Supported Ligands for Homogeneous Cr(III) and Ru(II) Catalysts,” 234th ACS National Meeting, Boston, MA, August, 2007. (Individual)
- “Constructing Superhydrophobic Surfaces Using Covalent Layer-by-Layer Assembly Using Aminated Multiwall Carbon Nanotubes,” IUCCCP Symposium, Texas A&M University, College Station, TX, October, 2007. (Graduate, K. Liao)
- “Polyisobutylene Supported Ligands for Homogeneous Cr(III) and Ru(II) Catalysts,” IUCCCP Symposium, Texas A&M University, College Station, TX, October, 2007. (Graduate, C. Hongfa)
- “Soluble Polyisobutylene-Supported Reusable Catalysts for Olefin Cyclopropanation,”
IUCCP Symposium, Texas A&M University, College Station, TX, October, 2007.(Graduate, J. Tian)

▷ “Using Polymers as Green Chemistry Tools to Facilitate Separations,” University of Tulsa, Tulsa, OK, October, 2007.(Individual)


▷ “Smart Functional Interfaces,” National Taiwan University, Taipei, Taiwan, December, 2007.(Individual)

▷ “Soluble Polymer Facilitated Homogeneous Catalysis,” Shanghai Institute of Organic Chemistry, Shanghai, China, December, 2007.(Individual)

▷ “Using Soluble Polymers as Tools in Catalysis,” University of Hong Kong, Hong Kong, China, December, 2007.(Individual)

• PUBLICATIONS DURING 2007


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

• SERVICE DURING 2007
  University
  ▷ Service Position: Center for Atmospheric Chemistry and the Environment, Texas A&M University(Director), Laboratory for Submillimeter/THz Science and Technology (Director)
  Department
  ▷ Research Group: Physical and Nuclear Chemistry Division (Chair)
  ▷ Committee/Panel: Departmental Advisory Council (Alternate Member), Faculty Recruitment Committee - Analytical (Member), Faculty Recruitment Committee - Physical - Nuclear (Member), Tenure and Promotion Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ CHEM 324. — Physical Chemistry (total enrollment: 35)
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 2)

  Summer
  ▷ CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 7)
  ▷ CHEM 691. — Research (total enrollment: 2)

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

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Development of Submillimeter/Terahertz Instrumentation for Spectroscopy and Dynamics, National Science Foundation, coworkers: Z. Wang (P), S. Belov (G), B. McElmurry (G), R. Zhang (G)
  ▷ Spectroscopic and Computational Characterization of Non-Covalent Interactions, National Science Foundation
  ▷ Elaboration of Analytical methods in THz Frequency Range for Atmospheric Investigations, U.S. Civilian Research and Development Foundation
(REN) Probing Intermolecular Interactions Emphasizing Backward Wave Oscillator Sub-millimeter Spectroscopy, *The Robert A. Welch Foundation*, coworkers: B. McElmurry (G), G. Shan (G)

(REN) The Structure and Dynamics of Prototypical Hydrogen-Bonded Interactions, *The Robert A. Welch Foundation*

**PUBLICATIONS DURING 2007**


No report received from faculty member.
• SERVICE DURING 2007

National
▷ Editorial/Board: Various Manuscripts, Book, and PRF Proposal (Review: Proposals)

Department
▷ Service Position: Research Experiences for Undergraduates Program (Participant)
▷ Committee/Panel: Information and Communications Technology (ICT) Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 689 — Special Topics in (total enrollment: 4)

• PRESENTATIONS DURING 2007

▷ “New Solid-State NMR Techniques for Studying Species Immobilized on Oxide Supports,” North American Solid-State Chemistry Conference 2007, Texas A&M University, College Station, TX, May, 2007. (Contributed)
▷ “Catalysts Immobilized on Oxide Supports: A Solid-State NMR Study,” Department of Chemistry, Texas A&M University, College Station, TX, July, 2007. (Invited)
▷ “Pursuing Graduate Studies as a German in the Department of Chemistry of Texas A&M University - from visa Requirements Over Course Work, the Campus, and Living in College Station,” University of Erlangen-Nuremberg, Germany, July, 2007. (Invited)
▷ “Pursuing Graduate Studies as a German in the Department of Chemistry of Texas A&M University - from visa Requirements Over Course Work, the Campus, and Living in College Station,” University of Heidelberg, Germany, July, 2007. (Invited)
▷ “Scaffolds of Di- and Tetraphosphine Linkers that Diminish Interactions of Immobilized Catalysts with Oxide Supports,” University of California, Berkeley, CA, July, 2007. (Poster Graduate, B. Beele)

• PUBLICATIONS DURING 2007

• **SERVICE DURING 2007**

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

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

  Department
  ▶ Service Position: Chemistry 107 (Coordinator)

• **TEACHING ASSIGNMENTS DURING 2007**

  Spring
  ▶ CHEM 334. — *Experimental Physical Chemistry II* (total enrollment: 20)

  Fall
  ▶ CHEM 107. — *General Chemistry for Engineering Students* (total enrollment: 628)
  ▶ CHEM 697. — *Methods in Teaching Chemistry Laboratory* (total enrollment: 6)

• **PRESENTATIONS DURING 2007**
  ▶ “Design and Evolution a Large General Chemistry Course,” Texas A&M University, Qatar, January, 2007. (Invited)

• **PUBLICATIONS DURING 2007**
KEVIN BURGESS

PROFESSOR
CHEM-Organic Chemistry

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burgess@tamu.edu

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

• SERVICE DURING 2007

  International
  ▶ Service Position: L’Oreal in France (Consultant)
  ▶ Editorial/Board: Hong Kong Universities (Review: Proposals)

  National
  ▶ Service Position: Combimix, San Francisco, CA (Consultant), Three Legal Cases (Expert Witness)
  ▶ Event: American Chemical Society Meeting for the Awards Symposia (Organizer)
  ▶ Committee/Panel: NIH Synthetic and Biological Chemistry Review Panel (Member)

  State
  ▶ Service Position: Southwestern Medical School (Consultant)

  University
  ▶ Research Group: Chemistry Biology Interface Training Grant (Member)
  ▶ Committee/Panel: Library Committee (Liaison) (Chair), Sterling C. Evans Library Faculty Senate Reporting Committee Council (Member), Texas A&M University International Curriculum Development Grant Review Panel (Member)

  Department
  ▶ Research Group: NMR and Mass Spectrometry User Group (Member)
  ▶ Committee/Panel: Library Committee (Representative), Organic Chemistry Division (Chair)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ CHEM 689. — Special Topics in (total enrollment: 18)
  ▶ CHEM 691. — Research (total enrollment: 10)

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

  Fall
  ▶ CHEM 689. — Special Topics in (total enrollment: 4)
• RESEARCH PROJECTS DURING 2007

Federal

▷ (REN) Design and Synthesis of Functional NGF Peptidomimetics, National Institutes of Health, coworkers: Y. Angell (G), J. Han (G), Y. Li (G), J. Liu (G), S. Shimidzu (G)

▷ Evolving Libraries of Bivalent Compounds, National Institutes of Health, coworkers: D. Chen (P), A. Malakhov (P), E. Ko (G), Y. Li (G), J. Liu (G), G. Lu (G)

▷ Fluorescent Probes for Multiplexed Intracellular Imaging, National Institutes of Health, coworkers: B. Nguyen (P), J. Castro (G), J. Han (G), J. Jose (G), L. Li (G), A. Loudet (G), J. Rodriguez-Poirier (G), C. Thivierge (G), Y. Ueno (G), L. Wu (G), J. Zhao (G)

▷ Minority Predoctoral Fellowship Program, National Institutes of Health, coworkers: J. Castro (G)

▷ Synthetic Molecules in Biological Systems, National Institutes of Health

▷ Asymmetric Hydrogenations of Unfunctionalized Alkenes Mediated by Ir-N-Heterocyclic Carbene Complexes, National Science Foundation, coworkers: A. Schaefer (P), J. Zhao (P), Y. Zhu (G)

Private

▷ Synthesis of Deoxypolypropionate Chirons, The Robert A. Welch Foundation, coworkers: J. Han (G), C. Thivierge (G), Y. Zhu (G)

Industrial

▷ Compound Screening, Amersham Biosciences AB

• PRESENTATIONS DURING 2007


▷ “Hydrogenations with Chiral Crabtree Catalysts to Give Deoxypolyketide Chirons,” Yale University, New Haven, CT, April, 2007. (Individual)


▷ “Peptidomimetics for Mimicking or Disrupting Protein-protein Interactions,” Sanofi-Aventis Combinatorial Technologies Center, Tucson, AZ, June, 2007. (Individual)


▷ “Peptidomimetics for Mimicking or Disrupting Protein-protein Interactions,” University of Malaysia, Malaysia, August, 2007. (Individual)


▷ “Chiral Crabtree Catalyst Analogs for Syntheses of Deoxypolyketide Chirons, Catalysis and Synthesis, Focus on Oxidation and Hydrogenation,” Sigtuna, Sweden, November,
“The Interface of Chemistry and Biology,” Princess Congress to celebrate the 80th birthday for His Majesty King Bhumibol, Thailand, November, 2007. (Invited)

**PUBLICATIONS DURING 2007**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ➢ Member, Interdisciplinary Faculty, Materials Science and Engineering, /2007/

• SERVICE DURING 2007
  International
  ➢ Service Position: Hydrogen Storage in Metal Phosphonates Proposal (Consultant)
  College
  ➢ Committee/Panel: Faculty Advisory Council (Elected Member)
  Department
  ➢ Committee/Panel: Undergraduate Research Programs (Mentor)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ➢ CHEM 106. — Molecular Science for Citizens (total enrollment: 63)
  ➢ CHEM 491. — Research (total enrollment: 2)
  ➢ CHEM 691. — Research (total enrollment: 2)
  Summer
  ➢ CHEM 491. — Research (total enrollment: 1)
  ➢ CHEM 691. — Research (total enrollment: 2)
  Fall
  ➢ CHEM 106. — Molecular Science for Citizens (total enrollment: 67)
  ➢ CHEM 491. — Research (total enrollment: 3)
  ➢ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007
  Federal
  ➢ (REN) Strategic Design and Optimization of Inorganic Sorbents for Cesium, Strontium and Actinides, Department of Energy, coworkers: T. Bosser (G), C. Fewox (G), H. Perry (G), J. Delgado (U), S. Kerlegon (U)
  ➢ (REN) Pillared Layered Compounds: Their Synthesis, Structure and Properties, National Science Foundation, coworkers: B. Skpeizer (Research Scientist), S. Kirumakki (P), P. Zhang (P), H. Perry (G), J. Law (U), A. Mukherjee (U), S. Samarjeewa (U)
  ➢ Strategic Design and Optimization of Sorbents for Cesium, Strontium, and Actinides, Washington Savannah River Company, coworkers: C. Fewox (G), T. Bosser (U)

  Private
(REN) Metal Phosphonates as Crystal Engineered Solids, *The Robert A. Welch Foundation*, coworkers: N. Bestaoui (P), S. Konar (P), D. Kong (P), T. Clover (G), C. Gatlen (G), J. Mann (G), L. Holliness (U), L. Quirindongo (U)

**Industrial**

Hybrid Inorganic/Organic Ion Exchange Material for the 227AC-223RA Generator, *Lynntech Corp.*, coworkers: D. Kong (P), J. Yao (P), L. Holliness (U), M. Raiford (U)

**PRESENTATIONS DURING 2007**


**PUBLICATIONS DURING 2007**

- Celestian, A.J.; Parise, J.B.; Smith, R.I.; Toby, B.H.; Clearfield, A. (2007) Role of the Hydroxyl- Water Hydrogen-Bond Network in Structural Transitions and Selectivity Toward Cesium in Cs- 0.38(D1.08H0.54)SiTi2O7 Center dot(D0.86H0.14)(2)O Crystalline Silicotitanate *Inorganic Chemistry*, vol. 46, 1081-1089.
United Kingdom: Imperial College Press.


2007 Chemistry Annual Report
• SERVICE DURING 2007

National

Department
▷ Committee/Panel: Graduate Admissions and Review Committee (Member), Organic Division Faculty Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 446. — *Organic Chemistry III* (total enrollment: 8)
▷ CHEM 681. — *Seminar* (total enrollment: 22)
▷ CHEM 691. — *Research* (total enrollment: 5)

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

Fall
▷ CHEM 491. — *Research* (total enrollment: 1)
▷ CHEM 615. — *Organic Synthesis* (total enrollment: 5)
▷ CHEM 681. — *Seminar* (total enrollment: 23)
▷ CHEM 691. — *Research* (total enrollment: 4)

• RESEARCH PROJECTS DURING 2007

Private
▷ Asymmetric Hydrovinylation and Related Reactions, *American Chemical Society*, coworkers: R. Sanchez, Jr (G)
▷ New Methods for Asymmetric Catalysis, *The Robert A. Welch Foundation*, coworkers: A. Bugarin (G), M. Galvan (G), J. Kang (G), S. Ko (G)
• CHAIRS/PROFESSORSHIPS
  ▶ W.T. Doherty-Welch Foundation Chair in Chemistry [1972]

• SERVICE DURING 2007
  National
  ▶ Professional Affiliation: American Philosophical Society (Member), National Academy of Sciences (Member)
  College
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 691. — Research (total enrollment: 5)

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

• PUBLICATIONS DURING 2007


Deceased 02/20/2007.
• **CHAIRS/PROFESSORSHIPS**
  ▷ A.E. Martell Endowed Chair [2007]
  ▷ Davidson Chair in Science [2005]

• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2007**
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2007**
  
  **International**
  ▷ Committee/Panel: Langmuir, Chemical Reviews, Surface Science, and Biointerphases (Editorial Board)

  **National**
  ▷ Committee/Panel: ACS Colloid & Surface Science Division, American Chemical Society (Chair), Defense Science Study Group, Institute for Defense Analyses (Member)

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

  **Department**
  ▷ Committee/Panel: Analytical Chemistry Division (Chair), Analytical/Physical Faculty Search Committee (Chair), Colloquium and Seminar Committee (Member), Graduate Student Association Committee (Advisor), Graduate Student Recruitment Committee and Admissions (Member), Promotion and Tenure Committee (Member), Space Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2007**

  **Spring**
  ▷ CHEM 491. — *Research* (total enrollment: 1)
  ▷ CHEM 681. — *Seminar* (total enrollment: 18)
  ▷ CHEM 691. — *Research* (total enrollment: 7)

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

  **Fall**
  ▷ CHEM 325. — *Physical Chemistry Laboratory I* (total enrollment: 14)
  ▷ CHEM 691. — *Research* (total enrollment: 9)

• **RESEARCH PROJECTS DURING 2007**
Federal
▷ Developing Air-Stable Biosensors with Solid Supported Lipid Bilayers, Department of Defense, coworkers: S. Lim (G), Y. Zhang (G)
▷ Protein Supported Lipid Bilayers as a Mimic of Native Biological Membranes, Department of Health and Human Services
▷ Graduate Training in Molecular Biophysics, National Institutes of Health
▷ Multivalent Ligand-Receptor Binding on Lipid Bilayers, National Institutes of Health, coworkers: T. Yang (P), F. Albertorio (G), E. Castellana (G), Y. Cho (G), A. Diaz (G), H. Jung (G), S. Kataoka (G), J. Shi (G)

Private
▷ Using Temperature Gradients to Study Polymer and Protein Solubility, Camille and Henry Dreyfus Foundation
▷ Engineered Bio-Molecular Nano-Devices/Systems, Electronic Bio Sciences, coworkers: F. Albertorio (G), S. Daniel (G)
▷ Probing Monolayer and Interfacial Water Structure in the Presence of Anions, The Robert A. Welch Foundation

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007

  National
  ▶ Advisory Board: Analytical Chemistry (Member)
  ▶ Editorial/Board: Langmuir (Senior Editor)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ A Fundamental Study of Transport within a Single Nanoscop Channel, Department of Energy
  ▶ Institute for Intelligent Bio-Nano Materials for Aerospace Vehicles, National Aeronautics and Space Administration, coworkers: H. Lin (P), M. Malta dos Santos (P)

  Private
  ▶ A Fundamental Study of Size-Selective Catalysis, The Robert A. Welch Foundation, coworkers: J. Garcia (P)

• PUBLICATIONS DURING 2007


No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Director, X-Ray Diffraction Laboratory (formerly Crystal and Molecular Structure Laboratory), Chemistry, [1985]

• SERVICE DURING 2007
  International
  ▷ Editorial/Board: Numerous Research Proposals and Numerous Manuscripts, International Journals (Reviewed), Scientific Advisory Board of ICDDU (Member)
  ▷ Committee/Panel: Evaluation Panel for COST (Member), Irish Research Council for Science, Engineering, and Technology Review (Member)

  National
  ▷ Editorial/Board: Editorial Advisory Board of Advances in Inorganic Chemistry and Organometallics (Member), Numerous Research Proposals and Numerous Manuscripts, National Journals ( Reviewed), Organometallic (Advisory Editorial Board)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ CHEM 491. — Research (total enrollment: 4)
  ▷ CHEM 691. — Research (total enrollment: 5)

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

  Fall
  ▷ CHEM 642. — Organometallic Chemistry and Homogeneous Catalysis (total enrollment: 25)
  ▷ CHEM 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Biodegradable Copolymers Produced from Carbon Dioxide and Epoxides by Well-Defined Metal Catalysts: Mechanistic and Technology Enabling Studies, National Science Foundation, coworkers: J. Andreatta (G), W. Choi (G), S. Fitch (G), E. Frantz (G), O. Karroornirun (G), A. Moncada (G), R. Poland (G), A. Jones (U), M. Keyser (U), C. Richers (U), S. Stranahan (U), S. Swingle (U)

  Private
  ▷ (REN) Mixed Metal Cyanide Derivatives and Their Role in Catalysis, The Robert A. Welch Foundation, coworkers: J. Andreatta (G), W. Choi (G), S. Fitch (G), E. Frantz
PRESENTATIONS DURING 2007

- “Utilizing the Air We Breathe,” Student Research Week, Texas A&M University, College Station, TX, 2007. (Poster Graduate)
- “Polycarbonate Produced from the Copolymerization of Oxiranes or Oxetanes and CO₂, or the Ring-Opening Polymerization of Trimethylene Carbonate,” Texas A&M University, Doha, Qatar, January, 2007. (Invited)
- “Evaluation of Manganese (III) Schiff Base Complexes for the Copolymerization of CO₂ and Cyclohexene Oxide,” 233rd ACS National Meeting, Chicago, IL, March, 2007. (Graduate)
- “Metal Salen Derivatives as Catalysts for the Copolymerization of Oxetane and Carbon Dioxide to Afford Polycarbonates,” 233rd ACS National Meeting, Chicago, IL, March, 2007. (Poster Graduate)
- “(Tetramethyltetraazaannulene)ChromiumCl: A Highly Active Catalyst for the Copolymerization of Epoxides and Carbon Dioxide,” 9th International Conference on Carbon Dioxide Utilization (ICCDU IX), Kingston, Ontario, Canada, July, 2007. (Poster Graduate)
- “Metal Catalysts for the Coupling of Cyclic Ethers and CO₂ or Ring-Opening Cyclic Esters or Cyclic Carbonates,” Gordon Research Conference Inorganic Chemistry, Salve Regina University, Newport, RI, July, 2007. (Invited)
- “Studies Towards the Utilization of CO₂ for Polymer/Catalyst Separations,” 9th International Conference on Carbon Dioxide Utilization (ICCDU IX), Kingston, Ontario, Canada, July, 2007. (Poster Graduate)
- “Production of Aliphatic Polycarbonates from Carbon Dioxide and Oxiranes and Oxetanes,” 234th American Chemical Society National Meeting, Boston, MA, August, 2007. (Invited)
- “Studies into the Copolymerization of CO₂ and Epoxides with Fluorinated Manganese(III) Acacen Complexes,” 234th ACS National Meeting, Boston, MA, August, 2007. (Graduate)
- “(Tetramethyltetraazaannulene)ChromiumCl: A Highly Active Catalyst for the Copolymerization of Epoxides and Carbon Dioxide,” Industry-University Cooperative Chemistry Program (IUCCP), College Station, TX, October, 2007. (Poster Graduate)
- “Metal Complexes of Siloxy and Silane Substituted Salen Ligands for the Copolymerization of Carbon Dioxide and Epoxides,” Industry-University Cooperative Chemistry Program (IUCCP), College Station, TX, October, 2007. (Poster Graduate)
- “Sequestering CO₂ to Produce Viable Products: Polycarbonates from Oxiranes or Oxetanes and Carbon Dioxide,” Lyondell Symposium CO₂ Removal Sequestration Utilization, Newton Square, PA, October, 2007. (Invited)
- “Studies into the Copolymerization of CO₂ and Epoxides with Fluorinated Manganese(III) Acacen Complexes,” Industry-University Cooperative Chemistry Program (IUCCP), October, 2007. (Graduate)
- “Making Plastics from CO₂: Copolymerization of CO₂ and Epoxides or Oxetanes to Polycarbonates,” John Carroll University, Cleveland, OH, November, 2007. (Invited)
- “Plastics from Carbon Dioxide: An Environmentally Benign Route to Polycarbonates,”
Case Western University - Sixty-Seventh Frontiers in Chemistry, Cleveland, OH, November, 2007. (Invited)

“A Plastics from Carbon Dioxide: An Environmentally Benign Route to Polycarbonates,” Lubrizol Corporation, Cleveland, OH, November, 2007. (Invited)

• PUBLICATIONS DURING 2007


• SERVICE DURING 2007

International
▷ Event: Hydrogenase and Hydrogen Production 2007: The 8th International Hydrogenase Conference (Co-Chair)
▷ Editorial/Board: Chemical Communications Editorial Advisory Board (Member), Journal of Inorganic Biochemistry Editorial Advisory Board (Member), Various Manuscripts (Reviewed)

National
▷ Professional Affiliation: Inorganic Chemistry Editorial Advisory Board (Member)
▷ Editorial/Board: California Institute of Technology/Massachusetts Institute of Technology, "Powering the Planet" Chemical Boarding Center Advisory Board (Member), Department of Energy Catalysis Program Initiative (Reviewed), Various Manuscripts (Reviewed)
▷ Committee/Panel: American Chemical Society’s Petroleum Research Fund (Advisory Board)

College
▷ Committee/Panel: Diversity Committee (Member)

Department
▷ Research Group: ESR User Group (Member), NMR User Group (Member), X-ray Diffraction User Group (Member)
▷ Service Position: 2007 Annual Biomedical Research Conference for Minority Students (ABRCMS) (Recruiting)
▷ Committee/Panel: Advisory Council (Member), Faculty Awards (Member), Library Committee (Member), P&T Committee (Member), Space Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 433. — Advanced Inorganic Chemistry Laboratory (total enrollment: 11)
▷ CHEM 691. — Research (total enrollment: 6)

Summer
▷ CHEM 491. — Research (total enrollment: 2)
▷ CHEM 691. — Research (total enrollment: 8)

Fall
▷ CHEM 462. — Inorganic Chemistry (total enrollment: 17)
▷ CHEM 681. — Seminar (total enrollment: 14)
▷ CHEM 691. — Research (total enrollment: 8)
• RESEARCH PROJECTS DURING 2007

Federal
▷ Bio-organometallic Catalysts: Strategies for Synthesis, Immobilization, and Applications, *National Science Foundation*, coworkers: C. Thomas (P), E. Almaraz (G), S. Brothers (G), C. Carson (G), S. Fitch (G), W. Foley (G), K. Green (G), J. Hess (G), R. Jenkins (G), T. Liu (G), O. Rudiger (G), M. Singleton (G), M. Arnold (U), A. Cantillo (U), J. Duffin (U), C. Klemashevich (U), R. Nearburg (U)

Private
▷ Bioinorganic Chemistry: Peptide Models of SOD and NHtase Enzyme Active Sites, *The Robert A. Welch Foundation*, coworkers: C. Thomas (P), E. Almaraz (G), M. Arnold (G), A. Cantillo (G), C. Carson (G), J. Duffin (G), S. Fitch (G), W. Foley (G), K. Green (G), J. Hess (G), R. Jenkins (G), T. Liu (G), M. Singleton (G), C. Klemashevich (U), R. Nearburg (U)

• PRESENTATIONS DURING 2007
▷ “Diiron Model Complexes Related to [FeFe]-Hydrogenase: Understanding Key Differences from the Enzyme Active Site,” 233rd ACS National Meeting, Chicago, IL, March, 2007.(Postdoc)
▷ “Macrocyclization, Sulfination, and Computation Explorations of the Thiolate Carbonylamido NiN₂S₂ Complex Ni(ema)²⁺,” 233rd ACS National Meeting, Chicago, IL, March, 2007.(Graduate)
▷ “Imidazole Derivatives if (Et₄N)₂ [Ni(ema)] as Mimics of the NiSOD Active State,” Chemistry-Biology Interface Training Summit, Washington, DC, June, 2007.(Graduate)
▷ “Macrocyclization, Sulfination, and Computational Explorations of the Thiolate Carbonylamido NiN₂S₂ Complex Ni(ema)²⁺,” 13th International Conference on Biological Chemistry (ICBIC XIII), Vienna, Austria, July, 2007.(Poster Graduate)
▷ “The Acetyl coA Synthase Paradigm for Nickel-dithiolates as Ligands in Organometallic Chemistry and Catalysis,” 13th International Conference on Biological Chemistry (ICBIC XIII), Vienna, Austria, July, 2007.(Invited)
▷ “The Synthesis and Molecular Structures of Co(NO) and Fe(NO) in N₂S₂ Coordination and Their S-based Adducts of W(CO)₄,” 13th International Conference on Biological Chemistry (ICBIC XIII), Vienna, Austria, July, 2007.(Poster Graduate)
▷ “A Series of Mixed Valent, Fe(II)Fe(I), Diiron Complexes Modeling the Hox State of the
[FeFe] Hydrogenase Active Site,” 8th International Hydrogenase Conference, Breckenridge, CO, August, 2007.(Poster Graduate)

▷ “Mixed Valent, Fe(II)Fe(I), Diiron Complexes Reproduce the Unique Rotated State of the [FeFe] Hydrogenase Active Site,” 234th ACS National Meeting, Boston, MA, August, 2007.(Poster Graduate)

▷ “Theoretical Investigation of Mixed Valent Fe(II)Fe(I) Models of the Active Site of [FeFe]-Hydrogenase in the ‘As Isolated’ State,” 8th International Hydrogenase Conference, Breckenridge, CO, August, 2007.(Poster Postdoc)

▷ “Immobilized Metallodithiolate Ligand Supports for Construction of Bioinorganic Model Complexes,” Tarleton State University, Chemistry/Biology, Stephenville, TX, October, 2007.(Graduate)

▷ “Immobilized Metallodithiolate Ligand Supports for Construction of Bioinorganic Model Complexes: Understanding what is going on inside the Beads,” Industry-University Cooperative Chemistry Program (IUCCP) for Graduate Research in General and Pharmaceutical Chemistry Symposium, Texas A&M University, College Station, TX, October, 2007.(Graduate)


▷ “The Acetyl coA Synthase Paradigm for Nickel-dithiolates as Ligands in Organometallic Chemistry and Catalysis,” University of California, San Diego, CA, October, 2007.(Invited)

▷ “Theoretical Investigation of Mixed Valent Fe(II)Fe(I) Models of the Active Site of [FeFe]-Hydrogenase in the ‘As Isolated’ State,” Southwest Theoretical and Computational Chemistry Conference, College Station, TX, October, 2007.(Poster Postdoc)


• PUBLICATIONS DURING 2007


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]

• SERVICE DURING 2007
  University
  ▶ Committee/Panel: Life Sciences Building Committee (Member), Life Sciences Task Force (Chair)
  Department
  ▶ Research Group: EPR User Group (Member), NMR User Group (Member)
  ▶ Committee/Panel: Biological Chemistry Faculty Search Committee (Member), Undergraduate Chemistry Curriculum Committee (Chair)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Graduate Training in Molecular Biophysics, *National Institutes of Health*

• PUBLICATIONS DURING 2007

*No report received from faculty member.*
KIM R. DUNBAR

DISTINGUISHED PROFESSOR (979) 845-5235
CHEM-Inorganic Chemistry dunbar@mail.chem.tamu.edu

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

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007
  International
  ▶ Advisory Board: American Advisor for Molmagnet, The European Funding Network for Research on Magnetism (Advisor)
  ▶ Editorial/Board: European Journal of Inorganic Chemistry (Advisory Board)
  National
  ▶ Service Position: CHEMTRACTS (Expert Analyst)
  ▶ Professional Affiliation: American Association for the Advancement of Science (Fellow), American Chemical Society (Member), American Institute of Chemists (Fellow), Kappa Mu Epsilon National Mathematics Honor Society (Member), New York Academy of Science (Member), Phi Lambda Upsilon Chemical Honorary, Nu Chapter (Member), Pi Sigma Pi National Scholastic Honorary (Member), Sigma Xi Chemical Honorary (Member)
  ▶ Event: Gordon Research Conference Council (Member)
  ▶ Editorial/Board: Crystal Engineering (Advisory Board), Inorganic Chemistry (Associate Editor), Journal of the Chemical Society, Dalton Transactions (Advisory Board)
  ▶ Committee/Panel: Division of Inorganic, American Chemical Society (Chair)

Department
  ▶ Committee/Panel: Promotion and Tenure Committee (Member), SQUID Instrumentation Committee (Chair), X-ray Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 691. — Research (total enrollment: 12)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 10)
  Fall
  ▶ CHEM 691. — Research (total enrollment: 9)

• RESEARCH PROJECTS DURING 2007
Federal
▷ Design Principles of Nanomagnets Based on Molecules: Investigation of Spin, Orbital, and Molecular Shape Anistropies, Department of Energy
▷ A Systematic Study of the Structural Magnetic and Spectroscopic Properties of Clusters and Extended Arrays Based on Cyanide Ligands, National Science Foundation
▷ Acquisition of a Scanning Hall Probe Microscope for Nanomagnetics Research and Student Training, National Science Foundation
▷ Systematic Studies of the Structural, Magnetic, and Spectroscopic Properties on Cyanide Ligands, National Science Foundation

Private
▷ Systematic and Theoretical Studies of Anion-π Interactions for the Development of Supermolecules and New Materials, American Chemical Society
▷ Systemic and Theoretical Studies of Anion-II Interactions for the Development of Supramolecules and New Materials, American Chemical Society
▷ (REN) Nanomagnets Based on Molecules: Investigation of the Effect of Magnetic Anisotropy on the Properties of Large Moment Molecules, The Robert A. Welch Foundation

Other
▷ Design of New Ru(II) Complexes as Potential Photo-Cisplatin Analogs, Ohio State University, coworkers: H. Chifotides (P), A. Chouai (P), J. Aguirre (G), A. Angeles-Boza (G), M. Kang (G)

• PRESENTATIONS DURING 2007
▷ “Investigations into Anion-π Interactions Involving Complex Anions,” ACS Meeting, Chicago, IL, March, 2007.( Individual)
▷ “Molecular magnets based on lanthanide ions and the TCNQF₄,” ACS Meeting, Chicago, IL, March, 2007.( Individual)
▷ “Theoretical and Experimental Investigations of Anion-π Interactions with Complex Anions,” ACS Meeting, Chicago, IL, March, 2007.( Individual)
▷ “Investigation into Anion-π Interactions between π-Deficient Aromatic Systems and Complex Anions,” ACS Meeting, Boston, MA, August, 2007.( Individual)
▷ “Investigation into Anion-π Interactions between π-Deficient Aromatic Systems and Complex Anions,” ACS Meeting, Boston, MA, August, 2007.( Individual)
▷ “Charge-Transfer-Induced Spin Transition and Photomagnetic Behavior in a Trigonal-Bipyramidal Cyanide Cluster and it’s Extended Materials,” IUCCP, College Station, TX, October, 2007.( Individual)
▷ “Computational Study of Complex Anions in the Presence of Conjugated Olefin Systems: Can these Be Considered Anion - π,” IUCCP, College Station, TX, October, 2007.( Individual)
▷ “Investigation into Anion-π Interactions between π-Deficient Aromatic Systems and Complex Anions,” IUCCP, College Station, TX, October, 2007.( Individual)
“Synthesis of Threaded Bimetallic DNA Metallointercalators as Moderators of Charge Transfer,” IUCCP, College Station, TX, October, 2007.( Individual)

**PUBLICATIONS DURING 2007**


Zhao, H.H.; Lopez, N.; Prosvirin, A.; Chifotides, H.T.; Dunbar, K.R. (2007) Lanthanide-3d Cyanometalate Chains Ln(III)-M(III) (Ln = Pr, Nd, Sm, Eu, Gd, Tb; M = Fe) with the Tridentate Ligand 2,4,6-tri(2-Pyridyl)-1,3,5-Triazine (tptz): Evidence of Ferromagnetic Interactions for the Sm(III)-M(III) Compounds (M = Fe, Cr) Dalton Transactions 878-888.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• AWARDS DURING 2007
  University
  ▶ Distinguished Achievement Award - Research, The Association of Former Students

• SERVICE DURING 2007
  National
  ▶ Professional Affiliation: American Chemical Society (Career Counselor), 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)

  University
  ▶ Committee/Panel: Distinguished Professors Executive Committee (Member), Faculty Senate (Faculty Senator - 05), National Advisory Board PEER, College of Veterinary Medicine (Member), Quality Enhancement Plan Council, Executive Committee (Member), Research Environment Council (Member), TAMU Chapter Sigma Xi, Planning and Executive Committees (Member)

  College
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Member)

  Department
  ▶ Advisory Board: Industry University Cooperative Chemistry Program (Member)
  ▶ Committee/Panel: Faculty Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 462. — Inorganic Chemistry (total enrollment: 8)
  ▶ CHEM 491. — Research (total enrollment: 1)

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

  Fall
  ▶ CHEM 103. — Structure and Bonding (total enrollment: 13)
  ▶ CHEM 113. — Physical and Chemical Principles (total enrollment: 13)
• RESEARCH PROJECTS DURING 2007

Private

• PRESENTATIONS DURING 2007
▷ “Seeking to Attain Continuous Improvement in the Learning Environment at a Research University - Texas A&M QEP, January 2001 to the Present,” Assessment Conference, Texas A&M University, College Station, TX, February, 2007. (Invited)
▷ “Heavy metals and murder - a Halloween Talk,” Texas A&M Rotaract Club, College Station, TX, October, 2007. (Invited)

• PUBLICATIONS DURING 2007
▷ Abdou, H.E.; Mohamed, A.A.; Fackler, J.P. (2007) Synthesis, Characterization, Luminescence, and Electrochemistry of New Tetranuclear Gold(I) Amidinate Clusters: \( \text{Au}_4[\text{PhNC(Ph)}\text{NPh}]_4 \), \( \text{Au}_4[\text{PhNC(CH}_3\text{)}\text{NPh}]_4 \), and \( \text{Au}_4[\text{ArNC(H)NAr}]_4 \) *Journal of Cluster Science*, vol. 18, 630-641.
▷ Abdou, H.E.; Mohamed, A.A.; Fackler, J.P. (2007) Synthesis, Characterization, Luminescence, and Electrochemistry of the Tetranuclear Gold(I) Amidinate Clusters, Precursors to CO Oxidation Catalysts: \( \text{Au}_4[(\text{ArNC(H)NAr})_4 \), \( \text{Au}_4[(\text{PhNC(Ph)}\text{NPh})_4 \) and \( \text{Au}_4[\text{PhNC(CH}_3\text{)}\text{NPh}]_4 \) *Journal of the Chinese Chemical Society*, vol. 54, 1107-1113.
per(II) Cluster. Structure and Magnetic Properties of $[\text{Au}(PPh_3)_2][\text{trans} - \text{Cu}_6(\mu - \text{OH})_6(\mu - (3,5 - \text{CF}_3)2\text{pz})_6\text{Cl}]$ Inorganic Chemistry, vol. 46, 2348–2349.

• SERVICE DURING 2007

National
▷ Editorial/Board: Archives of Biochemistry and Biophysics (Executive Editor)
▷ Committee/Panel: NIH Physical Biochemistry Study Section (Ad hoc Member)

Department
▷ Research Group: Protein Chemistry Lab Users’ Group (Chair)
▷ Committee/Panel: Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

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

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

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

• RESEARCH PROJECTS DURING 2007

Federal
▷ Enzymes of Neurotransmitter Biosynthesis, National Institutes of Health, coworkers: C. Daubner (P), M. Royo (P), B. Eser (G), P. Frantom (G), J. Li (G), A. Pavon (G), E. Ralph (G), G. Sura (G), V. Baxter (U), T. McGinnis (U)
▷ Graduate Training in Molecular Biophysics, National Institutes of Health
▷ Mechanisms of Flavoproteins, National Institutes of Health, coworkers: C. Daubner (P), V. Gawandi (P), D. Borizovski (G), E. Ralph (G), C. Tsai (G)

Private
▷ (REN) Mechanisms of Oxidative Enzymes, The Robert A. Welch Foundation

• PUBLICATIONS DURING 2007


*No report received from faculty member.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007
  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: Colloquium and Seminar Committee (Member), Executive Committee (Member), Graduate Awards Committee (Member), Inorganic Chemistry Division (Chair), Welch Chair Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ CHEM 433. — Advanced Inorganic Chemistry Laboratory (total enrollment: 12)
  ▷ CHEM 681. — Seminar (total enrollment: 22)
  ▷ CHEM 691. — Research (total enrollment: 6)
  Summer
  ▷ CHEM 491. — Research (total enrollment: 2)
  ▷ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▷ CHEM 491. — Research (total enrollment: 2)
  ▷ CHEM 691. — Research (total enrollment: 5)
  ▷ CHEM 695. — Frontiers in Chemical Research (total enrollment: 41)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Neutral Bidentate Lewis Acids as Fluoride Probes, Aberdeen Proving Ground
  ▷ Project 1, Aim 2-Synthesis of Novel Fluoride Sensing Compounds for the Bioscavenger U54 Center of Excellence Grant from NINDS, Department of Defense
  ▷ Cationic Boranes - Synthesis, Reduction, and Generation of Radicals, National Science Foundation

  Private
  ▷ Ortho-Bis(Methylum)phenylene and Related Dications-Synthesis, Characterization and Anion Complexation, American Chemical Society

SEC. 6.1 PROFESSIONAL ACTIVITIES 213
• PRESENTATIONS DURING 2007

• PUBLICATIONS DURING 2007

*Correction - The 2006 annual report failed to include the following citation from Dr. Gabbai’s 2006 publications:*

• SERVICE DURING 2007

National
▷ Professional Affiliation: American Chemical Society, Chemical Education Division (Member), Biophysical Society (Member)
▷ Committee/Panel: Center for the Integration of Research, Teaching, and Learning Steering Committee Petroleum Research Foundation (Member), National Science Foundation (Member), National Science Foundation Panelist, Major Research Instrumentation Program (Reviewer)

Regional
▷ Event: Science Demonstrations, Brazos Valley Children’s Museum (Volunteer)

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 13), Major Research Instrumentation Program (Member), Parent’s Council, University Children’s Center (Member), Personnel and Welfare Committee (Member)

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

Department
▷ Service Position: New Student Conferences (Advisor)
▷ Event: Chemistry Open House (Volunteer), Summer Research Experience for Undergraduates (Director)
▷ Committee/Panel: Council on Undergraduate Research (Member), Physical Chemistry Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 481. — Seminar (total enrollment: 23)

Fall
▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 25)

• PRESENTATIONS DURING 2007
▷ “\(^1\text{H} - \text{MAS} - \text{NOESY}\), Short Course: Introduction to Solid-State NMR Spectroscopy of Model and Biomembranes,” National Institutes of Health, Bethesda, MD, January, 2007. (Individual)
• PUBLICATIONS DURING 2007


TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 631. — Statistical Thermodynamics (total enrollment: 9)
▷ CHEM 691. — Research (total enrollment: 3)

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

Fall
▷ CHEM 689. — Special Topics in (total enrollment: 7)
▷ CHEM 691. — Research (total enrollment: 4)

RESEARCH PROJECTS DURING 2007

Federal
▷ Purchase of a Computer Cluster for Theoretical, Computational, and Cyber-Enabled Chemistry, National Science Foundation

Private
▷ Using Chemical Energy at a Single Molecule Level-Chemomechanical Coupling of Molecular Motors, American Chemical Society
▷ New Faculty Award, Camille and Henry Dreyfus Foundation
▷ Searle Scholar Program, Searle Scholars Program

PRESENTATIONS DURING 2007
▷ “Accelerated Simulations of Protein Folding,” Beijing University, Beijing, China, May, 2007. (Invited)
▷ “Protein Motions: Folding, Misfolding, and Aggregation,” Institute of Chemistry, Chinese Academy of Sciences, Beijing, China, May, 2007. (Invited)
▷ “Enhanced Sampling in the Energy and Configuration Space,” Department of Bioengineering, Texas A&M University, College Station, TX, October, 2007. (Invited)

• PUBLICATIONS DURING 2007
• CHAIRS/PROFESSORSHIPS
  ◦ Dow Chair in Chemical Invention [2007]

• AWARDS DURING 2007
  International
  ◦ International Society of Fluorous Technology, University of Pittsburgh

• SERVICE DURING 2007
  International
  ◦ Advisory Board: International Conference on Organometallic Chemistry (ICOMC) (Member)
  ◦ Committee/Panel: External Review Committee, Osaka City University, Osaka Japan (Member), Mittelverteilungskommission der Nat. Fak. II (College Budget Committee, Erlangen-Nürnberg) (Member), Vorstand, Deutscher Hochschul Verbandsgruppe Erlangen-Nürnberg (Member)

  National
  ◦ Advisory Board: New Journal of Chemistry (Member)
  ◦ Editorial/Board: Sheffield Academic Press (Member), Chemical Reviews (Associate Editor)

  Department
  ◦ Committee/Panel: Diplom Exam Committee (Member), Faculty Search Committee (Member), Professor Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Fall
  ◦ CHEM 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ◦ Complexes in Which sp Carbon Chains Span Two Metals, National Science Foundation

  Private
  ◦ Flourous Chemistry Flourous Chemistry without Fluorous Solvents: New Catalyst Recovery Protocols Based upon Fluoropolymers, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2007
  ◦ “Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” Albert- Ludwigs-Universität Freiburg, Freiburg, Germany, January, 2007. (Invited)
“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” Freidrich-Wilhelms-Universität Bonn, Bonn, Germany, June, 2007. (Invited)

“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” Universität Leipzig, Leipzig, Germany, June, 2007. (Invited)

“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” Universität Regensburg, Regensburg, Germany, June, 2007. (Invited)


“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” 10th Osaka City University International Conference, Osaka, Japan, July, 2007. (Invited)


“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” Baylor University, Waco, TX, September, 2007. (Invited)


“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” International Congress of Young Chemists, Poland, October, 2007. (Invited)

“Alkene Metathesis in Metal Coordination Spheres: The Quest for Molecular Gyroscopes,” University of Oslo, Oslo, Norway, October, 2007. (Invited)


PUBLICATIONS DURING 2007


Faculty member hired 03/16/2007

222 2007 CHEMISTRY ANNUAL REPORT
D. WAYNE GOODMAN
DISTINGUISHED PROFESSOR (979) 845-0214
CHEM-Physical/Nuclear Chemistry goodman@mail.chem.tamu.edu

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

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▶ Director, Center for Surface Science and Catalysis, Chemistry, [ ]

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: Topics in Catalysis, Catalysis Letters, Journal of Molecular Catalysis A: Chemical (Editorial Advisory Board)

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

  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 2007
  Spring
  ▶ CHEM 691. — Research (total enrollment: 7)

  Summer
  ▶ CHEM 691. — Research (total enrollment: 7)

  Fall
  ▶ CHEM 681. — Seminar (total enrollment: 13)
  ▶ CHEM 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Surface Chemistry of Oxides, Battelle - Pacific Northwest National Laboratory, coworkers: M. Chen (P), P. Han (P), Y. Cai (G), K. Luo (G), C. Yi (G)
  ▶ (REN) The Physical and Chemical Properties of Nanostructured Mixed-Metal Catalysts, Department of Energy, coworkers: M. Chen (P), P. Han (P), S. Axnanda (G), Y. Cai (G), F. Yang (G)
The Physical and Chemical Properties of Nanosized Metal Clusters on Oxide Surfaces, National Science Foundation, coworkers: M. Chen (P), M. Lundwall (G)

Private
Vibrational and Electronic Properties of Supported Metal Clusters, The Robert A. Welch Foundation, coworkers: M. Chen (P), S. Axnanda (G), F. Gao (G), K. Garth (G), M. Lundwall (G)

Industrial
Research on Diesel Fuel Dehydrogenation, Cummins Corporation, coworkers: B. Wang (G), Z. Yan (G)

• PRESENTATIONS DURING 2007
“CO Oxidation over Ruthenium: From UHV to High Pressures,” St. Louis Conference, Cuernavaca, Mexico, April, 2007. (Invited)
“The Use of PM-IRAS to Study Surface Reactions,” St. Louis Conference, Cuernavaca, Mexico, April, 2007. (Invited)
“Catalysis by Gold and Gold Alloys,” XXXV Colloquium Spectroscopicum International Conference, Xiamen, China, September, 2007. (Invited)
“Catalysis by Gold and Gold Alloys: From Single Crystals to Nanoparticles,” Nanqiang Lecture at the University of Xiamen, Xiamen, China, September, 2007. (Invited)
“Catalysis by Nanostructured Gold,” ACS Southern Regional Meeting, Lubbock, TX, November, 2007. (Invited)

• PUBLICATIONS DURING 2007

• SERVICE DURING 2007

University
▷ Event: International Talent Show (Judge), Student Research Week (Judge)

College
▷ Event: Texas Junior Academy Science Presentations (Judge)

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

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 228. — Organic Chemistry II (total enrollment: 275)
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 22)

Summer
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 65)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 311)

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

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ⊳ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ⊳ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ⊳ Executive Associate Dean, Main Office, College of Science, [2002]
  ⊳ Associate Director, Institute for Scientific Computation, Vice President for Research, [1997]
  ⊳ Director, Laboratory for Molecular Simulation, Chemistry, [1997]

• SERVICE DURING 2007

  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)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ⊳ CHEM 641. — Structural Inorganic Chemistry (total enrollment: 6)
  ⊳ CHEM 691. — Research (total enrollment: 2)

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

  Fall
  ⊳ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

  Federal
  ⊳ Graduate Training in Molecular Biophysics, National Institutes of Health
Development of a High Density, High Performance Beowulf Cluster, National Science Foundation

Purchase of a Computer Cluster for Theoretical, Computational, and Cyber-Enabled Chemistry, National Science Foundation

REU Site: Nanotechnology and Materials Systems, National Science Foundation

(REN) Theoretical Studies of Inorganic, Organometallic, and Bioinorganic Systems, National Science Foundation, coworkers: C. Thomas (P), H. Wu (P), X. Yang (P)

Private

(REN) Molecular Orbital Calculations on Chemical Reactions of Transition Metals, The Robert A. Welch Foundation, coworkers: P. Surawatanawong (G), B. Vastine (G)

PRESENTATIONS DURING 2007


PUBLICATIONS DURING 2007


• SERVICE DURING 2007

National
▷ Professional Affiliation: Phi Kappa Phi Honor Society (President)

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

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 228.(H) — Organic Chemistry II (total enrollment: 35)
▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 8)

Summer
▷ CHEM 227. — Organic Chemistry I (total enrollment: 59)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 38)

Fall
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 12)
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 20)
▷ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 5)

No report received from faculty member.
• SERVICE DURING 2007
  National
  ▷ Editorial/Board: *Journal of Organic Chemistry* (Referee: Journals)
  Department
  ▷ Event: Chemistry Department Open House (Participant)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ CHEM 326. — *Physical Chemistry Laboratory II* (total enrollment: 10)
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 3)
  Summer
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▷ CHEM 327 — *Physical Chemistry* (total enrollment: 38)
  ▷ CHEM 491. — Research (total enrollment: 1)
  ▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007
  Private
  ▷ Structure and Function of Membrane Proteins by NMR Using DNP Hyperpolarization, *Camille and Henry Dreyfus Foundation*, coworkers: S. Bowen (G), S. Hwang (G), H. Zeng (G)
  ▷ Structural Perspectives on Transmembrane Helix Assembly by NMR, *The Robert A. Welch Foundation*, coworkers: S. Hwang (G), G. Sekar (G)

• PRESENTATIONS DURING 2007
  ▷ “Para-hydrogen Induced Polarization in Hetergeneous Hydrogenation Reactions,” 48th Experimental Nuclear Magnetic Resonance Conference, April, 2007.(Poster Individual)

• PUBLICATIONS DURING 2007


JOHN L. HOGG

PROFESSOR
CHEM-Organic Chemistry

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• CHAIRS/PROFESSORSHIPS
  ▶ Presidential Professor for Teaching Excellence /2007/
  ▶ Thaman University Professorship in Undergraduate Teaching Excellence /1999/
  ▶ University Professorship in Undergraduate Teaching Excellence /1996/

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Undergraduate Advisor, Chemistry Undergraduate Advising Office, Chemistry, /1985/

• AWARDS DURING 2007
  University
  ▶ Presidential Professor for Teaching Excellence, Texas A&M University

• SERVICE DURING 2007
  University
  ▶ Service Position: ATMentors (Member)
  ▶ Committee/Panel: Faculty Senate Undergraduate Admissions Advisory Council (Member), Undergraduate Appeals Panel (Member)

  College
  ▶ Committee/Panel: Undergraduate Curriculum Committee (Member)

  Department
  ▶ Service Position: Chemistry Road Show (Director), Department of Chemistry SIMS Access (Coordinator), Undergraduate Advisor (Advisor)
  ▶ Committee/Panel: Academic Operations Council (Member), Chemistry Education Committee (Member), Faculty Awards Committee (Member), Internal Awards Committee (Chair), Undergraduate Awards Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ CHEM 106. — Molecular Science for Citizens (total enrollment: 96)
  ▶ CHEM 228. — Organic Chemistry II (total enrollment: 28)
  ▶ CHEM 491. — Research (total enrollment: 2)

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

  Fall
  ▶ CHEM 106. — Molecular Science for Citizens (total enrollment: 107)
  ▶ CHEM 227.(H) — Organic Chemistry I (total enrollment: 39)
CHEM 491. — Research (total enrollment: 12)

• PRESENTATIONS DURING 2007
  ▶ Aggieland Saturday, College Station, TX, January, 2007. (Individual)
  ▶ Intermediate School, Caldwell, TX, January, 2007. (Individual)
  ▶ Texas Junior Science and Humanities Symposium, College Station, TX, January, 2007. (Individual)
  ▶ Holleman Elementary, Walker, TX, May, 2007. (Individual)
  ▶ Road Show, September, 2007. (Individual)
  ▶ “Off Road Show,” Chemistry Open House, College Station, TX, October, 2007. (Individual)
  ▶ Navasota Intermediate School, Navasota, TX, October, 2007. (Individual)
  ▶ Pebble Creek Elementary, College Station, TX, October, 2007. (Individual)
  ▶ “Expanding Your Horizons,” Road Show, December, 2007. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007
  National
  ▶ Event: North American Solid State Chemistry Conference (Organizer)
  Department
  ▶ Research Group: X-Ray Diffraction User Group (Member)
  ▶ Service Position: Graduate Admissions and Recruiting (Department Coordinator)
  ▶ Committee/Panel: Computer User Group (Member), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 634. — Physical Methods in Inorganic Chemistry (total enrollment: 7)
  ▶ CHEM 691. — Research (total enrollment: 3)
  Summer
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▶ CHEM 673. — Symmetry and Group Theory in Chemistry (total enrollment: 17)
  ▶ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Investigation of Magnetism in Discrete Rare Earth Clusters and Low Dimensional Solids, National Science Foundation, coworkers: S. Dempsey (G), L. Roy (G), L. Sweet (G)
  Private
  ▶ Polynuclear Clusters in Magnetism and Porous Solids, The Robert A. Welch Foundation

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

University
▷ Committee/Panel: University W Course Advisory Committee (Member)

College
▷ Service Position: Ethel Ashworth-Tsutsui Memorial Awards in Research and Mentoring (Organizing Board), Susan M. Arseven Memorial Award (Organizing Board)
▷ Event: Fifteenth Annual Women in Science and Engineering Career Development Conference, ”Bridging the Gap” (Organizing Board)
▷ Advisory Board: Women in Science and Engineering Executive Board (Member)

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

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 320. — Instrumental Analysis Laboratory (total enrollment: 42)
▷ CHEM 686. — Ethics in Chemical Research and Scholarship (total enrollment: 40)

Fall
▷ CHEM 317. — Quantitative Analysis (total enrollment: 28)
▷ CHEM 320. — Instrumental Analysis Laboratory (total enrollment: 32)
• CHAIRS/PROFESSORSHIPS
  ▶ E.L. Wehner-Welch Chair in Chemistry [1994]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Professor (J), Biochemistry and Biophysics, [ ]
  ▶ Distinguished Professor, Molecular and Cellular Medicine, [ ]

• SERVICE DURING 2007
  University
  ▶ Committee/Panel: College of Medicine Council of PIs (Chair), Senior Faculty Search Committee, Department of Molecular and Cellular Medicine, TAMUS HSC (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BICH 672 — Biological Membranes (total enrollment: 15)
  ▶ BICH 691 — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 1)

  Summer
  ▶ BICH 691 — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 2)

  Fall
  ▶ BICH 672 — Biological Membranes (total enrollment: 18)
  ▶ BICH 691 — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Pore Formation by Cholesterol-Dependent Cytolysins, National Institute of Allergy and Infectious Diseases, coworkers: T. Sato (P)
  ▶ Protein Trafficking and Dislocation at the ER Membrane, National Institute of General Medical Sciences, coworkers: N. Alder (P), B. Hou (P), P. Lin (P), P. Mayerhofer (P), C. Jongsma (G), J. Wahlman (G)
  ▶ How Do Proteins Fold into Their Native and Functional In Vitro and in the Physiological Milieu of the Living Cell, National Science Foundation

• PRESENTATIONS DURING 2007

SEC. 6.1 PROFESSIONAL ACTIVITIES
“Fluorescence-detected Protein Trafficking into and out of the ER,” Department of Pharmacology, University of Minnesota, St. Paul, MN, February, 2007. (Invited)

“How One Bacterial Protein Toxin Kills Mammalian Cells,” College of Medicine, Texas A&M Health Science Center, College Station, TX, February, 2007. (Invited)

“Fluorescence-detected Protein Trafficking into and out of the ER,” Institute of Biochemistry and Molecular Biology, University of Freiburg, Freiburg, Germany, March, 2007. (Invited)

“Fluorescence-detected Protein Trafficking into and out of the ER,” Life Science Lecture, University of Zurich, Zurich, Switzerland, March, 2007. (Invited)


“Fluorescence-detected Protein Trafficking into and out of the ER,” Department of Cell Biology, University of Geneva, Geneva, Switzerland, April, 2007. (Invited)


“FRET-detected Nascent Chain Folding Inside the Ribosome,” 21st Symposium of the Protein Society, Boston, MA, July, 2007. (Poster Postdoc)


“Interactions with CFTR during the Earliest Step(s) in Biogenesis,” 21st Symposium of the Protein Society, Boston, MA, July, 2007. (Poster Postdoc)


“Protein Folding and Assembly In Vitro and In Vivo,” Harden Conference, Ambleside, England, August, 2007. (Invited)

“Fluorescence-detected Protein Trafficking into and out of the ER,” Department of Molecular Biology and Genetics, Cornell University, Ithaca, NY, September, 2007. (Invited)


- PUBLICATIONS DURING 2007
Tim23p and Other Subunits *Molecular Biology of the Cell*, vol. 19, 159-170.


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Director, Chemistry, [J]

• AWARDS DURING 2007
  University
  ▶ Excellence in Quality Enhancement Award, 7th Annual Texas A&M Assessment Conference

• SERVICE DURING 2007
  National
  ▶ Professional Affiliation: American Chemical Society-Chemical Education Division (Member)

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

  University
  ▶ Service Position: ACS Chemistry Open House and Science Exploratorium (Coordinator), Age of Oak (Faculty Advisor), Aggie School Volunteers (Faculty Advisor), ATMentors (Member), Calibrated Peer Review for Texas A&M University(Master Administrator), Texas Environmental Action Coalition (Faculty Advisor)
  ▶ Professional Affiliation: Organization of Professional Academic Lecturers (Co-Founder)
  ▶ Event: CPR at Texas A&M University (Presenter), Youth Adventure Program (Co-instructor)
  ▶ Committee/Panel: Faculty Senate Sub-committee on the Status of Non-Tenure Track Faculty (Co-Chair), GLBT Members of the University Community (ALLY), Texas A&M University Women’s & Gender Equity Resource Center Advisory Committee (Member)

  College
  ▶ Event: All Chemistry Events and Pentathlon, Texas Science Olympiad (Coordinator), Mitchell Institute for Fundamental Physics (Chemistry Coordinator), Texas A&M Regional Junior Science Bowl (Judge), Texas A&M Regional Science Bowl (Judge)

  Department
  ▶ Service Position: First Year Chemistry Program (Associate Director), TA Teaching Mentor and Ombudsman (Mentor)
  ▶ Event: American Chemical Society Chemists Celebrating Earth Day (Coordinator), AP Chemistry Summer Institute (Director), Chemistry Road Show (Member), Chemistry Show (Presenter), Dr. K’s Invitational First Year Chemistry Poetry Jam (Coordinator), Engineering Day (Organizer), First Year Chemistry Study Hall and Computer Lab
(Participant), Physics Festival (Presenter), Wacky Science Camp (Presenter)
▷ Committee/Panel: TA Training (Co-Organizer) (Speaker)

- **TEACHING ASSIGNMENTS DURING 2007**
  - **Spring**
    ▷ CHEM 101. — *Fundamentals of Chemistry I* (total enrollment: 618)
  - **Fall**
    ▷ CHEM 102. — *Fundamentals of Chemistry II* (total enrollment: 483)

- **PRESENTATIONS DURING 2007**
  ▷ “Overcoming Student Resistance to a Teaching Innovation,” 3rd Annual Teaching with Technology Conference (TwTC), February, 2007. (Individual)
  ▷ “Overcoming Student Resistance to a Teaching Innovation,” 7th Annual Texas A&M Assessment Conference, College Station, TX, February, 2007. (Individual)
  ▷ “Factors Affecting Student Acceptance of Calibrated Peer Review TM,” CPR Symposium 2007, College Station, TX, June, 2007. (Individual)
  ▷ “Overcoming Student Resistance to Writing with CPR TM,” CPR Symposium 2007, College Station, TX, June, 2007. (Individual)
  ▷ “Assessment of the Effect of International TAs on Student Attitude and Learning in a First Year Chemistry Laboratory Program,” 234th American Chemical Society Meeting, Boston, MA, August, 2007. (Individual)

- **PUBLICATIONS DURING 2007**
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Professor (J), Physics, [2007]

• SERVICE DURING 2007

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

  National
  ▶ Professional Affiliation: Alexander von Humboldt Association of America (President)

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

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

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

• TEACHING ASSIGNMENTS DURING 2007

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

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

  Fall
  ▶ CHEM 322. — Physical Chemistry for Engineers (total enrollment: 33)
  ▶ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Development of Submillimeter/Terahertz Instrumentation for Spectroscopy and Dynamics, National Science Foundation

  Private
  ▶ (REN) Molecular Conformations and Vibrational Potential Energy Surfaces, The Robert A. Welch Foundation, coworkers: A. Al-Saadi (P), J. Yang (P), P. Boopalachandran (G),

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H. Chun (G), K. McCann (G), E. Ocola (G), M. Rishard (G)

**PRESENTATIONS DURING 2007**
- “Spectroscopic Determination of Vibrational Potential Energy Calculations in Electronic Excited States,” Texas A&M UniversityMolecular Physics and Quantum Optics Symposium, College Station, TX, January, 2007. (Invited)
- “Spectroscopic Determination of Molecular Structures and Vibrational Potential Energy Surfaces in Ground and Excited Electronic States,” Texas A&M UniversityPhysics Department Seminar, College Station, TX, April, 2007. (Invited)
- “The Application of Symmetry to the Spectra of DPA and its Ions,” Texas A&M UniversitySymposium on Quantum Mechanics, Informatics and Control, College Station, TX, April, 2007. (Invited)
- “Applications of Symmetry and Group Theory in Chemistry and Molecular Physics,” Texas A&M University/Princeton Summer School on Quantum Optics and Molecular Physics, Casper, WY, July, 2007. (Invited)
- “Laser Induced Fluorescence and Ultraviolet Absorption Spectra, DFT Calculations, and Structure of 1,3-Benzodioxan,” Texas Section Fall 07 Meeting of the American Physical Society, College Station, TX, October, 2007. (Individual)
- “Ultraviolet Absorption Spectra and the Quasi-Planarity of Pyridine and its $^d_2$ Isotopomer in its $S_1(\pi, \pi^*)$ Excited State,” Industry-University Cooperative Chemistry Program (IUCCP) Symposium, College Station, TX, October, 2007. (Individual)
- “Ultraviolet Absorption Spectra and the Quasi-Planarity of Pyridine and its $^d_2$ Isotopomer in its $S_1(\pi, \pi^*)$ Excited State,” Texas Section Fall 07 Meeting of the American Physical Society, College Station, TX, October, 2007. (Individual)
- “Vibrational Spectra and DFT Calculations of Dipicolinic Acid and its Calcium Salt,” Texas Section Fall 07 Meeting of the American Physical Society, College Station, TX, October, 2007. (Individual)

**PUBLICATIONS DURING 2007**


• SERVICE DURING 2007

National
▷ Professional Affiliation: American Chemical Society (Treasurer)
▷ Committee/Panel: Committee for the Computational Neurosciences Graduate Training Program at the University of Minnesota (External Advisor), Hydrogen Program Panel, Department of Energy (Member)

University
▷ Research Group: Center for Advanced Biomolecular Research (Member), Chemistry Biology Interface Training Program (Member)

Department
▷ Research Group: Departmental EPR User Group (Chair)
▷ Service Position: Biological Division (Graduate Advisor)
▷ Event: Graduate Visitation Weekend (Chemistry and Biochemistry Departments) (Participant)
▷ Committee/Panel: Awards Committee (Member), Biological Chemistry Division (Chair), Chemistry Service-Course Evaluation Committee (Member), Colloquium and Seminar Committee (Member), Executive Committee (Member), Graduate Awards Committee (Member), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 628. — Coordination and Bioinorganic Chemistry (total enrollment: 7)
▷ CHEM 681. — Seminar (total enrollment: 13)
▷ CHEM 691. — Research (total enrollment: 2)

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

Fall
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 157)
▷ CHEM 681. — Seminar (total enrollment: 15)
▷ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Bioinorganic Chemistry of Carbon Monoxide Dehydrogenase, National Institutes of Health, coworkers: X. Tan (Research Scientist)
Synthetic Molecules in Biological Systems, *National Institutes of Health*

Integrated Modeling and Analysis of Animal Cell Cytokinesis, *National Science Foundation*

Private

Biochemistry and Biophysics of YFH1p from Saccharomyces Cervisiae, *The Robert A. Welch Foundation*

**PUBLICATIONS DURING 2007**


*No report received from faculty member.*
WENSHE LIU
ASSISTANT PROFESSOR
CHEM-Bioorganic Chemistry

- **TEACHING ASSIGNMENTS DURING 2007**
  - Fall
    - CHEM 491. — Research (total enrollment: 1)
    - CHEM 689. — Special Topics in (total enrollment: 8)

- **PUBLICATIONS DURING 2007**

*Faculty member hired 08/01/2007*
• SERVICE DURING 2007

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: Library Committee (Member), Phys/Nuc/Chemistry Division (Chair), Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 323. — Physical Chemistry (total enrollment: 46)
▷ CHEM 691. — Research (total enrollment: 3)

Summer
▷ CHEM 324. — Physical Chemistry (total enrollment: 31)
▷ CHEM 691. — Research (total enrollment: 2)

Fall
▷ CHEM 648. — Principles of Quantum Mechanics (total enrollment: 14)
▷ CHEM 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Photoelectron-Vibration Coupling in Nonlinear Molecules, Department of Energy
▷ Resonant and Nonresonant Vibrational Effects in the Photoionization Dynamics of Asymmetric Systems, Department of Energy
▷ Development of a High Density, High Performance Beowulf Cluster, National Science Foundation
▷ Development of Submillimeter/Terahertz Instrumentation for Spectroscopy and Dynamics, National Science Foundation
▷ Purchase of a Computer Cluster for Theoretical, Computational, and Cyber-Enabled Chemistry, National Science Foundation
▷ Spectroscopic and Computational Characterization of Non-Covalent Interactions, National Science Foundation

Private
Nondipole Effects in Photoelectron Angular Distributions of Molecular Photoionization, *The Robert A. Welch Foundation*

**PRESENTATIONS DURING 2007**
- “Molecular Photoionization,” Department of Chemistry, University of Rome, June, 2007. (Invited)
- “Morphed Intermolecular Interaction Potentials of Molecular Dimers,” Department of Chemistry, University of Rome, June, 2007. (Invited)

**PUBLICATIONS DURING 2007**


No report received from faculty member.
• SERVICE DURING 2007

National
▷ Editorial/Board: NIH 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 2007

Spring
▷ CHEM 315. — Quantitative Analysis (total enrollment: 36)
▷ CHEM 691. — Research (total enrollment: 4)

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

Fall
▷ CHEM 315. — Quantitative Analysis (total enrollment: 31)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 43)
▷ CHEM 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Lipoprotein Density Profiling for Clinical Studies, National Institutes of Health, coworkers: Z. Farwig (P), R. Chandra (G), L. Espinosa (G), R. Hernandez (G), S. Lester (G), M. Nowlin (G), J. Johnson (U), S. Swetch (U), S. Tilford (U)

• PUBLICATIONS DURING 2007

No report received from faculty member.
• SERVICE DURING 2007

College
▷ Event: Regional Science Bowl (Question Reviewer), Texas Junior Science and Humanities Symposium (Presentation Judge), Texas Science Olympiad (Event Coordinator)

Department
▷ Event: Physics Festival (Demonstration Coordinator)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 609)
▷ CHEM 285. — Directed Studies (total enrollment: 1)

Summer
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 65)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 480)
▷ CHEM 111 — Fundamentals of Chemistry Laboratory I (total enrollment: 2336)

• PUBLICATIONS DURING 2007

• SERVICE DURING 2007
  
  Regional
  ▶ Professional Affiliation: Local Section of the American Chemical Society (Secretary)

  University
  ▶ Committee/Panel: Polymer Technology Center (Member)

  Department
  ▶ Research Group: Inorganic Division (Associate Member)
  ▶ Event: IUCCP Faculty Participant (Participant/Presenter)
  ▶ Committee/Panel: Graduate Student Recruiting Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  
  Spring
  ▶ CHEM 466. — Polymer Chemistry (total enrollment: 79)
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 6)

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

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

• RESEARCH PROJECTS DURING 2007
  
  Federal
  ▶ CAREER: Catalytic Aldimine Coupling: A Versatile Carbon-Carbon Bond Forming Reaction, National Science Foundation, coworkers: J. Grill (G)

  University
  ▶ Homogeneous Catalysts Based on Silver, College of Science, coworkers: P. Zeits (G)
  ▶ Oxidation Catalysis with Nanoparticulate Nickel Oxide, College of Science, coworkers: J. Grill (G), J. Peacock (G)

  Private
  ▶ Activation of Carbon Dioxide: Polyester Formation via Coordination Polymerization of Carbon Dioxide and Olefins, Research Corporation, coworkers: C. Price (G)
  ▶ Controlling Polyolefin Architectures with Sterically Expanded Transition Metal Polymerization Catalysts, The Robert A. Welch Foundation, coworkers: B. Duffus (G), C. Price (G), N. Rife (G), E. Schwerdtfeger (G), P. Zeits (G), R. Mitchell (U)
• **PUBLICATIONS DURING 2007**


*On leave.*
• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 269)

• PUBLICATIONS DURING 2007


No report received from faculty member.
• SERVICE DURING 2007

Regional
▷ Event: “Pallavi” a Program on Indian Classical Music on KAMU-FM (Host)

University
▷ Service Position: SPICMACAY (Society for the Promotion of Indian Classical Music and Culture Among Youth) (Faculty Advisor)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 316. — Quantitative Analysis (total enrollment: 91)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 64)
○ SERVICE DURING 2007

National
▷ Professional Affiliation: American Chemical Society - Chemical Education and Biological Chemistry Divisions (Member)

○ TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 222. — Elements of Organic and Biological Chemistry (total enrollment: 139)

No report received from faculty member.
CARLOS A. MURILLO
SENIOR LECTURER (979) 845-3646
CHEM-Inorganic Chemistry murillo@tamu.edu

• SERVICE DURING 2007
  Department
  ◦ Research Group: Laboratory for Molecular Structure and Bonding (Executive Director)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ◦ CHEM 104. — Chemistry of the Elements (total enrollment: 13)
  ◦ CHEM 114. — Quantitative Analysis (total enrollment: 14)

• PUBLICATIONS DURING 2007


No report received from faculty member.
• CHAIRS/PROFESSORSHIPS
  ▶ Cyclotron Institute Bright Chair in Nuclear Science [2002]

• SERVICE DURING 2007
  International
  ▶ Committee/Panel: Programs Advisory Committee, French-Belgian DEMON Detector Array (Chair)

  National

  University
  ▶ Committee/Panel: Center for Teaching Excellence Advisory Committee (Member)

  College
  ▶ Event: Expanding Your Horizons Program (Presenter)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 310)
  ▶ CHEM 691. — Research (total enrollment: 1)

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

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

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ (REN) Cyclotron-Based Nuclear Science, Department of Energy

  Private
  ▶ Nuclear Reaction Studies, The Robert A. Welch Foundation, coworkers: C. Bottosso (P), Z. Chen (P), J. Hagel (P), L. Qin (P), P. Sahu (G), R. Wada (G)

• PRESENTATIONS DURING 2007
“Agitated Nuclei and the Nuclear Equation of State,” Symposium celebrating the Fiftieth Anniversary of the Flerov Laboratory of Nuclear Reactions, Dubna, Russia, May, 2007. (Invited)

“Nuclear Collisions, Metastable Nuclei and the Nuclear Equation of State,” Workshop on f7/2 to the Quark Gluon Plasma, Legnaro National Laboratory, Italy, May, 2007. (Invited)

“Nuclear Symmetry Energies at Low Density,” Department of Physics, University of Padova, Italy, May, 2007. (Invited)

**PUBLICATIONS DURING 2007**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  > Associate Director, Center for Atmospheric Chemistry and the Environment, Chemistry,

• SERVICE DURING 2007
  National
  > Research Group: Project Research Team, Advanced Light Source, Berkeley, CA (Member)
  University
  > Research Group: Center for Atmospheric Chemistry and the Environment (Member)
  College
  > Committee/Panel: Grievance Committee (Elected Member)
  Department
  > Service Position: Physical Chemistry Laboratory (Coordinator)
  > Committee/Panel: Department Head Search Committee (Chair), Departmental Executive Committee (Member), Faculty Search Committee (Physical/Analytical) (Member), Graduate Admission and Review Committee (Member), Shop User Committee (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  > CHEM 491. — Research (total enrollment: 1)
  > CHEM 621. — Chemical Kinetics (total enrollment: 11)
  > CHEM 691. — Research (total enrollment: 6)
  Summer
  > CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 14)
  > CHEM 491. — Research (total enrollment: 2)
  > CHEM 691. — Research (total enrollment: 5)
  Fall
  > CHEM 326. — Physical Chemistry Laboratory II (total enrollment: 13)
  > CHEM 491. — Research (total enrollment: 4)
  > CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2007
  Federal
Purchase of a Computer Cluster for Theoretical, Computational, and Cyber-Enabled Chemistry, National Science Foundation

Hypersonic Transition and Turbulence with Non-Equilibrium Thermo-Chemistry, United States Air Force, coworkers: A. Hsu (G)

State

Measurements of $NO_3$ Using Cavity Cavity-ring Down During TexASQ II, Texas Air Research Center

Private

Photofragment Imaging of Atmospheric Free Radicals, The Robert A. Welch Foundation, coworkers: K. Dooley (G), H. Kim (G)

• PUBLICATIONS DURING 2007

• SERVICE DURING 2007

   National
   ▶ Professional Affiliation: American Chemical Society - Division of Inorganic Chemistry (Member)

   University
   ▶ Professional Affiliation: Faculty Teaching Academy (Member)
   ▶ Event: Center for Teaching Excellence Workshop (Participant)

• TEACHING ASSIGNMENTS DURING 2007

   Spring
   ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 256)

   Fall
   ▶ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 241)
   ▶ CHEM 481. — Seminar (total enrollment: 31)

No report received from faculty member.
• AWARDS DURING 2007
  College
  ▷ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2007
  National
  ▷ Professional Affiliation: American Chemical Society (Member)

  University
  ▷ Service Position: Project Sunshine (Faculty Advisor)
  ▷ Professional Affiliation: Christian Faculty Network (Member)
  ▷ Committee/Panel: Aggie Access Namesake (Member), Project Sunshine (Faculty Advisor), Status of Non-Tenure Track Faculty (Member)

  College
  ▷ Event: Science Olympiad (Event Coordinator), Texas Junior Academy of Science (TJAS) (Judge)

  Department
  ▷ Event: Chemistry Road Show (Demonstration Coordinator), National Chemistry Week Open House (Volunteer)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ CHEM 228. — Organic Chemistry II (total enrollment: 211)

  Fall
  ▷ CHEM 227. — Organic Chemistry I (total enrollment: 285)

• PUBLICATIONS DURING 2007
• TEACHING ASSIGNMENTS DURING 2007

Spring

▷ CHEM 227. — Organic Chemistry I (total enrollment: 278)

Fall

▷ CHEM 228. — Organic Chemistry II (total enrollment: 323)

No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2007

Fall

▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 462)

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

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Toxicology, /2006/
  ▶ Director, Center for Biological Nuclear Magnetic Resonance, Chemistry, //

• SERVICE DURING 2007
  International
  ▶ Committee/Panel: Excellence Initiative - Germany (Member), Study Panel - Deutsche Forschungsgemeinschaft (Member)

  National
  ▶ Editorial/Board: Archives of Biochemistry & Biophysics (Member), Biochemistry (Member), BioOrganic Chemistry (Member)

  University
  ▶ Advisory Board: Gene Technologies Laboratory (Member)
  ▶ Committee/Panel: Research Foundation - Principal Investigator Advisory Committee (Member)

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

  Department
  ▶ Research Group: Mass Spectrometry User Group (Member), NMR User Group (Member)
  ▶ Advisory Board: Protein Chemistry Laboratory (Member)
  ▶ Committee/Panel: External Review Committee (Member), Graduate Admissions and Review Committee (Member), Promotion and Tenure Committee (Member), Space Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 672. — Bioorganic Reaction Mechanisms (total enrollment: 13)
  ▶ CHEM 681. — Seminar (total enrollment: 15)
  ▶ CHEM 691. — Research (total enrollment: 6)

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

  Fall
CHEM 681. — Seminar (total enrollment: 15)
CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2007

Federal
- (REN) Mechanism and Control of Urea Biosynthesis, Department of Health and Human Services
- Deciphering Enzyme Specificity, National Institutes of Health, coworkers: Y. Li (P), D. Xiang (P), C. Xu (P), J. Cummings (G), E. Ghanem (G), R. Hall (G), L. Lund (G), R. Marti-Arbona (G), T. Nguyen (G), C. Tsai (G), L. Williams (G)
- Enzymatic Detoxification of Organophosphate Nerve Agents, National Institutes of Health, coworkers: Y. Li (P), D. Xiang (P), C. Xu (P), J. Cummings (G), E. Ghanem (G), R. Hall (G), L. Lund (G), R. Marti-Arbona (G), T. Nguyen (G), C. Tsai (G), L. Williams (G)
- Graduate Training in Molecular Biophysics, National Institutes of Health
- Minority Predoctoral Fellowship Program, National Institutes of Health
- (REN) Porphyrin and Corrinoid Biosynthesis, National Institutes of Health

Private
- (REN) Investigations of Enzyme Reaction Mechanisms, The Robert A. Welch Foundation, coworkers: Y. Li (P), D. Xiang (P), C. Xu (P), J. Cummings (G), E. Ghanem (G), R. Hall (G), L. Lund (G), R. Marti-Arbona (G), T. Nguyen (G), C. Tsai (G), L. Williams (G)

• PUBLICATIONS DURING 2007
- Li, Y.; Raushel, F.M. (2007) Differentiation of Chiral Phosphorus Enantiomers by P-31 and H-1 NMR Spectroscopy using Amino Acid Derivatives as Chemical Solvating Agents


• SERVICE DURING 2007

National
  ▶ Event: NSF Workshop on Organic Synthesis (Organizer)
  ▶ Editorial/Board: NSF CAREER (Reviewer)

Department
  ▶ Committee/Panel: Executive Committee (Member), P&T Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 43)
  ▶ CHEM 691. — Research (total enrollment: 14)

Summer
  ▶ CHEM 691. — Research (total enrollment: 13)

Fall
  ▶ CHEM 227. — Organic Chemistry I (total enrollment: 51)
  ▶ CHEM 691. — Research (total enrollment: 13)

• RESEARCH PROJECTS DURING 2007

Federal
  ▶ Novel Anticancer Fatty Acid Synthase Inhibitors, National Cancer Institute, coworkers: G. Ma (P), D. Castillo (G), Y. Oyola (G)
  ▶ Center on Proteolytic Pathways, National Center for Research Resources, coworkers: C. Zhou (P), S. Chamni (G)
  ▶ Beta-Lactones: Bioactive Targets and Vehicles for Synthesis, National Institute of General Medical Sciences, coworkers: W. Zhang (P), A. Matla (G), K. Morris (G), H. Nguyen (G)
  ▶ Synthetic/Mechanistic Studies of Bioactive Marine Agents, National Institute of General Medical Sciences, coworkers: S. Peddibhotla (P), L. Tang (P), K. Kong (G), F. Torres (G), S. Wang (G), M. Zancanella (G)
  ▶ Novel Asymmetric Routes to 2-Oxetanones and Their Applications, National Science Foundation, coworkers: S. Cho (G), C. Lee (G), V. Purohit (G)

Private
  ▶ Bioactive Natural Product Total Synthesis and Derivatization Studies Including the Use of β-Lactones (3-Oxetanones), The Robert A. Welch Foundation, coworkers: R. Duffy (G), G. Liu (G), T. Mitchell (G)
  ▶ Translocation of Virulence Proteins, Cystic Fibrosis Foundation, coworkers: S. Chammi (G)
PRESENTATIONS DURING 2007

- “Toward a Systematized Approach of Applying the Information-Rich Content of Natural Products of Chemical Genomics,” Manapro XII, Marine Natural Products, Queenstown, New Zealand, February, 2007. (Individual)
- “Synthetic Strategies for Natural Products Premised on Biosynthetic Proposals,” Biomimetic Natural Product Symposia (ACS National Meeting), Chicago, IL, March, 2007. (Individual)
- “Total Synthesis of Oroidin Alkaloids and Salinosporamide,” University of Alabama, Department of Chemistry, Tuscaloosa, AL, April, 2007. (Individual)
- “Natural Products as Enduring Forums for Total Synthesis and Methodology Development,” ACS Southwest Regional Meeting, Lubbock, TX, November, 2007. (Individual)

PUBLICATIONS DURING 2007

for a Biosynthetic Pathway? *Organic Letters*, vol. 9, 2143-2146.


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Graduate Advisor, Chemistry Graduate Advising Office, Chemistry, [2002]
  ▶ Associate Department Head, Chemistry, [1981]

• AWARDS DURING 2007
  College
  ▶ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2007
  University
  ▶ Committee/Panel: Laboratory Safety Sub-Committee (Member)
  College
  ▶ Committee/Panel: Graduate Instruction Committee (Member), Technology-Mediated Instruction Committee (Member)
  Department
  ▶ Advisory Board: IUCCP Advisory Board (Member)
  ▶ Committee/Panel: Colloquium and Seminar Committee (Member), Graduate Admissions and Review Committee (Member), Graduate Curriculum Committee (Member), Internal Awards Committee (Member), Safety Committee (Chair), Space Committee (Chair), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 102.(H) — Fundamentals of Chemistry II (total enrollment: 33)
  ▶ CHEM 691. — Research (total enrollment: 8)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 5)
  Fall
  ▶ CHEM 101(H) — Fundamentals of Chemistry I (total enrollment: 30)
  ▶ CHEM 111.(H) — Fundamentals of Chemistry Laboratory I (total enrollment: 30)
  ▶ CHEM 691. — Research (total enrollment: 27)
• SERVICE DURING 2007

University
▷ Advisory Board: Study Abroad Scholarship Review Committee (Member)
▷ Committee/Panel: National Scholarship Committee (Member)

Department
▷ Service Position: Quantitative Analysis Laboratory Program (Coordinator)
▷ Committee/Panel: Post-Tenure Review Committee (Chair), Search Committee for Nuclear Chemistry Chair (Member), Undergraduate Awards Committee (Member)

No report received from faculty member.
• CHAIRS/PROFESSORSHIPS

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Biotechnology, [2006]
  ▶ Department Head, Chemistry, [2006]

• SERVICE DURING 2007

  National
  ▶ Event: NIH Special Emphasis Panel/Scientific Review Group 2005/05 ZRG1 BCMB-M (10) (B), Washington, DC, 9-11 (Member), NIH Teleconference Reviewer for the October 27th NIH Study Section (Reviewer), U.S. Department of Energy Environmental Molecular Sciences Laboratory Review (Reviewer)
  ▶ Editorial/Board: Department of Energy (2 site visits, PNNL & ORNL) (Reviewer), National Science Foundation, National Institutes of Health (Review: Proposals)
  ▶ Committee/Panel: U.S. Department of Energy Oak Ridge National Lab (Review Panel)

  University
  ▶ Research Group: Council of Principal Investigators (Chair elect)
  ▶ Committee/Panel: Transportation Construction Committee (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member)

  Department
  ▶ Advisory Board: Industry University Cooperative Chemistry Program (Representative)
  ▶ Committee/Panel: Chemistry Department Executive Committee (Member), Executive Committee (Member), Graduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ CHEM 689. — Special Topics in (total enrollment: 7)
  ▶ CHEM 691. — Research (total enrollment: 12)

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

  Fall
  ▶ CHEM 691. — Research (total enrollment: 12)
• **RESEARCH PROJECTS DURING 2007**

**Federal**
- (REN) Development of Laser-Ion Beam Photodissociation Methods, *Department of Energy*
- (REN) Nanoparticle Laser Desorption Ionization and IM-MS Applied Structural Mass Spectrometry, *Department of Energy*
- Center for Environmental Rural Health, *National Institute for Environmental Health Sciences*
- Graduate Training in Molecular Biophysics, *National Institutes of Health*
- Ion Mobility Mass Spectrometry for Proteomics, *National Institutes of Health*
- Development of Advanced Structural Techniques for Gas-Phase Ions, *National Science Foundation*

**Private**
- (REN) Studies of the Structure of Gas-Phase Peptide Ions, *The Robert A. Welch Foundation*

**Industrial**
- Photofragmentation MS of Ion Mobility Separated Peptides, *Ionwerks, Inc.*

• **PRESENTATIONS DURING 2007**


• **PUBLICATIONS DURING 2007**


JAMES C. SACCHETTINI

PROFESSOR (J) (979) 862-7637
CHEM sacchett@tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, Center of Structural Biology, Chemistry,

• SERVICE DURING 2007
  National
  ▶ Committee/Panel: NIH Biological Chemistry & Macromolecular Biophysics Integrated
    Review Group (Member), Scientific Advisory Committee Bill & Melinda Gates Grand
    Challenges in Global Health Project ‘Drugs for Treatment of Latent Tuberculosis Infection’
    (Member), Scientific Advisory Committee NIH-NIAID TB TARGET Panel (Member)
  University
  ▶ Committee/Panel: Center of Structural Biology, Institute of Biosciences and Technology
    (Director), Intellectual Property and Commercialization Working Committee (Member),
    Interdisciplinary Lifesciences Building Scientific Advisors Committee (Member), TB Structural
    Genomics Consortium (Director)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 691. — Research (total enrollment: 9)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 7)
  Fall
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 6)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ A Novel Endoribonuclease of the SARS Virus, National Institutes of Health
  ▶ Inh-Induced Lysis of the HIV Ol M. tuberculosis, National Institutes of Health
  ▶ Novel Drug Discovery Against P. falciparum ENR, National Institutes of Health
  ▶ Structural Genomics of Persistence Targets from Mycobacterium Tuberculosis, National
    Institutes of Health
  ▶ Tethered Domains as Regulatory Elements, National Institutes of Health
  ▶ Acquisition of a High Resolution Data Collection System, National Science Foundation
  Private
  ▶ Integrated Methods for Tuberculosis Drug Discovery, Bill & Melinda Gates Foundation

SEC. 6.1 PROFESSIONAL ACTIVITIES 281
Real Time Optical Imaging Solutions for Tuberculosis Infections, Bill & Melinda Gates Foundation

Chemical Validation of Malate Synthase as a Drug Target for Persistent TB, Global Alliance for TB Drug Development

Industrial

Research Program, GlaxoSmithKline

Presentations During 2007

- NIH-NIAID Target Contracts Meeting, College Station, TX, 2007. (Individual)
- University of Pittsburgh, Molecular Genetics and Biochemistry Seminar Series, Pittsburgh, PA, 2007. (Individual)

Publications During 2007


2007 Chemistry Annual Report
• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 227. — Organic Chemistry I (total enrollment: 162)

Fall
▷ CHEM 227. — Organic Chemistry I (total enrollment: 179)
▷ CHEM 234. — Organic Synthesis and Analysis IV (total enrollment: 13)
• **ADDITIONAL UNIVERSITY TITLES HELD DURING 2007**
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• **SERVICE DURING 2007**
  State
  ▶ Committee/Panel: Materials Science and Engineering Ph.D. Program (Executive Committee)

  University
  ▶ Service Position: Texas A&M University, Chapter of Phi Lambda Upsilon (Advisor)
  ▶ Committee/Panel: Electron Microscopy Advisory Committee of the Microscopy and Imaging Center (Member)

  Department
  ▶ Event: Inorganic Student Research Seminars (Coordinator)
  ▶ Committee/Panel: Center for Integrated Microchemical Systems (Member)

• **TEACHING ASSIGNMENTS DURING 2007**
  Spring
  ▶ CHEM 691. — Research (total enrollment: 10)

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

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

• **RESEARCH PROJECTS DURING 2007**
  Federal
  ▶ Low-Temperature Synthesis Routes to Intermetallic Superconductors, *Department of Energy*, coworkers: F. Dawood (G), T. Delgado (G), N. Henderson (G), B. Leonard (G), T. Phon (G)
  ▶ Low-Temperature Solution Synthesis of Intermetallic Nanomaterials, *National Science Foundation*, coworkers: J. Baner (G), N. Chou (G), F. Dawood (G), A. Henkes (G), T. Ewers (U), N. Fox (U), J. Karnes (U), J. Knight (U), A. Ofczarzak (U)

  State
  ▶ Chemical Synthesis of Nanostructured Shape Memory Alloys, *Texas Higher Education Coordinating Board*, coworkers: R. Cable (G), F. Dawood (G), T. Ewers (G), N. Henderson
Private

▷ New Structures of Old Elements: Low-Temperature Solution Routes to Metastable Poly-
morphs, American Chemical Society, coworkers: J. Bauer (G), M. Sanders (G), Z. Schaefer
(G)
▷ A New Polymer-Assisted Galvanic Approach to Hollow Multi-Metal Nanospheres for
Biomedical, Plasmonic, and Fuel Cell Applications, Beckman Foundation, coworkers: Q.
Liu (P), N. Chan (G), Y. Vasquez (G)
▷ Synthesis of Exotic Solid-State Materials with Nanoscale Geometric Confinement, The
Robert A. Welch Foundation, coworkers: A. Sra (P), B. Leonard (G), E. Hendrickson (U)

Industrial

▷ Young Professor Grant, DuPont, Inc.

• PUBLICATIONS DURING 2007

▷ Cable, R.E.; Schaak, R.E. (2007) Solution Synthesis of Nanocrystalline M-Zn (M = Pd, Au,
Cu) Intermetallic Compounds via Chemical Conversion of Metal Nanoparticle Precursors
into Intermetallic M-Sn (M = Fe, Co, Ni, Pd) Nanocrystals Journal of the American
Chemical Society, vol. 129, 7339-7345.
▷ Dawood, F.; Leonard, B.M.; Schaak, R.E. (2007) Oxidative Transformation of Intermetal-
llic Nanoparticles: An Alternative Pathway to Metal/Oxide Nanocomposites, Textured
Ceramics, and Nanocrystalline Multimetal Oxides Chemistry of Materials, vol. 19,
4545-4550.
thesis of SHG-Active Eu2Ti2O7 with a [110] Layered Perovskite Structure: Suppressing
Pyrochlore Formation by Oxidation of Perovskite-Type EuTiO3 Chemistry of Materials,
vol. 19, 1883-1885.
the Low-Temperature Conversion of Metals into Metal Phosphides Chemistry of Materials,
vol. 19, 4234-4242.
General Strategy for the Synthesis of Metal Phosphide Nanocrystals Journal of the Amer-

On leave.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, Elemental Analysis Laboratory, Chemistry,
  ▶ Director, Center for Chemical Characterization and Analysis (CCCA), Chemistry,

• SERVICE DURING 2007
  Department
  ▶ Research Group: X-Ray Diffraction User Group (Member), Center for Chemical Characterization and Analysis (Director), Mass Spectrometry User Group (Member), NMR User Group (Member)
  ▶ Advisory Board: Industry University Cooperative Chemistry Program (Representative)
  ▶ Committee/Panel: Trace Elemental Analysis User Group (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 691. — Research (total enrollment: 4)
  Summer
  ▶ CHEM 491. — Research (total enrollment: 1)
  ▶ CHEM 691. — Research (total enrollment: 4)
  Fall
  ▶ CHEM 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Purchase of a Computer Cluster for Theoretical, Computational, and Cyber-Enabled Chemistry, National Science Foundation
  ▶ (REN) Secondary Ion Mass Spectrometry with Massive Projectiles, National Science Foundation, coworkers: C. Guillermier (P), S. Verkhoturov (P), L. Chen (G), K. Deal (G), M. Eller (G), N. Hawbaker (G), Z. Li (G), V. Pinnick (G), R. Sidhartharaja (G)

  Private
  ▶ (REN) Studies in Surface Ionization, The Robert A. Welch Foundation, coworkers: C. Guillermier (P), S. Verkhoturov (P), L. Chen (G), K. Deal (G), M. Eller (G), N. Hawbaker (G), Z. Li (G), V. Pinnick (G), R. Sidhartharaja (G)

• PRESENTATIONS DURING 2007
  ▶ “Massive Projectiles for the Characterization of Surfaces,” 44th IUVSTA Workshop, April, 2007. (Invited)


“SIMS with \( \text{Au}_{400} \) and \( \text{C}_{60} \) as Projectiles,” 20th Annual Workshop on Secondary Ion Mass Spectrometry, May, 2007. (Individual)

• PUBLICATIONS DURING 2007
A. IAN SCOTT

DISTINGUISHED PROFESSOR (979) 845-3243
CHEM-Biological Chemistry scott@mail.chem.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▶ Robert A. Welch Foundation Chair and Derek Barton Professor in Chemistry /2001/

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Distinguished Professor, Biochemistry, /1981/

• SERVICE DURING 2007

  International
  ▶ Committee/Panel: IUPAC Committee Bioorganic Chemistry (Member)

  National
  ▶ Editorial/Board: Bio-organic Chemistry (Member), Chemistry and Biology (Member), Study Section on Natural Products, NIH (Panel), Tetrahedron Publications (Member)
  ▶ Committee/Panel: ACS National Prize (Member)

  Department
  ▶ Committee/Panel: Biological Chemistry Faculty Search Committee (Member), Faculty Awards Committee (Member)

• PUBLICATIONS DURING 2007
  ▶ Kaczmarek, K.; Williams, H.J.; Coast, G.M.; Scott, A.I.; Zabrocki, J.; Nachman, R.J. (2007) Comparison of Insect Kinin Analogs with Cis-Peptide Bond Motif 4-

Deceased 04/18/2007.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]
  ▶ Director, First Year Chemistry Program, Chemistry, [2006]

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: Molecular Pharmacology Special Issue (Editor)
  ▶ Committee/Panel: NIH SBCA Study Section (Review Panel)
  Department
  ▶ Advisory Board: Industry University Cooperative Chemistry Program (IUCCP) (Representative)
  ▶ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 295)
  ▶ CHEM 242. — Elementary Organic Chemistry Laboratory (total enrollment: 39)
  ▶ CHEM 285. — Directed Studies (total enrollment: 4)
  ▶ CHEM 485. — Directed Studies (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 8)
  ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 24)
  Summer
  ▶ CHEM 491. — Research (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 8)
  Fall
  ▶ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 229)
  ▶ CHEM 116. — Molecular Science for Citizens Laboratory (total enrollment: 63)
  ▶ CHEM 242. — Elementary Organic Chemistry Laboratory (total enrollment: 46)
  ▶ CHEM 691. — Research (total enrollment: 5)
  ▶ CHEM 697. — Methods in Teaching Chemistry Laboratory (total enrollment: 19)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Molecular Recognition in Dendrimers Based on Melamine, National Institutes of Health
Anchoring Organic Chemistry in Broad Context, *National Science Foundation*

Track 1, GK-12: Building Understanding Through Research Partnerships and IT, *National Science Foundation*

### PRESENTATIONS DURING 2007


### PUBLICATIONS DURING 2007

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

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, Nuclear Magnetic Resonance Laboratory (NMR), Chemistry, []

• SERVICE DURING 2007
  National
    ▶ Editorial/Board: *The Journal of Organic Chemistry* (Associate Editor)
  College
    ▶ Committee/Panel: College Quality Enhancement Plan Council (Member)
  Department
    ▶ Research Group: Computer User Group (Member), NMR User Group (Chair)
    ▶ Committee/Panel: CBI Advertising Committee (Chair), Promotion and Tenure Committee (Member), Undergraduate Curriculum Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
    ▶ CHEM 238. — *Organic Chemistry Laboratory* (total enrollment: 59)
    ▶ CHEM 491. — *Research* (total enrollment: 2)
    ▶ CHEM 647. — *Spectra of Organic Compounds* (total enrollment: 9)
    ▶ CHEM 691. — *Research* (total enrollment: 6)
  Summer
    ▶ CHEM 491. — *Research* (total enrollment: 2)
    ▶ CHEM 691. — *Research* (total enrollment: 7)
  Fall
    ▶ CHEM 491. — *Research* (total enrollment: 2)
    ▶ CHEM 646. — *Organic Chemistry* (total enrollment: 26)
    ▶ CHEM 691. — *Research* (total enrollment: 7)

• RESEARCH PROJECTS DURING 2007
  Federal
    ▶ New Concepts in Organic Selectivity and Mechanisms, *National Institutes of Health*, coworkers: X. Bogle (G), S. Carroll (G), Z. Chen (G), C. Christian (G), S. Collins (G), J. Hirschi (G), O. James (G), A. Morales (G), Y. Oyola (G), R. Plata (G), L. Quijan (G), M. Vetticatt (G), W. Foley (U), E. West (U)
Purchase of a Computer Cluster for Theoretical, Computational, and Cyber-Enabled Chemistry, National Science Foundation

Private

Dynamic Isotope Effects, The Robert A. Welch Foundation, coworkers: J. Besinaiz (G), K. Kelly (G), S. Fergeson (U)

PRESENTATIONS DURING 2007


“New Effects of Non-statistical Recrossing, Bifurcations, and ‘Hot’ Intermediates on Isotope Effects and Selectivity,” Isotopes 2007, Benicassim, Spain, May, 2007.( Invited)


“Failure of Transition State Theory in the Hydroboration of Alkenes with BH3,” 63rd Southwest Regional American Chemical Society Meeting, Lubbock, TX, November, 2007.( Individual)

PUBLICATIONS DURING 2007


• **TEACHING ASSIGNMENTS DURING 2007**

**Spring**

- CHEM 681. — *Seminar* (total enrollment: 15)
- CHEM 689. — *Special Topics in* (total enrollment: 8)
- CHEM 691. — *Research* (total enrollment: 1)

**Summer**

- CHEM 691. — *Research* (total enrollment: 3)

**Fall**

- CHEM 601. — *Analytical Chemistry I* (total enrollment: 16)
- CHEM 691. — *Research* (total enrollment: 3)

• **RESEARCH PROJECTS DURING 2007**

**Private**

- Real Time Investigation of the Dynamic Structural Changes of Metal Oxide Nanocrystals Using Time Resolved X-ray Spectroscopy, *American Chemical Society*
- Real Time Investigation of the Dynamic Structural Changes of Metal Oxide Nanocrystals using Time-Resolved X-ray Spectroscopy, *American Chemical Society*
- Ultrafast X-ray Absorption Studies of Structural Transformations in Semiconductor Nanocrystals, *The Robert A. Welch Foundation*, coworkers: H. Son (P), T. Chen (G), C. Hsia (G)

• **PRESENTATIONS DURING 2007**

- “Synthesis of Amorphous Palladium Selenide Nanoparticles via Cation Exchange and Studies of Their Phase Transformation,” Best Little Nano Conference in Texas, Austin, TX, April, 2007. (Individual)

• **PUBLICATIONS DURING 2007**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]/

• SERVICE DURING 2007
  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 2007
  Spring
  ▶ CHEM 602. — Analytical Chemistry II (total enrollment: 11)
  ▶ CHEM 691. — Research (total enrollment: 5)

  Summer
  ▶ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 78)
  ▶ CHEM 285. — Directed Studies (total enrollment: 2)
  ▶ CHEM 691. — Research (total enrollment: 5)

  Fall
  ▶ CHEM 107. — General Chemistry for Engineering Students (total enrollment: 315)
  ▶ CHEM 415. — Analytical Chemistry (total enrollment: 27)
  ▶ CHEM 681. — Seminar (total enrollment: 19)
  ▶ CHEM 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2007
  Private
  ▶ (REN) Surface Coordination Chemistry of Noble-Metal Electrodes, The Robert A. Welch Foundation, coworkers: J. Baricuatro (G), K. Cummins (G), M. Hossain (G), P. Kar (G), D. Li (G), J. Sanabria-Chinchilla (G)
(REN) Surface Structure of Nanostructured Noble-Metal Electrodes, *The Robert A. Welch Foundation*, coworkers: J. Baricuatro (G), X. Chen (G), J. Cruz (G), M. Hossain (G), Y. Park (G), J. Sanabria-Chinchilla (G)

- **PUBLICATIONS DURING 2007**

*No report received from faculty member.*
ELIZABETH SORIAGA

SERVICE DURING 2007

Department
▷ Committee/Panel: Physical Chemistry Laboratory Development Committee (Member)

TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 317. — Quantitative Analysis (total enrollment: 48)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 17)
▷ CHEM 325. — Physical Chemistry Laboratory I (total enrollment: 33)

Summer
▷ CHEM 316. — Quantitative Analysis (total enrollment: 18)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 15)

Fall
▷ CHEM 316. — Quantitative Analysis (total enrollment: 139)
▷ CHEM 318. — Quantitative Analysis Laboratory (total enrollment: 106)

No report received from faculty member.
EARLE G. STONE

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CHEM
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stone@mail.chem.tamu.edu

TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 261)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 480)
▷ CHEM 485. — Directed Studies (total enrollment: 2)

No report received from faculty member.
MEGAN TICHY
LECTURER
CHEM
(979) 862-1221
mtichy@mail.chem.tamu.edu

- AWARDS DURING 2007
  University
    ▶ Teaching Award, Corps of Cadets

- TEACHING ASSIGNMENTS DURING 2007
  Spring
    ▶ CHEM 228. — Organic Chemistry II (total enrollment: 273)
    ▶ CHEM 238 — Organic Chemistry Laboratory (total enrollment: 288)
  Summer
    ▶ CHEM 228. — Organic Chemistry II (total enrollment: 98)
    ▶ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 47)
  Fall
    ▶ CHEM 227. — Organic Chemistry I (total enrollment: 310)
    ▶ CHEM 237 — Organic Chemistry Laboratory (total enrollment: 288)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Undergraduate Advisor, Chemistry Undergraduate Advising Office, Chemistry, \[\]

• SERVICE DURING 2007
  University
  ▶ Service Position: OPAS Board of Directors (Member), Student Affiliate Chapter of the American Chemical Society (Faculty Advisor)
  Department
  ▶ Service Position: Undergraduate Studies (Associate Coordinator)
  ▶ Committee/Panel: Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 228. — Organic Chemistry II (total enrollment: 184)
  Fall
  ▶ CHEM 100. — Horizons in Chemistry (total enrollment: 99)
  ▶ CHEM 227. — Organic Chemistry I (total enrollment: 207)
GYULA VIGH

PROFESSOR (979) 845-2456
CHEM-Analytical Chemistry vigh@mail.chem.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▶ Gradipore Chair in Separation Science in Chemistry [2001]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• AWARDS DURING 2007
  College
  ▶ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: Special Issue of *Electrophoresis* (Editor), *Electrophoresis* (Member), *Journal of Chromatography* (Member), *Journal of Separation Science* (Member)
  Department
  ▶ Committee/Panel: Graduate Awards Committee (Member), Graduate Curriculum Committee (Chair), Graduate Curriculum Committee (Member), Library Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 318. — *Quantitative Analysis Laboratory* (total enrollment: 19)
  ▶ CHEM 691. — *Research* (total enrollment: 5)
  Summer
  ▶ CHEM 691. — *Research* (total enrollment: 7)
  Fall
  ▶ CHEM 691. — *Research* (total enrollment: 3)

• PUBLICATIONS DURING 2007
  ▶ Shave, E.; Vigh, G. (2007) The Biflow: An Instrument for Transfer-Loop Mediated, Continuous, Preparative-Scale Isoelectric Trapping Separations *Electrophoresis*, vol. 28,


*No report received from faculty member.*
• SERVICE DURING 2007

National

University
▷ Event: ABRCMS Conference for Graduate Recruiting (Attendee)

Department
▷ Committee/Panel: CBI Diversity Committee (Chair), Faculty Recruiting for Organic Divisions and Biological Divisions (Participant)

• TEACHING ASSIGNMENTS DURING 2007

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

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

Fall
▷ CHEM 231. — Techniques of Organic Chemistry (total enrollment: 59)
▷ CHEM 691. — Research (total enrollment: 8)

• RESEARCH PROJECTS DURING 2007

Private
▷ Probing the Biosynthesis of the Anti-Tumor Agent Azinomycin B, *American Cancer Society*, coworkers: H. Agbo (P), J. Foulke (P), G. Kelly (P), J. Pearson (P), V. Sharma (P)
▷ Research Corporation Innovation Award, *Research Corporation*
▷ Investigation of the Biological Roles of 1,2,4-Trisubstituted and 1,4-Disubstituted Cyclohexadienes, *The Robert A. Welch Foundation*, coworkers: B. Bench (G), V. Suarez (G), M. Nobata (U)

• PRESENTATIONS DURING 2007

“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” University of Texas, College of Pharmacy, Austin, TX, February, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” University of Utah, Department of Chemistry, Salt Lake City, UT, February, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” Rice University, Department of Chemistry, Houston, TX, March, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” University of Wisconsin, School of Pharmacy, Madison, WI, March, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” Brown University, Department of Chemistry, Providence, RI, April, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” Cornell University, Department of Chemistry and Chemical Biology, Ithaca, NY, April, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” Penn State University, Department of Chemistry, University Park, PA, April, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” The Johns Hopkins University Medical School, Department of Pharmacology and Molecular Sciences, Baltimore, MD, April, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” University of California, Department of Chemistry, Davis, CA, April, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” University of California, Department of Molecular Biology and Biochemistry, Irvine, CA, April, 2007.  
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” The Scripps Research Institute, Department of Chemistry, La Jolla, CA, September, 2007.
“Inspiration from Nature: Natural Products in Drug Discovery Efforts,” University of Illinois, Department of Chemistry, Champaign-Urbana, IL, September, 2007. (Individual)

**PUBLICATIONS DURING 2007**

• SERVICE DURING 2007
  College
  ▶ Committee/Panel: Tenure and Promotion Advisory Committee (Member)
  Department
  ▶ Committee/Panel: Colloquium and Seminar Committee (Chair), Faculty Awards Committee (Chair), Space Committee (Member), Undergraduate Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 324. — Physical Chemistry (total enrollment: 34)
  Summer
  ▶ CHEM 691. — Research (total enrollment: 1)
  Fall
  ▶ CHEM 101.(H) — Fundamentals of Chemistry I (total enrollment: 31)
  ▶ CHEM 111(H) — Fundamentals of Chemistry Laboratory I (total enrollment: 28)
  ▶ CHEM 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Private
  ▶ (REN) Excitation of Atoms and Molecules in Collisions with Fast, Highly-Charged Ions, The Robert A. Welch Foundation, coworkers: V. Horvat (P), Y. Peng (G)
• CHAIRS/PROFESSORSHIPS
  ▶ Robert A. Welch Endowed Chair in Chemistry at the Institute of Biosciences and Technology [1990]

• SERVICE DURING 2007

  International
  ▶ Service Position: Served on scientific, academic, governmental, and industrial affairs in foreign countries including: Australia, Brazil, Canada, Costa Rica, Czechoslovakia, Denmark, England, France, Germany, Italy, Japan, Mexico, The Netherlands, Norway, Poland, Puerto Rico, South Korea, Sweden, and Switzerland (Foreign Member)
  ▶ Professional Affiliation: Poland-United States Science Foundation (Co-Founder), Polish Academy of Sciences (Foreign Member)
  ▶ Event: The Japanese Biochemical Society in Kyoto, Japan (President Elect), The Korean Biochemical Society Meeting in Seoul, Korea (President Elect)

  National
  ▶ Professional Affiliation: American Society for Biochemistry and Molecular Biology (President), Federation of American Societies for Experimental Biology (President)
  ▶ Event: Coalition of American Scientific Society Presidents (Organizer)
  ▶ Advisory Board: Helen Keller Eye Research Foundation (Member)
  ▶ Editorial/Board: ASBMB Today (Member), Campaign for Medical Research, Board of Directors (Member), CHEMTRACTS-Biochemistry and Molecular Biology (Member), DNA Structure, Genomic Rearrangements, and Human Disease (Co-Organizer), International Bulletin of Molecular Medicine (Member), NIH Study Section Committees (Panel), In Vitro Review for Special Issue of the Journal, DNA Repair (Reviewer), Journal of Biochemistry and Molecular Biology (Advisor), Journal of Biochemistry and Molecular Biology (Guest Associate Editor), Journal of Experimental Therapeutics and Oncology (Associate Editor)
  ▶ Committee/Panel: American Academy of Microbiology , American Society of Microbiology (Fellow), American Society for Biochemistry and Molecular Biology Centennial Organization Committee (Member), American Society for Biochemistry and Molecular Biology Council (Member), American Society for Biochemistry and Molecular Biology Finance and Marketing Committees (Member), American Society for Biochemistry and Molecular Biology Membership Task Force (Member), American Society for Biochemistry and Molecular Biology Publications Committee (Member), American Society for Biochemistry and Molecular Biology, Search Committee for New Executive Officer (Member), Damon Ruyon-Walter Winchell Cancer Research Fund, National Steering Committee of Former Fellows (Member), Federation of American Societies for Experimental Biology Executive Director Search Committee (Member), Federation of American Societies for Experimental Biology Finance and Science Policy Committee (Member), Federation of American Societies for Experimental Biology Location Committee (Member), National Institute of Environmental Health Sciences Directorship Search Committee (Member), National Institutes
of Environmental Health Sciences, External Review Committee, Division of Extramural Research and Training (Member), National Institutes of Environmental Health Sciences, National Advisory Environmental Health Science Council (Member), National Institutes of Health, Site Visit Committee (Member), NIH, National Institute of Environmental Health Science Scientific Advisory Council (Member), Nominations Committee, American Society for Biochemistry and Molecular Biology (ASBMB) (Elected Member), U.S. National Committee, International Union of Biochemistry and Molecular Biology (Member), Molecular and Cellular Proteomics (Founding Associate Editor)

State
▶ Advisory Board: Baylor College Of Medicine, External Advisory Board, Specific Progress of Research Excellence in Prostate Cancer (Member)
▶ Committee/Panel: Cullen College of Engineering, University of Houston, Engineering Leadership Board (Member)

• RESEARCH PROJECTS DURING 2007

International
▶ (REN) DNA Triplexes in the Etiology of Friederich’s Ataxia, Friederich’s Ataxia Research Alliance

• PUBLICATIONS DURING 2007

No report received from faculty member.
VICKIE M. WILLIAMSON

SENIOR LECTURER (979) 845-4634
CHEM-First Year Chemistry williamson@mail.chem.tamu.edu

- SERVICE DURING 2007

National
▷ Event: Biennial Conference on Chemical Education (Exhibits Chair)
▷ Editorial/Board: Chemical Education Research Section, Journal of Chemical Education (Feature Editor), Journal for Science Education and Technology (Member), Journal of Chemical Education (Associate Editor), School Science and Mathematics Journal (Assistant Advisor)
▷ Committee/Panel: ACS General Chemistry Blended Exam Committee (Member), ACS General Chemistry Conceptual Exam Chairperson (Chair), Awards Committee Member, School Science and Mathematics Association (Member)

State
▷ Committee/Panel: Region V, Associated Chemistry Teachers of Texas (Alternate Director)

- TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 102. — Fundamentals of Chemistry II (total enrollment: 616)
▷ CHEM 685. — Directed Studies (total enrollment: 3)

Fall
▷ CHEM 101. — Fundamentals of Chemistry I (total enrollment: 492)

- PRESENTATIONS DURING 2007

▷ “Feedback and Attitude Study of Online Web-Based Learning (OWL) in First Semester General Chemistry,” 233rd National Meeting of the American Chemical Society, Chicago, IL, March, 2007. (Poster Individual)
▷ “Feedback and Attitude Study of Online Web-Based Learning (OWL) in First Semester General Chemistry,” 234th National Meeting of the American Chemical Society, Boston, MA, August, 2007. (Individual)

- PUBLICATIONS DURING 2007

TEACHING ASSIGNMENTS DURING 2007

Fall
▷ CHEM 647. — Spectra of Organic Compounds (total enrollment: 22)

PRESENTATIONS DURING 2007
▷ “A Tale of Two Molecules: From Natural Products to Kinase Inhibitors,” Department of Chemistry, Northwestern Normal University, Lanzhou, China, June, 2007. (Invited)

PUBLICATIONS DURING 2007

Faculty member hired 08/01/2007
• SERVICE DURING 2007

University
▷ Service Position: Chaper of the Brazos Valley Coalition Against the War (Faculty Advisor), Texas A&M University (ALLY)

Department
▷ Event: XXIII Southwest Theoretical Chemistry Conference (Co-Organizer)
▷ Committee/Panel: Computer Committee (Member), Information and Communications Technology Committee (Member), Phi Beta Kappa (Vice President)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 322. — Physical Chemistry for Engineers (total enrollment: 13)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 1)

Summer
▷ CHEM 323. — Physical Chemistry (total enrollment: 18)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 1)

Fall
▷ CHEM 323 — Physical Chemistry (total enrollment: 24)
▷ CHEM 491. — Research (total enrollment: 1)
▷ CHEM 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Purchase of a Computer Cluster for Theoretical, Computational, and Cyber-Enabled Chemistry, National Science Foundation

Private
▷ Electron-Molecule Resonances from Multiconfigurational Self-Consistent Field and Multiconfigurational Electron Propagator Methods with Complex Scaled Hamiltonians, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2007
“Electron-Molecule Resonances from Multiconfigurational Self-Consistent Field and Multiconfigurational Electron Propagator Methods with Complex Scaled Hamiltonians,” University of Chicago, Chicago, IL, August, 2007. (Individual)

“Electron-Molecule Resonances from Multiconfigurational Self-Consistent Field and Multiconfigurational Electron Propagator Methods with Complex Scaled Hamiltonians,” XXIII Southwest Theoretical Chemistry Conference, Texas A&M University, College Station, TX, October, 2007. (Individual)

- PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Dean for Diversity, Office of Diversity, College of Science, /2004/

• AWARDS DURING 2007
  University
  ▶ Regents Professor Award, Texas A&M University System

• SERVICE DURING 2007
  National
  ▶ Committee/Panel: APS Division of Nuclear Physics Education Committee (Member), APS Division of Nuclear Physics LRP Town Meeting "Nuclear Astrophysics/Study of Nuclei" Organizing Committee (Member), Gender Equity: Strengthening the Physics Enterprise in Universities and National Laboratories Organizing Committee (Member), Nuclear Science Advisory Committee: Long Range Plan Writing Group (Member), Nuclear Science Advisory Committee: Rare Ion Beam Task Force (Member), Women Encouraging the Competitive Advancement in Nuclear Science (Executive Committee)

  University
  ▶ Service Position: Texas A&M University (Mediator)
  ▶ Committee/Panel: Climate and Diversity (Councilor), Diversity Advisory Committee (Member), Diversity Fellowship Selection Committee (Member), Women’s Faculty Network Steering Committee (Member)

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

  Department
  ▶ Committee/Panel: Faculty Awards Committee for Teaching/Service (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ CHEM 691. — Research (total enrollment: 5)

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

  Fall
  ▶ CHEM 464. — Nuclear and Radiochemistry (total enrollment: 13)
  ▶ CHEM 691. — Research (total enrollment: 4)
• RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: S. Galanopoulos (P), D. Shetty (P), G. Souliotis (P), J. Iglio (G), A. Keksis (G), Z. Kohley (G), L. May (G), S. Soisson (G), B. Stein (G), S. Wuenschel (G), R. Dienhoffer (U), A. Echevernia (U), A. Grup (U), K. Huseman (U), W. Smith (U), J. Sonne (U)
▷ REU Site: Nuclear and Particle Science at Texas A&M University, National Science Foundation, coworkers: R. Dienhoffer (U), L. Dunkelberger (U), C. Harris (U), M. Hernberg (U), C. Knaup (U), P. Nguyen (U), C. Niman (U), R. Patel (U), A. Plunkett (U), S. Rose (U), D. Saenz (U), J. Shen (U)
▷ REU Site: Nuclear Science at the Texas A&M Cyclotron Institute, National Science Foundation, coworkers: R. Dienhoffer (U), L. Dunkelberger (U), C. Harris (U), M. Hernberg (U), C. Knaup (U), P. Nguyen (U), C. Niman (U), R. Patel (U), A. Plunkett (U), S. Rose (U), D. Saenz (U), J. Shen (U)

Private
▷ (REN) The Equation of State for a Two-Component Nuclear System, The Robert A. Welch Foundation, coworkers: S. Galanopoulos (P), D. Shetty (P), G. Souliotis (P), J. Iglio (G), A. Keksis (G), Z. Kohley (G), L. May (G), S. Soisson (G), B. Stein (G), S. Wuenschel (G), R. Dienhoffer (U), A. Echevernia (U), A. Grup (U), K. Huseman (U), W. Smith (U), J. Sonne (U)

• PRESENTATIONS DURING 2007
▷ “From Postdoc to Tenure Track Position,” American Physical Society Meeting, Jacksonville, FL, April, 2007.( Individual)
▷ “Investigating the Nuclear Equation of State through N/Z Equilibration,” VII Latin American Symposium on Nuclear Physics and Applications, Peru, June, 2007.( Individual)
▷ “Changing the Face of Physics,” APS/AAPT New Faculty Workshop, July, 2007.( Individual)
▷ “Women In Science: Why Let Men Have All the Fun?,” Arkansas Tech University, Russellville, AR, October, 2007.( Individual)

• PUBLICATIONS DURING 2007
C: Nuclear Physics, vol. 75, 034602.


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, Center for Atmospheric Chemistry and the Environment, Chemistry, [ ]

• AWARDS DURING 2007
  International
  ▶ Outstanding Overseas Young Researcher Award, China National Science Foundation

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ ATMO 613 — Advanced Atmospheric Chemistry (total enrollment: 6)
  Fall
  ▶ ATMO 363 — Introduction to Atmospheric Chemistry and Air Pollution (total enrollment: 37)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Laboratory Investigation of Mixing States and Optical and Physical Properties of Soot-Containing Aerosol, Department of Energy
  ▶ Field Measurements of Gaseous Inorganic and Organic Compounds during TexASQ II, Environmental Protection Agency
  ▶ Investigation of Urban Aerosols and Their Impact on Cloud Microphysics, National Aeronautics and Space Administration
  ▶ Demonstration of A New Framework for Studying Aerosol Indirect Effect, National Science Foundation
  ▶ Investigation of Urban and Regional Aerosol Formation and Transformation in China and Associated Climate Effects, National Science Foundation

  State
  ▶ An Integrated Experimental and Modeling Study for Improving Mercury Chemical Mechanism in Atmospheric Mercury Models, Texas Air Research Center
  ▶ Improving the Chemical Mechanism of Aromatic Hydrocarbons in Photochemical Modeling, Texas Air Research Center
  ▶ Measurements of NO₃ Using Cavity Cavity-ring Down During TexASQ II, Texas Air Research Center
  ▶ Ground-based Measurements of Volatile Organic Compounds (VOCs) and Nitrogen Reservoir Species during TexAQS II, Texas Commission of Environmental Quality

  Private
Chemical Kinetics and Mechanism of Hydrocarbon Oxidation, *The Robert A. Welch Foundation*

**PRESENTATIONS DURING 2007**

- “A Link Between the Pacific Storm Track and Asian Pollution Aerosols,” AGU Spring Meeting, Acapulco, Mexico, May, 2007. (Individual)
- “Measurements of Methiglyoxal and Aromatic Hydrocarbons During 06 MILAGRO Campaign,” AGU Spring Meeting, Acapulco, Mexico, May, 2007. (Individual)
- “Measurements of Nitric Acid (HNO₃) During 06 MILAGRO Campaign,” AGU Spring Meeting, Acapulco, Mexico, May, 2007. (Individual)

**PUBLICATIONS DURING 2007**


Hays, D.B.; Mandel, R.M.; Zhang, R.C.; Pharis, R.P. (2007) Changes in Levels of Gibberellins, Their Putative Conjugates, and ABA in Zygotic Embryos During Late Matura-
tion and Dry Seed Stages of Brassica Napus cv Topaz Plant Growth Regulation, vol. 52, 181-186.


• PUBLICATIONS DURING 2007

No report received from faculty member.
7. Research Activity, 2007

This section contains information on all funded research activity for the calendar year 2007. 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 2007 = # Days 2007 × Daily Grant Award
## 7.1 Summary of Research Support, 2007

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<td>- <strong>Aberdeen Proving Ground</strong></td>
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<tr>
<td>Gabbai, F.P.</td>
<td>Neutral Bidentate Lewis Acids as Fluoride Probes</td>
<td>10/1/2006</td>
<td>9/30/2008</td>
<td>100,000</td>
<td>0</td>
<td>100,000</td>
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<td>- <strong>Subtotal:</strong> Aberdeen Proving Ground</td>
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<td>100,000</td>
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<td>- <strong>Battelle - Pacific Northwest National Laboratory</strong></td>
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<td>- <strong>Subtotal:</strong> Battelle - Pacific Northwest National Laboratory</td>
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<td>58,984</td>
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<td>- <strong>Department of Defense</strong></td>
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<tr>
<td>Gabbai, F.P.</td>
<td>Project 1, Aim 2-Synthesis of Novel Fluoride Sensing Compounds for the Bioscavenger U54 Center of Excellence Grant from NINDS</td>
<td>10/20/2007</td>
<td>9/19/2009</td>
<td>9,107</td>
<td>1,474</td>
<td>10,581</td>
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<td>- <strong>Department of Energy</strong></td>
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<td>Dunbar, K.R.</td>
<td>Design Principles of Nanomagnets Based on Molecules: Investigation of Spin, Orbital, and Molecular Shape Anisotropies</td>
<td>9/1/2005</td>
<td>8/31/2008</td>
<td>225,000</td>
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<td>Grantee</td>
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<td>Schaak, R.E.</td>
<td>Low-Temperature Synthesis Routes to Intermetallic Superconductors</td>
<td>8/15/2006</td>
<td>8/14/2009</td>
<td>74,674</td>
<td>29,319</td>
<td>103,993</td>
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<td>Zhang, R.</td>
<td>Laboratory Investigation of Mixing States and Optical and Physical Properties of Soot-Containing Aerosol</td>
<td>9/1/2006</td>
<td>8/31/2009</td>
<td>69,749</td>
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<td>69,749</td>
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- **Subtotal:** Department of Energy
  1,629,286  226,585  1,855,871

- **Department of Health and Human Services**

  - Cremer, P.S.  Protein Supported Lipid Bilayers as a Mimic of Native Biological Membranes, (with: P. Cremer, A. Diaz)
    7/1/2005  6/30/2008  4,742  0  4,742

  - Raushel, F.M.  (REN) Mechanism and Control of Urea Biosynthesis

- **Subtotal:** Department of Health and Human Services
  52,370  5,749  58,119

- **Environmental Protection Agency**

  - Zhang, R.  Field Measurements of Gaseous Inorganic and Organic Compounds during TexASQ II
    9/1/2007  8/31/2009  7,814  0  7,814

- **Subtotal:** Environmental Protection Agency
  7,814  0  7,814

- **National Aeronautics and Space Administration**

  - Crooks, R.M.  Institute for Intelligent Bio-Nano Materials for Aerospace Vehicles
    6/1/2002  5/31/2007  1,233  0  1,233

  - Zhang, R.  Investigation of Urban Aerosols and Their Impact on Cloud Microphysics
    9/1/2004  8/31/2007  1,325  0  1,325

- **Subtotal:** National Aeronautics and Space Administration
  2,568  0  2,568

- **National Cancer Institute**

  - Romo, D.  Novel Anticancer Fatty Acid Synthase Inhibitors

SEC. 7.  RESEARCH ACTIVITY  323
<table>
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<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
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<td><strong>National Cancer Institute</strong></td>
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<td><em>Subtotal: National Cancer Institute</em></td>
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<td>Romo, D.</td>
<td>Center on Proteolytic Pathways</td>
<td>8/1/2007</td>
<td>7/31/2008</td>
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<td>6,605</td>
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<td><em>Subtotal: National Center for Research Resources</em></td>
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<td><strong>National Institute for Environmental Health Sciences</strong></td>
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<td><em>Subtotal: National Institute for Environmental Health Sciences</em></td>
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<td>Johnson, A.E.</td>
<td>Protein Trafficking and Dislocation at the ER Membrane</td>
<td>7/1/2004</td>
<td>6/30/2008</td>
<td>245,000</td>
<td>111,475</td>
<td>356,475</td>
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<td>Romo, D.</td>
<td>Synthetic/Mechanistic Studies of Bioactive Marine Agents</td>
<td>8/1/1995</td>
<td>12/31/2008</td>
<td>70,370</td>
<td>22,558</td>
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<td>Burgess, K.</td>
<td>Minority Predoctoral Fellowship Program</td>
<td>9/1/2005</td>
<td>3/31/2007</td>
<td>7,253</td>
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<td>Burgess, K.</td>
<td>Synthetic Molecules in Biological Systems</td>
<td>4/1/2004</td>
<td>2/14/2007</td>
<td>33,448</td>
<td>1,700</td>
<td>35,148</td>
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<td>Cremer, P.S.</td>
<td>Graduate Training in Molecular Biophysics, (with: P. Cremer, V. DeRose, P. Fitzpatrick, M. Hall, A. Holzenburg, A. Johnson, F. Raushel, D. Russell)</td>
<td>7/1/2003</td>
<td>6/30/2008</td>
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<td>DeRose, V.J.</td>
<td>Graduate Training in Molecular Biophysics, (with: P. Cremer, V. DeRose, P. Fitzpatrick, M. Hall, A. Holzenburg, A. Johnson, F. Raushel, D. Russell)</td>
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<td>6/30/2008</td>
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<td>Fitzpatrick, P.</td>
<td>Enzymes of Neurotransmitter Biosynthesis</td>
<td>12/1/2003</td>
<td>5/30/2008</td>
<td>276,955</td>
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<td>Hall, M.B.</td>
<td>Graduate Training in Molecular Biophysics, (with: P. Cremer, V. DeRose, P. Fitzpatrick, M. Hall, A. Holzenburg, A. Johnson, F. Raushel, D. Russell)</td>
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<td>Raushel, F.M.</td>
<td>Graduate Training in Molecular Biophysics, (with: P. Cremer, V. DeRose, P. Fitzpatrick, M. Hall, A. Holzenburg, A. Johnson, F. Raushel, D. Russell)</td>
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<td>6/30/2008</td>
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<td>Raushel, F.M.</td>
<td>Minority Predoctoral Fellowship Program</td>
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<td>58,361</td>
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<td>Raushel, F.M.</td>
<td>(REN) Porphyrin and Corrinoid Biosynthesis, (with: F. Raushel, A. Scott)</td>
<td>2/1/2004</td>
<td>1/31/2009</td>
<td>141,922</td>
<td>61,966</td>
<td>203,888</td>
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<td>Sacchettini, J.C.</td>
<td>A Novel Endoribonuclease of the SARS Virus</td>
<td>9/15/2006</td>
<td>8/31/2007</td>
<td>20,420</td>
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<td>Indirect</td>
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**INDUSTRIAL/CORPORATE AGENCIES**

- **Amer sham Biosciences AB**
  - Burgess, K. | Compound Screening | 12/18/2001 | 12/17/2007 | 4,931   | 0        | 4,931   |
  - * Subtotal: Amer sham Biosciences AB* | 4,931 | 0 | 4,931 |

- **Cummins Corporation**
  - * Subtotal: Cummins Corporation* | 42,077 | 0 | 42,077 |

- **DuPont, Inc.**
  - Schaak, R.E. | Young Professor Grant | 9/1/2006 | 8/31/2009 | 25,000  | 0        | 25,000  |
  - * Subtotal: DuPont, Inc.* | 25,000 | 0 | 25,000 |
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INTERNATIONAL AGENCIES

* Friederich's Ataxia Research Alliance

| Wells, R.D.              | (REN) DNA Triplexes in the Etiology of Friederich’s Ataxia          | 2/1/2004   | 1/31/2007  | 4,669   | 0        | 4,669    |
|                         | * Subsubtotal: Friederich's Ataxia Research Alliance                 |            |            | 4,669   | 0        | 4,669    |
| * Subtotal: INTERNATIONAL AGENCIES |                                                                  |            |            | 4,669   | 0        | 4,669    |

OTHER GOVERNMENT

* Ohio State University

|                         | * Subsubtotal: Ohio State University                                |            |            | 43,655  | 18,231   | 61,886   |
| * Subtotal: OTHER GOVERNMENT |                                                                  |            |            | 43,655  | 18,231   | 61,886   |

PRIVATE/NON-PROFIT AGENCIES

SEC. 7. RESEARCH ACTIVITY 331
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**State Agencies**

- **Texas Air Research Center**

  North, S.W. Measurements of NO$_3$ Using Cavity Cavity-ring Down During TexASQ II, (with: S. North, R. Zhang)  
  6/1/2007 12/31/2007 11,979 0 11,979

  Zhang, R. An Integrated Experimental and Modeling Study for Improving Mercury Chemical Mechanism in Atmospheric Mercury Models, (with: A. Khalizov, R. Zhang)  
  10/1/2007 9/30/2008 5,360 0 5,360

  Zhang, R. Improving the Chemical Mechanism of Aromatic Hydrocarbons in Photochemical Modeling  
  6/1/2007 12/31/2007 27,757 0 27,757

  Zhang, R. Measurements of NO$_3$ Using Cavity Cavity-ring Down During TexASQ II, (with: S. North, R. Zhang)  
  6/1/2007 12/31/2007 11,979 0 11,979

  * Subsubtotal: Texas Air Research Center  
  57,076 0 57,076

- **Texas Commission of Environmental Quality**

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| Schaak, R.E.  | Chemical Synthesis of Nanostructured Shape Memory Alloys | 5/16/2006 | 5/15/2008 | 50,000 | 0        | 50,000 |

* Subtotal: Texas Higher Education Coordinating Board 100,000 0 100,000

* Subtotal: State Agencies 159,309 0 159,309

*** Total: All Grantees 12,500,408 1,658,833 14,359,241
### 7.2 Summary of Individual Support, 2007

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  - The Robert A. Welch Foundation  New Methods for Asymmetric Catalysis  6/1/2006 5/31/2009 50,000 0 50,000

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- **Cremer, P.S.**
  - Department of Health and Human Services  Protein Supported Lipid Bilayers as a Mimic of Native Biological Membranes, (with: P. Cremer, A. Diaz)  7/1/2005 6/30/2008 4,742 0 4,742
  - National Institutes of Health  Graduate Training in Molecular Biophysics, (with: P. Cremer, V. DeRose, P. Fitzpatrick, M. Hall, A. Holzenburg, A. Johnson, F. Raushel, D. Russell)  7/1/2003 6/30/2008 9,068 0 9,068
  - Camille and Henry Dreyfus Foundation  Using Temperature Gradients to Study Polymer and Protein Solubility  5/1/2003 4/30/2008 11,993 0 11,993
  - The Robert A. Welch Foundation  Probing Monolayer and Interfacial Water Structure in the Presence of Anions  6/1/2005 5/31/2008 80,000 0 80,000
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**Hall, M.B.**

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| **Miller, S.A.** | | | | | | |
| **Subtotal Miller, S.A.** | | | | **106,760** | **41,244** | **148,004** |

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* Subtotal Raushel, F.M.                      |                                                                       |         |         | 709,412    | 226,615    | 936,028  |

** Reme, D.                                    |

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* Subtotal Reme, D.                            |                                                                       |         |         | 512,334    | 153,514    | 665,848  |

** Russell, D.H.                               |

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**Subtotal Sacchettini, J.C.**

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- 572,763

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* Schmak, R.E.*

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* Schweikert, E.A.*

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*Zhang, L.*

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<td>National Aeronautics and Space Administration</td>
<td>Investigation of Urban Aerosols and Their Impact on Cloud Microphysics</td>
<td>9/1/2004</td>
<td>8/31/2007</td>
<td>1,325</td>
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<td>The Robert A. Welch</td>
<td>Chemical Kinetics and Mechanism of Hydrocarbon Oxidation</td>
<td>6/1/2007</td>
<td>4/30/2010</td>
<td>35,014</td>
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<tr>
<td>Texas Air Research Center</td>
<td>Improving the Chemical Mechanism of Aromatic Hydrocarbons in Photochemical Modeling</td>
<td>6/1/2007</td>
<td>12/31/2007</td>
<td>27,757</td>
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<td>Texas Air Research Center</td>
<td>Measurements of NO$_3$ Using Cavity Cavity-ring Down During TexASQ II, (with: S. North, R. Zhang)</td>
<td>6/1/2007</td>
<td>12/31/2007</td>
<td>11,979</td>
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<td>Granting Agency</td>
<td>Title</td>
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<td>End</td>
<td>Direct</td>
<td>Indirect</td>
<td>Total</td>
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<tr>
<td>-----------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>----------</td>
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<tr>
<td>Texas Commission of Environmental Quality</td>
<td>Ground-based Measurements of Volatile Organic Compounds (VOCs) and Nitrogen Reservoir Species during TexAQS II</td>
<td>6/1/2006</td>
<td>8/31/2007</td>
<td>2,233</td>
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<td>2,233</td>
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<tr>
<td><strong>Subtotal Zhang, R.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>231,345</td>
<td>0</td>
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<tr>
<td>*** Total: All Faculty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12,500,408</td>
<td>1,858,833</td>
</tr>
</tbody>
</table>

SEC. 7. RESEARCH ACTIVITY
Contents

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7. Research Activity ...................................................... 553
   7.1 By Granting Agency ............................................... 554
   7.2 By Faculty Member ................................................. 567
1. Foreword from the Department Head

The 2007 calendar year was full of many fine accomplishments for the Department of Mathematics. Two new assistant professors, Ioan Bejenaru and Matthew Young, and one tenured associate professor, Dmitry Panchenko, started their appointments during the Fall of 2007.

In addition, Ron DeVore, an international reknown scholar in the area of approximation theory, spent the year here as a visiting professor, and we were successful in our efforts to recruit Ron to fill our Koss Endowed Professorship (to start in July, 2008). The faculty as a whole received 4.7 million in federal, state, industrial and private grants during 2007. Nearly two-thirds of our tenured and tenure-track faculty are receiving external funding which nearly doubles the national average. Our faculty received many distinguished awards, including the Banach Medal for Bill Johnson, the Wilkinson Prize in computing for Wolfgang Bangerth and Guido Kanschat, the Mathematics Association of America Ford Prize for Harold Boas, an Excellence in Research Award in Computational Mathematics and Science for Joseph Pasciak, an AFS University Research Award for Ciprian Foias, and an AFS College level teaching award to Mr. Greg Klein. We also learned recently that two of our assistant professors, Wolfgang Bangerth and Laura Matusevich, received Sloan Foundation awards. Our department is the only mathematics department in the country with two Sloan awards this year. Our department graduated 12 Ph.D. students, 25 masters students and 57 bachelors degree students in 2007. Many of these masters recipients received their degrees through our popular on-line (distance) masters degree program.

Our National Science Foundation funded Research Experiences for Undergraduates and Undergraduate Mathematics Biology grants have funded over 25 undergraduates in research projects mentored by our faculty. Many of these students have given presentations at professional conferences and workshops around the country. Overall, our department taught nearly 75,000 credit hours which is the largest of any department on campus. Our excellent staff help manage this enormous workload for the benefit of our students and faculty.

I am sincerely proud of the many fine 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

▷ Compiled from the College of Science Faculty Database. (Fall 2006, Fall 2007) Baselines_Title, Gender, Ethnicity.

Non-Tenure-Track Faculty

▷ Compiled from the College of Science Faculty Database Faculty_List.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2006, Fall 2007) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff

▷ Compiled from the College of Science Dean Database Baselines_Staff.

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours

▷ SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2007) SCH Summaries by College for [Semester] [Year].

PhD Degrees/Masters Degrees

▷ Queried from COGNOS and calculated through the College of Science Dean Database Degrees_Grad.

Undergraduate Degrees

▷ Queried from COGNOS and calculated through 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>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Tenured and Tenure-Track Faculty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>14</td>
<td>12</td>
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<tr>
<td>Associate Professor</td>
<td>19</td>
<td>23</td>
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<tr>
<td>Distinguished Professor</td>
<td>5</td>
<td>5</td>
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<tr>
<td><strong>b. Non-Tenure-Track Faculty</strong></td>
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<tr>
<td>Visiting Professor</td>
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<td>5</td>
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<tr>
<td>Visiting Assistant Professor</td>
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<td>27</td>
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<tr>
<td>Visiting Associate Professor</td>
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<td>1</td>
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<tr>
<td>Lecturer</td>
<td>13</td>
<td>14</td>
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<tr>
<td>Senior Lecturer</td>
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<td>15</td>
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<tr>
<td><strong>c. Postdoctoral Fellows</strong></td>
<td>0</td>
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<tr>
<td><strong>d. Graduate Students</strong></td>
<td>121</td>
<td>127</td>
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<tr>
<td><strong>e. Undergraduate Majors</strong></td>
<td>261</td>
<td>283</td>
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<tr>
<td><strong>f. Support Staff</strong></td>
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### II. Instructional Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td><strong>a. Graduate Semester Credit Hours</strong></td>
<td>3,083</td>
<td>3,289</td>
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<tr>
<td><strong>b. Undergraduate Semester Credit Hours</strong></td>
<td>68,617</td>
<td>70,374</td>
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<tr>
<td><strong>c. PhD Degrees</strong></td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td><strong>d. Masters Degrees</strong></td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td><strong>e. Undergraduate Degrees</strong></td>
<td>68</td>
<td>57</td>
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### III. Research Activities

<table>
<thead>
<tr>
<th>Category</th>
<th>2006</th>
<th>2007</th>
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<tbody>
<tr>
<td><strong>a. Research Publications</strong></td>
<td>139</td>
<td>212</td>
</tr>
<tr>
<td><strong>b. Research Presentations</strong></td>
<td>418</td>
<td>447</td>
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<tr>
<td><strong>c. Federal</strong></td>
<td>3,158,311</td>
<td>4,384,045</td>
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<tr>
<td><strong>d. State</strong></td>
<td>249,773</td>
<td>133,899</td>
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<td><strong>e. University</strong></td>
<td>75,103</td>
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<td><strong>f. Private/Non-Profit</strong></td>
<td>1,068</td>
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<tr>
<td><strong>g. Industrial/Corporate</strong></td>
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<tr>
<td><strong>h. International</strong></td>
<td>25,270</td>
<td>831</td>
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<tr>
<td><strong>i. Other Govt</strong></td>
<td>35,675</td>
<td>91,579</td>
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<tr>
<td><strong>Total</strong></td>
<td>3,545,199</td>
<td>4,651,301</td>
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</table>
3. Honors & Awards, 2007

By Faculty
▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2007.

By Students
▷ This section contains all honors and awards, as reported by the department, during the calendar year 2007.
### 3.1 Honors & Awards Received by Faculty, 2007

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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<tbody>
<tr>
<td>W. Bangerth</td>
<td>Wilkinson Prize for Numerical Software, Institute of Aerodynamics and Flow Technology</td>
</tr>
<tr>
<td>H. Boas</td>
<td>Lester R. Ford Award, Mathematical Association of America</td>
</tr>
<tr>
<td></td>
<td>Outstanding Service Award, Department of Mathematics, Texas A&amp;M University</td>
</tr>
<tr>
<td>R. Ewing</td>
<td>2007 Michael P. Malone International Leadership Award, National Association of State Universities and Land-Grant Colleges</td>
</tr>
<tr>
<td></td>
<td>Marin Drinov Medal, The Bulgarian Academy Of Sciences</td>
</tr>
<tr>
<td>C. Foias</td>
<td>Distinguished Achievement Award - Research, The Association of Former Students</td>
</tr>
<tr>
<td>W. Johnson</td>
<td>Stephan Banach Medal, Polish Academy of Sciences</td>
</tr>
<tr>
<td>G. Kanschat</td>
<td>Wilkinson Prize for Numerical Software, Institute of Aerodynamics and Flow Technology</td>
</tr>
<tr>
<td>G. Klein</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>J. Pasciak</td>
<td>Excellence in Research Award, Computational and Mathematical Methods in Science and Engineering 2007</td>
</tr>
<tr>
<td>J. Reddy</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2007

Graduate

▷ Bridge to the Doctorate Fellowship
   Maya Johnson

▷ GE Fellowship
   Heather Albrecht
   Mary Childs
   Jennifer James
   Michelle Kronman
   Victoria Malloy

▷ Graduate Assistance in Areas of National Need (GAANN) Fellowship
   Jan Cameron
   Luke Oeding
   Paul Schumacher

▷ Graduate Diversity Fellowship
   Jan Cameron
   Raylon Yao

▷ Houston A&M Mother’s Club Outstanding TA Awards
   Michael Fulkerson
   Victoria Malloy
   Ryan Newman
   Dimitar Trenov

▷ L.F. Guseman Prize in Mathematics
   Dimitrije Kostic
   Stefan Tohaneanu
   Bentuo Zheng

▷ Master’s Excellence Fellowship
   Theodoros Kyriopoulos

▷ Regents’ Fellowship
   Mortiz Allmaras
   Abraham Martin Del Campo Sanchez
   Javier Chavez Dominguez
   Abner Salgado Gonzalez
   Nickolas Hein
   Seul Ki Kang
   Orhan Mehmetoglu
   Benli Mustafa
   Linh Nguyen
   Javier Polanco
   Yang Qi
   Daniel Redelmeier

SEC. 3.2  HONORS AND AWARDS - STUDENTS
Joshua Rhodes  
Korben Rusek  
Piyush Shroff  
Francisco Torres-Ayala  
Wei-Wei Wang  
Xiaohui Wang  
Yi-Ching Wang  
Fang Wang  
Kainan Wang  
Mei Yang  
Ming Yang  
Ke Ye

▷ W.E. Coppage Fellowship
Jeanette Shakalli-Tang

▷ Walter E. Koss Endowed Fellowship in Mathematics
Thanh-Hao Nguyen
Jorge Samayao-Ranero

Undergraduate

▷ Academic Achievement Scholarship
Lisa Cangelose  
Michelle Moyer  
Anastasia Rothe  
Sean Sedlock

▷ Best in Class Award for Math 409
Curtis Porter  
Sean Sedlock  
Kenneth Taliaferro

▷ Best in Class Award for Math 409H
Ryan Rodriguez

▷ Best in Class Award for Math 411
Ben Hollady  
Bret Lockhart  
Katie Schlecht  
Tracy Yee

▷ Best in Class Award for Math 425
Amy Doslich

▷ Best in Class Award for Math 446/447H
Chris Barot  
Hannah Saugier

▷ Best in Class Award for Math 467
Sara Cox
John Hernandez

▷ **Best in Class for Math 415/416**
  Paul Geffert
  Jason Pfister

▷ **Dr. Walter E. Koss, Roger McGee and John Hillman Endowed Scholarships in Mathematics**
  Joshua Brinsfield
  Bernardo Cunha
  Beth Gardiner
  Shelley Herbrich
  Alicia Israel
  Andrew Matteson
  Kenneth Taliaferro
  Jennifer Wolff
  Mark Zobeck

▷ **Elizabeth W. Lepley Scholarship in Science**
  Michelle Moyer
  Kenneth Taliaferro

▷ **Freshman Calclab Scholarship**
  Gary Newman
  Ellen Paige
  Staci Stephens

▷ **Mary & Robert N. Walker Endowed Scholarship**
  Kristin Creech
  John Fulk
  Jessica Hayworth
  Bret Lockhart
  Cara Montgomery
  Patience Sanders

▷ **New Phi Beta Kappa Member**
  Brian O’Quinn
  Ashley Pagnotta
  Patience Sanders
  Katie Zimmerman

▷ **New Pi Mu Epsilon Member**
  Lisa Cangelose
  Jacqueline Cordova
  Julie Davis
  Kimberly Dulock
  Samuel Foster
  Deborah Franklin
  Pam Garner
  Angela Gilbert
Megan Hanson
Allison Hendley
Suzy Hicks
Ben Holladay
Cayce Horner
Anncchen Knodt
Susan Koons
Lea Leverington
Brian Linn
Andrea Long
Steven McFarling
Cara Montgomery
Michelle Moyer
Kelly Mueller
Lindsey Novak
Laura Peter
Ryan Rodriguez
Danielle Schroeder
Sean Sedlock
Ty Thurmond

▶ Walter E. Koss/E.C. Klipple Endowed Scholarship in Mathematics
Shannon Cavanaugh
Emily Slack

▶ Watson Wyatt Actuarial Scholarship
Katie Adkins
Amy Doslich
Thu Ho
Ashley Holcomb
Brian Linn
Steven McFarling
Michelle Moyer
Laura Peter
Anastasia Rothe
Sean Sedlock
Allison Sloan
Ty Thurmond
Tracy Yee

▶ William A. Triche and Homer A. Triche Endowed Scholarship Fund in Engineering, Science and Medicine
John Fulk
4. Students, 2007

This section contains all degrees awarded, as reported by the department, during the calendar year 2007.
4.1 Graduate Degrees Awarded, 2007

Fall

▷ M.S.
Andrew Cihonski  Advisor(s): J. Walton
Kendra Kristine Feinstein  Advisor(s): J. Pitts
Karl David Hoerster  Advisor(s): S. Fulling
Theodoros Kyriopoulos  Advisor(s): J. Rojas
Peter Michael Murphy  Advisor(s): G. Allen
Becky D. Voyles  Advisor(s): J. Pitts

▷ Ph.D.
Ievgen Bondarenko Groups Generated by Bounded Automata and Their Schreier Graphs  Advisor(s): R. Grigorchuk
Veselin Asenov Dobrev Preconditioning of Discontinuous Galerkin Methods for Second Order Elliptic Problems  Advisor(s): R. Lazarov
Paul Francis Dostert Uncertainty Quantification using Multiscale Methods for Porous Media Flows  Advisor(s): Y. Efendiev
Lavanya Kannan Densities in Graphs and Matroids  Advisor(s): A. Hobbs

Spring

▷ M.S.
Megan Lynne Aaker  Advisor(s): J. Walton
David Dakota Blair  Advisor(s): S. Geller
Kevin Michael Brink  Advisor(s): R. DeBlassie
Lynetta Kopta Campbell  Advisor(s): J. Zinn
Thomas Andrew Campos
Ivan Christov Christov \quad \text{Advisor(s):} S. Geller

Yemisach Derebe \quad \text{Advisor(s):} B. Popov

William Robert Finkenkeller \quad \text{Advisor(s):} M. Stecher

Kaibin Fu \quad \text{Advisor(s):} M. Aguiar

Rachel Beth Grabow \quad \text{Advisor(s):} J. Walton

Robin Ann Nance \quad \text{Advisor(s):} J. Walton

Jeffrey Lee Pattillo \quad \text{Advisor(s):} G. Allen

Nathaniel Kirk Strawn \quad \text{Advisor(s):} K. Dykema

Ryan Scott Westbrook \quad \text{Advisor(s):} J. Walton

\textbf{Ph.D.}

Stefan Ovidiu Tohaneanu \quad \text{Homological Algebra and Problems in Combinatorics and Geometry} \quad \text{Advisor(s):} H. Schenck

Alan D Wiggins \quad \text{Singular Subfactors of II 1 Factors} \quad \text{Advisor(s):} R. Smith

\textbf{Summer}

\textbf{M.S.}

Andrew John Cihonski \quad \text{Advisor(s):} J. Walton

Kimberly Sue Larance \quad \text{Advisor(s):} S. Geller

Aldora M Louw \quad \text{Advisor(s):} G. Allen

Jennifer Michelle Nagle \quad \text{Advisor(s):} J. Pitts

Swati Ray \quad \text{Advisor(s):} G. Allen

Daniel Reynold Walker \quad \text{Advisor(s):} J. Zinn
Kevin Abbott  
Applications of Algebraic Geometry to Object/Image Recognition  
**Advisor(s):** P. Stiller

Jenny Gilmore Fuselier  
Hypergeometric Functions Over Finite Fields and Relations to Modular Forms and Elliptic Curves  
**Advisor(s):** M. Papanikolas

Nikolay Antonov Ivanov  
On the Structure of Some Free Products of C*-Algebras  
**Advisor(s):** K. Dykema

Dimitrije Nenad Kostic  
Graph Searching and a Generalized Parking Function  
**Advisor(s):** C. Yan

James Vincent Ruffo  
A Straightening Law for the Drinfel’d Lagrangian Grassmannian  
**Advisor(s):** F. Sottile

Bentuo Zheng  
Embeddings and Factorizations of Banach Spaces  
**Advisor(s):** W. Johnson
4.2 Undergraduate Degrees Awarded, 2007

Fall

▷ B.A.

Tyler Carlton Bartley
Amanda Jo Bechtol
Mathew Grant Berry
Rachel Ann Blaschke
Lacy Leigh Erwin
Megan Danielle Hanson
Joseph Tynes Hildebrand
Jennifer Anne Kingsley
Anneliese Delene Nauck
Hilary Dyann Walters
Caitlin Therese Wehrle
Katie Elizabeth Zimmerman

▷ B.S.

Kathleen Nicole Adkins
Amy Michelle Doslich
Lucas Allen Hawk
Jarrod Dean Hutson
Paul Spencer Liechty
Andrew Thomas Milner
Daniel Wayne Scott
Christina Renee Stover
Joanna Marie Szuluk
Brandon Michael Tuxhorn
Marcus A Webb

Spring

▷ B.A.

Michael Christopher Alger
Catherine Mccall Bigbee
Anna Marie Bouboulis
Laura Elizabeth Bruner
James Buckheit
Janie Linn Dullard
Stephanie Clare Fisseler
Ashley Marie Hubble
Warren Christopher Reichel
Patience Nicole Sanders
Katharine Elizabeth Schlecht
Erik Joseph Seidel
Amanda Paige Simon
Lauren Kate Walch

▷ B.S.

Christian Michael Allison

SEC. 4.2 UNDERGRADUATE DEGREES 373
Summer

- B.A.
  - Mark Nicholas Olsen
  - Larry Wayne Peterson

- B.S.
  - Samuel Bowman Adams
  - Dana Lea Bergstresser
  - Bryan Michael Fellman
  - Amy Kathleen Hopson
  - Caitlin Marie Morrison
  - Lindsay Taylor Paetow
  - Jon Ross Perritt
  - Christopher Albert Portales
## 5. Colloquium and Seminar Speakers, 2007

### Algebra and Combinatorics

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Institution</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1/18/2007</td>
<td>Alvaro Rittatore</td>
<td>University of Uruguay</td>
<td>The Structure of Algebraic Monoids</td>
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<tr>
<td>1/26/2007</td>
<td>Fumei Lam</td>
<td>Brown University</td>
<td>Polyhedral Study of Traveling Salesman Path Problems</td>
</tr>
<tr>
<td>2/2/2007</td>
<td>Volodymyr Kirichenko</td>
<td>Kyiv State University</td>
<td>Quivers of Rings</td>
</tr>
<tr>
<td>2/9/2007</td>
<td>Milena Hereng</td>
<td>Institute of Mathematics and its Applications</td>
<td>Syzygies of Toric Varieties</td>
</tr>
<tr>
<td>2/16/2007</td>
<td>Tien-Yien Li</td>
<td>Michigan State University</td>
<td>Numerical Calculation of the Jordan Normal Form</td>
</tr>
<tr>
<td>3/2/2007</td>
<td>Tatyana Chmutova</td>
<td>University of Michigan</td>
<td>Twisted Symplectic Reflection Algebras</td>
</tr>
<tr>
<td>3/30/2007</td>
<td>Luis David Garcia</td>
<td>Texas A&amp;M University</td>
<td>Linear Precision for Multi-sided Toric Patches</td>
</tr>
<tr>
<td>4/6/2007</td>
<td>Chris Hillar</td>
<td>Texas A&amp;M University</td>
<td>Algebraic Characterizations of Uniquely Colorable Graphs</td>
</tr>
<tr>
<td>4/13/2007</td>
<td>Michael Anshelevich</td>
<td>Texas A&amp;M University</td>
<td>Lattice Paths and Orthogonal Polynomials: A Case Study</td>
</tr>
<tr>
<td>4/20/2007</td>
<td>Eric Rowell</td>
<td>Texas A&amp;M University</td>
<td>Braid Group Representations from Twisted Quantum Doubles of Finite Groups</td>
</tr>
</tbody>
</table>
4/27/2007  Laura Matusevich  
*Texas A&M University*  
Combinatorics of Binomial Primary Decomposition

9/3/2007  Harm Derksen  
*University of Michigan*  
Mutations of Quivers

9/10/2007  Chris Hillar  
*Texas A&M University*  
Solving Word Equations in Terms of Radicals: Towards a Noncommutative Abel Theorem

9/17/2007  Aaron Lauve  
*Texas A&M University*  
Noncommutative Invariants and Coinvariants of the Symmetric Group

9/24/2007  Maria Belk  
*Texas A&M University*  
Problems Related to the Kneser-Poulsen Conjecture

10/1/2007  Felipe Voloch  
*University of Texas, Austin*  
Elements of High Order in Finite Fields

10/8/2007  Lionel Levine  
*University of California, Berkeley*  
Chip-Firing and Rotor-Routing on Trees

10/12/2007  Jesus de Loera  
*University of California, Davis*  
Recent Progress on Computing Volumes of Polytopes

10/29/2007  Zach Teitler  
*Texas A&M University*  
Huebl’s “Powers of Elements and Monomial Ideals”

11/2/2007  Charles R. Johnson  
*College of William & Mary*  
Eigenvalues, Multiplicities and Graphs

11/5/2007  Salah A. Aly  
*Texas A&M University*  
Algebraic Constructions of Quantum LDPC Codes Derived from Combinatorial Objects and Finite Geometry

11/12/2007  Frank Sottile  
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10/16/2007 Ngaiming Mok
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Jet Bundles, Differential Equations and Hyperbolic Algebraic Varieties I

10/24/2007 Jean-Pierre Demailly
Universite Grenoble
Jet Bundles, Differential Equations and Hyperbolic Algebraic Varieties II

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10/23/2007  Michael Eastwood  
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11/6/2007  Jin-Yi Cai  
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11/9/2007  Daniel Fox  
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11/19/2007  Michael Douglas  
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11/30/2007  Eric Sharpe  
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<td>Northwestern University</td>
<td>Dynamics on an Infinite Translation Surface</td>
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<td>Volodymyr Nekrashevych</td>
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<td>David Kerr</td>
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<td>Weak Mixing and $\ell$</td>
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<td>Bruce Hughes</td>
<td>Vanderbilt University</td>
<td>Local Similarities and the Haagerup Property</td>
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<td>Romain Tessera</td>
<td>Vanderbilt University</td>
<td>Gromov Hyperbolic Riemannian Manifolds</td>
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<td>Texas A&amp;M University</td>
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<td>11/7/2007</td>
<td>Mikael de la Salle</td>
<td>E’cole Normale Suprieure Paris, France</td>
<td>Proper Actions of Free Lamplighter Groups on Spaces with Walls (After Cornulier-Stalder-Valette)</td>
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<td>11/14/2007</td>
<td>Sarah Koch</td>
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<td>Todor Tsankov</td>
<td>California Institute of Technology</td>
<td>Measured Equivalence Relations and Their Full Groups</td>
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Linear Analysis

1/19/2007  Jaydeb Sarkar  
*Texas A&M University*  
Commuting Tuples and a Theory of Sz.-Bagy and Foias

1/26/2007  Yves de Cornulier  
*IRMAR Institute in Rennes, France*  
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2/9/2007  Alan Wiggins  
*Texas A&M University*  
Singularity and Strong Singularity for Subfactors

2/16/2007  Volodymyr Nekrashevych  
*Texas A&M University*  
C*-Algebras and Iterated Monodromy Groups

2/23/2007  Matt Daws  
*Oxford University*  
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3/2/2007  Evgeny Troitskiy  
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3/23/2007  Hari Bercovici  
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3/30/2007  Dan Timotin  
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<td>Uffe Haagerup</td>
<td>University of Southern Denmark</td>
<td>Solution of the Effros-Ruan Conjecture for Bilinear Forms on C*-Algebras</td>
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<td>Deguang Han</td>
<td>University of Central Florida</td>
<td>Search for a Duality Principle for Projective Unitary Representation Frames</td>
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<td>Vern Paulsen</td>
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<td>Francisco Garcia</td>
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<td>Gadadhar Misra</td>
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<td>Homogeneous Operators, Sz.-Nagy-Foias Characteristic Function and Projective Representations of SU(1,1)</td>
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<td>Alistair Windsor</td>
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<td>A Weak Mixing Dichotomy for Special Flows</td>
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<td>Gabriel Tucci</td>
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<td>Some Quasinilpotent Generators of the Hyperfinite $II_1$ factor</td>
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<td>Andrew Comech</td>
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<td>Global Attraction to Solitary Waves for the Klein-Gordon Field Coupled to Finitely Many Nonlinear Oscillators</td>
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<td>Lev Kaplan</td>
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<td>Cyclicity of Bicyclic Operators and Completeness of Translates</td>
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<td>Rafael del Rio</td>
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<td>Francesco Fidaleo</td>
<td>University of Rome, Tor Vergata</td>
<td>Bose Einstein Condensation on Nonhomogeneous Amenable Graphs</td>
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<td>Maxim Zinchenko</td>
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<td>Stability Analysis of Stationary Solutions for the Cahn-Hilliard Equation</td>
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Louisiana State University
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10/19/2007  Boris Gutkin
Erlangen-Nuremberg, Germany
Metric Bounds on the Semiclassical Measures of Quantized 1d Maps

10/19/2007  Vladimir Varlamov
University of Texas, Pan American
Fractional Derivatives of Airy Functions and Applications to Differential Equations

10/26/2007  Anna Skripka
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The Lifshits-Krein Spectral Shift Function

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11/9/2007  Michael Anshelevich
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11/16/2007  Melanie Pivarski
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Small Time Heat Kernel Behavior on Riemannian Complexes

11/30/2007  Maxim Zyskin
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Liquid Crystals in Polyhedral Domains
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4/10/2007  Georgia Benkart
University of Wisconsin
Determinants - A Condensed Matter

4/11/2007  Georgia Benkart
University of Wisconsin
Bases, Braids, and Beyond
Number Theory

1/24/2007  Mihran Papikian
          Stanford University
          Congruences Between Modular Forms Over Function Fields

2/7/2007   Jenny Fuselier
          Texas A&M University
          Hypergeometric Functions Over Finite Fields and Relations to Elliptic Curves

2/14/2007  Zoran Sunik
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          Frobenius Problem and Dead Ends in Integers

2/21/2007  Lenny Fukshansky
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          On the Distribution of Integral Well-rounded Lattices in Dimension Two, Part II

2/27/2007  Sinnou David
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          Heights of Subvarieties of Abelian Varieties

3/8/2007   Fernando Rodriguez-Villegas
          University of Texas, Austin
          Character Varieties and the Tutte Polynomial of Graphs

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          Texas A&M University
          Transcendence of Values of Hypergeometric Functions

4/11/2007  Laura Matusevich
          Texas A&M University
          Hypergeometric Differential Equations in Two Variables

4/13/2007  Matt Young
          American Institute of Mathematics
          The Fourth Moment of Dirichlet L-Functions

4/18/2007  John Garza
          University of Texas, Austin
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4/24/2007  Rob Benedetto
          Amherst College
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9/12/2007  Ahmad El-Guindy
          Texas A&M University
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9/26/2007  Matt Papanikolas
          Texas A&M University
          Problems in Transcendental Number Theory

10/10/2007 Matt Young

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10/17/2007  Paula Tretkoff
Texas A&M University
Transcendence of Values of Hypergeometric Functions
10/24/2007  Nathan Jones
University of Montreal
Serre Curves and Averages of Elliptic Curves Constants
10/31/2007  Scott Ahlgren
University of Illinois, Urbana-Champaign
Rank Generating Functions as Weakly Holomorphic Modular Forms
11/7/2007  Stephan Baier
Jacobs University Bremen
On the Low-lying Zeros of Elliptic Curve L-Functions
11/28/2007  Valentin Blomer
University of Toronto
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<td>John E. Lavery</td>
<td>Mathematics Division, Army Research Office</td>
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<td>$L_1$ Splines</td>
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<td>Alexis Vasseur</td>
<td>University of Texas, Austin</td>
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<td>John Strain</td>
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<td>Semi-Lagrangian Contouring and Elliptic Systems with Complex Moving Interfaces</td>
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<td>3/7/2007</td>
<td>Fengyan Li</td>
<td>Rensselaer Polytechnic Institute</td>
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<td>Nonconforming Methods for Maxwell Source Problems and Eigenproblems</td>
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<td>3/21/2007</td>
<td>Tim Barth</td>
<td>NASA Ames Research Center</td>
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<td>Energy Stable FEM Discretization of Nonlinear Conservation Laws: A Contrasting Look at Hydrodynamics</td>
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<td>A Quasi-Continuum Approximation and its Analysis</td>
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<td>4/4/2007</td>
<td>Peter Moore</td>
<td>Southern Methodist University</td>
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<td>Solving Regularly and Singularly Perturbed Reaction-Diffusion Equations in Three Space Dimensions</td>
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<td>Slimane Adjerid</td>
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<td>Error Estimation and Superconvergence for DG Methods</td>
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<td>4/18/2007</td>
<td>Dominik Schotzau</td>
<td>University of British Columbia</td>
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<td>Interior Penalty Discontinuous Galerkin Methods for the Time-harmonic Maxwell Equations</td>
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<td>hp-Discontinuous Galerkin Methods for Elliptic Problems</td>
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<td>Adelia Sequeira</td>
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<td>5/2/2007</td>
<td>Helke Hesse</td>
<td>University of Heidelberg</td>
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<td>Indirect Multiple Shooting for PDE Constrained Optimization</td>
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Multiscale Simulations Using Limited Global Information and Applications to Porous Media Flows

9/12/2007  **Guido Kanschat**  
*Texas A&M University*  
Divergence-Free Finite Elements for Incompressible Flow Problems

9/19/2007  **Kumbakonam Rajagopal**  
*Texas A&M University*  
The Navier-Stokes Equations and Beyond

9/26/2007  **Murat Guven**  
*Rensselaer Polytechnic Institute*  
Identifying and Addressing the Error Sources in Diffuse Optical Tomography

10/10/2007  **Andrea Bonito**  
*University of Maryland*  
A New Adaptive Finite Element Method for DG

10/17/2007  **Vivette Girault**  
*University Paris VI, Paris, France*  
Time Dependent Grade-Two Fluid Model : Analysis and Discretization

10/22/2007  **Richard Falk**  
*The State University Of New Jersey*  
Mixed Finite Elements for the Equations of Linear Elasticity with Weakly Imposed Symmetry

10/24/2007  **Ewald Quak**  
*University of Oslo, Norway*  
Some Experiences on Two Important Issues: Software Sustainibility and Practical Relevance

10/31/2007  **Bojan Popov**  
*Texas A&M University*  
Second Order Schemes and Entropy

11/7/2007  **Craig Douglas**  
*Texas A&M University*  
A Wildland Fire Model with Data Assimilation

11/14/2007  **Joseph Pasciak**  
*Texas A&M University*  
The Computation of Resonances in Open Systems Using a Perfectly Matched Layer

11/19/2007  **Thomas Russell**  
*National Science Foundation*  
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11/28/2007  **Marvin Adams**  
*Texas A&M University*
Behavior of Discontinuous Galerkin Solutions in an Asymptotic Limit of Practical Interest

12/5/2007  **Pavel Bochev**  
*Sandia National Laboratories*  
Rehabilitation of the Lowest-Order Raviart-Thomas Element on Quadrilateral Grids

12/6/2007  **Ludmil Zikatanov**  
*Pennsylvania State University*  
Multigrid methods for Lattice Quantum Chromodynamics

12/12/2007  **Johnny Guzman**  
*Institute for Mathematics and its Applications*  
Superconvergent Discontinuous Galerkin Methods for Second-Order Elliptic Problems
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<td>Andy Raich</td>
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<td>Techniques for Pointwise Estimates for a Class of Heat Kernels in RxC, I</td>
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<td>A Sufficient Condition for Global Regularity of the $\overline{\partial}$-Neumann Operator, I</td>
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<td>Peter Kuchment</td>
<td>Texas A&amp;M University</td>
<td>Tomography Group Discussion of Problems</td>
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<tr>
<td>9/21/2007</td>
<td>Peter Kuchment</td>
<td>Texas A&amp;M University</td>
<td>While in Previous Sessions we Have Surveyed Some Newly Developing Versions of What is Called Transmission Tomography, This Time a Brief Survey Will be Provided of one of the Types of the so Called Emission Tomography, i.e. Imaging of a Self-Radiating Object</td>
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<td>Yulia Georgieva-Hristova</td>
<td>Texas A&amp;M University</td>
<td>Time Reversal Procedures for the Thermoacoustic Tomography will be Discussed</td>
</tr>
<tr>
<td>11/30/2007</td>
<td>Wolfgang Bangerth</td>
<td>Texas A&amp;M University</td>
<td>Theoretical and Numerical Aspects of some Techniques Used for Solving Nonlinear Inverse Problems</td>
</tr>
<tr>
<td>11/30/2007</td>
<td>Matt Sternat</td>
<td>Texas A&amp;M University</td>
<td>Theoretical and Numerical Aspects of some Techniques Used for Solving Nonlinear Inverse Problems</td>
</tr>
</tbody>
</table>
6. Faculty*, 2007

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marcelo Aguiar</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>G. Donald Allen</td>
<td>Professor</td>
</tr>
<tr>
<td>Angela Allen</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Michael Anshelevich</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Margaret Arnold</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Ben Aurispa</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Amy L. Austin</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Wolfgang Bangerth</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Guy A. Battle</td>
<td>Professor</td>
</tr>
<tr>
<td>Ioan Bejenaru</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Arthur P. Belmont</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Gregory Berkolaiko</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>G. Robert Blakley</td>
<td>Professor</td>
</tr>
<tr>
<td>Harold P. Boas</td>
<td>Professor</td>
</tr>
<tr>
<td>Albert Boggess</td>
<td>Professor</td>
</tr>
<tr>
<td>Kathryn L. Bollinger</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Itshak Borosh</td>
<td>Professor</td>
</tr>
<tr>
<td>James H. Bramble</td>
<td>Distinguished Professor</td>
</tr>
<tr>
<td>Chia-Rong Chen</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Goong Chen</td>
<td>Professor</td>
</tr>
<tr>
<td>Amy Collins</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Andrew Comech</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Prabir Daripa</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Richard D. DeBlassie</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Ronald G. Douglas</td>
<td>Distinguished Professor</td>
</tr>
<tr>
<td>Marcia L. Drost</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Kenneth J. Dykema</td>
<td>Professor</td>
</tr>
<tr>
<td>Yalchin R. Efendiev</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Janice L. Epstein</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Tamas Erdelyi</td>
<td>Professor</td>
</tr>
<tr>
<td>Richard E. Ewing</td>
<td>Distinguished Professor</td>
</tr>
<tr>
<td>Ciprian I. Foias</td>
<td>Distinguished Professor</td>
</tr>
<tr>
<td>Stephen A. Fulling</td>
<td>Professor</td>
</tr>
<tr>
<td>Susan C. Geller</td>
<td>Professor</td>
</tr>
<tr>
<td>Mel Griffin</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Rostislav I. Grigorchuk</td>
<td>Professor</td>
</tr>
<tr>
<td>Jean-Luc Guermond</td>
<td>Professor</td>
</tr>
<tr>
<td>Robert A. Gustafson</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Douglas A. Hensley</td>
<td>Professor</td>
</tr>
<tr>
<td>Arthur M. Hobbs</td>
<td>Professor</td>
</tr>
<tr>
<td>Peter B. Howard</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>William B. Johnson</td>
<td>Distinguished Professor</td>
</tr>
<tr>
<td>Lori Jones</td>
<td>Lecturer</td>
</tr>
<tr>
<td>Joseph E. Kahlig</td>
<td>Senior Lecturer</td>
</tr>
<tr>
<td>Guido Kanschat</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>David Kerr</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Thomas R. Kiffe</td>
<td>Associate Professor</td>
</tr>
</tbody>
</table>
John Slattery ......................................................... Professor (J)
Kirby C. Smith .................................................... Professor
Roger R. Smith .................................................... Professor
Frank Sottile ....................................................... Professor
Michael J. Stecher ................................................. Associate Professor
Peter F. Stiller ..................................................... Professor
Emil J. Straube ..................................................... Professor
Zoran Sunik ........................................................ Assistant Professor
Jamie Sutherland .................................................. Senior Lecturer
Steven D. Taliaferro ............................................. Associate Professor
Stefan Tohaneanu ............................................... Adjunct Assistant Professor
Paula Tretkoff ...................................................... Professor
Thomas I. Vogel .................................................. Associate Professor
Yaroslav Vorobets ............................................... Assistant Professor
Jay R. Walton ..................................................... Professor
Joseph D. Ward ................................................... Professor
Jennifer G. Whitfield ........................................... Senior Lecturer
Alan Wiggins ..................................................... Adjunct Assistant Professor
Sarah Witherspoon .............................................. Associate Professor
Catherine Huafei Yan ............................................. Professor
Philip B. Yasskin .................................................. Associate Professor
Matthew Young ................................................... Assistant Professor
Jill Zarestsky ..................................................... Lecturer
Jianxin Zhou ...................................................... Professor
Joel Zinn ............................................................ Professor

*For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2007 (01/01/2007-12/31/2007).
6.1 Professional Activities, 2007

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2007.

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 2007.
▷ 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 2007.
▷ 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 2007
  
  National
  ▶ Event: Combina Texas 07 (Organizer), CRM Thematic Semester, Montréal “Combinatorial Hopf Algebras and Macdonald Polynomials” (Organizer)

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

• TEACHING ASSIGNMENTS DURING 2007
  
  Spring
  ▶ MATH 662. — Seminar in Algebra (total enrollment: 10)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 1)

  Fall
  ▶ MATH 630. — Graduate Combinatorics (total enrollment: 12)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  
  Federal
  ▶ Algebra and Combinatorics of Free Structures, *National Science Foundation*

• PRESENTATIONS DURING 2007
  
  ▶ “Algèbre et Topologie,” Institut de Recherche Mathématique Avancée de Strasbourg, France, February, 2007.( Individual)
  ▶ Séminaire d’Algèbre et Topologie, Laboratoire J. A. Dieudonné, Université de Nice Sophia-Antipolis, France, February, 2007.( Individual)
  ▶ “Differential Algebra and Related Topics II,” Rutgers University Newark, Newark, NJ, April, 2007.( Invited)
“Math Department Colloquium,” Texas A&M University, College Station, TX, September, 2007. (Individual)

“Shuffles, Descents and Representations, in Memory of Manfred Schocker,” Université de Nice Sophia-Antipolis, France, September, 2007. (Invited)


**PUBLICATIONS DURING 2007**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Department Head, Mathematics, [2006]

• SERVICE DURING 2007
  National
  ▶ Research Group: NSF PEER Distance Learning Community Group (Member)
  ▶ Professional Affiliation: American Educational Research Association (Member), Joining Educational Mathematics (Member), Mathematical Association of America, Society for Industrial and Applied Mathematics, Southwest Educational Research Association, Merlot-Multimedia Educational Resource for Learning and Online Teaching (Member)
  ▶ Event: Conference for the Advancement of Mathematics Teaching ( Presenter)

  State
  ▶ Event: The Grass-roots P-16 Consortium (Organizer), Workshop on Trends in College Algebra (Presenter)
  ▶ Committee/Panel: P-16 Grass-roots Initiative Meeting and Workshop (Co-Chair)

  University
  ▶ Service Position: Regents Scholar Mentor Program (Mentor)
  ▶ Advisory Board: Geometry Advisory Board (Member)
  ▶ Editorial/Board: Graduate Program Self Study (Review: Proposals)
  ▶ Committee/Panel: GK-12 Educational Outreach Institutionalization Committee (Member), NSF G-K12 Fellows Recruiting and Selection Committee (Chair), NSF G-K12 Fellows Steering Committee (Chair), STEPS Management Team (College of Engineering) (Member)

  College
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Member), Institutional Effectiveness Working Group (Member)

  Department
  ▶ Committee/Panel: Camtasia Steering Committee (Member), Honors Committee (Member), Sigma XI Educational Outreach Committee (Member), Texas Math Talent Search (Chair)
• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 646. — A Survey of Mathematical Problems II (total enrollment: 17)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 3)
▷ MATH 696. — Mathematical Communication and Technology (total enrollment: 19)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Star Schools Project-Math Star Extension Grant to Los Angeles County Office of Education, Department of Education
▷ TRACK1, GK-12: Fellows Integrate Science/Math In Rural Middle Schools, National Science Foundation

State
▷ Course Redesign for Math 1324, Texas Higher Education Coordinating Board
▷ High Quality Algebra II Instruction, Texas Higher Education Coordinating Board
▷ Teacher Quality Grant- Algebra II, Texas Higher Education Coordinating Board

University
▷ The Computational Masters Degree, Office of Distance Education

• PRESENTATIONS DURING 2007

▷ “Problem Solving: Survey of the 9-12 modules for the MTC Project,” Airpot Hilton, Austin, TX, January, 2007.( Individual)
▷ “Focus on College Algebra,” TexMATYC Section of the TCCTA Annual Meeting, Austin, TX, February, 2007.( Invited)
▷ “The College Algebra Survey,” Texas Association of Two Year Colleges, Arboretun Renaissance Hotel, Austin, TX, February, 2007.( Individual)
▷ “The Triadic Survey in Building Capacity,” 7th Annual Texas A&M University Assessment Conference, College Station, TX, February, 2007.( Individual)
▷ “Using and Validating a Triadic Instrument to Survey Pre-Service Teacher Preferences,” 2007 Annual Meeting of the Southwest Educational Research Association (SERA), San Antonio, TX, February, 2007.( Individual)
▷ “Multiple Representations - a journey to the future, at the ”Aiming for Excellence in Mathematics Teacher Preparation,” Math TEKS Connections, College Station, TX, May, 2007.( Individual)
▷ “All About Quadratics - for the Teacher,” Conference for the Advancement of Mathematics Teaching, San Antonio, TX, June, 2007.( Individual)
Moving from High School Mathematics to College Mathematics. What’s going on?, Conference for the Advancement of Mathematics Teaching, San Antonio, TX, June, 2007. (Individual)


“The MS Online Program in Mathematics,” AP Calculus Institute, College Station, TX, August, 2007. (Individual)

“Focus Group for the Governor’s Commission for a College Ready Texas,” Meeting of Business Leaders and Faculty, Airport Hilton, Austin, TX, September, 2007. (Individual)

“Course redesign at Texas A&M University,” Baylor University, Waco, TX, October, 2007. (Invited)

“University Interface with Community Colleges to Ensure Success of Transfer Students through the NSF GK-12 Program,” Southwest Regional NSF GK-12 Conference, College Station, TX, November, 2007. (Individual)

- PUBLICATIONS DURING 2007
• SERVICE DURING 2007
  
  International

  National
  ▶ Event: Free Probability Seminar (Co-Organizer)
  ▶ Editorial/Board: *Proceedings of the National Academy of Sciences* (Referee: Journals)

  University
  ▶ Committee/Panel: Preliminary Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ MATH 409(H) — Advanced Calculus I (total enrollment: 2)
  ▶ MATH 409. — Advanced Calculus I (total enrollment: 24)

  Fall
  ▶ MATH 152. — Engineering Mathematics II (total enrollment: 102)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Combinatorial Methods in Free Probability, *National Science Foundation*

• PRESENTATIONS DURING 2007

  ▶ “Analysis seminar,” University of Waterloo, Ontario, Canada, 2007. (Individual)

• PUBLICATIONS DURING 2007

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• AWARDS DURING 2007
  International
  ▶ Wilkinson Prize for Numerical Software, Institute of Aerodynamics and Flow Technology

• SERVICE DURING 2007
  National
  ▶ Event: Workshop on Adaptive Mesh Refinement Techniques in Geodynamics Applications (Organizer)
  ▶ Committee/Panel: Science Steering Committee, Center for Computational Infrastructure in Geodynamics (Elected Member)

  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 12)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ MATH 417. — Numerical Analysis I (total enrollment: 13)
  ▶ MATH 685. — Directed Studies (total enrollment: 4)

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

  Fall
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 101)
  ▶ MATH 412. — Theory of Partial Differential Equations (total enrollment: 29)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ 3-D Deep Penetration Neutron Imaging of Thick Absorbing and Diffusive Heterogeneous Objects Using Transport Theory, Department of Energy
Diagnostic Cancer Imaging Using NIR Fluorescent Agents and EDPM, National Institutes of Health

A Framework for Developing Novel Detection Systems Focused on Interdicting Shielded, National Science Foundation

Mathematical Methods for Novel Modalities of Medical Imaging, National Science Foundation

• PRESENTATIONS DURING 2007
  Department of Mathematics, University of Houston, Houston, TX, 2007. (Individual)
  Electrical Engineering Department, Katholieke Universiteit Leuven, Belgium, 2007. (Individual)
  Institute for Computational and Applied Mathematics (ICES), University of Texas, Austin, TX, 2007. (Individual)
  MAMOS Workshop, Austin, TX, October, 2007. (Invited)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

National
▷ Service Position: EnCana Oil & Gas (Consultant)
▷ Editorial/Board: *Applied and Computational Harmonic Analysis* (Member)

University
▷ Committee/Panel: Budget Information Committee (Member), Core Curriculum Council (Member), Election Committee (Member), Faculty Senate (Faculty Senator - 01), Teaching Committee (Member)

Department
▷ Service Position: Math 151 Course (Coordinator)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 151. — *Engineering Mathematics I* (total enrollment: 65)
▷ MATH 401. — *Advanced Engineering Mathematics* (total enrollment: 30)

Summer
▷ MATH 602. — *Methods and Applications of Partial Differential Equations* (total enrollment: 27)

Fall
▷ MATH 409. — *Advanced Calculus I* (total enrollment: 26)
• SERVICE DURING 2007
  National

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Schrödinger Maps and Related Problems, *National Science Foundation*

• PRESENTATIONS DURING 2007
  ▶ “MSRI summer microprogram on nonlinear PDE,” Mathematical Sciences Research Institute, Berkeley, CA, August, 2007. (Individual)
  ▶ “Oberwolfach Nonlinear Waves and Dispersive Equations,” Oberwolfach, Germany, September, 2007. (Individual)
  ▶ University of California, Berkeley, CA, October, 2007. (Invited)
  ▶ University of Wisconsin, Madison, WI, December, 2007. (Invited)

• PUBLICATIONS DURING 2007

*Faculty member hired 07/01/2007*
• SERVICE DURING 2007

International
▷ Editorial/Board: US-Israel Binational Science Foundation (Referee: Journals)

National

Department
▷ Service Position: Math Awareness Month Website (Developer)
▷ Event: Summer Educational Enrichment in Math (Assisted)
▷ Committee/Panel: Math Awareness Month (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 689. — Special Topics in (total enrollment: 8)

Fall
▷ MATH 251. — Engineering Mathematics III (total enrollment: 200)
▷ MATH 491. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Spectral Properties of Quantum Graphs, National Science Foundation

• PRESENTATIONS DURING 2007

▷ Mathematical Physics Seminar, Texas A&M University, College Station, TX, 2007.( Individual)
▷ Isaac Newton Institute, Cambridge, United Kingdom, March, 2007.( Individual)
▷ University of Bristol, Bristol, United Kingdom, March, 2007.( Individual)
▷ University of Nottingham, Nottingham, United Kingdom, March, 2007.( Individual)
▷ “A Lower Bound for Nodal Count on Discrete and Metric Graphs, Their Spectra and Applications”, Isaac Newton Institute Workshop, April, 2007.( Individual)
▷ University of Strathclyde, Glasgow, Scotland, United Kingdom, June, 2007.( Individual)

• PUBLICATIONS DURING 2007


• SERVICE DURING 2007

  International
  ▶ Editorial/Board: Springer-Verlag’s International Journal of Information Security (Co-Founder)
  ▶ Committee/Panel: Management Board, Information Security Research Centre, Faculty of Information Technology, Queensland University (Member)
• AWARDS DURING 2007

National
▶ Lester R. Ford Award, Mathematical Association of America

Department
▶ Outstanding Service Award, Department of Mathematics, Texas A&M University

• SERVICE DURING 2007

International

National

College
▶ Committee/Panel: Diversity Committee (Member)

Department
▶ Committee/Panel: Awards Committee (Chair), Committee L (Member), Subcommittee P (Chair)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▶ MATH 618. — Theory of Functions of a Complex Variable II (total enrollment: 12)

Summer
▶ MATH 304. — Linear Algebra (total enrollment: 35)
▶ MATH 685. — Directed Studies (total enrollment: 2)
▶ MATH 691. — Research (total enrollment: 1)

Fall
▶ MATH 171. — Analytic Geometry and Calculus (total enrollment: 29)
▶ MATH 650. — Several Complex Variables (total enrollment: 7)
▶ MATH 691. — Research (total enrollment: 1)

• PRESENTATIONS DURING 2007

“Special Session on Analysis and CR Geometry,” American Mathematical Society, DePaul University, Chicago, IL, October, 2007. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Department Head, Mathematics, [2002]

• SERVICE DURING 2007
  International
  ▶ Editorial/Board: Mathematische Annalen, Israel Journal of Mathematics (Referee: Journals)

  National

  Regional
  ▶ Committee/Panel: High School Mathematics Competition Committee (Member)

  University
  ▶ Committee/Panel: University Department Heads Council (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Fall
  ▶ MATH 640. — Linear Algebra for Applications (total enrollment: 19)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Graduate Assistance in Areas of National Need, Department of Education
  ▶ REU Site: Undergraduate Research in Mathematical Sciences and Its Applications, National Science Foundation

• PRESENTATIONS DURING 2007
  ▶ “Approximation of CR functions by Entire Functions,” Texas A&M University Complex Analysis Seminar, College Station, TX, 2007.( Individual)
  ▶ “Euler LaGrange Equations,” Math Club, Texas A&M University, College Station, TX, 2007.( Individual)
  ▶ “CR Approximation by Entire Functions,” Banach Center, Warsaw Poland, June, 2007.( Invited)
• SERVICE DURING 2007

International
▷ Editorial/Board: Austrian Academy of Science (Review: Proposals)

National

Department
▷ Committee/Panel: Library Committee (Member), Talent Search (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 304. — Linear Algebra (total enrollment: 36)

Summer
▷ MATH 302. — Discrete Mathematics (total enrollment: 19)

Fall
▷ MATH 152. — Engineering Mathematics II (total enrollment: 99)
▷ MATH 302. — Discrete Mathematics (total enrollment: 32)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Distinguished Professor Emeritus, [2007]

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: Advances in Computational Mathematics (Member), Communications in Applied Analysis (Member), Numerical Functional Analysis and Optimization (Member), RAIRO (Member), Panamerican Mathematical Journal (Member)
  State
  ▶ Event: The Texas Finite Element “Rodeo” (Co-Organizer)
  Department
  ▶ Event: Numerical Analysis Weekly Seminars (Co-Organizer)
  ▶ Committee/Panel: Search Committee for Koss Chair (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ MATH 691. — Research (total enrollment: 1)
  Summer
  ▶ MATH 691. — Research (total enrollment: 1)
  Fall
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ (REN) A New Approximation Technique for Maxwell’s Equations, National Science Foundation
  ▶ Development of a High Density, High Performance Beowulf Cluster, National Science Foundation

• PUBLICATIONS DURING 2007

Retired 08/31/2007.
• SERVICE DURING 2007

International
▷ Event: The First Doha Conference on Applied Mathematics and Computational Science (Co-Organizer), The First Doha Conference on Applied Mathematics and Computational Science (Session Chair), Workshop on Dynamical Systems, Institute of Mathematics, Academia Sinica (Organizer), Workshop on Dynamical Systems, Institute of Mathematics, Academia Sinica (Session Chair)
▷ Editorial/Board: International Journal of Quantum Information (Member)

National
▷ Editorial/Board: Chapman & Hall/CRC Press Applied Mathematics and Nonlinear Sciences Series (Editor-in-Chief), Electronic Journal of Differential Equations (Member), Middleton Conference on Quantum Fluctuations, PRISM, Princeton University (Session Chair), 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 2007

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)

Fall
▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 34)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Spin-Based Lattice-Gas Quantum Optics in Solids Using Optical Addressing, Air Force Office of Scientific Research

• PRESENTATIONS DURING 2007

▷ “Quantum-Number D-Scaling and Mathematical Issues in the Associated Max-Min Problem”, Texas A&M University Molecular Physics and Quantum Optics Symposium, Institute for Quantum Studies, College Station, TX, January, 2007.(Invited)
> “On English technical writing,” Department of Bio-Industrial Mechatronics Engineering, National Taiwan University, Taipei, Taiwan, March, 2007. (Invited)
> “Atoms, Molecules and the Schrödinger Equation,” Department of Mathematics, University of Texas-pam American, Edinburg, TX, April, 2007. (Invited)
> “Chemical Applications of Group Theory and Symmetries,” Texas A&M University/Princeton Summer School on Quantum Optics and Molecular Physics, Casper College, Casper WY, July, 2007. (Invited)
> “A Chitchat on Greenhouse Effects and Some Mathematical Properties of Greenhouse Gas Molecules,” Department of Mathematics, National Taiwan University, Taipei, Taiwan, August, 2007. (Invited)
> “Some of my most Favorite Unsolved Problems Related to the Chaotic Vibration of the Wave Equation,” Workshop on Dynamical Systems, Institute of Mathematics, Academia Sinica, Taipei, Taiwan, August, 2007. (Invited)
> “Introduction to Quantum Computing Devices,” Institute of Applied Mechanics, National Taiwan University, Taipei, Taiwan, September, 2007. (Invited)
> “Mathematical Formulations of Atom Trap Quantum Gates,” Mathematics Department, University of Texas at Tyler, Tyler, TX, September, 2007. (Invited)
> Institute of Mathematics, Academia Sinica, Taipei, Taiwan, December, 2007. (Invited)

• PUBLICATIONS DURING 2007
with Unbounded Distributed Delays Chaos, Solitons and Fractals, vol. 34, 992-996.

• SERVICE DURING 2007

International
▷ Editorial/Board: *Acta Mathematics Sinica* (Referee: Journals)

National
▷ Editorial/Board: *American Journal of Mathematics* (Referee: Journals), *Transactions of the AMS* (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 308(H) — *Differential Equations* (total enrollment: 18)
▷ MATH 308. — *Differential Equations* (total enrollment: 43)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Harmonic Analysis and Nonlinear Hamiltonian Equations, *National Science Foundation*
▷ Nonlinear Dispersive Hamiltonian Systems: Solitary Waves and Global Attractions, *National Science Foundation*

• PRESENTATIONS DURING 2007

▷ “Partielle Differentialgleichungen,” Universität Potsdam, Institut für Mathematik, January, 2007.( Individual)
▷ Texas A&M University, Mathematical Physics and Harmonic Analysis, College Station, TX, February, 2007.( Individual)
▷ University of North Carolina, Analysis, Charlotte, NC, April, 2007.( Individual)
▷ Institute for Information Transmission Problems of Russian Academy of Sciences, Russia, June, 2007.( Individual)
▷ Technische Universität München, Oberseminar zur Mathematischen Physik, October, 2007.( Individual)
▷ Technische Universität Darmstadt, Darmstadt, Germany, October, 2007.( Individual)
▷ “Partial Differential Equations,” Moscow State University, Moscow, Russia, November, 2007.( Individual)
▷ “Angewandte Analysis,” Universität Duisburg, Essen, December, 2007.( Individual)
• PUBLICATIONS DURING 2007
  ▶ Comech, A. (2007) Math Hints for TeX/LaTeX and HTML.
• SERVICE DURING 2007

International
▶ Event: Special Session on Numerical Methods for PDEs: Evolution Problems, 6th International Congress on Industrial and Applied Mathematics (Chair)

National
▶ Event: Minisymposium on High Speed Flows, 44th Annual Technical Meeting of Society of Engineering Sciences (Co-Organizer), Special Session on Instability: Interfacial and Thin Films, 60th Annual Meeting of Division of Fluid Dynamics of APS (Chair), Special Session on Multiphase Flows, SIAM07 CSE Meeting (Chair)

University
▶ Committee/Panel: Faculty Development Leave Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▶ MATH 151. — *Engineering Mathematics I* (total enrollment: 84)
▶ MATH 401. — *Advanced Engineering Mathematics* (total enrollment: 26)

Summer
▶ MATH 601. — *Methods of Applied Mathematics I* (total enrollment: 12)

Fall
▶ MATH 605. — *Mathematical Fluid Dynamics* (total enrollment: 10)
▶ MATH 672 — *Hydrodynamic Stability* (total enrollment: 10)

• RESEARCH PROJECTS DURING 2007

Federal
▶ Numerical Methods and Algorithms in Complex Geometry for Complex Problems, *National Science Foundation*

• PRESENTATIONS DURING 2007


“Role of Multi-Scale in Unstable Multi-Layer Hele-Shaw Flows,” 44th Annual Technical Meeting of the Society of Engineering Sciences, College Station, TX, October, 2007. (Invited)

“Multi-phase Flow and Enhanced Oil Recovery,” Prairie View A&M University, Prairie View, TX, November, 2007. (Invited)

“Stability of Multi-Layer Hele-Shaw Flows with and without Diffusion,” Department of Mathematics, Southern Methodist University, Dallas, TX, November, 2007. (Invited)


**PUBLICATIONS DURING 2007**


• SERVICE DURING 2007

International

National

Regional
▷ Event: High School Math Contest (Member)

University
▷ Committee/Panel: Faculty Senate University Bookstore Advisory Committee (Member), Undergraduate Studies Committee (Member), Who’s Who in American Universities and Colleges (Member)

College
▷ Committee/Panel: College Quality Enhancement Plan Council (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 625. — *Applied Stochastic Differential Equations* (total enrollment: 8)
▷ MATH 685. — *Directed Studies* (total enrollment: 2)

Summer
▷ MATH 411. — *Mathematical Probability* (total enrollment: 17)
▷ MATH 485. — *Directed Studies* (total enrollment: 1)

Fall
▷ MATH 251. — *Engineering Mathematics III* (total enrollment: 101)
▷ MATH 619. — *Applied Probability* (total enrollment: 13)

• PUBLICATIONS DURING 2007
RONALD G. DOUGLAS
DISTINGUISHED PROFESSOR  (979) 845-7241
MATH-Operator Theory, Operator Algebras  rdoigus@math.tamu.edu

• SERVICE DURING 2007
  International
  ▶ Editorial/Board: Bilateral Israeli/United States Foundation, Joint India-NSF (Review: Proposals)
  National
  ▶ Professional Affiliation: Alfred E. Strom Foundation (Fellow), American Association for the Advancement of Science (Fellow), John Simon Guggenheim Memorial Foundation (Fellow)
  ▶ 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: Pure and Applied Mathematics Grant Selection Committee NSERC (Member), Review Committee for Department of Mathematics, University of Nebraska (Member)

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

Department
  ▶ Committee/Panel: Department Committee D (Chair), Distinguished Position Recruitment Committee (Member), Honor System Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ MATH 663. — Seminar in Analysis (total enrollment: 6)
  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ MATH 446. — Principles of Analysis I (total enrollment: 22)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Invariants for Multivariate Operator Theory, National Science Foundation

• PRESENTATIONS DURING 2007
  ▶ Mathematics Department, University of Waterloo, Ontario, Canada, 2007. (Individual)
Mathematics Department, University of British Columbia, BC Canada, March, 2007.( Individual)
“Legacy of R. L. Moore,” Austin, TX, April, 2007.( Invited)
Friends of Mathematics, Kansas State University, Manhattan, KS, April, 2007.( Individual)
Mathematics Department at Kansas State University, Manhattan, KS, April, 2007.( Individual)
AMS-MMS Meeting, May, 2007.( Invited)
Mathematics Department, University of Lille, Lille, France, June, 2007.( Individual)

- PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International

National
▷ Committee/Panel: National Science Foundation (Panelist)

Department
▷ Event: Concentration Week in Free Probability (Co-Organizer), Linear Analysis Seminar (Organizer)
▷ Committee/Panel: Executive Committee (Member), Scientific Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 33)
▷ MATH 410. — Advanced Calculus II (total enrollment: 12)
▷ MATH 691. — Research (total enrollment: 4)

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

Fall
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Free Probability Theory and Applications to Free Group Factors, National Science Foundation

• PRESENTATIONS DURING 2007


“Horn Inequalities and Connes’ Embedding Problem,” C*-Algebras Seminar, University of Muenster, Germany, June, 2007. (Invited)


“Horn’s Inequalities and Connes’ Embedding Problem,” 5th Annual ECOAS (East Coast Operator Algebras Symposium), Wellesley, MA, September, 2007. (Invited)


- PUBLICATIONS DURING 2007


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2007
  International
  ▷ Editorial/Board: Georigian, Norwegian, UK and National Science Foundation (Review: Proposals), Norway Research Council Swiss National Science Foundation (Reviewer)
  National

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ MATH 689. — Special Topics in (total enrollment: 13)
  ▷ MATH 691. — Research (total enrollment: 4)
  Summer
  ▷ MATH 685. — Directed Studies (total enrollment: 1)
  ▷ MATH 691. — Research (total enrollment: 4)
  Fall
  ▷ MATH 308. — Differential Equations (total enrollment: 35)
  ▷ MATH 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Multiscale Analysis and Computation for Flows in Heterogenous Media, Department of Energy
  ▷ Multiscale Modeling and Simulation of Flow in Heterogeneous Porous Media and Their Applications, Department of Energy
  ▷ CMG Research on Multiscale Spatial Models for Petroleum Mapping Using Static and Dynamic Data, National Science Foundation
  ▷ DDAS-TMRP: Collaborative Research: Adaptive Data-Driven Sensor Configuration, Modeling, and Deployment for Oil, Chemical, and Biological Contamination Near Critical Coastal Facilities, National Science Foundation
Development of a High Density, High Performance Beowulf Cluster, *National Science Foundation*

- **PRESENTATIONS DURING 2007**
  - Chevron, February, 2007. (Individual)
  - Society for Industrial and Applied Mathematics Geoscience, Santa Fe, Mexico, March, 2007. (Individual)
  - “LMS-EPSRC Short Course,” University of Warwick, United Kingdom, April, 2007. (Invited)
  - “Upscaling Workshop,” University of Bergen and CIPR, Bergen, Norway, April, 2007. (Invited)
  - 17th International Conference on Domain Decomposition Methods, Strobl, Austria, July, 2007. (Individual)
  - Institute for Math and Computer Science, College Station, TX, November, 2007. (Individual)

- **PUBLICATIONS DURING 2007**
• SERVICE DURING 2007

International

▷ Professional Affiliation: Mathematical Institute of the Hungarian Academy of Science (Associate Member)

National

▷ Professional Affiliation: American Mathematical Society (Member), Janos Bolyai Mathematical Society (Member), Mathematical Association of America (Member)
▷ Editorial/Board: Proceedings of the American Mathematical Society (Reviewed), Section Problems and Solutions: Of the American Mathematical Monthly (Assisted), American Mathematical Monthly, Constructive Approximation, Journal of Approximation Theory (Referee: Journals), Journal of Approximation Theory (Editor), Mathematical Inequalities and Applications (Editor), Proceedings of the American Mathematical Society, Results in Mathematics (Referee: Journals)

University

▷ Research Group: Center for Experimental and Constructive Mathematics at Simon Fraser University (Associate Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring

▷ MATH 151. — Engineering Mathematics I (total enrollment: 166)

Fall

▷ MATH 251. — Engineering Mathematics III (total enrollment: 75)

• RESEARCH PROJECTS DURING 2007

Federal

▷ Exponential Sums, National Science Foundation

• PRESENTATIONS DURING 2007

▷ “Modern Approaches in Asymptotics of Polynomials,” Banff, Canada, November, 2007. (Individual)

• PUBLICATIONS DURING 2007


• CHAIRS/PROFESSORSHIPS
  ▶ Distinguished Research Chair (TEES) [1992]
  ▶ Mobil Technology Company Endowed Chair in Computational Science [1999]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Vice President for Research, Vice President for Research, [2000]

• AWARDS DURING 2007
  International
  ▶ 2007 Michael P. Malone International Leadership Award, National Association of State Universities and Land-Grant Colleges
  ▶ Marin Drinov Medal, The Bulgarian Academy Of Sciences

• SERVICE DURING 2007
  International
  ▶ Advisory Board: International Advisory Board, Institute for Mathematics of Life Sciences, Texas Tech (Member)
  ▶ Professional Affiliation: European Society of Computational Methods in Sciences and Engineering (Member), International Association for Computational Mechanics (Member), International Association for Mathematics and Computers in Simulation (Member), International Federation of Nonlinear Analysis (Member)

  National
  ▶ Professional Affiliation: American Association for the Advancement of Science (Fellow), American Chemical Society (Member), American Geophysical Union (Member), American Mathematical Society (Member), Institute of Electrical and Electronics Engineers Inc. (Member), Mathematics Association of America (Member), United States Association for Computational Mechanics (Member)
  ▶ Advisory Board: Advisory Committee, In-Situ (Member)
Partial Differential Equations (Member)

- Committee/Panel: Bi-National Sustainability Laboratory (Board of Directors), Big 12 Center for Economic Development, Operations Committee (Member), Oak Ridge Associated Universities (Board of Directors)
- Service Position: National Space Biomedical Research Institute (Board of Directors), Software Commercialization and Innovation Center (Board of Directors)

State

- Committee/Panel: FutureGen Texas (Advisory Board), Steering Committee, Texas Telecommunications Engineering Consortium, State of Texas (Member), Texas Product Development and Small Business Incubator Board (Member)
- Service Position: Houston Technology Center (Board of Directors), Texas Healthcare and Biosciences Institute (Board of Directors), Texas Society for Biomedical Research (Board of Directors)
- Research Group: Houston Advanced Research Center (Board of Directors), Texas Institute for Genomic Medicine (Board of Directors)

Regional

- Service Position: Associated Western Universities (Board of Directors), Southeastern Universities Research Association (Board of Directors)

University

- Event: Texas GigaPOP, Internet2 (Executive Liaison)
- Advisory Board: Board of Trustees, Texas A&M University Research Foundation (Member), Scientific Board, Industrial Mathematics Institute, University of South Carolina (Member)

Department

- Committee/Panel: Endowed Professorship Committee (Member)
- Research Group: Center for Animal Biotechnology and Genomics, TAES (Steering Committee)
- Professional Affiliation: Society for Industrial and Applied Mathematics (Member), Society of Engineering Science (Member), Society of Petroleum Engineers of AIME (Member)

- RESEARCH PROJECTS DURING 2007

Federal

- Center for the Application of Information Technology in the Teaching and Learning of Science, National Science Foundation
- DDAS-TMRP: Collaborative Research: Adaptive Data-Driven Sensor Configuration, Modeling, and Deployment for Oil, Chemical, and Biological Contamination Near Critical Coastal Facilities, National Science Foundation
- Development of a High Density, High Performance Beowulf Cluster, National Science Foundation
- Noyce Scholarship (Supplement to ITS Center Grant), National Science Foundation
- Supplement to the ITS Center, National Science Foundation
• PUBLICATIONS DURING 2007

Deceased 12/05/2007.
• **AWARDS DURING 2007**
  University
  ▶ Distinguished Achievement Award - Research, The Association of Former Students

• **TEACHING ASSIGNMENTS DURING 2007**
  Spring
  ▶ MATH 663. — *Seminar in Analysis* (total enrollment: 5)

• **PUBLICATIONS DURING 2007**
• SERVICE DURING 2007

International

National

Department
▷ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 491. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)

Fall
▷ MATH 412(H) — Theory of Partial Differential Equations (total enrollment: 6)
▷ MATH 412. — Theory of Partial Differential Equations (total enrollment: 21)
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Collaborative Research: Quantum Vacuum Energy, National Science Foundation

• PRESENTATIONS DURING 2007

▷ Newton Institute, University of Cambridge, Cambridge, United Kingdom, February, 2007. (Individual)
▷ University of Sussex, Physics Department, Brighton, United Kingdom, February, 2007. (Invited)
▷ University of York, Physics Department, York, United Kingdom, March, 2007. (Invited)
8th Workshop on Quantum Field Theory under the Influence of External Conditions, Leipzig, Germany, September, 2007. (Invited)

**PUBLICATIONS DURING 2007**

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, University Honors Program, ///
  ▶ Professor, College of Veterinary Medicine, ///

• SERVICE DURING 2007

  National
  ▶ Event: Association of Women in Mathematics Mentor at January AMS/MAA meetings (Mentor), Ethics in the Mathematical Science, Joint Mathematics Meetings (Moderator), Women In Mathematics (Speaker)
  ▶ Editorial/Board: Ethics in the Mathematical Science, Joint Mathematics Meetings (Panel)
  ▶ Committee/Panel: MAA Committee on Science Policy (Member), MAA Committee on the Profession (Chair), MAA Strategic Planning Committee on Meetings (Member), MAA Subcommittee on Early Career Development (Member)

  University
  ▶ Service Position: AWM Student Chapter (Faculty Sponsor), Dean of Faculties (Mediator), Junior Faculty (Mentor), Student Conflict Resolution Center (Mediator)
  ▶ Committee/Panel: Women’s Faculty Network (Mentor)

  Department
  ▶ Service Position: Students in MS in Mathematics, Teaching Option (Mentor)
  ▶ Committee/Panel: Goldwater Scholarship Selection Committee (Member), Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ MATH 152.(H) — Engineering Mathematics II (total enrollment: 38)

  Summer
  ▶ MATH 485. — Directed Studies (total enrollment: 1)

  Fall
  ▶ MATH 222. — Linear Algebra (total enrollment: 20)
  ▶ MATH 415. — Modern Algebra I (total enrollment: 16)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Graduate Assistance in Areas of National Need, Department of Education
  ▶ Undergraduate Student Travel to Conferences, National Science Foundation
• PRESENTATIONS DURING 2007
  ▶ “Using Mathematics in Microarray,” Texas A&M University Summer High School Program, College Station, TX, June, 2007. (Individual)
• SERVICE DURING 2007

International

▷ Event: 6-th International Algebraic Conference in Ukraine (Organizer), Analysis on Graphs and Fractals, Cardiff, United Kingdom (Organizer), Methods of Algebra and Analysis in Contemporary Mathematics, Chernivtsi, Ukraine (Organizer)

▷ Editorial/Board: Pierre Deligne (Referee), Switzerland National Science Foundation, Science and Engineering Research Canada, Israel Science Foundation, Marie Curie (EPPS) (Referee), Annales de l’Institut Fourier, Izvestiya RAN. Mathematical Series, Publications Mathématiques de l’IHÉS (Referee: Journals), Geometriae Dedicata, International Journal of Mathematics and Mathematical Sciences, International Journal of Algebra and Computations, Matematicheskii Sbornik, Inventiones Mathematicae (Referee: Journals), Geometriae Dedicata (Editor), International Journal of Algebra and Computation (Editor), Mathematicni Studii (Editor)

National

▷ Event: Conference Dedicated to the 100-th Anniversary of W. Magnus, New York (Organizer), Dichotomy Amenable/Nonamenable in Combinatorial Group Theory (Participant)


Department

▷ Event: Groups and Dynamics Seminar (Head), Groups and Dynamics Seminar (Organizer)

▷ Committee/Panel: Committee P&T (Member), Postdoc Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring

▷ MATH 416(H) — Modern Algebra II (total enrollment: 5)

▷ MATH 416. — Modern Algebra II (total enrollment: 6)

▷ MATH 691. — Research (total enrollment: 3)

Summer

▷ MATH 684. — Professional Internship (total enrollment: 1)

▷ MATH 685. — Directed Studies (total enrollment: 1)

▷ MATH 691. — Research (total enrollment: 3)

Fall
- **MATH 304. — Linear Algebra** (total enrollment: 75)
- **MATH 691. — Research** (total enrollment: 3)

• **RESEARCH PROJECTS DURING 2007**

  **Federal**
  - Algebraic, Combinatorial, Spectral, and Algorithmic Properties of Groups Generated by Finite Automata, *National Science Foundation*
  - FRG: Asymptotic and Probabilistic Methods in Geometric Group Theory, *National Science Foundation*

• **PRESENTATIONS DURING 2007**
  - “Amenability, Branching and Hanoi Towers Game,” Rice University, Houston, TX, February, 2007. (Individual)
  - “Schur Complement and Schreier Graphs,” Analysis on Graphs and Applications, Cambridge, United Kingdom, June, 2007. (Invited)
  - “The Beginning of the Atlas of Self-Similar Groups,” Indiana University Purdue University, Indianapolis, IN, November, 2007. (Individual)

• **PUBLICATIONS DURING 2007**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT,

• SERVICE DURING 2007
  International

  National

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 15)

  Summer
  ▶ MATH 685. — Directed Studies (total enrollment: 2)

  Fall
  ▶ MATH 308. — Differential Equations (total enrollment: 38)
  ▶ MATH 661. — Mathematical Theory of Finite Element Methods (total enrollment: 8)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Proposal for Supporting the Organization of a Workshop on L1-based Nonlinear Approximation Techniques, Department of Defense
  ▶ Computational Issues in Neutron Transport, Lawrence Livermore National Laboratory
  ▶ A Framework for Developing Novel Detection Systems Focused on Interdicting Shielded, 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
Nonlinear Finite Element Approximation of First-Order PDE’s in L1, National Science Foundation

PRESENTATIONS DURING 2007

- “Numerical Analysis Seminar,” University of Maryland, College Park, MD, November, 2007. (Individual)

PUBLICATIONS DURING 2007

• SERVICE DURING 2007
  National
  ▷ Editorial/Board: *Journal of Math Analysis and Applications* (Associate Editor)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ MATH 152. — *Engineering Mathematics II* (total enrollment: 85)
  ▷ MATH 433. — *Applied Algebra* (total enrollment: 14)
  Fall
  ▷ MATH 220. — *Fundamentals of Discrete Mathematics* (total enrollment: 20)
• SERVICE DURING 2007

  International
  ▷ Editorial/Board: *International Journal of Number Theory* (Referee: Journals)

  National

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ MATH 152. — *Engineering Mathematics II* (total enrollment: 148)

  Fall
  ▷ MATH 304. — *Linear Algebra* (total enrollment: 17)
  ▷ MATH 490. — *The Putnam Challenge* (total enrollment: 9)
• SERVICE DURING 2007

National
▷ Professional Affiliation: Phi Beta Kappa Chapter (Treasurer)

State
▷ Event: Texas State Conference of AAUP (Vice President)

Regional
▷ Event: High School Mathematics Tournament (Grader)

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 10), Faculty Senate Executive Committee (Member), Faculty Senate Planning Committee (Chair), Steering Committee for Freshman Convocation (Member), Subcommittee on Legislative Affairs (Chair), System Faculty Council (Coordinator)

Department
▷ Committee/Panel: Budget Information Committee (Member), Math 302 Development Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ CHEM 238. — Organic Chemistry Laboratory (total enrollment: 68)
▷ MATH 302. — Discrete Mathematics (total enrollment: 21)
▷ MATH 613. — Graph Theory (total enrollment: 12)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 304. — Linear Algebra (total enrollment: 28)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 66)
▷ MATH 302. — Discrete Mathematics (total enrollment: 36)
▷ MATH 691. — Research (total enrollment: 1)
• SERVICE DURING 2007

National

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

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 289. — Special Topics in (total enrollment: 17)

Fall
▷ MATH 151. — Engineering Mathematics I (total enrollment: 61)
▷ MATH 442. — Mathematical Modeling (total enrollment: 27)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Stability of Shock Waves and Related Structures in Combustion Models, Thin Film Flows and General Conservative Systems, National Science Foundation

• PRESENTATIONS DURING 2007
▷ Texas PDE 2007, March, 2007.( Contributed)
▷ Texas A&M University, College Station, TX, September, 2007.( Individual)
▷ Pennsylvania State University, University Park, PA, October, 2007.( Individual)
▷ University of Louisville, Louisville, KY, October, 2007.( Individual)

• PUBLICATIONS DURING 2007
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MATH-Functional Analysis johnson@math.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▷ Arthur George and Mary Emolene Owen Chair in Mathematics [1984]

• AWARDS DURING 2007
  International
  ▷ Stephan Banach Medal, Polish Academy of Sciences

• SERVICE DURING 2007
  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), Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ MATH 608. — Real Variables II (total enrollment: 7)
  ▷ MATH 691. — Research (total enrollment: 2)
  Summer
  ▷ MATH 691. — Research (total enrollment: 2)
  Fall
  ▷ MATH 607. — Real Variables I (total enrollment: 23)
  ▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Collaborative Research: FRG: Embeddings of Finite Metric Spaces- A Geometric Approach to Efficient Algorithms, National Science Foundation
  ▷ (REN) Geometry of Banach Spaces and Operator Spaces, National Science Foundation
  ▷ Workshop in Analysis and Probability, National Science Foundation
• PRESENTATIONS DURING 2007
  ▶ “Geometric and Functional Analysis Seminar,” Tel Aviv, January, 2007.( Invited)
  ▶ “Geometry and Algorithms,” Edinburgh, Scotland, April, 2007.( Invited)
  ▶ “Functional Analysis Seminar Talk,” Warsaw, IN, June, 2007.( Individual)
  ▶ Stefan Banach Medal Address, Warsaw, IN, June, 2007.( Individual)
  ▶ University of Missouri, Columbia, MO, December, 2007.( Individual)

• PUBLICATIONS DURING 2007
• AWARDS DURING 2007

International
▷ Wilkinson Prize for Numerical Software, Institute of Aerodynamics and Flow Technology

• SERVICE DURING 2007

International
▷ Event: International Conference on Modeling, Simulation and Optimization of Complex Processes (Organizer)

National
▷ Service Position: University of Minnesota (Consultant)
▷ Event: Minisymposium Fast Solvers for Saddle-point Problems With Applications in Fluid Dynamics (Organizer), Minisymposium High-level Software for the Numerical Solution of Partial Differential Equations (Organizer)

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 09)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 602. — Methods and Applications of Partial Differential Equations (total enrollment: 6)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 27)

• RESEARCH PROJECTS DURING 2007

Federal
▷ A Framework for Developing Novel Detection Systems Focused on Interdicting Shielded, *National Science Foundation*
▷ Discontinuous Galerkin Methods for PDE’s with Heterogeneous Coefficients, *National Science Foundation*

• PRESENTATIONS DURING 2007

464 2007 Mathematics annual report
University of Texas, Austin, TX, February, 2007. (Individual)
Universität Göttingen, Göttingen, Germany, June, 2007. (Individual)
Universität Karlsruhe, Karlsruhe, Germany, June, 2007. (Individual)
University of Alberta-Edmonton, Alberta, Canada, November, 2007. (Individual)

PUBLICATIONS DURING 2007
• SERVICE DURING 2007

National

Department
▷ Event: Led a Session on Google, Matrices, and Random Walks for SEE-Math (Organizer), Real Analysis Qualifying Exam Committee (Grader), Talk on Google, Matrices, and Random walks at Aggieland Saturday and at the Department of Mathematics Freshmen Meeting (Speaker), Weekly Linear Analysis Seminar (Organizer)
▷ Committee/Panel: Real Analysis Qualifying Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 160)
▷ MATH 685. — Directed Studies (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 151. — Engineering Mathematics I (total enrollment: 60)
▷ MATH 689. — Special Topics in (total enrollment: 10)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Dynamics, Geometry, and Operator Algebras, National Science Foundation

• PRESENTATIONS DURING 2007
▷ “Great Plains Operator Theory Symposium,” University of Nebraska, Lincoln, NE, May, 2007.( Invited)
▷ “Barcelona Conference on C*-Algebras and Their Invariants,” CRM, Bellaterra, Spain, June, 2007.( Contributed)
▷ “Banach Spaces and Related Topics,” Texas A&M University, College Station, TX, October, 2007.( Individual)
▷ “Groups and Dynamics Seminar,” Texas A&M University, College Station, TX, October, 2007.( Individual)
▷ “Analysis Seminar,” University of Waterloo, Canada, November, 2007.( Individual)

- **PUBLICATIONS DURING 2007**
  
  
• SERVICE DURING 2007

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 2007

Spring
  ▶ MATH 609. — *Numerical Analysis* (total enrollment: 15)

Summer
  ▶ MATH 308. — *Differential Equations* (total enrollment: 30)

Fall
  ▶ MATH 221. — *Several Variable Calculus* (total enrollment: 44)
  ▶ MATH 251. — *Engineering Mathematics III* (total enrollment: 87)

• PUBLICATIONS DURING 2007
- **ADDITIONAL UNIVERSITY TITLES HELD DURING 2007**
  - Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

- **SERVICE DURING 2007**
  - **International**
    - Committee/Panel: Organizing Committee of the Spring 2007 International Program (Member)
  - **National**
    - Event: AMS Special Session on Radon Transform and Tomography (Co-Organizer)
  - **Department**
    - Event: Math Physics and Harmonic Analysis Seminar (Co-Organizer)
    - Committee/Panel: Koss Prof. Hiring Committee (Member), Talent Search (Chair)

- **TEACHING ASSIGNMENTS DURING 2007**
  - **Fall**
    - MATH 171. — *Analytic Geometry and Calculus* (total enrollment: 40)
    - MATH 611. — *Ordinary Differential Equations* (total enrollment: 11)
    - MATH 685. — *Directed Studies* (total enrollment: 1)
    - MATH 691. — *Research* (total enrollment: 1)

- **RESEARCH PROJECTS DURING 2007**
  - **Federal**
    - A Framework for Developing Novel Detection Systems Focused on Interdicting Shielded, *National Science Foundation*
    - Analysis on Graphs and its Applications, *National Science Foundation*
• PRESENTATIONS DURING 2007

▷ "Spectra of Schroedinger Operators on Carbon Graphen and Nanotube Quantum Graph Structures," University of Nottingham, Nottingham, United Kingdom, May, 2007. (Individual)
▷ "On an Inverse Problem for the Wave Equation That Arises in Medical Imaging," Mathematical Physics Seminar, Texas A&M University, College Station, TX, September, 2007. (Individual)
▷ "Analysis on Graphs and its Applications," Mathematical Department University of Texas, Arlington, TX, October, 2007. (Individual)
▷ "Mathematical Problems of Thermoacoustic Tomography," International Biomedical imaging Workshop, Radon Institute, Linz, Austria, November, 2007. (Invited)

• PUBLICATIONS DURING 2007


• SERVICE DURING 2007

International

National

State
▷ Event: Texas Geometry and Topology Conference (Organizer)

Department
▷ Committee/Panel: Graduate Reviews (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 685. — Directed Studies (total enrollment: 4)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 666. — Seminar in Geometry (total enrollment: 9)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Collaborative Research: Exterior Differential System Approach to Periodic Orbits in Hamiltonian Systems, *National Science Foundation*

• PRESENTATIONS DURING 2007
▷ Texas Geometry and Topology Conference, Texas Christian University, Fort Worth, TX, March, 2007. (Invited)
University of Texas, Geometry Seminar, Austin, TX, April, 2007. (Individual)
University Bologna, Geometry Seminar, Bologna, Italy, July, 2007. (Individual)
Annual Conference of the Heilbronn Institute for Mathematical Research (HIMR), Bristol, Bristol, United Kingdom, September, 2007. (Invited)
Colloquium and Geometry Seminar, University College Cork, Cork, Ireland, September, 2007. (Individual)
Geometry Day at Loughborough, Loughborough, United Kingdom, September, 2007. (Individual)

PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International
▷ Committee/Panel: Committee for International Journal of Pure and Applied Mathematics (Editorial Board)

National

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

Department
▷ Service Position: Undergraduate Studies (Director)
▷ Committee/Panel: Honors Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 447(H) — Topics in Analysis (total enrollment: 3)
▷ MATH 447 — Topics in Analysis (total enrollment: 8)
▷ MATH 691 — Research (total enrollment: 1)

Summer
▷ MATH 685 — Directed Studies (total enrollment: 4)
▷ MATH 691 — Research (total enrollment: 1)

Fall
▷ CHEM 237 — Organic Chemistry Laboratory (total enrollment: 71)
• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Collaborative Research: Focused Research on Wavelets, Frames, Operator Theory, National Science Foundation
  ▶ REU Site: Undergraduate Research in Mathematical Sciences and Its Applications, National Science Foundation
  ▶ Workshop in Analysis and Probability, National Science Foundation

• PRESENTATIONS DURING 2007
  ▶ University of Central Florida, Orlando, FL, February, 2007.( Individual)
  ▶ “Great Plains Operator Theory Symposium [GPOTS],” University of Nebraska, Lincoln, NE, May, 2007.( Individual)
  ▶ University of North Carolina, Charlotte, NC, December, 2007.( Individual)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]

• SERVICE DURING 2007

  International
  ▶ Editorial/Board: International Journal on Finite Volumes (Member), Zentralblatt fur Mathematik (Referee: Journals)

  National

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

  Department
  ▶ Research Group: WG 2.5 Numerical Software, IFIP (International Federation for Information Processing) (Associate Member)
  ▶ Committee/Panel: Award Committee (Member), Promotion Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ MATH 610. — Numerical Methods in Partial Differential Equations (total enrollment: 5)
  ▶ MATH 691. — Research (total enrollment: 1)

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

  Fall
  ▶ MATH 417. — Numerical Analysis I (total enrollment: 15)
  ▶ MATH 609. — Numerical Analysis (total enrollment: 7)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

  Federal
• PRESENTATIONS DURING 2007
  ▶ “Hybridization of FE Approximations of Elliptic Problems with Applications to Discontinuous Galerkin Methods,” Sixth International Conference on Large Scale Scientific Computations, Sozopol, Bulgaria, June, 2007. (Individual)

• PUBLICATIONS DURING 2007
• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ MATH 222. — Linear Algebra (total enrollment: 23)
  ▶ MATH 425. — The Mathematics of Contingent Claims (total enrollment: 29)

Summer
  ▶ MATH 308. — Differential Equations (total enrollment: 20)

Fall
  ▶ MATH 325. — The Mathematics of Interest (total enrollment: 48)
  ▶ MATH 411. — Mathematical Probability (total enrollment: 36)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Graduate Advisor, Mathematics Graduate Advising Office, [2006]

• SERVICE DURING 2007
  National
    (Referee: Journals)

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

Department
  ▷ Event: Recruiting Weekend and Mini-Symposium for the Graduate Program (Organizer)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ MATH 644. — *Algebraic Topology II* (total enrollment: 6)
  ▷ MATH 691. — *Research* (total enrollment: 1)

Summer
  ▷ MATH 685. — *Directed Studies* (total enrollment: 1)
  ▷ MATH 691. — *Research* (total enrollment: 2)

Fall
  ▷ MATH 636. — *Topology I* (total enrollment: 17)
  ▷ MATH 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Graduate Assistance in Areas of National Need, *Department of Education*

• PRESENTATIONS DURING 2007
  ▷ University of Chicago, Chicago, IL, April, 2007.( Individual)
  ▷ Instituto Superior Tecnico, Universidade Politecnica de Lisboa, Portugal, June, 2007.( Individual)
  ▷ Trinity University, San Antonio, TX, December, 2007.( Individual)
• SERVICE DURING 2007
  National
  ▶ Editorial/Board: *Inverse Problems* (Referee: Journals)
  Regional
  ▶ Committee/Panel: Exam Committee High School Math Conference (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Summer
  ▶ MATH 409. — *Advanced Calculus I* (total enrollment: 18)
  Fall
  ▶ MATH 629. — *History of Mathematics* (total enrollment: 21)
  ▶ MATH 645. — *A Survey of Mathematical Problems I* (total enrollment: 24)
LAURA F. MATUSEVICH
ASSISTANT PROFESSOR (979) 845-7636
MATH-Algebraic Geometry & Combinatorics laura@math.tamu.edu

- SERVICE DURING 2007
  
  International
  ▶ Editorial/Board: *International Mathematics Research Notices* (Referee: Journals)

  National

  Department
  ▶ Event: IMA Participating Institution Graduate Summer Program on Applicable Algebraic Geometry (Organizer)

- TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ MATH 302. — *Discrete Mathematics* (total enrollment: 19)

  Fall
  ▶ MATH 662. — *Seminar in Algebra* (total enrollment: 6)

- RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Multivariate Hypergeometric Functions and Equations, *National Science Foundation*
  ▶ Postdoctoral Research Fellowship, *National Science Foundation*
  ▶ Summer School on Applicable Algebraic Geometry: Additional Funding, *National Science Foundation*

- PRESENTATIONS DURING 2007

  ▶ “Interactions Between Algebraic Combinatorics and Algebraic Geometry,” CRM Montreal, Canada, May, 2007.( Individual)
  ▶ “Applicable Algebraic Geometry,” Texas A&M University, College Station, TX, July, 2007.( Individual)
  ▶ Purdue University, West Lafayette, IN, September, 2007.( Individual)
  ▶ University of Illinois at Urbana-Champaign, Champaign, IL, September, 2007.( Individual)
  ▶ “American Mathematical Society, Special Session on Toric Varieties,” Fall Eastern Section Meeting, Rutgers University, New Brunswick NJ, October, 2007.( Individual)

- PUBLICATIONS DURING 2007

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, Center for Approximation Theory (CAT), []

• SERVICE DURING 2007
  
  International
  ▶ Editorial/Board: Foundations of Computational Mathematics (Referee: Journals), Numerische Mathematik (Referee: Journals)
    
  National
  
  College
  ▶ Committee/Panel: Tenure and Promotion Advisory Committee (Member)

  Department
  ▶ Committee/Panel: Teaching Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  
  Spring
  ▶ MATH 311. — Topics in Applied Mathematics I (total enrollment: 25)
  ▶ MATH 642. — Analysis for Applications II (total enrollment: 12)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

  Summer
  ▶ MATH 311. — Topics in Applied Mathematics I (total enrollment: 25)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

  Fall
  ▶ MATH 641. — Analysis for Applications I (total enrollment: 16)

• RESEARCH PROJECTS DURING 2007
  
  Federal
  ▶ Approximation and Learning in High Dimensions, National Science Foundation
  ▶ (REN) New Approaches to Scattered Data Analysis via Radial Related Basis Functions and Tight Spherical Frames, National Science Foundation

• PRESENTATIONS DURING 2007


“Divergence-free RBFs on Spheres and Other Surfaces,” 2nd Workshop on Constructive Function Theory, Sam Houston State University, Huntsville, TX, October, 2007. (Individual)

• PUBLICATIONS DURING 2007


SERVICE DURING 2007

International

✦ Event: Group Theory at AMS-SBM Joint International Meeting, Rio de Janeiro, Brazil (Co-Organizer), Groups Generated by Automata in Ascona, Switzerland (Co-Organizer)
✦ Editorial/Board: Swiss National Science Foundation (Review: Proposals), Algorithms and Computation in Mathematics, Analysis on Graphs and Applications (Referee: Journals), Geometriae Dedicata, International Journal of Algebra and Computation (Referee: Journals)
✦ Committee/Panel: Award Committee of Award for Young Mathematicians in Ukraine (Executive Secretary)

National

✦ Editorial/Board: Algebra and Discrete Mathematics (Guest Editor), Groups, Geometry and Dynamics (Member), Groups, Geometry and Dynamics, Contemporary Mathematics (Referee: Journals)

University

✦ Event: Groups and Dynamics (Co-Organizer)

Department

✦ Committee/Panel: Graduate Committee (Member)

TEACHING ASSIGNMENTS DURING 2007

Spring

✦ MATH 637. — Topology II (total enrollment: 13)

Fall

✦ MATH 251. — Engineering Mathematics III (total enrollment: 102)
✦ MATH 311. — Topics in Applied Mathematics I (total enrollment: 39)

RESEARCH PROJECTS DURING 2007

Federal

✦ Iterated Monodromy Groups, National Science Foundation

PRESENTATIONS DURING 2007

✦ “Amenability,” Erwin Schroedinger Institute, Vienna, Austria, February, 2007. (Individual)
✦ “Amenability,” Erwin Schroedinger Institute, Vienna, Austria, March, 2007. (Individual)
- State University of New York, Stony Brook, NY, March, 2007. (Individual)
- “Amenability,” Erwin Schroedinger Institute, Vienna, Austria, April, 2007. (Individual)
- “Special Session on Operator Algebras,” American Mathematical Society Western Section Meeting, Tucson, AZ, April, 2007. (Individual)
- “Amenability,” Erwin Schroedinger Institute, Vienna, Austria, May, 2007. (Individual)
- “Analysis on Graphs and Fractals,” Cardiff, United Kingdom, May, 2007. (Invited)
- Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom, May, 2007. (Individual)
- “Amenability,” Erwin Schroedinger Institute, Vienna, Austria, June, 2007. (Individual)
- “Analysis on Graphs and Fractals,” Cardiff, United Kingdom, June, 2007. (Invited)
- Colloquium of Kyiv Mathematical Society, Kyiv, Ukraine, June, 2007. (Individual)
- “Amenability,” Erwin Schroedinger Institute, Vienna, Austria, July, 2007. (Individual)
- “Groups and Their Actions,” Bedlewo, Poland, July, 2007. (Invited)

*PUBLICATIONS DURING 2007*

Faculty member hired 09/01/2007

No report received from faculty member.
• SERVICE DURING 2007

National

• TEACHING ASSIGNMENTS DURING 2007

Fall
▷ MATH 304. — *Linear Algebra* (total enrollment: 39)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Spin Glass Models, *National Science Foundation*

• PRESENTATIONS DURING 2007

▷ “The Informal Regional Functional Analysis Seminar,” College Station, TX, August, 2007. (Individual)

• PUBLICATIONS DURING 2007


*Faculty member hired 08/16/2007*
• SERVICE DURING 2007

National
▷ Event: Arizona Winter School on p-adic Geometry (Co-Organizer)

Department
▷ Service Position: Post-Doctoral Mentoring (Mentor)
▷ Event: Mathematics Mini-Fair, K-12 Students (Co-Organizer)
▷ Committee/Panel: Executive Committee (Member), Mathematics Awareness Month Committee (Chair), Post-doctoral Hiring Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 75)
▷ MATH 654. — Algebra II (total enrollment: 8)
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)

Fall
▷ MATH 151. — Engineering Mathematics I (total enrollment: 85)
▷ MATH 308. — Differential Equations (total enrollment: 54)
▷ MATH 685. — Directed Studies (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Southwest Center for Arithmetic Geometry, National Science Foundation
▷ Special Functions and Transcendence, National Science Foundation

• PRESENTATIONS DURING 2007
• AWARDS DURING 2007
  International
  ▶ Excellence in Research Award, Computational and Mathematical Methods in Science and Engineering 2007

• SERVICE DURING 2007
  International

  National
  ▶ Committee/Panel: Scientific Committee, Copper Mountain Multigrid Meetings (Member)

  Department
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ MATH 251. — Engineering Mathematics III (total enrollment: 67)
  ▶ MATH 601. — Methods of Applied Mathematics I (total enrollment: 29)
  ▶ MATH 691. — Research (total enrollment: 1)

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

  Fall
  ▶ MATH 639. — Iterative Techniques (total enrollment: 6)
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Computational Issues in Neutron Transport, Lawrence Livermore National Laboratory
  ▶ (REN) A New Approximation Technique for Maxwell’s Equations, National Science Foundation
Development of a High Density, High Performance Beowulf Cluster, National Science Foundation

- PRESENTATIONS DURING 2007

- PUBLICATIONS DURING 2007
• SERVICE DURING 2007

National

University
  ▶ Advisory Board: Board of Trustees of the Development Foundation (Member)

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

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ MATH 311.(H) — Topics in Applied Mathematics I (total enrollment: 8)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)

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

Fall
  ▶ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 28)
  ▶ MATH 691. — Research (total enrollment: 1)

• PUBLICATIONS DURING 2007

WILLIAM L. PERRY

PROFESSOR
MATH-Integral Equations

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
   ▶ Vice Provost, Administration (TAMU), [2004]

Retired 06/30/2007.
• SERVICE DURING 2007

National

Department
▷ Event: Approximation and Learning in High Dimensions (Co-Organizer)
▷ Committee/Panel: Executive Committee (Member), Subcommittee T (Member), Undergraduate Studies Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 414. — Fourier Series and Wavelets (total enrollment: 33)

Fall
▷ MATH 172. — Calculus (total enrollment: 38)
▷ MATH 609. — Numerical Analysis (total enrollment: 16)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Analysis and Numerical Methods for Transport Equations and Related Problems, National Science Foundation
▷ Approximation and Learning in High Dimensions, National Science Foundation

International
▷ Mathematical Methods and Algorithms for Computed Tomography, Ministry of Education and Science

Other
▷ Model Classes, Approximation, and Metrics for Dynamic Processing of Urban Terrain Data, University of South Carolina

• PRESENTATIONS DURING 2007

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International
▷ Event: First Annual Doha Conference on Applied Mathematics and Computational Science (Organizer), Groundwater Conference in Doha Qatar (Organizer)

National
▷ Professional Affiliation: Phi Beta Kappa, Local Chapter (Member)
▷ Event: Parameter Estimation and Modeling in Nonlinear Systems (Speaker)

University
▷ Committee/Panel: Instructional Technology Council (Member)

College
▷ Service Position: Information Technology Lab (Director)
▷ Committee/Panel: Information Technology Committee (Member), Qatar Advisory Committee (Member), Technology-Mediated Instruction Committee (Member)

Department
▷ Committee/Panel: Committee of Instructional Enhancement Fees for Math 141 and 166 (Member), Computer Committee (Member), Electronic Homework Project Team (Member), Honors Committee (Member), Mathematics and Science Education Advisory Council (Member), Moving Algebra Diagnostic Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Fall
▷ MATH 647. — Mathematical Modelling (total enrollment: 10)

• RESEARCH PROJECTS DURING 2007

Federal
▷ TAMU STEPS: Physics, Engineering, and Mathematics (PEM) Model, National Science Foundation

University
▷ The Computational Masters Degree, Office of Distance Education
• CHAIRS/PROFESSORSHIPS
  ▶ Arthur George and Mary Emolene Owen Chair in Mathematics [1985]

• SERVICE DURING 2007
  International

  National
  ▶ Event: Conference on Non-Commutative $L_p$-Spaces (Organizer), Conference on Operator Spaces and Quantum Groups (Co-Organizer)
  ▶ Editorial/Board: *Duke Mathematical Journal* (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Fall
  ▶ MATH 663. — *Seminar in Analysis* (total enrollment: 5)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ FRG: Asymptotic and Probabilistic Methods in Geometric Group Theory, *National Science Foundation*
  ▶ (REN) Geometry of Banach Spaces and Operator Spaces, *National Science Foundation*
  ▶ Workshop in Analysis and Probability, *National Science Foundation*

• PRESENTATIONS DURING 2007
  ▶ University of Rennes, Rennes, France, February, 2007.( Individual)
  ▶ Université de Paris, Paris, France, May, 2007.( Individual)
  ▶ “Non-commutative $L_p$-Spaces and Operator Spaces,” Nankai University, Tianjin, China, July, 2007.( Individual)
  ▶ Schrödinger Institute Vienna, Vienna, Austria, July, 2007.( Individual)
  ▶ Banff International Research Station, Banff, Canada, August, 2007.( Individual)
  ▶ American Institute of Mathematics, Palo Alto, CA, October, 2007.( Individual)
  ▶ University of Texas, San Antonio, TX, October, 2007.( Individual)
  ▶ Bangalore, India, December, 2007.( Individual)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

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

Department
▷ Service Position: Departmental of Mathematics (Mediator)
▷ Committee/Panel: Awards Committee (Member), Promotion and Tenure (Member),
Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 152. — Engineering Mathematics II (total enrollment: 91)
▷ MATH 436(H) — Introduction to Topology (total enrollment: 4)
▷ MATH 436. — Introduction to Topology (total enrollment: 6)

Summer
▷ MATH 666. — Seminar in Geometry (total enrollment: 18)

Fall
▷ MATH 171. — Analytic Geometry and Calculus (total enrollment: 25)

• RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Texas Geometry and Topology Conference, National Science Foundation
• SERVICE DURING 2007

National
▷ Editorial/Board: Journal of Operator Theory, Journal of Mathematical Analysis and Applications (Referee: Journals)

Department
▷ Event: Mathematical Physics and Harmonic Analysis Seminar (Organizer)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 407. — Complex Variables (total enrollment: 35)
▷ MATH 685. — Directed Studies (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 1)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 106)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Asymptotics of Analytic Integrals and the Beurling-Malliavin Theory, National Science Foundation

• PRESENTATIONS DURING 2007

▷ Rice University, Houston, TX, March, 2007. (Individual)
▷ South Eastern Analysis Meeting, University of Richmond, Richmond, VA, March, 2007. (Individual)
▷ Michigan State University, East Lansing, MI, April, 2007. (Individual)
▷ 15th Annual Analysis Meeting, Euler Institute, St. Petersburg, Russia, June, 2007. (Individual)
▷ University of Oklahoma, Norman, OK, October, 2007. (Individual)
• SERVICE DURING 2007

National

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 417. — Numerical Analysis I (total enrollment: 16)

Fall
▷ MATH 251. — Engineering Mathematics III (total enrollment: 204)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Proposal for Supporting the Organization of a Workshop on L1-based Nonlinear Approximation Techniques, Department of Defense
▷ Approximation and Learning in High Dimensions, National Science Foundation
▷ Nonlinear Finite Element Approximation of First-Order PDE’s in L1, National Science Foundation

• PRESENTATIONS DURING 2007


• PUBLICATIONS DURING 2007

• SERVICE DURING 2007

National
▷ Editorial/Board: Differential Equations, An Introduction to Modern Methods and Applications (Reviewed)

Regional
▷ Event: Houston Regional Science and Engineering Fair (Judge)

Department
▷ Committee/Panel: Math 308 Textbook Selection (Coordinator)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 308. — Differential Equations (total enrollment: 55)
▷ MATH 470. — Communications and Cryptography (total enrollment: 13)
▷ MATH 485. — Directed Studies (total enrollment: 1)

Summer
▷ MATH 308. — Differential Equations (total enrollment: 36)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 53)
▷ MATH 470. — Communications and Cryptography (total enrollment: 12)
• SERVICE DURING 2007

  International

  National

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ MATH 489. — Special Topics in (total enrollment: 7)

  Fall
  ▶ MATH 171. — Analytic Geometry and Calculus (total enrollment: 40)

• PUBLICATIONS DURING 2007

• SERVICE DURING 2007

International

▷ Event: MEGA 2007, CSR (Referee)

National

▷ Event: Complexity, Coding, and Communication (Co-Organizer)

Department

▷ Editorial/Board: Spanish Language (Examiner)
▷ Committee/Panel: Textbook Committee for Math 302 (Member), Undergraduate Studies Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring

▷ MATH 685. — Directed Studies (total enrollment: 1)

Summer

▷ MATH 685. — Directed Studies (total enrollment: 4)

Fall

▷ MATH 289. — Special Topics in (total enrollment: 18)
▷ MATH 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal

▷ Graduate Assistance in Areas of National Need, Department of Education
▷ CAREER: Complexity, Reality, and Rationality in Large Non-linear Equation Solving, National Science Foundation, coworkers: A. Ibrahim (G), T. kyriopolos (G), S. Sethuraman (G)

• PRESENTATIONS DURING 2007

▷ “Large Chambers, Discrimiants, and Fewnomials,” Johns Hopkins University, Baltimore, MD, March, 2007.( Invited)
- "P=NP, Optimization, and Algebraic Geometry," IMA Summer School in Algebraic Geometry, Texas A&M University, College Station, TX, July, 2007.( Individual)
- "Torsion Points and Algorithmic Fewnomial Theory," Number Theory Seminar, University of Texas, Austin, TX, September, 2007.( Individual)
- "Codes and Numbers," AggieLand Country School, College Station, TX, October, 2007.( Individual)
- "Discriminant Chambers and Smale’s 17th Problem,” National Science Foundation CDI Workshop, Arlington, VA, October, 2007.( Individual)
- "Most Hard Equations are Easy,” Modern Mathematics Workshop, Kansas City, MI, October, 2007.( Individual)
- "Most Hard Equations are Easy,” University of Houston, Houston, TX, November, 2007.( Invited)

**PUBLICATIONS DURING 2007**

• SERVICE DURING 2007
National
  ▶ Editorial/Board: American Mathematical Society (Review: Proposals)

• TEACHING ASSIGNMENTS DURING 2007
Spring
  ▶ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 23)

Fall
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 101)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Algebraic Aspects of Topological Quantum Computing, Department of Defense

• PRESENTATIONS DURING 2007
  ▶ Cinvestav, Mexico City, Mexico, May, 2007. (Invited)
  ▶ “Representation Theory, Quantum Field Theory, Category Theory, Mathematical Physics and Quantum Information Theory,” University of Texas, Tyler, TX, September, 2007. (Invited)
  ▶ “Knots and Quantum Computing,” University of Texas, Dallas, TX, December, 2007. (Invited)
• SERVICE DURING 2007

International
▷ Committee/Panel: Applied Inverse Problems (Co-Organizer), Executive Committee Inverse Problems International Association (Chair)

National
▷ Committee/Panel: Imaging and Inverse Problems (Editorial Board), Inverse Problems (Editorial Board), Scientific Board, Radon Institute for Computational and Applied Mathematics (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 470. — Communications and Cryptography (total enrollment: 35)

Fall
▷ MATH 251. — Engineering Mathematics III (total enrollment: 73)
▷ MATH 470. — Communications and Cryptography (total enrollment: 36)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Development of a High Density, High Performance Beowulf Cluster, National Science Foundation
▷ Reconstruction Algorithms for Inverse Obstacle Problems, National Science Foundation

• PRESENTATIONS DURING 2007
▷ Universität Mainz, Mayence, Germany, May, 2007.(Individual)
▷ Universität Göttingen, Göttingen, Germany, June, 2007.(Individual)
▷ “Numerical Methods and Modelling,” Tunis, Tunisia, December, 2007.(Invited)
HENRY K. SCHENCK
ASSOCIATE PROFESSOR (979) 845-7792
MATH-Algebraic Geometry schenck@math.tamu.edu

• SERVICE DURING 2007

International
  ▶ Event: Surface Modeling and Syzygies, Oberwolfach (Organizer)
  ▶ Editorial/Board: European J. Combinatorics  (Referee: Journals)

National
  ▶ Committee/Panel: American Mathematical Society Data Committee (Member)

Department
  ▶ Event: Graduate Student Seminar (Co-Organizer)
  ▶ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ MATH 311. — Topics in Applied Mathematics I (total enrollment: 116)
  ▶ MATH 685. — Directed Studies (total enrollment: 1)
  ▶ MATH 691. — Research (total enrollment: 2)

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

Fall
  ▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
  ▶ Applied Commutative Algebra, Department of Defense
  ▶ Collaborative Research: Symbolic Computations in Algebra and Topology, National Science Foundation
  ▶ Surface modeling approximation theory and coding theory, National Science Foundation
  ▶ Texas Algebraic Geometry Seminars, National Security Agency

• PRESENTATIONS DURING 2007
“Toric Surface Codes and Minkowski Sums,” AMS Special Session on Computational Algebraic Geometry for Low-Dimensional Varieties, New Orleans, LA, January, 2007. (Invited)

“Combinatorial Algebraic Geometry,” AMS Special Session, Hoboken, NJ, April, 2007. (Individual)

University of Illinois, Urbana, IL, April, 2007. (Individual)


“A Dimension Formula for Polyhedral Splines,” BIRS Workshop on Commutative Algebra, Banff, Canada, June, 2007. (Invited)


“Free Resolutions,” AMS Special Session, Chicago, IL, October, 2007. (Individual)


Texas A&M University, College Station, TX, October, 2007. (Individual)

“Algebra and Geometry of Four Sections of O(2,1),” MFO Workshop on Surface Modelling and Syzygies, Oberwolfach, Germany, December, 2007. (Invited)

**PUBLICATIONS DURING 2007**


• SERVICE DURING 2007

National
▷ Advisory Board: Advisory Committee to the Committee on the American Mathematics Competitions (Member), Advisory Committee, U.S. Department of Energy National Middle School Science Bowl (Member), Advisory Committee, U.S. Department of Energy National Science Bowl (Member)
▷ Committee/Panel: American Mathematics Competition (Panel)

State
▷ Advisory Board: Texas Academy of Science Board of Directors (Member)

College
▷ Event: Texas A&M Regional Science Fair (Committee Member and Judge), 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 2007

Spring
▷ MATH 366. — Structure of Mathematics II (total enrollment: 36)
▷ MATH 376. — Intermediate Abstract Algebra (total enrollment: 5)
▷ MATH 403. — Mathematics and Technology (total enrollment: 13)

Summer
▷ MATH 366. — Structure of Mathematics II (total enrollment: 20)

Fall
▷ MATH 366. — Structure of Mathematics II (total enrollment: 25)
▷ MATH 375. — Intermediate Real Analysis (total enrollment: 3)
▷ MATH 403. — Mathematics and Technology (total enrollment: 16)
• PRESENTATIONS DURING 2007
  ▶ “Ripley’s Mathematical Lies: Believe It or Not!,” Conference for the Advancement of Mathematics Teaching, San Antonio, TX, June, 2007. (Individual)
  ▶ “Fermi Questions,” Texas Science Olympiad Coaches’ Clinic, College Station, TX, November, 2007. (Individual)
  ▶ “Some Mathematical Lies of Ripley,” NCTM Regional Meeting, Houston, TX, November, 2007. (Individual)
  ▶ “Techniques for Using The Geometer’s Sketchpad (GSP) in the Mathematics Classroom,” NCTM Regional Meeting, Houston, TX, November, 2007. (Individual)
  ▶ “We’ve Got Your Number,” Texas Science Olympiad Coaches’ Clinic, College Station, TX, November, 2007. (Individual)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Dean for Assessment and PreK-12 Education, Office of Assessment and PreK-12 Education, [2006]
  ▶ Director, ITS Center for Teaching and Learning, Information Technology in Science Center for Teaching and Learning (ITS), [2000]

• SERVICE DURING 2007

  National
  ▶ Editorial/Board: School Science and Mathematics Journal (Associate Editor)

  University
  ▶ Committee/Panel: Center for Teaching Excellence Faculty Advisory Board (Member), College of Education Selection Committee for Mathematics Education Position (Member), NSF-funded Policy Research Initiative in Science Education (Chair), Quality Enhancement Plan Executive Committee (Member), Sigma Xi Education Committees (Member), University Council on Teacher Education (Member), VPR Office of Sponsored Projects (Member)

  College
  ▶ Event: Regional Junior Science Bowl (Judge), Regional Science Bowl (Judge), Texas Junior Academy of Science Competition (Judge), Texas Science Olympiad (Judge)
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Chair), Executive Committee (Member), Institutional Effectiveness Working Group (Chair), Science Ed Policy Position Search Committee (Chair), Technology-Mediated Instruction Committee (Member)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Center for the Application of Information Technology in the Teaching and Learning of Science, National Science Foundation, coworkers: G. Nickles (P), D. Bozeman (G), L. Brooks (G), J. Cryer (G), C. Force (G), L. Forsyth (G), A. Harbaugh (G), S. Hilding-Kronforst (G), C. Johnson (G), S. Metoyer (G), H. Miller (G), C. Peterson (G), C. Romero (G), J. Scallen (G), K. Sell (G), C. Shimek (G)
  ▶ Engaging Middle School Students in Student-Directed Inquiry Through Virtual Environments for Learning, National Science Foundation
  ▶ Noyce Scholarship (Supplement to ITS Center Grant), National Science Foundation
  ▶ Supplement to the ITS Center, National Science Foundation
  ▶ Track 1, GK-12: Building Understanding Through Research Partnerships and IT, National Science Foundation
PREsentations during 2007

- “Closing the Expectation Gap for Mathematics,” Commission for a College Ready Texas, Austin, TX, April, 2007. (Individual)
- “Panel Discussion: National Perspectives,” Seminar for Teacher Educators: Aiming for Excellence in Mathematics Teacher Preparation, College Station, TX, May, 2007. (Individual)
- “NCTM’s Curriculum Focal Points: What are They? How Can They be Used?,” Conference for the Advancement of Mathematics Teaching, San Antonio, TX, June, 2007. (Individual)


› “Improving Student Achievement in Middle-Level Mathematics Through Standards-Based Instruction,” 4th Annual Meeting of the Council of Chief State School Officers (CCSSO) and Texas Instruments Research and Development Advisory Committee, Austin, TX, November, 2007. (Individual)

› “Ongoing Questioning to Enhance Students’ Engagement in Mathematical Thinking,” National Council of Teachers of Mathematics (NCTM) Regional Conference and Exposition, Houston, TX, November, 2007. (Individual)

• PUBLICATIONS DURING 2007


• SERVICE DURING 2007

International
▷ Editorial/Board: Studia Mathematica (Referee: Journals)

National

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

Department
▷ Committee/Panel: Subcommittee T&P (Chair), Subcommittee T&P (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 685. — Directed Studies (total enrollment: 2)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 151. — Engineering Mathematics I (total enrollment: 102)
▷ MATH 655. — Functional Analysis I (total enrollment: 11)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Banach Spaces and Operators on Them, National Science Foundation
▷ Banach Spaces: Theory and Application, National Science Foundation

• PRESENTATIONS DURING 2007
▷ Czech Academy of Sciences, Prague., March, 2007.( Individual)
University of Illinois, Urbana Champaign, Chicago, IL, September, 2007. (Individual)


Millican Lecture, University of North Texas, Denton, TX, November, 2007. (Individual)

• PUBLICATIONS DURING 2007


-service during 2007

department
▷ service position: undergraduate students (mentor)
▷ committee/panel: library committee (member), speakers committee (member)

• teaching assignments during 2007

spring
▷ mATH 172. — Calculus (total enrollment: 35)
▷ mATH 423(H) — Linear Algebra II (total enrollment: 7)
▷ mATH 423. — Linear Algebra II (total enrollment: 6)

fall
▷ mATH 151.(H) — Engineering Mathematics I (total enrollment: 50)
▷ mATH 663. — Seminar in Analysis (total enrollment: 9)
• SERVICE DURING 2007

Department
△ Committee/Panel: State Employee Charitable Campaign (Representative), Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
△ MATH 221. — Several Variable Calculus (total enrollment: 25)
△ MATH 433. — Applied Algebra (total enrollment: 10)
△ MATH 485. — Directed Studies (total enrollment: 1)

Fall
△ MATH 311. — Topics in Applied Mathematics I (total enrollment: 60)

No report received from faculty member.
• SERVICE DURING 2007

International

National
▷ Service Position: External Promotion and Tenure Cases (Panel)

Department
▷ Committee/Panel: Frontiers Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 411. — *Mathematical Probability* (total enrollment: 28)
▷ MATH 691. — *Research* (total enrollment: 1)
▷ MATH 695. — *Frontiers in Mathematical Research* (total enrollment: 5)

Summer
▷ MATH 423. — *Linear Algebra II* (total enrollment: 16)
▷ MATH 691. — *Research* (total enrollment: 2)

Fall
▷ MATH 685. — *Directed Studies* (total enrollment: 1)
▷ MATH 695. — *Frontiers in Mathematical Research* (total enrollment: 5)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Studies in Operator Algebras, *National Science Foundation*, coworkers: J. Cameron (G), K. Mukherjee (G), A. Wiggins (G)

• PRESENTATIONS DURING 2007

▷ “Homogeneous Operator Algebras,” University of Houston, Houston, TX, August, 2007. (Individual)
▷ “Cohomology into the Compact Operators,” University of Glasgow, Scotland, United Kingdom, September, 2007. (Individual)
“Cones Defined by Operator Subalgebras,” University of Waterloo, Ontario, Canada, October, 2007. (Individual)

“Invariants for Masas,” University of Copenhagen, Denmark, October, 2007. (Individual)
• SERVICE DURING 2007

International
▷ Service Position: Banff International Research Station, International Committee for Museum Security (Reviewer)
▷ Event: Semester on Real Algebraic and Tropical Geometry at the Centre Bernoulli (Co-Organizer), Workshop on Schubert Calculus and Schubert Geometry at the Banff International Research Station (Co-Organizer)
▷ Committee/Panel: Mathematical Aspects of Computer and Information Sciences (Member)

National
▷ Event: Computational Thinking in Pure Mathematics, Presentation at NSF CDI workshop on The Role of Symbolic, Numeric and Algebraic Computation in Cyber-Enabled Discovery and Innovation (CDI) (Speaker), The IMA program on Applications of Algebraic Geometry, IMA PIC/IAB meeting, Institute for Mathematics and its Applications (Speaker)
▷ Committee/Panel: NSF Panel for Focused Research Groups (Member)

University
▷ Service Position: Mock Interview for Rhodes Scholar Candidate Andrew Matteson (Participant)

Department
▷ Event: Algebra Seminar (Organizer), IMA Summer Graduate Program, Applicable Algebraic Geometry (Co-Organizer), IMA Summer PI Graduate Program, Applicable Algebraic Geometry (Co-Organizer), Positive Polynomials (Co-Organizer), Science of Shapes,
Summer Educational Enrichment in Math (Speaker), Workshop on Non-linear Computational Geometry (Co-Organizer), Workshop on Schubert Calculus and Schubert Geometry (Co-Organizer)

- **TEACHING ASSIGNMENTS DURING 2007**
  
  **Spring**
  - MATH 691. — *Research* (total enrollment: 1)
  
  **Summer**
  - MATH 662. — *Seminar in Algebra* (total enrollment: 6)
  - MATH 685. — *Directed Studies* (total enrollment: 2)
  - MATH 691. — *Research* (total enrollment: 1)
  
  **Fall**
  - MATH 221. — *Several Variable Calculus* (total enrollment: 16)
  - MATH 648 — *Computational Alg Geom* (total enrollment: 9)

- **RESEARCH PROJECTS DURING 2007**

  **Federal**
  - Applicable Algebraic Geometry: Real Solutions, Applications, and Combinatorics, *National Science Foundation*
  - CAREER: Computation, Combinatorics, and Reality in Algebraic Geometry with Applications, *National Science Foundation*
  - Summer School on Applicable Algebraic Geometry: Additional Funding, *National Science Foundation*

- **PRESENTATIONS DURING 2007**

  - University of North Carolina, Chapel Hill, NC, January, 2007. (Individual)
  - University of Texas, Austin, TX, February, 2007. (Individual)
  - “Complexity, Coding, and Communications,” April, 2007. (Individual)
  - Institute for Mathematics and its Applications, Minneapolis, MN, April, 2007. (Individual)
  - University of Minnesota, Minneapolis, MN, April, 2007. (Individual)
  - University of Wisconsin, Madison, WI, April, 2007. (Individual)
  - “Real, Tropical, and Complex Enumerative Geometry,” Centre de Recherches Mathématiques, Montreal, Quebec, June, 2007. (Invited)
  - University of Minnesota, Minneapolis, MN, June, 2007. (Individual)
  - IMA PI Summer Graduate School on Applicable Algebraic Geometry, Minneapolis, MN, August, 2007. (Individual)
  - Texas A&M University, College Station, TX, August, 2007. (Individual)
  - “Computational Methods for Algebraic Spline Surfaces,” COMPASS 07, Strobl, Austria, September, 2007. (Individual)
Sam Houston State University, Huntsville, TX, September, 2007. (Individual)
Technische Universität München, München, Germany, September, 2007. (Individual)
Texas A&M University, College Station, TX, September, 2007. (Individual)
Texas A&M University, College Station, TX, October, 2007. (Individual)
University of Illinois, Chicago, IL, October, 2007. (Individual)
Texas A&M University, College Station, TX, November, 2007. (Individual)
Oberwolfach, Germany, December, 2007. (Individual)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Undergraduate Advisor, Mathematics Undergraduate Advising Office, [1990]

• SERVICE DURING 2007
  Regional
  ▶ Event: Annual High School Mathematics Contest (Supervisor)
  University
  ▶ Committee/Panel: Tenure Mediation (Elected Member)
  Department
  ▶ Service Position: Maple (Ambassador)
  ▶ Committee/Panel: Undergraduate Programs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ MATH 170. — Freshman Mathematics Laboratory (total enrollment: 26)
  ▶ MATH 285. — Directed Studies (total enrollment: 12)
  ▶ MATH 308. — Differential Equations (total enrollment: 83)
  Fall
  ▶ MATH 151. — Engineering Mathematics I (total enrollment: 83)
  ▶ MATH 170. — Freshman Mathematics Laboratory (total enrollment: 72)
  ▶ MATH 285. — Directed Studies (total enrollment: 11)
  ▶ MATH 308.(H) — Differential Equations (total enrollment: 24)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Writing for Assessment and Learning in the Natural and Mathematical Sciences, National Science Foundation
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Director, Institute for Scientific Computation, [1999]
  ▶ Professor (J), Computer Science, [1993]

• SERVICE DURING 2007
  International
▶ Editorial/Board: Research Grants Council, Hong Kong (Reviewer)

  National
▶ Editorial/Board: Air Force Office of Scientific Research (Reviewer), National Science Foundation Division of Mathematical Sciences (Review: Proposals), Various Journals and Conference Proceedings (Reviewer)

  College
▶ Committee/Panel: Campus Community Campaign Committee (Member)

  Department
▶ Committee/Panel: Post-doctoral Hiring Committee (Member), Promotion Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
▶ MATH 467. — Modern Geometry (total enrollment: 26)
▶ MATH 691. — Research (total enrollment: 2)

  Summer
▶ MATH 433. — Applied Algebra (total enrollment: 21)
▶ MATH 691. — Research (total enrollment: 2)

  Fall
▶ MATH 171. — Analytic Geometry and Calculus (total enrollment: 42)
▶ MATH 467. — Modern Geometry (total enrollment: 17)
▶ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
▶ Geometric Methods for ATR: Shape Spaces, Metrics, Object/Image Relations and Shapelets, Air Force Office of Scientific Research
▶ Development of Spatially Immersive Visualization Facilities, National Science Foundation
• PRESENTATIONS DURING 2007
  ▶ “Vector Bundles on Projective Space,” Working Geometry Seminar, Texas A&M University, College Station, TX, February, 2007. (Individual)
  ▶ “Algebraic Geometry, Shape, and Understanding Configurations from Projections to Lower Dimensions with Applications to Object Recognition and Image Understanding,” New Directions in Complex Data Analysis for Emerging Applications (NSF/AFOSR), Breckenridge, CO, March, 2007. (Invited)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International
▷ Editorial/Board: Austrian Academy of Sciences (Review: Proposals)
▷ Committee/Panel: Scientific Committee, Conference on Several Complex Variables, Fribourg, Switzerland (Member)

National
▷ Event: Special Session on PDE Methods in Several Complex Variables at AMS Meeting (Organizer)

University
▷ Committee/Panel: Faculty Senate (Faculty Senator - 09)

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

Department
▷ Committee/Panel: Executive Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 308. — Differential Equations (total enrollment: 54)
▷ MATH 612. — Partial Differential Equations (total enrollment: 6)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 308. — Differential Equations (total enrollment: 76)
▷ MATH 691. — Research (total enrollment: 1)

Fall
▷ MATH 617. — Theory of Functions of a Complex Variable I (total enrollment: 19)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
Federal
▷ (REN) Research and Education in Several Complex Variables, National Science Foundation

• PRESENTATIONS DURING 2007
▷ “SCV Seminar and Geometry Working Seminar,” Texas A&M University, College Station, TX, 2007. (Individual)
▷ Georgetown University, Washington, DC, April, 2007. (Invited)
▷ University of Missouri-Rolla, Rolla, MO, April, 2007. (Invited)
▷ “Geometric Analysis on PDE’s and Several Complex Variables,” IV Workshop, Serra Negra, Brazil, August, 2007. (Invited)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International
▷ Editorial/Board: Geometriae Dedicata (Referee: Journals), International Journal of Algebra and Computation (Referee: Journals)

National
▷ Advisory Board: MAA Advisory Panel on American Mathematical Competitions (Member)
▷ Editorial/Board: AMS Math Reviews (Reviewer), Geometriae Dedicata, Geometric and Probabilistic Methods in Group Theory (Guest Editor), Groups, Geometry, and Dynamics, Communications in Algebra, Mathematica Moravica (Referee: Journals)
▷ Committee/Panel: MAA Committee on United States of America Mathematics Olympiad (Member)

State
▷ Committee/Panel: Texas Talent Search Committee (Member)

Department
▷ Event: Groups and Dynamics Seminar (Organizer), Mini Workshop Groups and Dynamics (Organizer)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 222. — Linear Algebra (total enrollment: 34)

Summer
▷ MATH 412. — Theory of Partial Differential Equations (total enrollment: 15)

Fall
▷ MATH 152. — Engineering Mathematics II (total enrollment: 98)
▷ MATH 415(H) — Modern Algebra I (total enrollment: 9)
▷ MATH 415. — Modern Algebra I (total enrollment: 20)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Algebraic, Combinatorial, Spectral, and Algorithmic Properties of Groups Generated by Finite Automata, National Science Foundation

• PRESENTATIONS DURING 2007
• PUBLICATIONS DURING 2007

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• SERVICE DURING 2007

International
▷ Editorial/Board: *Indian Journal of Pure and Applied Mathematics* (Referee: Journals)

National

Department
▷ Committee/Panel: Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 308. — Differential Equations (total enrollment: 44)
▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 28)

Fall
▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 63)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007
  
  International
  ▶ Committee/Panel: Scientific Committee of the Journes Arithmtiques (Chair)

  National

  State
  ▶ Committee/Panel: ArithmeTexas (Co-Founder)

  University
  ▶ Event: Number Theory Seminar (Co-Organizer)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ MATH 311. — *Topics in Applied Mathematics I* (total enrollment: 26)
  ▶ MATH 689. — *Special Topics in* (total enrollment: 5)

  Fall
  ▶ MATH 427(H) — *Introduction to Number Theory* (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Transcendence and Geometry on Shimura Varieties in the Commutative and Non-commutative Case, *National Science Foundation*

• PRESENTATIONS DURING 2007
  ▶ University of Texas, Austin, TX, March, 2007. (Individual)
• SERVICE DURING 2007

National

University
▷ Committee/Panel: Academic Affairs Committee (Chair), Faculty Senate (Faculty Senator - 03), Faculty Senate (Faculty Senator - 03), Faculty Senate (Caucus Leader)

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

Department
▷ Service Position: Ombudsman, Department of Mathematics (Ombudsman)
▷ Committee/Panel: Faculty Senate Executive Committee (Member), Teaching Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 442. — Mathematical Modeling (total enrollment: 21)

Fall
▷ MATH 221. — Several Variable Calculus (total enrollment: 21)
▷ MATH 409. — Advanced Calculus I (total enrollment: 22)
• SERVICE DURING 2007
  
  International
  ▶ Editorial/Board: Geometriae Dedicata, Sbornik Mathematics (Referee: Journals)
  
  National
  ▶ Editorial/Board: Ergodic Theory and Dynamical Systems, Journal of Modern Dynamics
  (Referee: Journals)

• TEACHING ASSIGNMENTS DURING 2007
  
  Spring
  ▶ MATH 311. — Topics in Applied Mathematics I (total enrollment: 11)
  
  Fall
  ▶ MATH 304. — Linear Algebra (total enrollment: 20)

• RESEARCH PROJECTS DURING 2007
  
  Federal
  ▶ Periodic Orbits of Billiards and Closed Geodesics on Flat Surfaces, National Science Foundation

• PRESENTATIONS DURING 2007
  
  ▶ “Closed Geodesics on Translation Surfaces,” Rice University, Houston, TX, February, 2007. (Individual)
  ▶ “Stability of Periodic Billiard Trajectories in Polygons and Polyhedra,” Special Day on Groups and Dynamics, College Station, TX, December, 2007. (Invited)

• PUBLICATIONS DURING 2007
  
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007

  International

  National

  University
  ▶ Committee/Panel: 44th Annual Meeting of the Society of Engineering Science Organizing Committee (Member), External Advisory Board of the Army Research Lab’s Advanced Materials and Technologies for Weapons Detection and Blast Mitigation Project Center at the University of Nebraska at Lincoln (Member)

  Department
  ▶ Service Position: Undergraduate Math Honors (Mentor), Undergraduate Mathematical Biology Majors (Advisor)
  ▶ Event: Applied Mathematics Seminar (Organizer)
  ▶ Committee/Panel: Graduate Programs Committee (Member), Honors Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Admissions and Advising Committee for Graduate Program (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
MATH 285. — Directed Studies (total enrollment: 2)
MATH 604. — Mathematical Foundations of Continuum Mechanics (total enrollment: 9)
MATH 685. — Directed Studies (total enrollment: 2)
MATH 691. — Research (total enrollment: 1)

Summer
- MATH 685. — Directed Studies (total enrollment: 4)
- MATH 691. — Research (total enrollment: 2)

Fall
- MATH 151. — Engineering Mathematics I (total enrollment: 85)
- MATH 285. — Directed Studies (total enrollment: 2)
- MATH 485. — Directed Studies (total enrollment: 1)
- MATH 491. — Research (total enrollment: 2)
- MATH 603. — Methods of Applied Mathematics II (total enrollment: 21)
- MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
- Modeling Interfaces Through an Extension of Continuum Mechanics to the Nanoscale with Application to Fracture, Debonding, and, Air Force Office of Scientific Research
- IGERT: New Mathematical Tools for Next Generation Materials, National Science Foundation
- Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, National Science Foundation
- REU Site: Undergraduate Research in Mathematical Sciences and Its Applications, National Science Foundation

Other
- An Analysis of the Dynamic, Transient Propagation of a Mode 1 Crack-Tip Cohesive Zone, University of Nebraska

• PRESENTATIONS DURING 2007
• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

National

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 304. — Linear Algebra (total enrollment: 56)

Fall
▷ MATH 407. — Complex Variables (total enrollment: 18)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Approximation and Learning in High Dimensions, *National Science Foundation*
▷ (REN) New Approaches to Scattered Data Analysis via Radial Related Basis Functions and Tight Spherical Frames, *National Science Foundation*

• PRESENTATIONS DURING 2007

▷ “Norming Sets in Multivariate Approximation, Constructive Function Theory,” Sam Houston State University, Huntsville, TX, October, 2007. (Individual)

• PUBLICATIONS DURING 2007

SARAH WITHERSPOON
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• SERVICE DURING 2007
  International
    ▶ Event: Banff International Research Station Workshop on Hochschild Cohomology of
              Algebras: Structure and Applications (Co-Organizer)
    ▶ Editorial/Board: Mathematical Proceedings of the Royal Irish Academy (Referee: Journals)
  National
    ▶ Event: The Association for Women in Mathematics Workshop (Mentor)
    ▶ Editorial/Board: AMS Mathematical Review (Reviewer), Algebra Colloquium, Journal of
              Mathematical Physics (Referee: Journals), Journal of Algebra, Communications in Algebra,
              Journal of Pure and Applied Algebra, Advances in Mathematics (Referee: Journals)
    ▶ Committee/Panel: AMS-MAA-SIAM Committee on Employment Opportunities (Member)
  Department
    ▶ Committee/Panel: Mathematics Awareness Month Committee (Member), Maxson Lectures Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
    ▶ MATH 171. — Analytic Geometry and Calculus (total enrollment: 34)
    ▶ MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 30)
  Fall
    ▶ MATH 653. — Algebra I (total enrollment: 26)

• RESEARCH PROJECTS DURING 2007
  Federal
    ▶ Cohomology, Deformations, and Representations of Algebras, National Security Agency

• PRESENTATIONS DURING 2007
  ▶ Texas A&M University, College Station, TX, April, 2007. (Individual)
  ▶ “Algebraic Representation Theory Seminar,” University of Minnesota, Minneapolis, MN, June, 2007. (Individual)

“Algebra and Combinatorics Seminar,” Texas A&M University, College Station, TX, November, 2007. (Individual)

- PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International
▷ Event: 19th International Conference in Formal Power Series and Algebraic Combinatorics (Organizing Committee)
▷ Editorial/Board: *Ars Combinatoria, European Journal of Combinatorics* (Referee: Journals), *Seminaire Lotharingien de Combinatoire, Annals of Combinatorics* (Referee: Journals)
▷ Committee/Panel: AMS Subcommittee on International Meetings (Member)

National
▷ Professional Affiliation: American Mathematical Society (Member)
▷ Committee/Panel: Advances in Applied Mathematics (Editorial Board), American Mathematical Society (Member), AMS Committee on Conference and Meeting (Member), AMS to the Board of Directors of Canadian Mathematical Society (Representative), *Journal of Combinatorics and Number Theory* (Editoral Board)

State
▷ Event: CombinaTexas Conference, Texas A&M University (Organizer)

Department
▷ Committee/Panel: Promotion Subcommittee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 302. — *Discrete Mathematics* (total enrollment: 28)
▷ MATH 691. — *Research* (total enrollment: 2)

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

Fall
▷ MATH 685. — *Directed Studies* (total enrollment: 1)
▷ MATH 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
Federal
  - CombinaTexas: A Combinatorics Conference for the South-Central U.S., Department of Defense
  - Combinatorial Patterns and Structures, National Science Foundation

- PRESENTATIONS DURING 2007
  - “Graduate Student Seminar,” Texas A&M University, College Station, TX, February, 2007. (Individual)
  - “Algebra Seminar,” Kansas State University, Manhattan, KS, April, 2007. (Individual)
  - “Searching with Errors and the Liar Games,” Conference on Random Combinatorial Structures, University of Nebraska-Lincoln, Lincoln, NE, April, 2007. (Individual)
  - “Virginia L. Chatelain Memorial Lecture Series, in Cooperation with the ADVANCED Distinguished Lecture Series,” Kansas State University, Manhattan, KS, April, 2007. (Individual)
  - “Combinatorics Seminar,” Beijing University, China, July, 2007. (Individual)
  - “Multi-parking Functions, Graph Search, and Tutte Polynomial,” 19th International Conference in Formal Power Series and Algebraic Combinatorics, Nankai University, Tianjin, China, July, 2007. (Individual)
  - Graduate School of Academic Sinica, Beijing, China, July, 2007. (Individual)
  - “Algebra, Number Theory and Combinatorics Seminar,” University of Texas, Austin, TX, October, 2007. (Individual)
  - Vanderbilt University, Nashville, TN, November, 2007. (Individual)

- PUBLICATIONS DURING 2007
• SERVICE DURING 2007

Regional
▷ Event: High School Math Contest (Assisted)

University
▷ Event: Summer Honors Invitational Program (Speaker)

College
▷ Event: Physics Festival (Participant), Texas A&M University Regional Junior Science Bowl (Volunteer), Texas A&M University Regional Science Bowl (Volunteer)
▷ Committee/Panel: Faculty Advisory Council (Elected Member)

Department
▷ Service Position: Summer Educational Enrichment in Math (Director)
▷ Committee/Panel: Math 142 Textbook Selection Committee (Member), Math Awareness Month Organizing Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 251. — Engineering Mathematics III (total enrollment: 80)
▷ MATH 253. — Engineering Mathematics III (total enrollment: 55)

Fall
▷ MATH 152(H) — Engineering Mathematics II (total enrollment: 34)
▷ MATH 152. — Engineering Mathematics II (total enrollment: 135)

• RESEARCH PROJECTS DURING 2007

Federal
▷ TRACK1, GK-12: Fellows Integrate Science/Math In Rural Middle Schools, National Science Foundation
▷ Writing for Assessment and Learning in the Natural and Mathematical Sciences, National Science Foundation

• PRESENTATIONS DURING 2007

▷ “Math Circles and Similar Programs for Students and Teachers.” Summer Educational Enrichment Program at Texas A&M for Middle School Students, San Antonio, TX, January, 2007. (Invited)


“On-Line Calculus resources,” AP Calculus Workshop, Texas A&M University, College Station, TX, August, 2007. (Individual)


“Teaching Calculus with Maple: Embedded Components, and Maplets,” 6th Colombian Calculus Meeting / 1st Iberoamerican Calculus Meeting, Bogota, Colombia, December, 2007. (Individual)
• SERVICE DURING 2007

National

Department
▷ Event: Number Theory Seminar (Participant), Working Seminar in Number Theory (Organizer)

• TEACHING ASSIGNMENTS DURING 2007

Fall
▷ MATH 470. — Communications and Cryptography (total enrollment: 28)

• PRESENTATIONS DURING 2007

▷ Vanderbilt University, Nashville, TN, January, 2007. (Individual)
▷ Georgia Tech University, Atlanta, GA, February, 2007. (Individual)
▷ Texas A&M University, College Station, TX, February, 2007. (Individual)
▷ “Texas A&M Number Theory Seminar,” Texas A&M Department of Mathematics, College Station, TX, March, 2007. (Invited)
▷ “Texas A&M Number Theory Seminar,” Texas A&M University, College Station, TX, October, 2007. (Invited)

• PUBLICATIONS DURING 2007


Faculty member hired 08/16/2007
• SERVICE DURING 2007

International
▷ Event: International Conference on Theoretical and Numerical Nonlinear PDE (Organizer)

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

Regional
▷ Service Position: A Local Chinese School (Advisor)

University
▷ Professional Affiliation: China Faculty Association (Director)
▷ Advisory Board: Texas A&M University Chinese Student and Scholar Association (Advisor)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ MATH 664. — Seminar in Applied Mathematics (total enrollment: 6)
▷ MATH 691. — Research (total enrollment: 1)

Summer
▷ MATH 601. — Methods of Applied Mathematics I (total enrollment: 23)
▷ MATH 691. — Research (total enrollment: 4)

Fall
▷ MATH 308. — Differential Equations (total enrollment: 51)
▷ MATH 651. — Optimization I (total enrollment: 7)
▷ MATH 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Computational Theory and Methods for Finding Multiple Solutions to Differential Systems, National Science Foundation

• PRESENTATIONS DURING 2007


**PUBLICATIONS DURING 2007**

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  - Professor (J), Statistics, [1988]

- SERVICE DURING 2007
  National
  - Event: Approximation and Learning in High Dimensions, The Interaction between Approximation Theory and Probability in Machine Learning (Co-Organizer), Probability Inequalities With Applications to High Dimensional Phenomena (Co-Organizer)
  Department
  - Event: Workshop in Linear Analysis and Probability (Co-Organizer)

- TEACHING ASSIGNMENTS DURING 2007
  Spring
  - MATH 172.(H) — Calculus (total enrollment: 10)
  - MATH 482(H) — Research Seminar (total enrollment: 6)
  - MATH 482. — Research Seminar (total enrollment: 7)
  Summer
  - MATH 663. — Seminar in Analysis (total enrollment: 6)
  - MATH 685. — Directed Studies (total enrollment: 1)
  Fall
  - MATH 220. — Fundamentals of Discrete Mathematics (total enrollment: 14)
  - MATH 409.(H) — Advanced Calculus I (total enrollment: 7)

- RESEARCH PROJECTS DURING 2007
  Federal
  - Graduate Assistance in Areas of National Need, Department of Education
  - Approximation and Learning in High Dimensions, National Science Foundation
  - Workshop in Analysis and Probability, National Science Foundation
  - Inequalities and Limit Theorems in Probability with Applications, National Security Agency
7. Research Activity, 2007

This section contains information on all funded research activity for the calendar year 2007. 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 2007 = # Days 2007 × Daily Grant Award
### 7.1 Summary of Research Support, 2007

<table>
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<th>Grantee</th>
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#### Air Force Office of Scientific Research

- **Chen, G.** Spin-Based Lattice-Gas Quantum Optics in Solids Using Optical Addressing, (with: G. Chen, O. Kocharovskaya, M. Scully, G. Welch, M. Zubairy)

- **Slattery, J.** Modeling Interfaces Through an Extension of Continuum Mechanics to the Nanoscale with Application to Fracture, Debonding, and, (with: J. Slattery, J. Walton)

- **Stiller, P.F.** Geometric Methods for ATR: Shape Spaces, Metrics, Object/Image Relations and Shapelets

- **Walton, J.R.** Modeling Interfaces Through an Extension of Continuum Mechanics to the Nanoscale with Application to Fracture, Debonding, and, (with: J. Slattery, J. Walton)

- **Sub-subtotal: Air Force Office of Scientific Research** | 148,385 | 47,480 | 195,865 |

#### Department of Defense

- **Guermond, J.** Proposal for Supporting the Organization of a Workshop on Li-based Nonlinear Approximation Techniques, (with: J. Guermond, B. Popov)
  - Start: 7/1/2007 | End: 6/30/2008 | Direct: 3,635 | Indirect: 0 | Total: 3,635

- **Popov, B.** Proposal for Supporting the Organization of a Workshop on Li-based Nonlinear Approximation Techniques, (with: J. Guermond, B. Popov)
  - Start: 7/1/2007 | End: 6/30/2008 | Direct: 3,635 | Indirect: 0 | Total: 3,635

- **Rowell, E.** Algebraic Aspects of Topological Quantum Computing

- **Schenck, H.K.** Applied Commutative Algebra

- **Yan, C.** CombinasTexas: A Combinatorics Conference for the South-Central U.S.
  - Start: 11/1/2007 | End: 10/31/2009 | Direct: 1,201 | Indirect: 0 | Total: 1,201

- **Sub-subtotal: Department of Defense** | 28,490 | 2,436 | 30,926 |

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554  
2007 Mathematics annual report
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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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<td>Efendiev, Y.R.</td>
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**Subtotal: Department of Energy**

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<tr>
<td>Guermond, J.</td>
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<tr>
<td>Lazarov, R.D.</td>
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**Subtotal: Lawrence Livermore National Laboratory**

**Total:** 107,663 0 107,663
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<td>Discontinuous Galerkin Methods for PDE's with Heterogeneous Coefficients, (with: J. Guermond, G. Kanschat, R. Lazarov)</td>
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* Subtotal: National Science Foundation

3,458,946 317,194 3,776,139

* National Security Agency

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2007 MATHEMATICS ANNUAL REPORT
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2007 Mathematics Annual Report
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RESEARCH ACTIVITY 573
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- Lazarov, R.D.

Lawrence Livermore National Laboratory

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2007 Mathematics Annual Report
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- **Subtotal Lima-Filho, P.**

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| National Science Foundation | Summer School on Applicable Algebraic Geometry: Additional Funding, (with: L. Matushevich, F. Sottile) | 7/1/2007 | 8/31/2007 | 12,500 | 0 | 12,500 |

- **Subtotal Matushevich, L.F.**

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- **Marcovich, F.J.**

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- **Subtotal Schielack, J.F.**
  
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- **Schlumprecht, T.B.**

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- **Subtotal Schlumprecht, T.B.**
  
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- **Slattery, J.**

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- **Subtotal Slattery, J.**
  
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- **Smith, R.E.**

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- **Subtotal Smith, R.E.**
  
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2007 Mathematics Annual Report
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SEC 7. RESEARCH ACTIVITY 581
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582  2007 Mathematics Annual Report
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SEC. 7. RESEARCH ACTIVITY 583
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</table>
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1. Foreword from the Department Head

The physics department has vigorous research programs in physics and astronomy. We offer BA and BS undergraduate Physics degrees and MS and PhD graduate degrees in Physics and PhD degrees in Applied Physics and in Materials Science in Engineering. We have a large number of students enrolled in our service courses. We participate in a number of outreach and service activities, such as the Saturday Morning Physics program at the cyclotron and the annual Physics Festival of hands-on physics demonstrations that also includes a public lecture by a notable physicist.

The physics department had many notable accomplishments during 2007.

Construction continued on two new physics buildings, the George P. and Cynthia W. Mitchell Institute for Fundamental Physics and the George P. Mitchell Physics Building. These two new buildings will provide much needed and enhanced space for research, teaching and public events. Currently our faculty are spread over three buildings and our undergraduate teaching laboratories are in yet another building that is across campus from our offices. The new buildings will go a long way towards bringing all our activities together. These buildings are made possible by a major gift from George P. and Cynthia Mitchell of Houston.

The expansion of our department into the field of astronomy continued. Four new astronomy faculty were hired during 2007 and will join our faculty in 2008 and early 2009. This brings our total number of astronomy faculty to seven. Darren DePoy has been hired as a tenured Professor to head our astronomy instrumentation program. A major donation from Charles Munnerlyn has funded the renovation of a building to house this program. The junior hires are Lucas Macri, Vy Tran and Casey Papovich. Along with the three faculty hired in 2006 (Nick Suntzeff, Lifan Wang and Kevin Krisciunas), this gives our department an outstanding astronomy group. Through a major gift from George Mitchell, Texas A&M is a participating institution in the Giant Magellan Telescope project, a major astronomy instrumentation effort that will construct a large new optical telescope in Chile.

The Texas A&M Faculty Reinvestment Program has made it possible for the department to continue to make a number of outstanding additions to our faculty. Tenured or tenure-track hires in 2007, in addition to the four astronomy hires, were Alexander Finkel’stein (theoretical condensed matter physics), Dan Melconian (experimental nuclear physics), Igor Roschin (experimental nanoscience), and Helmut Katzgraber (theoretical condensed matter and computational physics). Finkel’stein, Melconian and Roschin will join the faculty in 2008 and Katzgraber will arrive in January, 2009.

The endowments in the department continued to grow and now have a market value of about twenty twelve million dollars. They produce a monthly income into the department of over $60,000.

Our faculty and students continue to receive national and international recognition. In 2007, physics faculty member Nick Suntzeff was a co-winner of the Gruber Cosmology Prize and Marlan Scully was designated the Morris Loeb Lecturer in Physics at Harvard. Rainer Fries received the International Union of Pure and Applied Physics Young Scientist Prize in Nuclear Physics, Ralf Rapp received the Friedrich Wilhelm Bessel Research Award from the Alexander von Humbolt Foundation, Suhail Zubairy received a Humboldt Research Award and Alexei Safonov received a Department of Energy Outstanding Junior Investigator Award. Alexei Sokolov and his graduate student Dmitry Pestov received the Hyer Award from the Texas Section of the American Physical Society. Graduate student Trey Holik was named a Nuclear Fuel Cycle Graduate Fellow by the Department of Energy. Undergraduate physics major Phuongmai Truong was designated a Goldwater Scholar Honorable Mention.

Our faculty and staff also performed exceptionally within the university community and some of...
their accomplishments were acknowledged by awards. Dave Toback received a University-Level Association of Former Students Award in Teaching. Alexei Safonov was named the College of Science’s 2007/2008 Montague Scholar. Alexey Belyanin and Sinova were granted tenure and promoted to Associate Professor. Gerhard Paulus was granted tenure and Bob Kenefick was designated Professor Emeritus. Nelson Duller, class of 1948 and a member of our faculty, was inducted into the College of Science Academy of Distinguished Former Students. Alexey Belyanin received the 2007 Jo Ann Treat Research Excellence Award from the Texas A&M Research Foundation Board of Trustees. Institute for Quantum Studies staff member Kim Chapin received a President’s Meritorious Service Award. Graduate students Sheldon Campbell, Dmitry Pestov, Nate Pogue and Feng Xie received Student Presentation Awards at the Fall 2007 meeting of the Texas Section of the American Physical Society. Eleven of our graduate students won awards at the 2007 Student Research Week.

The physics department thanks everyone who contributed to an outstanding year for the department!
2. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty

▷ Compiled from the College of Science Faculty Database. (Fall 2006, Fall 2007) \textit{Baselines Title}, Gender, Ethnicity.

Non-Tenure-Track Faculty

▷ Compiled from the College of Science Faculty Database \textit{Faculty List}.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2006, Fall 2007) \textit{Enrollment Profile, Headcount by Major by Level, Fall for [Year]}.

Support Staff

▷ Compiled from the College of Science Dean Database \textit{Baselines Staff}.

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours

▷ \textit{SCH: Undergraduate and Graduate} - Office of Institutional Studies and Planning (OISP). (Fall 2007) \textit{SCH Summaries by College for [Semester] [Year]}.

PhD Degrees/Masters Degrees

▷ Queried from COGNOS and calculated through the College of Science Dean Database \textit{Degrees Grad}.

Undergraduate Degrees

▷ Queried from COGNOS and calculated through the College of Science Dean Database \textit{Degrees Undergrad}.

III. Research Activities

Research Publications

▷ Queried from Web of Science\textsuperscript{R} and compiled from the College of Science Dean Database \textit{Publications COUNT}.

Research Presentations

▷ As reported by faculty and compiled from the College of Science Dean Database \textit{Presentations COUNT}.

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

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

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<tr>
<td>Visiting Assistant Professor</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Visiting Associate Professor</td>
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<td>2</td>
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<tr>
<td>Lecturer</td>
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<tr>
<td>Senior Lecturer</td>
<td>0</td>
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</tr>
<tr>
<td>c. Postdoctoral Fellows</td>
<td>21</td>
<td>34</td>
</tr>
<tr>
<td>d. Graduate Students</td>
<td>150</td>
<td>149</td>
</tr>
<tr>
<td>e. Undergraduate Majors</td>
<td>113</td>
<td>127</td>
</tr>
<tr>
<td>f. Support Staff</td>
<td>25</td>
<td>29</td>
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<table>
<thead>
<tr>
<th>II. Instructional Activities</th>
<th>2006</th>
<th>2007</th>
</tr>
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<tbody>
<tr>
<td>a. Graduate Semester Credit Hours</td>
<td>2,665</td>
<td>2,790</td>
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<tr>
<td>b. Undergraduate Semester Credit Hours</td>
<td>27,401</td>
<td>27,063</td>
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<tr>
<td>c. PhD Degrees</td>
<td>17</td>
<td>15</td>
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<tr>
<td>d. Masters Degrees</td>
<td>13</td>
<td>11</td>
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<tr>
<td>e. Undergraduate Degrees</td>
<td>21</td>
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<table>
<thead>
<tr>
<th>III. Research Activities</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Research Publications</td>
<td>485</td>
<td>453</td>
</tr>
<tr>
<td>b. Research Presentations</td>
<td>380</td>
<td>433</td>
</tr>
<tr>
<td>c. Federal</td>
<td>8,455,285</td>
<td>9,829,189</td>
</tr>
<tr>
<td>d. State</td>
<td>224,881</td>
<td>187,175</td>
</tr>
<tr>
<td>e. University</td>
<td>231,293</td>
<td>15,399</td>
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<tr>
<td>f. Private/Non-Profit</td>
<td>903,120</td>
<td>1,002,851</td>
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<tr>
<td>g. Industrial/Corporate</td>
<td>153,434</td>
<td>202,194</td>
</tr>
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<td>h. International</td>
<td>97,278</td>
<td>62,140</td>
</tr>
<tr>
<td>i. Other Govt</td>
<td>0</td>
<td>282,288</td>
</tr>
</tbody>
</table>

**Total** | 10,065,291 | 11,581,236 |
3. Honors & Awards, 2007

By Faculty

▷ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2007.

By Students

▷ This section contains all honors and awards, as reported by the department, during the calendar year 2007.
### 3.1 Honors & Awards Received by Faculty, 2007

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Belyanin</td>
<td>JoAnn Treat Research Excellence Award, Texas A&amp;M Research Foundation</td>
</tr>
<tr>
<td>N. Duller</td>
<td>Academy of Distinguished Former Students, Texas A&amp;M University</td>
</tr>
<tr>
<td>R. Fries</td>
<td>Young Scientist Prize, International Union of Pure and Applied Physics</td>
</tr>
<tr>
<td>D. Nanopoulos</td>
<td>Distinguished Hellen Award, Hellenic Medical Society</td>
</tr>
<tr>
<td></td>
<td>Honorary Citizen, Golden Medal of the City, Larisa, Greece</td>
</tr>
<tr>
<td>R. Rapp</td>
<td>Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation</td>
</tr>
<tr>
<td>A. Safonov</td>
<td>Outstanding Junior Investigator Award, U.S. Department of Energy</td>
</tr>
<tr>
<td>M. Scully</td>
<td>Morris Loeb Lecturer in Physics, Harvard University</td>
</tr>
<tr>
<td>A. Sokolov</td>
<td>Montague Center for Teaching Excellence Award, Texas A&amp;M University</td>
</tr>
<tr>
<td></td>
<td>Robert S. Hyer Award, Texas Section APS</td>
</tr>
<tr>
<td>N. Suntzeff</td>
<td>Gruber Cosmology Prize, Gruber Foundation</td>
</tr>
<tr>
<td>D. Toback</td>
<td>Distinguished Achievement Award - Teaching, The Association of Former Students</td>
</tr>
<tr>
<td>M. Zubairy</td>
<td>Humboldt Research Prize, Alexander von Humboldt Foundation</td>
</tr>
</tbody>
</table>
3.2 Honors & Awards Received by Students, 2007

Graduate

▷ Graduate Poster & Oral Physical Sciences, Student Research Week, Texas A&M University
  Mario Borunda
  Pestov Dmitry
  Paul Hsu
  Hangil Lee
  Eunsin Lee
  Haidong Liu
  Van Mayes
  Nathaniel Pogue
  Ke Wang
  Masaki Watabe
  Miaochang Zhi

▷ Nuclear Fuel Cycle Graduate Fellows U.S. Department of Energy, Texas A&M University
  Eddie Trey Holik

▷ Outstanding Presentation Award, Texas Section APS
  Sheldon Campbell
  Dmitry Pestov
  Nathaniel Pogue
  Feng Xie

▷ Robert S. Hyer Award, Texas Section APS
  Dmitry S. Pestov

Undergraduate

▷ Barry M. Goldwater Scholarship, Texas A&M University
  Phuongmai Truong

▷ Undergraduate Poster & Oral Physical Sciences, Texas A&M University
  Trent Strong
4. Students, 2007

This section contains all degrees awarded, as reported by the department, during the calendar year 2007.
4.1 Graduate Degrees Awarded, 2007

Fall

▷ M.S.

Jonathan Abraham Asaadi  Advisor(s): D. Toback

Jianxu Lu  Investigation Of The Deformed Fermi Surfaces Mechanism For Pairing Of Two Species Of Fermions With Mismatched Fermi Surfaces  Advisor(s): C. Hu

Kevin Resil  Advisor(s): R. Allen

Julie Marie Slanker  Radiance in the Ocean: Effects of Wave Slope and Raman Scattering Near the Surface and at Depths Through the Asymptotic Region  Advisor(s): G. Kattawar

Todd Austin Zapata  The Wkb Approximation for a Linear Potential and Ceiling  Advisor(s): S. Fulling

▷ Ph.D.

Wei Chen  Kerr-Nut-Ads Metrics and String Theory  Advisor(s): C. Pope

Der-Chyn Jong  Aspects of 7D and 6d Gauged Supergravities  Advisor(s): E. Sezgin

Kyongwan Kim  Mn12-Acetate Thin Film Patterns and Their Interaction with Superconductors  Advisor(s): W. Teizer

Joel Lewis Means  Electronic Interactions Between Gold Films and Mn12-Acetate  Advisor(s): W. Teizer

Dongmin Seo  Alignment of Micro-Crystals of Mn12-Acetate and Direct Observation of Single Molecules Thereof  Advisor(s): W. Teizer

Indrani Sinha  Numerical Simulation of the Photoisomerization Of Retinal From The Cis To The Trans Form  Advisor(s): A. Ford

Yongjun Zhai  The Structure of 23Al and Astrophysical Consequences  Advisor(s): R. Tribble

Miaochan Zhi  Broadband Coherent Light Generation in Raman-Active Crystals Driven by Femtosecond Laser Fields  Advisor(s): A. Sokolov

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Spring

▷ M.S.

Adam Jude Aurisano

Advisor(s): D. Toback

Patrick Daniel Noyes

Design and Fabrication of a Stress-Managed Nb3Sn Wind and React Dipole

Advisor(s): P. McIntyre

Feng Zhang

Advisor(s): D. Nanopoulos

▷ Ph.D.

Changbo Fu

One Proton, Two Proton, and Alpha Emission from 14O+Alpha Resonance Interactions

Advisor(s): R. Tribble

Serguei Nikolaevich Jerebtsov

Femtosecond Time-Resolved Spectroscopy of Coherent Oscillations in Nanomaterials

Advisor(s): H. Schuessler

Antonio Richard Mondragon

Lorentz-Violating Dark Matter

Advisor(s): R. Allen

Au Kim Vuong

New Skyrme Nucleon-Nucleon Interaction for the Mean-Field Approximation

Advisor(s): S. Shlomo

Summer

▷ M.S.

Kyoungjin Lee

Electrical Properties of Quench-Condensed Thin Film

Advisor(s): W. Teizer

Yun Li

Advisor(s): C. Gagliardi

Rong Guang Xu

Advisor(s): C. Hu

▷ Ph.D.

Tariq Abdalhamed Al-Abdullah

Extracting the Asymptotic Normalization Coefficients in Neutron Transfer Reactions to Determine the Reaction Rates for 22Mg(P,Gamma)23Al and 17F(P,Gamma)18Ne

Advisor(s): C. Gagliardi

Van Eric Mayes

Phenomenology of Heterotic and Type II Orientifold String Models

Advisor(s): D. Nanopoulos

SEC. 4.1 GRADUATE DEGREES 597
Peter Heinrich Wagner  
Search for Heavy, Long-Lived Particles That Decay to Photons in Ppbar Collisions at \( \sqrt{s}=1.96 \) TeV  
Advisor(s): D. Toback
### 4.2 Undergraduate Degrees Awarded, 2007

#### Fall

- **B.A.**
  - Jonathan Gentry Ambs
  - Michael R. Shelby

#### Spring

- **B.A.**
  - Chad Eric Arpe
  - Sean Clayton Dupont
  - Jeffrey Paul Guillory
  - Ashley Sara Pagnotta
  - Shawn Edwin Richard
  - Justin David Sprabary

- **B.S.**
  - Joshua Tyler Davis
  - Charles Dickson Jessup, V
  - John Bernard Krause
  - Paul Eric Simeon
  - Trent Wade Strong
  - Santiago Trevino, III
  - Raymond Naeem Waniska
  - Justin Howard Wilson
  - Justin Bradley Wyatt
5. Colloquium and Seminar Speakers, 2007

Atomic and Quantum Optics

9/28/2007 Miaochan Zhi
Texas A&M University
Broadband Coherent Light Generation in Raman-active Crystals Driven by Femtosecond Laser Fields
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Affiliation</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1/11/2007</td>
<td>Andras Kis</td>
<td>University of California, Berkeley</td>
<td>Mechanical Manipulation of Nanotubes</td>
</tr>
<tr>
<td>1/15/2007</td>
<td>Xuan Gao</td>
<td>Harvard University</td>
<td>The Sensitivity Limits of Nanowire Bio-Sensors</td>
</tr>
<tr>
<td>1/16/2007</td>
<td>Anatoly Svidzinsky</td>
<td>Texas A&amp;M University</td>
<td>Interface Between AMO, Quantum Optics and Many Body Theory: Dimensional Scaling Analysis of Molecules, BEC Statistics and Correlated Spontaneous Emission of N Atoms</td>
</tr>
<tr>
<td>1/16/2007</td>
<td>Daniel Wasserman</td>
<td>Princeton University</td>
<td>Novel Sources for Mid-Infrared Emission</td>
</tr>
<tr>
<td>1/18/2007</td>
<td>Michael Spanner</td>
<td>University of Toronto</td>
<td>Entanglement- and Timing-based Mechanisms in the Coherent Control of Reactive Scattering</td>
</tr>
<tr>
<td>1/22/2007</td>
<td>Hou-Tong Chen</td>
<td>Los Alamos National Lab</td>
<td>Terahertz for Materials &amp; Metamaterials for Terahertz</td>
</tr>
<tr>
<td>1/24/2007</td>
<td>Igor Roshchin</td>
<td>University of California, San Diego</td>
<td>Unusual Magnetic Properties of Nanostructures and Proximity Effect</td>
</tr>
<tr>
<td>1/25/2007</td>
<td>Paul Corkum</td>
<td>Steacie Institute for Molecular Sciences, NRC Canada</td>
<td>Mapping Attosecond Science onto Electron Interferometry</td>
</tr>
<tr>
<td>1/25/2007</td>
<td>Alexey Sergeev</td>
<td>Tulane University</td>
<td></td>
</tr>
</tbody>
</table>
Perturbation Parameters, Analytical Continuation and Singularity Structure of the Energy Function: Applications in Atomic, Molecular and Nuclear Physics

1/26/2007  **Alexander Finkelstein**  
Weizmann Institute  
Spintronics Without Magnets: Spin-optics

2/1/2007  **Vladislav Yakovlev**  
*University of Wisconsin, Milwaukee*  
Imaging, Manipulating, Simulating and Controlling the Motion of Single Molecules with Light

2/5/2007  **Alexandre Kolomenskii**  
*Texas A&M University*  
Coherent Oscillations in Nanostructures Measured with Ultrafast Photonics

2/6/2007  **Yong P. Chen**  
*Rice University*  
Quantum Coherence in Insulators

2/19/2007  **Mike Douglas**  
*Rutgers University*  
Are There Testable Predictions of String Theory?

2/20/2007  **Sean Liddick**  
*Oak Ridge National Laboratory*  
Probing the Limits of Nuclear Existence

2/22/2007  **Oren Cohen**  
*University of Colorado*  
Attosecond Nonlinear Optics

2/22/2007  **Maria Elena Monzani**  
*Columbia University*  
Direct Detection of Dark Matter with the XENON Experiment

2/27/2007  **Andreas Schiller**  
*Michigan State University*  
On the Selective Population and Neutron Decay of Excited States in Semi-magic$^{230}$O

3/1/2007  **Andre Geim**  
*University of Manchester*  
QED in a Pencil Trace

3/6/2007  **Dan Melconian**  
*University of Washington*  
Probing Fundamental Properties of the Weak Interaction: Some Recent Experimental Progress

3/8/2007  **Jeffrey Guest**  
*Argonne National Laboratory*

3/12/2007  **Hannan Amro**  
*University of Notre Dame*  
$(\tau^Be, ^3He)$ Reaction: A Promising New Tool for Nuclear Spectroscopy

SEC. 5.  COLLOQUIUM AND SEMINAR SPEAKERS  603
<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Institution</th>
<th>Title</th>
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<tbody>
<tr>
<td>3/19/2007</td>
<td>Jason Clark</td>
<td>Yale University</td>
<td>Making Mass Measurements to Model an Assortment of Astrophysical Anomalies</td>
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<tr>
<td>3/22/2007</td>
<td>Mayly Sanchez</td>
<td>Harvard University</td>
<td>Measuring the Elusive: Neutrino Oscillations in MINOS and Beyond</td>
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<tr>
<td>3/27/2007</td>
<td>Patricia Vahle</td>
<td>University College London</td>
<td>Observation of Muon Neutrino Disappearance with the MINOS Detectors in the NuMI</td>
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<td>3/29/2007</td>
<td>Michael Kordosky</td>
<td>University College London</td>
<td>Understanding Nature’s Shyest Particle</td>
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<td>4/12/2007</td>
<td>Jeffrey Olafsen</td>
<td>Baylor University</td>
<td>Tabletop Experiments in Non-equilibrium, Biological, and Chaotic Systems</td>
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<tr>
<td>4/19/2007</td>
<td>Eva M. Silverstein</td>
<td>Stanford University</td>
<td>Models of Inflation and Dark Energy in String Theory</td>
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<tr>
<td>4/19/2007</td>
<td>Eva M. Silverstein</td>
<td>Stanford University</td>
<td>Models of Inflation and Dark Energy in String Theory</td>
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<tr>
<td>4/26/2007</td>
<td>Jaan Laane</td>
<td>Texas A&amp;M University</td>
<td>Spectroscopic Determination of Molecular Structures and Vibrational Potential Energy Surfaces in Ground and Excited Electronic States</td>
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<td>5/10/2007</td>
<td>Yuri Rostovtsev</td>
<td>Texas A&amp;M University</td>
<td>Nonlinear Optics Controlled via Slow Light</td>
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<tr>
<td>5/14/2007</td>
<td>Carlos Lobo</td>
<td>University of Trento</td>
<td>Normal State of a Polarised Fermi Gas at Unitarity</td>
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<tr>
<td>5/17/2007</td>
<td>Ofir Alon</td>
<td>University of Heidelberg</td>
<td>Some Hot Affairs of Cold Atoms</td>
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<tr>
<td>5/21/2007</td>
<td>Andreas Becker</td>
<td>Max Planck Institute for the Physics of Complex Systems</td>
<td>Ultrafast Few-body Dynamics in Intense Laser Pulses</td>
</tr>
<tr>
<td>5/21/2007</td>
<td>Michael Wood-Vasey</td>
<td>Harvard-Smithsonian Center for Astrophysics</td>
<td></td>
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</tbody>
</table>
Supernovae, Large-Scale Surveys, and the Nature of Dark Energy

5/22/2007  **Lucas Macri**  
*National Optical Astronomy Observatory*  
Constraining the Properties of Dark Energy with an Improved Cepheid Distance Scale

5/24/2007  **Robert Smith**  
*University of Pennsylvania*  
Probing Dark Energy Through Understanding Large Scale Structure Formation

5/25/2007  **Darren Depoy**  
*Ohio State University*  
Current and Future Surveys for Type Ia Supernovae

5/30/2007  **Thushara Perera**  
*University of Massachusetts*  
Discovering and Understanding the Earliest Galaxies: New Advances in a Young Field

5/31/2007  **Kim-Vy Tran**  
*University of Zurich*  
Cosmic Collisions: Forming the Most Massive Galaxies in the Universe

6/6/2007  **Casey Papovich**  
*University of Arizona*  
Studying Cosmology and Galaxy Evolution in the Era of the Great Observatories

6/20/2007  **Helmut Katzgraber**  
*Swiss Federal Institute of Technology Zurich*  
Do Spin Glasses Order in a Field?

9/13/2007  **John Gillaspy**  
*National Institute of Standards and Technology*  
From the Subatomic to the Astronomical: Physics Across 32 Orders of Magnitude with Highly Charged Ions

9/20/2007  **Don Carona**  
*Texas A&M University*  
Physics Observatory: Growth in Facilities, Teaching and Research

9/27/2007  **Wenhao Wu**  
*Texas A&M University*  
Can the Superconductor-Insulator Transition be a Duality Quantum Phase Transition?

10/4/2007  **Bhaskar Dutta**  
*Texas A&M University*  
23 Percent of the Universe at the Large Hadron Collider (LHC)

10/11/2007  **Jogesh Pati**  
*University of Maryland*  
Percent of the Universe at the Large Hadron Collider (LHC) Kamon Thurs. Oct 11  
Prof. Jogesh Pati, U. of Maryland Quest For Unification: With Neutrino Masses Revealed Proton Decay is the Missing Link
Peter Levy  
*New York University*
An Idiosyncratic Survey of Spintronics: From 1963 to the Present

Peter Levy  
*New York University*
On the Road to Spintronics

Michael Eckart  
*Institute of Quantum Physics, Ulm University, Germany*
Quantum Correlations of Dilute Quantum Gases with Extended Mean-field Theory

Joseph Kapusta  
*University of Minnesota*
Physics at RHIC

Ladan Arissian  
*Center for High Technology Materials University of New Mexico*
Mode Locked Laser: Coherent Control and Sensor Application

Paul Abell  
*Johnson Space Center, Houston*
Piloted Missions to Near-Earth Objects via the Crew Exploration Vehicle

Rob Landis  
*Johnson Space Center, Houston*
Piloted Missions to Near-Earth Objects via the Crew Exploration Vehicle

Eugene Frumker  
*Weizmann Institute of Science*
Novel Dynamic Approaches in Femtosecond Pulse Shaping

Mette Gaarde  
*Louisiana State University*
How to Control and Optimize the Generation of Coherent, Ultrafast XUV Radiation

Andy Howell  
*University of Toronto*
Dark Energy and Type Ia Supernovae: The latest results from the Supernova Legacy Survey

Weng W. Chow  
*Sandia National Laboratories*
Gain and Refractive Index in Quantum-dot Lasers

Randy Hulet  
*Rice University*
Fermion Pairing with Ultracold Atoms

Yuri Oganessian  
*Joint Institute for Nuclear Research, Dubna, Russia*
Superheavy Elements, Synthesis and Properties

Anatoli Polkovnikov  
*Boston University*
Cold Atoms and Out of Equilibrium Quantum Dynamics

12/6/2007  Shamit Kachru
Stanford University
Naturalness in Field Theory, String Theory, and Nature

12/13/2007  Louis DiMauro
Ohio State University
The Attosecond Era
<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Institution</th>
<th>Topic</th>
</tr>
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<tbody>
<tr>
<td>1/10/2007</td>
<td>Brian D'Urso</td>
<td>Oak Ridge National Laboratory</td>
<td>High Aspect Ratio Microstructures and Nanostructures: Fabrication and Novel Properties</td>
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<tr>
<td>1/11/2007</td>
<td>Andras Kis</td>
<td>University of California, Berkeley</td>
<td>Mechanical Manipulation of Nanotubes</td>
</tr>
<tr>
<td>1/15/2007</td>
<td>Xuan Gao</td>
<td>Harvard University</td>
<td>The Sensitivity Limits of Nanowire Bio-Sensors</td>
</tr>
<tr>
<td>1/24/2007</td>
<td>Igor Roshchin</td>
<td>University of California, San Diego</td>
<td>Unusual Magnetic Properties of Nanostructures and Proximity Effect</td>
</tr>
<tr>
<td>1/28/2007</td>
<td>Alex Finkelstein</td>
<td>Weizmann Institute</td>
<td>Spintronics Without Magnets: Spin-optics</td>
</tr>
<tr>
<td>2/5/2007</td>
<td>Alexander Kolomensky</td>
<td>Texas A&amp;M University</td>
<td>Coherent Oscillations in Nanostructures Measured with Ultrafast Photonics</td>
</tr>
<tr>
<td>2/6/2007</td>
<td>Yong Chen</td>
<td>Rice University</td>
<td>Quantum Coherence in Insulators</td>
</tr>
<tr>
<td>2/7/2007</td>
<td>Alexey Kovalev</td>
<td>Texas A&amp;M University</td>
<td>Current-driven Ferromagnetic Resonance, Mechanical Torques and Rotary Motion in Magnetic Nanostructures, Part II</td>
</tr>
<tr>
<td>2/14/2007</td>
<td>Christian Jeandey</td>
<td>CEA Grenoble</td>
<td>Magnetic Levitation of Microdroplets in Air and Beads in Liquids</td>
</tr>
<tr>
<td>2/21/2007</td>
<td>Vladislav Pokrovsky</td>
<td>Texas A&amp;M University</td>
<td>Fast Quantum Noise in Landau-Zener Transitions</td>
</tr>
<tr>
<td>2/28/2007</td>
<td>Oleg Tretiakov</td>
<td>Johns Hopkins University</td>
<td>Dissipative Dynamics and Topology of Composite Domain Walls in Magnetic Nanostrips</td>
</tr>
<tr>
<td>3/21/2007</td>
<td>Serkan Erdin</td>
<td>Baylor University</td>
<td>Photoinduced Magnetism Caused by Charge-Transfer Excitations in Tetracyanoethylene-Based Organic Magnets</td>
</tr>
<tr>
<td>Date</td>
<td>Speaker</td>
<td>Affiliation</td>
<td>Title</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------</td>
<td>-----------------------------------------</td>
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<tr>
<td>3/28/2007</td>
<td>Yafis Barlas</td>
<td>University of Texas, Austin</td>
<td>Graphene: A Pseudochiral Fermi Liquid</td>
</tr>
<tr>
<td>4/4/2007</td>
<td>Andrei Bernevig</td>
<td>Stanford University</td>
<td>Quantum Spin Hall Effect and Topological Phase Transition in HgTe Quantum Wells</td>
</tr>
<tr>
<td>4/18/2007</td>
<td>Carl E. Patton</td>
<td>Colorado State University</td>
<td>Spin Wave Solitons, Fractals, and Fermi-Pasta-Ulam Recurrence in Magnetic Films</td>
</tr>
<tr>
<td>4/20/2007</td>
<td>Vladislav Pokrovsky</td>
<td>Texas A&amp;M University</td>
<td>Fast Quantum Noise in Landau-Zener transitions, Part II</td>
</tr>
<tr>
<td>5/2/2007</td>
<td>Thomas Jungwirth</td>
<td>Institute of Physics, ASCR</td>
<td>DMS: A Spintronics Revolution</td>
</tr>
<tr>
<td>9/12/2007</td>
<td>Joseph H. Ross Jr.</td>
<td>Texas A&amp;M University</td>
<td>Underscreened Kondo Behavior in Al20V2Eu</td>
</tr>
<tr>
<td>9/19/2007</td>
<td>Konstantin Romanov</td>
<td>Texas A&amp;M University</td>
<td>The Neel to Bloch Domain Wall Phase Transition in Ferromagnetic Strips</td>
</tr>
<tr>
<td>9/26/2007</td>
<td>Igor Roshchin</td>
<td>Texas A&amp;M University</td>
<td>Capillary Condensation in Nanopores</td>
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<tr>
<td>10/3/2007</td>
<td>Yury Adamov</td>
<td>Texas A&amp;M University</td>
<td>Domain Wall Motion Induced by Current Fluctuations</td>
</tr>
<tr>
<td>10/10/2007</td>
<td>Xiaojin Li</td>
<td>University of Texas, Austin</td>
<td>Multidimensional Snapshots of Electron Couplings in Semiconductors</td>
</tr>
<tr>
<td>10/24/2007</td>
<td>Alexey Kovalev</td>
<td>Texas A&amp;M University</td>
<td>Nanomechanical Spin-polarizer</td>
</tr>
<tr>
<td>10/31/2007</td>
<td>Matthew Gilbert</td>
<td>University of Texas, Austin</td>
<td>Beyond the End of the Roadmap: The Physics and Tools of Next Generation Logic</td>
</tr>
<tr>
<td>11/7/2007</td>
<td>Ching-Hwa Kiang</td>
<td>Rice University</td>
<td></td>
</tr>
</tbody>
</table>
CM Seminar: DNA Nanoparticle Phase Transitions and Protein Folding Free Energy Reconstruction Using Jarzynski’s Equality

11/14/2007  **John Cerne**  
*State University of New York, Buffalo*  
CM Seminar: What can the Infrared Hall Conductivity Tell us About Interesting Materials?

11/27/2007  **O. Starykh**

Spinons and Triplons in a Spatially Anisotropic Triangular Lattice Antiferromagnet

12/5/2007  **Deqiang Sun**  
*Texas A&M University*  
Molecular Production at a Broad Feshbach Resonance in Fermi-gas of Cooled Atoms
<table>
<thead>
<tr>
<th>Date</th>
<th>Speaker</th>
<th>Institution</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/23/2007</td>
<td>James Liu</td>
<td>University of Michigan</td>
<td>Chain Inflation in the Landscape</td>
</tr>
<tr>
<td>2/5/2007</td>
<td>Volker Braun</td>
<td>University of Pennsylvania</td>
<td>Instantons on Quotient Calabi-Yau Manifolds</td>
</tr>
<tr>
<td>2/20/2007</td>
<td>Mike Douglas</td>
<td>Rutgers The State University of New Jersey</td>
<td>Balanced Metrics in String Theory</td>
</tr>
<tr>
<td>2/26/2007</td>
<td>Christopher Herzog</td>
<td>University of Washington</td>
<td>Applying AdS/CFT to 2+1 Dimensional Systems</td>
</tr>
<tr>
<td>3/5/2007</td>
<td>Henriette Elvang</td>
<td>Massachusetts Institute of Technology</td>
<td>Phases of (4+1)-Dimensional Black Holes</td>
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<tr>
<td>3/20/2007</td>
<td>Gary Shiu</td>
<td>University of Wisconsin</td>
<td>String Compactifications and D-brane Inflation</td>
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<tr>
<td>3/26/2007</td>
<td>Jacques Distler</td>
<td>University of Texas, Austin</td>
<td>Orientifolds and Twisted KR Theory</td>
</tr>
<tr>
<td>4/2/2007</td>
<td>Liam McAllister</td>
<td>Princeton University</td>
<td>Gravitational Waves from String Theory?</td>
</tr>
<tr>
<td>4/3/2007</td>
<td>David Berman</td>
<td>Queen Mary, University of London</td>
<td>Fuzzy Geometries in M-theory</td>
</tr>
<tr>
<td>4/16/2007</td>
<td>James Hartle</td>
<td>University of California, Santa Barbara</td>
<td>Generalizing Quantum Mechanics for Quantum Gravity</td>
</tr>
<tr>
<td>4/16/2007</td>
<td>Giovanni Villadoro</td>
<td>Harvard University</td>
<td>Quantum Horizons of the Standard Model Landscape</td>
</tr>
<tr>
<td>4/17/2007</td>
<td>Robert Myers</td>
<td>Perimeter Institute</td>
<td>Another Look at DGP Gravity</td>
</tr>
<tr>
<td>4/18/2007</td>
<td>Don N. Page</td>
<td>University of Alberta</td>
<td>Constants of Motion for Higher-Dimensional Black Holes</td>
</tr>
<tr>
<td>4/20/2007</td>
<td>Eva Silverstein</td>
<td></td>
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</tbody>
</table>
Stanford University
New Dimensions for Wound Strings and D-duality
4/20/2007 Nicholas Suntzeff
Texas A&M University
The Latest Results on Dark Energy from Supernovae
4/30/2007 Simeon Hellerman
Institute for Advanced Study School of Natural Sciences
Cosmological Unification of String Theories
9/4/2007 Christopher Pope
Texas A&M University
Lorentz Violation and Finsler Geometry
9/10/2007 Hong Lu
Texas A&M University
New Supersymmetric Solutions of N=2, D=5 Gauged Supergravity with Hyper-scalars
9/18/2007 Eric Mayes
Texas A&M University
Realistic Particle Physics from Intersecting Branes
9/24/2007 Eiichiro Komatsu
University of Texas, Austin
Cosmic Gamma-ray Background from Dark Matter Annihilation in the Large-scale Structure
10/2/2007 Louis Leblond
Texas A&M University
Non-Gaussianity and Cosmic Strings from Brane Inflation
10/8/2007 Daniel Robbins
University of Texas, Austin
Generalized NS-NS Fluxes in Type II Compactifications
10/11/2007 Jogesh Pati
Stanford Linear Accelerator Center
Quest for Unification: With Neutrino Masses Revealed Proton Decay is the Missing Link
10/12/2007 Jogesh Pati
Stanford Linear Accelerator Center
Proton Decay: The Missing Link Correlating d=6 and d=5 Proton Decay in SO(10)
10/16/2007 Tianjun Li
Texas A&M University
Implications of String Theory at the LHC
10/23/2007 Thomas Grimm
University of Wisconsin
Axion Inflation in Type II String Theory
10/29/2007 Vincent Bouchard
Harvard University
Remodeling the B-Model
11/6/2007 **Hong Lu**  
*Texas A&M University*  
Infinite-Dimensional Symmetries of Two-Dimensional Coset Models

11/12/2007 **Jaume Gomis**  
*Perimeter Ins., Canada*  
Nonlocal Operators in Gauge Theory and Holography

11/19/2007 **Michael Douglas**  
*Rutgers, The State University of New Jersey*  
Overview of Theory of Boundary States

11/26/2007 **Mirjam Cvetic**  
*University of Pennsylvania*  
Hierarchical Mass Scales from D-Brane Instantons

11/27/2007 **Josh Guffin**  
*University of Illinois at Urbana, Champaign*  
Topological Correlators in (0,2) Non-Linear Sigma Models

12/8/2007 **Shamit Kachru**  
*Stanford University*  
Stringy Instantons, Geometric Transitions, and Dynamical Supersymmetry Breaking

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<tr>
<th>Date</th>
<th>Name</th>
<th>Affiliation</th>
<th>Topic</th>
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<tbody>
<tr>
<td>2/2/2007</td>
<td>Peter Petreczky</td>
<td>Brookhaven National Laboratory</td>
<td>QCD Thermodynamics with Almost Physical Quark Masses</td>
</tr>
<tr>
<td>2/9/2007</td>
<td>Daniel Cabrera</td>
<td>Texas A&amp;M University</td>
<td>Quarkonium-Spectral Functions and Lattice Correlators in the QGP</td>
</tr>
<tr>
<td>2/23/2007</td>
<td>August Keksis</td>
<td>Texas A&amp;M University</td>
<td>N/Z Equilibration in Deep Inelastic Collisions and the Fragmentation of the Resulting Quasiprojectiles</td>
</tr>
<tr>
<td>3/23/2007</td>
<td>Kevin Dusling</td>
<td>Stony Brook University, New York</td>
<td>Viscous Relativistic Hydrodynamics</td>
</tr>
<tr>
<td>4/20/2007</td>
<td>Gerd Ropke</td>
<td>University of Rostock Germany</td>
<td>Low-Density Nuclear Matter Equation of State and Symmetry Energy: Cluster Formation and Condensates</td>
</tr>
<tr>
<td>5/2/2007</td>
<td>Abbijit Majumder</td>
<td>Duke University, Durham</td>
<td>Probing the QGP with Jets and Jet Correlations</td>
</tr>
<tr>
<td>5/18/2007</td>
<td>Lorenzo Ravagli</td>
<td>Texas A&amp;M University</td>
<td>Quark Coalescence Based on a Transport Equation</td>
</tr>
<tr>
<td>10/5/2007</td>
<td>Xingbo Zhao</td>
<td>Texas A&amp;M University</td>
<td>Transverse-Momentum Spectra of J/psi in Heavy-Ion Collisions</td>
</tr>
<tr>
<td>10/23/2007</td>
<td>Chiho Nonaka</td>
<td>Nagoya University, Nagoya, Japan</td>
<td>Bulk QCD Dynamics in Relativistic Heavy Ion Collisions - 3D Hydro+Micro Approach at RHIC</td>
</tr>
</tbody>
</table>
6. Faculty*, 2007

Artem G. Abanov ........................................... Assistant Professor
Thomas, III 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 Belyanin .............................................. Associate Professor
Ronald A. Bryan ............................................... Professor
Joel Bryan ........................................................ Lecturer
Siu Ah Chin ...................................................... Professor
David A. Church ............................................... Professor
Robert B. Clark .................................................. Professor
Nelson M. Duller ................................................ Professor
Bhaskar Dutta ................................................... Professor
Tatiana L. Erukhimova ....................................... Lecturer
A. Lewis Ford ................................................... Professor
Rainer J. Fries ................................................... Assistant Professor
Edward S. Fry .................................................... Professor
Carl A. Gagliardi ............................................... Professor
Janice W. Guikema ............................................ Lecturer
John C. Hardy ................................................... Distinguished Professor
Dudley Herschbach ............................................. Professor
Chia-Ren Hu .................................................... Professor
Dave Hyland ..................................................... Professor (J)
Teruki Kamon ................................................... Professor
George W. Kattawar ......................................... Professor
Leonid V. Keldysh ............................................. Professor
Robert A. Kenefick ............................................ Professor
Che-Ming Ko .................................................... Professor
Olga Kharovskaya ............................................. Distinguished Professor
Vitaly Kharovskiy ............................................. Professor
Kevin Krisciunas .............................................. Lecturer
Jaan Laane ...................................................... Professor (J)
Igor F. Lyuksyutov ........................................... Associate Professor
Peter M. McIntyre ............................................ Professor
Saskia Mioduszewski ........................................ Assistant Professor
Joseph A. Musser .............................................. Lecturer
Dimitri V. Nanopoulos ..................................... Distinguished Professor
Donald G. Naugle ............................................. Professor
Gerhard G. Paulus ........................................... Associate Professor
Valery L. Pokrovskiy .......................................... Distinguished Professor
Christopher N. Pope ......................................... Distinguished Professor
Ralf Rapp ........................................................ Associate Professor
John F. Reading ............................................... Professor
Igor V. Roshchin ................................................ Assistant Professor
Joseph H. Ross, Jr. .......................................................... Professor
Alexei N. Safonov ......................................................... Assistant Professor
Wayne M. Saslow .......................................................... Professor
Hans A. Schuessler ......................................................... Professor
Marlan O. Scully .......................................................... Distinguished Professor
Ergin Sezgin ............................................................... Professor
Jairo Sinova ............................................................... Associate Professor
Alexei V. Sokolov .......................................................... Associate Professor
Nicholas B. Suntzeff ....................................................... Professor
Winfried Teizer ........................................................... Associate Professor
David Toback ............................................................. Associate Professor
Robert E. Tribble .......................................................... 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
Dave H. Youngblood ...................................................... 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 2007 (01/01/2007-12/31/2007).
6.1 Professional Activities, 2007

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2007.

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 2007.
▷ 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 2007.
▷ 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 2007

International
▷ Event: Pokrovsky Fest (Organizer), The International Conference on Statistical Physics and Quantum Field Theory (Organizer), The International Conference on Strongly Correlated Electron Systems (Organizer)

National
▷ Event: Joint Fall Meeting of the Texas Sections of the APS (Session Chair)

Department
▷ Event: Chemistry Open House (Participant), Condensed Matter Lunch (Organizer), Condensed Matter Seminar (Organizer), Physics Festival (Participant)
▷ Committee/Panel: Building Committee (Contributor), Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 202. — College Physics (total enrollment: 60)
▷ PHYS 691. — Research (total enrollment: 1)

Fall
▷ PHYS 208. — Electricity and Optics (total enrollment: 114)

• PRESENTATIONS DURING 2007

▷ “Continuous Neel to Bloch Transition as Thickness Increases: Statics and Dynamics,” 2007 Joint Fall Meeting of the Texas Sections of the APS, 2007.( Individual)
▷ “Molecular Production at a Wide Frenshbach Resonance in Fermi-gas of Cooled Atoms,” 2007 Joint Fall Meeting of the Texas Sections of the APS, 2007.( Individual)
▷ “Point Splitting Regularization of Cusp Instability in Laplacian Growth,” Workshop on Quadrature Domains and Laplacian Growth in Modern Physics, Banff, Canada, July, 2007.( Individual)

• PUBLICATIONS DURING 2007

• SERVICE DURING 2007

National
▷ Professional Affiliation: NCAA Faculty (Athletic Representative)
▷ Committee/Panel: NCAA Academic/Eligibility/Compliance Cabinet (Member)

University
▷ Service Position: Texas A&M University President on Intercollegiate Athletics (Advisor)
▷ Committee/Panel: Athletic Compliance Committee (Member), Athletic Council (Member), Athletic Department Senior Administration Committee (Member), Big 12 Faculty (Athletic Representative)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 222. — Modern Physics for Engineers (total enrollment: 97)

Fall
▷ PHYS 208. — Electricity and Optics (total enrollment: 120)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007
  College
  ▷ Committee/Panel: Undergraduate Curriculum Committee (Member)
  Department
  ▷ Event: Engineering Day at the Mall (Presenter), Low Temperature Demonstration for Aggieland Saturday (Presenter), Low Temperature Demonstration for Chemistry Open House (Presenter), Low Temperature Demonstrations for Physics Festival (Presenter)
  ▷ Committee/Panel: New Building Committee (Member), Society of Physics Students (Chair), Undergraduate Curriculum Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ PHYS 607. — Statistical Mechanics (total enrollment: 32)
  ▷ PHYS 691. — Research (total enrollment: 2)
  Summer
  ▷ PHYS 691. — Research (total enrollment: 2)
  Fall
  ▷ PHYS 408. — Thermodynamics and Statistical Mechanics (total enrollment: 16)
  ▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007
  Private
  ▷ Electron Transport in Single Molecules, The Robert A. Welch Foundation, coworkers: C. Chen (G), L. Ma (G)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007
  State
  ▶ Committee/Panel: Texas APS Executive Committee (Member)

  University
  ▶ Committee/Panel: Professor Emeritus Committee (Member), Tenure Mediation Committee (Member)

  Department
  ▶ Committee/Panel: AMO Search Committee (Member), Astronomy Search Committee (Chair), Astronomy Search Committee (Member), New Buildings Committee (Member), Promotions, Tenure, and Appointments Committee (Member), Various Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ PHYS 307.(H) — Observational Astronomy (total enrollment: 7)
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 489. — Special Topics in (total enrollment: 7)
  ▶ PHYS 691. — Research (total enrollment: 1)

  Summer
  ▶ PHYS 201. — College Physics (total enrollment: 34)

  Fall
  ▶ PHYS 306.(H) — Basic Astronomy (total enrollment: 13)
  ▶ PHYS 307.(H) — Observational Astronomy (total enrollment: 8)
  ▶ PHYS 606. — Quantum Mechanics (total enrollment: 11)

• RESEARCH PROJECTS DURING 2007
  Private
  ▶ Response of Materials and Biological Molecules to Light, *The Robert A. Welch Foundation*, coworkers: P. Sauer (P), A. Mondragon (G), S. Yokoo (G), S. Dupont (U), Z. Wadiasingh (U)

• PRESENTATIONS DURING 2007

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• PUBLICATIONS DURING 2007
RICHARD L. ARNOWITT

DISTINGUISHED PROFESSOR EMERITUS (A) (979) 845-7746

PHYS-High Energy Physics arnowitt@physics.tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▶ Hershel E. Burgess Chair in Physics (High Energy Physics) /1997/

• SERVICE DURING 2007
  Department
  ▶ Committee/Panel: High Energy Experimental Search Committee (Member)

• PRESENTATIONS DURING 2007
  ▶ “Relic Density at the LHC,” Midwest Theory Conference, University of Kansas, Lawrence, KS, April, 2007.( Individual)
  ▶ “Particle Physics and Cosmology in the Co-annihilation Region,” International Workshop on the Connection Between Particle Physics and Cosmology, Texas A&M University, College Station, TX, May, 2007.( Individual)
  ▶ “Relic Density in MET+Jets+Taus Sample at the LHC,” Mini-Workshop on Early CMS Physics, Fermilab, Batavia, IL, June, 2007.( Individual)
  ▶ “SUSY at the LHC,” 15th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Karlsruhe, Germany, July, 2007.( Individual)
  ▶ “Cosmological Connection at the LHC: Stau-Neutralino Co-annihilation Case,” Workshop on Facing the LHC Data, University of Tokyo, Tokyo, Japan, December, 2007.( Individual)
• CHAIRS/PROFESSORSHIPS
  ▶ Presidential Professor for Teaching Excellence [2003]
  ▶ Thamann University Professorship in Undergraduate Teaching Excellence [2004]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Undergraduate Advisor, Physics Undergraduate Advising Office, Physics, [2007]

• SERVICE DURING 2007
  State
  ▶ Event: Physics Lab Section, Physics Olympiad (Coordinator)

  University
  ▶ Committee/Panel: Discrimination Appeals Panel (Member), Executive Committee, Center for Teaching Excellence (Member), Vice President for Student Affairs (Advisory Committee)

  College
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Member), Undergraduate Curriculum Committee (Member)

  Department
  ▶ Service Position: STEPS Physics 208 Lecture Sections (Coordinator), STEPS Physics 278 Lecture Sections (Coordinator), TA Teaching Assignments (Coordinator)
  ▶ Committee/Panel: Teaching Evaluation Committee (Chair), Undergraduate Curriculum Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 171)

  Fall
  ▶ PHYS 101. — Topics in Contemporary Physics (total enrollment: 50)
  ▶ PHYS 218. — Mechanics (total enrollment: 169)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ TAMU STEPS: Physics, Engineering, and Mathematics (PEM) Model, National Science Foundation

• PRESENTATIONS DURING 2007
“STEPS Physics,” Texas A&M University, College Station, TX, July, 2007. (Contributed)

- PUBLICATIONS DURING 2007
• SERVICE DURING 2007

National
▷ Editorial/Board: NSF (Reviewer), *Nuclear Physics B*, *Physics Review*, *Journal of High Energy Physics* (Referee: Journals)

Department
▷ Committee/Panel: Qualifier Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 691. — Research (total enrollment: 1)

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

Fall
▷ PHYS 202. — College Physics (total enrollment: 175)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Flux Compactification of M-Theory, Cosmology, and the Standard Model of Elementary Particles, *National Science Foundation*
▷ Strings, Branes, and the Search for Unification, *National Science Foundation*

• PRESENTATIONS DURING 2007

▷ “Heterotic Fluxes,” Recent Developments in String Effective Action and D-Instantons, Muenchen, Germany, November, 2007. (Individual)

• PUBLICATIONS DURING 2007


• SERVICE DURING 2007
  Department
  ▷ Committee/Panel: Promotions, Tenure, and Appointments Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 689. — Special Topics in (total enrollment: 7)
  ▷ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▷ PHYS 691. — Research (total enrollment: 2)
  Fall
  ▷ PHYS 689. — Special Topics in (total enrollment: 5)
  ▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Strings, Branes, and the Search for Unification, National Science Foundation
  Private
  ▷ Sloan Fellowship, Alfred P. Sloan Foundation

• PRESENTATIONS DURING 2007
  ▷ Department of Mathematics, Texas A&M University, College Station, TX, September, 2007. (Individual)
  ▷ University of Texas, Austin, TX, September, 2007. (Individual)
  ▷ McGill, Montreal, Canada, October, 2007. (Individual)
• PUBLICATIONS DURING 2007
• AWARDS DURING 2007

University
▷ JoAnn Treat Research Excellence Award, Texas A&M Research Foundation

• SERVICE DURING 2007

International
▷ Event: International Conference on Infrared and Terahertz Technologies at the International Symposium Optics East (Co-Chair/Organizer), Session on Quantum Cascade Lasers at the Annual Winter Colloquium on the Physics of Quantum Electronics (Organizer)
▷ Advisory Board: International Advisory Board, Nizhny Novgorod State Planetarium (Member)

National

Regional
▷ Event: Oakwood Intermediate School (Presenter)

University
▷ Event: MAES Workshop (Presenter)
▷ Committee/Panel: Security of Physics Students, Texas A&M UniversityChapter (Faculty Advisor)

College
▷ Event: Expanding Your Horizons (Presenter)

Department
▷ Event: Chemistry Open House (Presenter), Physics Festival (Presenter), Saturday Morning Physics Summer Camps (Presenter)
▷ Committee/Panel: Advisory Committee (Member), AMO Search Theory Committee (Member), Astronomy Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 689. — Special Topics in (total enrollment: 8)
▷ PHYS 691. — Research (total enrollment: 7)

Summer
PHYS 691. — Research (total enrollment: 5)

Fall
PHYS 218. — Mechanics (total enrollment: 85)
PHYS 691. — Research (total enrollment: 5)

**RESEARCH PROJECTS DURING 2007**

Federal
- New Mid/Far-Infrared CW Room-Temperature Semiconductor Lasers Based on Intralaser Wave-Mixing Technique, *Air Force Office of Scientific Research*
- New Widely Tunable Room Temperature Terahertz Coherent Sources, *Air Force Office of Scientific Research*, coworkers: F. Xie (G)
- CAREER: Active Integrated Nanostructure Devices for Infrared Photonics and Femtosecond Pulse Generation, *National Science Foundation*, coworkers: A. Wojcik (P), D. Smith (G), F. Xie (G)
- Engineering Research Center: Mid-Infrared Technologies for Health and the Environment, *National Science Foundation*, coworkers: F. Xie (G)
- New Types of Mid/Far-Infrared Semiconductor Lasers for CW Room-Temperature Operations, *National Science Foundation*

**PRESENTATIONS DURING 2007**
- “Mid-Infrared Photodetection Based on Resonant Frequency Up-Conversion in Quantum Well Heterostructures,” TSAPS Meeting, October, 2007. (Individual)
- “Nonlinear Optics in Quantum Cascade Lasers,” Tokyo University, Tokyo, Japan, November, 2007. (Individual)
• PUBLICATIONS DURING 2007

• SERVICE DURING 2007
  
  National
  ▷ Editorial/Board: The Physics Teacher, Journal of Scientific Exploration (Referee: Journals)

  Department
  ▷ Committee/Panel: Awards Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ PHYS 412. — Quantum Mechanics I (total enrollment: 30)
  ▷ PHYS 691. — Research (total enrollment: 1)

  Summer
  ▷ PHYS 485. — Directed Studies (total enrollment: 1)

• PRESENTATIONS DURING 2007

  ▷ “From Inert Particle Physics to a Conscious Universe,” Longmont, CO, September, 2007. (Individual)

• PUBLICATIONS DURING 2007

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Senior Research Associate, Center for Mathematics and Science Education (CMSE), College of Science, [2004]

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: School Science and Mathematics Journal (Associate Editor)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ PHYS 205. — Concepts of Physics (total enrollment: 56)

• RESEARCH PROJECTS DURING 2007
  State
  ▶ High School Physics: Teacher Quality Type B Professional Development Grant, Texas Higher Education Coordinating Board
  ▶ Texas Regional Collaboratives for Excellence in Science Teaching, University of Texas

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Undergraduate Advisor, Physics

• SERVICE DURING 2007
  International
  ▶ Committee/Panel: Feenberg Medal Selection Committee (Member), International Conference Series “Recent Progress in Many-Body Theories” and Awarding the Feenberg Medal for Outstanding Contribution to Many-Body Theory (Chair)

  National

  University
  ▶ Service Position: Chinese Christian Fellowship (Advisor), Hong Kong Students Association (Advisor)

  College
  ▶ Event: Texas Regional Science Bowl (Judge)
  ▶ Committee/Panel: Information Technology Committee (Member)

  Department
  ▶ Committee/Panel: Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ PHYS 201. — *College Physics* (total enrollment: 92)
  ▶ PHYS 691. — *Research* (total enrollment: 1)
  Summer
  ▶ PHYS 691. — *Research* (total enrollment: 1)
  Fall
  ▶ PHYS 606. — *Quantum Mechanics* (total enrollment: 16)
  ▶ PHYS 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Development of a High Density, High Performance Beowulf Cluster, *National Science Foundation*, coworkers: S. Scuro (G)
• Hamiltonian Lattice Gauge Method of Propagating Electromagnetic Waves, *National Science Foundation*

• PRESENTATIONS DURING 2007
  ▶ “Simulating Vortices Nucleation in a Rapidly Rotating BEC,” Department of Physics Colloquium, Texas A&M University, Commerce, TX, October, 2007. (Invited)

• PUBLICATIONS DURING 2007
DAVID A. CHURCH
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• SERVICE DURING 2007
   National
   ◦ Committee/Panel: Executive Committee of Precision Measurements and Fundamental Constants Group of the American Physical Society (Secretary/Treasurer)
   Department
   ◦ Committee/Panel: Awards Committee (Chair), Performance Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
   Spring
   ◦ PHYS 309. — Modern Physics (total enrollment: 30)
   Fall
   ◦ PHYS 222. — Modern Physics for Engineers (total enrollment: 43)
   ◦ PHYS 485. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
   Federal
   ◦ (REN) Spectroscopy and Collisions of Stored, Cold, Highly Charged Ions, National Science Foundation

• PRESENTATIONS DURING 2007
   ◦ “Recollections of RETRAP,” Workshop on Spectrap and Highly Charged Ions, Darmstadt, Germany, November, 2007. (Invited)
Faculty member active only during summers.
NELSON M. DULLER

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- AWARDS DURING 2007
  College
  ▶ Academy of Distinguished Former Students, Texas A&M University

- SERVICE DURING 2007
  Department
  ▶ Service Position: Undergraduate Advisor (Advisor)
  ▶ Committee/Panel: Astronomy Committee (Member), Undergraduate Curriculum Committee (Member)

- TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ PHYS 225. — Electronic Circuits and Applications (total enrollment: 32)
  Summer
  ▶ PHYS 306. — Basic Astronomy (total enrollment: 34)
  Fall
  ▶ PHYS 201. — College Physics (total enrollment: 148)
  ▶ PHYS 426. — Physics Laboratory (total enrollment: 12)

No report received from faculty member.
• SERVICE DURING 2007

International
  ▶ Event: International Workshop on Interconnection Between Particle Physics and Cosmology (Co-Chair)
  ▶ Editorial/Board: *International Journal of Modern Physics* (Referee: Journals)
  ▶ Committee/Panel: Organizing Committee for the International Workshop on Interconnection Between Particle Physics and Cosmology (Member)

National
  ▶ Editorial/Board: *Physical Letters B* (Referee: Journals), *Physical Review D* (Referee: Journals)

Department
  ▶ Event: Hands on Physics (Participant), Physics Festival (Participant), Saturday Morning Physics, Texas A&M University (Presenter)
  ▶ Committee/Panel: Graduate Admission Committee (Member), HEP Hiring Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ PHYS 685. — Directed Studies (total enrollment: 2)
  ▶ PHYS 689. — Special Topics in (total enrollment: 7)
  ▶ PHYS 691. — Research (total enrollment: 2)

Summer
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 2)

Fall
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 638. — Quantum Field Theory II (total enrollment: 6)
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
  ▶ GAANN (Graduate Assistance in the Areas of National Need), Department of Education, coworkers: Y. Mimura (P), S. Campbel (G), A. Krislock (G), P. Truong (U)
  ▶ High Energy Physics at Texas A&M, Department of Energy

• PRESENTATIONS DURING 2007
“Relic Density at the LHC,” Mid-West Theory Meet, KS, April, 2007. (Individual)
“Hidden Sector Baryogenesis,” PPC 2007, College Station, TX, May, 2007. (Contributed)
“Inflation from Branes,” PPC 2007, College Station, TX, May, 2007. (Contributed)
“Inflation from Branes,” PASCOS 2007, Imperial College, United Kingdom, July, 2007. (Contributed)
“Signals of Supercritical String Theory at the LHC,” SUSY 2007, July, 2007. (Contributed)
“SUSY at the LHC,” The 15th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Karlsruhe, Germany, July, 2007. (Individual)
“Cosmic γ-ray Background Anisotropies due to Supersymmetric Dark Matter,” APS Meeting Texas Section, October, 2007. (Graduate, S. Campbell)
“Dark Matter Content in Q-Cosmology & its Detectability in the Anisotropy of Cosmic Gamma-Ray Spectra,” APS Meeting Texas Section, October, 2007. (Graduate, P. Truong)
“Impact of Supercritical String Cosmology at the Large Hadron Collider,” APS meeting, Texas Section, October, 2007. (Graduate, A. Krislock)
“Probing 23% of the Universe at the Large Hadron Collider,” APS Meeting Texas Section, October, 2007. (Graduate, A. Gurrola)
“LHC and Cosmology,” University of Maryland, College Park, MD, November, 2007. (Individual)
“SO(10) Models,” University of Maryland, College Park, MD, November, 2007. (Individual)

• PUBLICATIONS DURING 2007


• SERVICE DURING 2007

  Department
  ▷ Event: Chemistry Open House and Science Exploration Gallery (Organizer), Physics Festival (Organizer)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ PHYS 208. — Electricity and Optics (total enrollment: 49)

  Fall
  ▷ PHYS 218. — Mechanics (total enrollment: 84)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ⊳ Associate Department Head, Physics, [1993]

• SERVICE DURING 2007

  College
  ⊳ Event: Junior Science Bowl and Science Bowl (Reviewer)
  ⊳ Committee/Panel: College Quality Enhancement Plan Council (Member), NRC Survey Committee (Member), Qatar Advisory Committee (Member)

  Department
  ⊳ Event: Physics Festivals (Participant)
  ⊳ Editorial/Board: Academic Program Review Self-Study (Editor)
  ⊳ Committee/Panel: AMO Search Committee (Member), Graduate Credentials and Records Committee (Chair), Long Range Planning Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ⊳ PHYS 202. — College Physics (total enrollment: 98)
  ⊳ PHYS 285. — Directed Studies (total enrollment: 6)

  Summer
  ⊳ PHYS 485. — Directed Studies (total enrollment: 1)

  Fall
  ⊳ PHYS 201. — College Physics (total enrollment: 265)
  ⊳ PHYS 285. — Directed Studies (total enrollment: 7)

• RESEARCH PROJECTS DURING 2007

  Federal
  ⊳ Writing for Assessment and Learning in the Natural and Mathematical Sciences, National Science Foundation

• PUBLICATIONS DURING 2007

• AWARDS DURING 2007
  International
  ▷ Young Scientist Prize, International Union of Pure and Applied Physics

• SERVICE DURING 2007
  National
  ▷ Event: Nuclear Physics Town Hall Meeting at Rutgers (Participant), Nuclear Theory during the DOE Site Review of the Cyclotron (Representative)

  Department
  ▷ Event: Physics Festival (Presenter), Saturday Morning Physics (Speaker)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ PHYS 218. — Mechanics (total enrollment: 87)

• PRESENTATIONS DURING 2007
  ▷ “Photons and Dileptons at LHC,” Heavy Ion Collisions at the LHC Last Call for Predictions, Geneva, Switzerland, May, 2007.( Individual)
  ▷ “Quark and Gluon Degrees of Freedom in High Energy Heavy Ion Collisions,” International Nuclear Physics Conference, Tokyo, Japan, June, 2007.( Invited)
  ▷ “Initial Energy Density, Momentum and Flow in Heavy Ion Collisions,” APS Annual Meeting of the Division of Nuclear Physics, Newport News, VA, October, 2007.( Individual)

• PUBLICATIONS DURING 2007

Fries, R.J. (2007) Hadron Correlations and Parton Recombination *Nuclear Physics A*, vol. 783, 125C-132C.
• CHAIRS/PROFESSORSHIPS
  ▶ George P. Mitchell Chair in Experimental Physics [2005]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Department Head, Physics, [2002]

• TEACHING ASSIGNMENTS DURING 2007
  
  Spring
  ▶ PHYS 691. — Research (total enrollment: 4)
  
  Summer
  ▶ PHYS 691. — Research (total enrollment: 5)
  
  Fall
  ▶ PHYS 691. — Research (total enrollment: 5)

• RESEARCH PROJECTS DURING 2007
  
  Federal
  ▶ Quantum Optics Initiative I, Office of Naval Research, coworkers: J. Katz (G)
  ▶ Bioaerosol Sampling and Collection: Optics and Forward Scattering by Aerosols, U.S. Army, coworkers: D. Haubrich (G)
  ▶ Bioaerosol Sampling and Collection: Optics and Forward Scattering by Sampling and Collection, U.S. Army, coworkers: J. Musser (P), D. Haubrich (G)
  
  Private
  ▶ Mercury Dimer Spectroscopy and a New Integrating Cavity Spectroscopic Tool, The Robert A. Welch Foundation, coworkers: M. Cone (G), X. Qu (G)
  ▶ Spectroscopy and Storage of the Components of Entangled States of Mercury, The Robert A. Welch Foundation

• PRESENTATIONS DURING 2007
  ▶ “Physics at Texas A&M,” Texas A&M University of Texas Joint Faculty Senate Meeting, Austin, TX, March, 2007. (Invited)
• PUBLICATIONS DURING 2007


SERVICE DURING 2007

International
  ▶ Committee/Panel: Carpathian Summer School Physics (Session Chair)

National
  ▶ Committee/Panel: DOE CD-1 Review of the PHENIX Forward Silicon Vertex Tracker (Member), DOE Review of the ALICE Electromagnetic Calorimeter Scientific Program (Member), Los Alamos National Laboratory LDRD DR Project Site Review (Member)

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

Department
  ▶ Committee/Panel: Cyclotron Institute Computer Committee (Chair), Cyclotron Institute Safety Committee (Member), Experimental Nuclear Chemistry Faculty Search (Member), Physics 218-208 Textbook Selection Committee (Member)

TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ PHYS 202. — College Physics (total enrollment: 162)
  ▶ PHYS 691. — Research (total enrollment: 3)

Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 2)

Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 210)
  ▶ PHYS 691. — Research (total enrollment: 1)

RESEARCH PROJECTS DURING 2007

Federal
  ▶ (REN) Cyclotron-Based Nuclear Science, Department of Energy
  ▶ (REN) QCD and Standard Model Studies, Department of Energy, coworkers: M. Sarsour (P), J. Drachenberg (G), Y. Li (G)
  ▶ Development of New Techniques to Determine Neutron and Charged-Particle Induced Reaction Rates, National Nuclear Security Administration

Private

**PRESENTATIONS DURING 2007**

- “Status of the Forward Meson Spectrometer,” Joint Spring Meeting of the Texas Sections of APS, AAPT, and SPS, Abilene, TX, March, 2007. (Graduate, J. Drachenberg)
- “Determination of the Reaction Rate for \(^{17}F(p, \gamma)^{18}Ne\) using the Neutron Transfer Reaction \((^{17}O, ^{18}O)\) in Mirror Nuclei,” Spring Meeting of the APS, Jacksonville, FL, April, 2007. (Graduate, T. Al-Abdullah)
- “Recent Results from the STAR Longitudinal Spin Program at RHIC,” 2007 RHIC AGS Annual Users’ Meeting, Brookhaven, NY, June, 2007. (Postdoc)
- “Study of the \(^{12}N(p, \gamma)^{13}O\) Reaction in Relation to Population III Star Evolution,” Third International Workshop on the First Stars, Santa Fe, NM, July, 2007. (Poster Postdoc)
- “Astrophysical S-factor of the \(^{12}N(p, \gamma)^{13}O\) Reaction Studied from a \((^{12}N, ^{13}O)\) Proton Transfer Reaction,” Carpathian Summer School Physics 2007, Sinaia, Romania, August, 2007. (Contributed)
- “Extracting the Asymptotic Normalization Coefficients in Neutron Transfer Reactions to Determine the Reaction Rates for \(^{22}Mg(p, \gamma)^{23}Al\) and \(^{17}F(p, \gamma)^{18}Ne\),” Carpathian Summer School Physics 2007, Sinaia, Romania, August, 2007. (Contributed)
- “Determination of the Astrophysical S-factor for the \(^{12}N(p, \gamma)^{13}O\) Reaction from \((^{12}N, ^{14}O)\) Proton Transfer Reaction,” 2007 Annual Meeting of the Division of Nuclear Physics of the APS, Newport News, VA, October, 2007. (Postdoc)

**PUBLICATIONS DURING 2007**

- Abelev, B.I.; et al. (2007) Rapidity and Species Dependence of Particle Production at Large Transverse Momentum for d+Au Collisions at \(\sqrt{s_{NN}} = 200\) GeV *Physical Review*


Abelev, B.I.; et al. (2007) Energy Dependence of $\pi^\pm$, p and $\bar{p}$ and Transverse Momentum Spectra for Au+Au Collisions at $\sqrt{s_{NN}} = 62.4$ and 200 GeV Physics Letters B, vol. 655, 104.

JANICE W. GUIKEMA

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• SERVICE DURING 2007
  Department
    ▷ Event: Physics Festival (Participant)
    ▷ Committee/Panel: Physics 201-202 Textbook Selection Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
    ▷ PHYS 202. — College Physics (total enrollment: 95)
  Fall
    ▷ PHYS 201. — College Physics (total enrollment: 118)

No report received from faculty member.
• SERVICE DURING 2007

International
▷ Professional Affiliation: Canadian Association of Physicists (Member), Royal Society of Canada (Fellow)
▷ Committee/Panel: International Advisory Committee, 30th Mazurian Lakes Conference (Member), International Advisory Committee, ENAM08 (Member)

National
▷ Professional Affiliation: American Physical Society (Fellow)
▷ Committee/Panel: Program Advisory Committee, ATLAS Facility, Argonne National Laboratory (Member), Science Policy Committee, Hollifield Lab, Oak Ridge National Lab (Member)

University
▷ Committee/Panel: Ad hoc Committees (Member), Reactor Safety Board (Member)

Department
▷ Committee/Panel: Award Committee (Member), Experimental Nuclear Physics Faculty Search Committee (Chair), Graduate Committee (Member), Graduate Student Advisors (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 208.506 — Electricity and Optics (total enrollment: 25)
▷ PHYS 208.507 — Electricity and Optics (total enrollment: 25)
▷ PHYS 208.508 — Electricity and Optics (total enrollment: 25)
▷ PHYS 208.509 — Electricity and Optics (total enrollment: 25)
▷ PHYS 208.510 — Electricity and Optics (total enrollment: 25)
▷ PHYS 208.516 — Electricity and Optics (total enrollment: 25)
▷ PHYS 208.517 — Electricity and Optics (total enrollment: 25)
▷ PHYS 208.518 — Electricity and Optics (total enrollment: 25)
▷ PHYS 208.519 — Electricity and Optics (total enrollment: 25)
▷ PHYS 691. — Research (total enrollment: 1)
Summer
▷ PHYS 691. — Research (total enrollment: 1)

Fall
▷ PHYS 691. — Research (total enrollment: 1)

- RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: V. Golovko (P), V. Iacob (P), N. Nica (P), J. Goodwin (G), H. Park (G), C. Bolonek (U)
▷ (REN) Nuclear Structure Evaluations for ENSDF, Department of Energy
▷ Nuclear Structure Evaluations for ENSDF, Department of Energy, coworkers: N. Nica (P)

Private
▷ (REN) Nuclear Decay Studies, The Robert A. Welch Foundation, coworkers: V. Golovko (P), V. Iacob (P), N. Nica (P), J. Goodwin (G), H. Park (G), C. Bolonek (U)
▷ (REN) Nuclear Decay Studies, The Robert A. Welch Foundation, coworkers: V. Golovko (P), V. Iacob (P), N. Nica (P), J. Goodwin (G), H. Park (G), C. Bolonek (U)

- PRESENTATIONS DURING 2007

▷ “Evaluated Nuclear Structure Data File,” Brookhaven National Laboratory, Upton, NY, April, 2007. (Poster Individual)
▷ “Precise Branching Ratios from $\beta - \gamma$ Coincidences: The Case of $^{34}$Ar,” APS Meeting, Jacksonville, FL, April, 2007. (Contributed)
▷ “The Structure of $^{23}$Al and Consequences on the Depletion of $^{22}$Na from one Novae,” APS Meeting, Jacksonville, FL, April, 2007. (Contributed)
▷ “Overview of Precision Internal Conversion Measurements as Tests of Internal Conversion Theory,” 17th Meeting of the International Network of Nuclear Structure and Decay Data Evaluators, Saint Petersburg, Russia, June, 2007. (Invited)
▷ “How Idiosyncratic is the Weak Force?,” Cyclotron Institute, July, 2007. (Individual)
▷ “Exotic Nuclei and Nuclear/Particle Astrophysics,” Carpathian Summer School of Physics 2007, Sinaia, Romania, August, 2007. (Invited)
• PUBLICATIONS DURING 2007


Correction - The 2006 annual report failed to include the following citation from Dr. Hardy’s 2006 publications:

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Professor (J), Chemistry, [2006]

• SERVICE DURING 2007
  National
  ▷ Professional Affiliation: National Academy of Sciences (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Fall
  ▷ CHEM 237. — Organic Chemistry Laboratory (total enrollment: 72)

• RESEARCH PROJECTS DURING 2007
  State
  ▷ Producing Ultracold Molecules via Magnetic Traps-on-a-Chip, Texas Higher Education Coordinating Board

• PUBLICATIONS DURING 2007

No report received from faculty member.
• SERVICE DURING 2007

International
▷ Editorial/Board: Hong Kong Government (Review: Proposals), *Scientific Journals International* (Referee: Journals)

National
▷ Editorial/Board: *Physical Review B* (Referee: Journals)

Department
▷ Committee/Panel: Distinguished Lecture Series and Colloquium Committee (Chair), Graduate Admission Committee (Member), Graduate Curriculum Committee (Member), Graduate Student Admissions and Appointments Committee (Member), Promotions, Tenure, and Appointments Committee (Member), The AMO Experimental and Theoretical Search Committees (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 631. — Quantum Theory of Solids (total enrollment: 8)
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 221. — Optics and Thermal Physics (total enrollment: 45)
▷ PHYS 691. — Research (total enrollment: 1)

• PUBLICATIONS DURING 2007


TERUKI KAMON
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- ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  - Graduate Advisor, Physics Graduate Advising Office, Physics, [2002]

- SERVICE DURING 2007
  
  **International**
  - Committee/Panel: International Scientific Advisory Committee, The 2nd International Workshop on the Interconnection between Particle Physics and Cosmology (Member), Organizing Committee on International Workshop on the Interconnection between Particle Physics and Cosmology (Member), Organizing Committee on International Workshop on the Interconnection between Particle Physics and Cosmology (Co-Chair)
  
  **National**
  - Event: Texas Section of APS Fall Meeting (Co-Organizer)
  - Committee/Panel: CDF SUSY Physics (Co-convener), Organizing Committee on Texas Section APS Meeting (Member), US CMS Jet + Missing Energy Topology Group (Co-convener)

  **University**
  - Committee/Panel: Texas A&M Reactor Safety Board (Member)

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

  **Department**
  - Event: Chemistry Open House (Presenter), Physics Open House (Presenter), Saturday Morning Physics at Texas A&M University (Lecturer)
  - Committee/Panel: AMO Experimental Faculty Search (Member), AMO Theory Faculty Search (Member), Graduate Advisor (Chair), Graduate Credentials and Records Committee (Member), Graduate Curriculum Committee (Member), HEP Exp. Faculty Search II (Member), HEP Exp. Faculty Search III (Member), PTA (Member)

- TEACHING ASSIGNMENTS DURING 2007
  
  **Spring**
  - PHYS 202. — College Physics (total enrollment: 42)
  - PHYS 691. — Research (total enrollment: 15)

  **Summer**
  - PHYS 208 — Electricity and Optics (total enrollment: 75)
  - PHYS 691. — Research (total enrollment: 7)

  **Fall**
  - PHYS 218 — Mechanics (total enrollment: 309)
• RESEARCH PROJECTS DURING 2007

Federal
▷ High Energy Physics at Texas A&M, Department of Energy
▷ High Energy Physics at Texas A&M University, Department of Energy, coworkers: M. Goncharov (P), M. Weinberger (P), A. Aurisano (G), V. Khotilovich (G), P. Wagner (G)
▷ Development of a High Density, High Performance Beowulf Cluster, National Science Foundation

• PRESENTATIONS DURING 2007
▷ “Relic Density at the LHC,” Midwest Theory Conference, University of Kansas, Lawrence, KS, April, 2007. (Contributed)
▷ “Particle Physics and Cosmology in the Co-annihilation Region,” International Workshop on the Interconnection between Particle Physics and Cosmology (PPC2007), Texas A&M University, College Station, TX, May, 2007. (Contributed)
▷ “Relic Density at the LHC,” Dark Side of the Universe 2007, June, 2007. (Contributed)
▷ “Relic Density in MET + Jets + Taus at the LHC,” LPC Mini-Workshop on Early CMS Physics, Fermilab, Batavia, IL, June, 2007. (Individual)
▷ “Search for Dark Matter in Stau-Neutralino Coannihilation Region at ILC: 500 to 800 GeV,” Canadian Association of Physicists, Saskatoon, Saskatchewan, Canada, June, 2007. (Contributed)
▷ “Signals of Supercritical String Theory at the LHC,” 15th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Karlsruhe, Germany, July, 2007. (Contributed)
▷ “Dark Matter in SUGRA models at the LHC,” 15th International Conference on Supersymmetry and the Unification of Fundamental Interactions, Karlsruhe, Germany, August, 2007. (Contributed)
▷ “Impact of Supercritical String Cosmology at the Large Hadron Collider,” Texas Section APS Meeting, College Station, TX, October, 2007. (Contributed)
▷ “Mass Reconstruction in MET + Jets (+ Taus) Events at the LHC,” US CMS First Physics Workshop, Fermilab, Batavia, IL, October, 2007. (Contributed)
▷ “MET + Jets Topology,” US CMS First Physics Workshop, Fermilab, Batavia, IL, October, 2007. (Contributed)
▷ “Missing Transverse Energy in Events with Taus at CMS,” Texas Section APS Meeting, College Station, TX, October, 2007. (Contributed)
▷ “Probing 23% of the Universe at the Large Hadron Collider,” Texas Section APS Meeting, College Station, TX, October, 2007. (Contributed)
“Cosmological Connection at the LHC: Stau Neutralino Co-annihilation Case,” International Workshop on Facing the LHC Data, Tokyo University, Kashiwa, Japan, December, 2007. (Contributed)

“Rare Decay at the Tevatron,” Lattice QCD Meets Experiment Workshop 2007, Fermilab, Batavia, IL, December, 2007. (Postdoc)

• PUBLICATIONS DURING 2007

Aaltonen, T.; et al. (2007) Search for Direct Pair Production of Supersymmetric Top and Supersymmetric Bottom Quarks in \( pp \) Collisions at \( \sqrt{s} = 1.96 \) TeV Physical Review D: Particles and Fields , vol. 76, 072010.


Aaltonen, T.; et al. (2007) Measurement of the \( pp \rightarrow t\bar{t} \) Production Cross Section and the Top Quark Mass at \( \sqrt{s} = 1.96 \) TeV in the All-Hadronic Decay Mode Physical Review D: Particles and Fields , vol. 76, 072009.


Abulencia, A.; et al. (2007) Measurement of \( \sigma \) \( pp \rightarrow Z \cdot B( Z \rightarrow \tau\tau ) \) in \( pp \) Collisions at \( \sqrt{s} = 1.96 \) TeV Physical Review Letters , vol. 99, 092004.


Abulencia, A.; et al. (2007) Measurement of the $\Lambda_c^0$ Lifetime in $\Lambda_c^0 \rightarrow J/\psi \Lambda^0$ in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV Physical Review Letters, vol. 98, 122001.

Abulencia, A.; et al. (2007) Measurement of the Ratios of Branching Fractions $B(\chi_{c2} \rightarrow D^- \pi^+ \pi^+ \pi^-)/B(\chi_{c1} \rightarrow D^- \pi^+ \pi^+ \pi^-)$ and $B(\chi_{c2} \rightarrow D^- \pi^+)/B(\chi_{c1} \rightarrow D^- \pi^+)$ in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV Physical Review Letters, vol. 98, 232001.


Abulencia, A.; et al. (2007) Measurements of Inclusive W and Z Cross Sections in \( p\bar{p} \) Collisions at \( \sqrt{s} = 1.96 \) TeV *Journal of Physics G: Nuclear and Particle Physics*, vol. 34, 2457.


GEORGE W. KATTAWAR

PROFESSOR

PHYS-Atomic, Quantum Optics & Applied Phys.

• SERVICE DURING 2007

National

University
▷ Committee/Panel: University Distinguished Lecture Committee (Member)

College
▷ Committee/Panel: Campus Community Campaign Committee (Chair)

Department
▷ Event: Chemistry Open House (Presenter), Physics Open House (Presenter)
▷ Committee/Panel: AMO Search Committee (Member), Astronomy Committee (Member), Computer Committee (Member), Graduate Student Admissions and Appointments Committee (Chair), Long Range Planning Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 208.(H) — Electricity and Optics (total enrollment: 33)
▷ 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: 3)

Fall
▷ PHYS 218.(H) — Mechanics (total enrollment: 69)
▷ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Ultrashort Laser Pulse Propagation in Water, Department of Defense, coworkers: J. Byeon (G), L. Naveira (G)

Quantum Optics Initiative I, *Office of Naval Research*

Theoretical Studies of Radiative Transfer with Inelastic Time-Dependent/Independent Scattering including Both Active and Passive Sources in Realistic Atmosphere-Ocean Systems, *Office of Naval Research*, coworkers: J. Slanker (G), Y. You (G)

- **PRESENTATIONS DURING 2007**

- **PUBLICATIONS DURING 2007**

SEC. 6.1 PROFESSIONAL ACTIVITIES 667


• SERVICE DURING 2007

  International
  ▶ Event: Strongly Correlated Electrons (Organizer), Topics in the Physics of High Pressure (Organizer)

  National
  ▶ Editorial/Board: *Solid State Communications* (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ PHYS 689. — *Special Topics in* (total enrollment: 5)

• PRESENTATIONS DURING 2007


  ▶ “Electroabsorption Under Strong Terahertz Pulses,” Terahertz Center Seminar, University of Regensburg, October, 2007. (Individual)
• SERVICE DURING 2007
  
  College
  ▷ Committee/Panel: Technology-Mediated Instruction Committee (Member)

  Department
  ▷ Committee/Panel: Graduate Credentials and Records Committee (Member)

Retired 05/31/2007.
• SERVICE DURING 2007

International
▷ Editorial/Board: *International Journal of Modern Physics* (Referee: Journals)

National

Department
▷ Committee/Panel: Graduate Student Admissions and Appointments Committee (Member), Promotions, Tenure, and Awards (Chair), Promotions, Tenure, and Awards (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 625. — *Nuclear Physics* (total enrollment: 9)

Fall
▷ PHYS 414. — *Quantum Mechanics II* (total enrollment: 13)

• RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Theoretical Nuclear Physics, *National Science Foundation*, coworkers: W. Liu (P), Y. Oh (P), B. Zhang (P)

Private
▷ (REN) Theoretical Studies of Heavy Ion Collisions, *The Robert A. Welch Foundation*, coworkers: W. Liu (P), Y. Oh (P), B. Zhang (P)

• PRESENTATIONS DURING 2007

▷ “Jet Conversions in QGP,” 10th International Workshop on Relativistic Nuclear Physics from Hundreds MeV to TeV, Kiev, Ukraine, June, 2007. (Invited)
▷ “Jet Conversions in QGP,” 7th International Workshop on Particle Physics Phenomenology, Taipei, Taiwan, June, 2007. (Invited)
“Recent Results from the AMPT Model,” International Workshop on Particle Correlations and Fluctuations, Sonona, CA, August, 2007.( Invited)


“Charm Production in Relativistic Heavy Ion Collisions,” APCTP Focus Program on Hadronic Physics at RHIC, Seoul, Korea, December, 2007.( Invited)

- PUBLICATIONS DURING 2007


• SERVICE DURING 2007

International
▷ Event: International Conference Coherent Control of the Fundamental Processes in Optics and X-ray Optics (Chair)
▷ Editorial/Board: Israel Science Foundation and Carnegie Trust for the Varicosities of Scotland (Review: Proposals)
▷ Committee/Panel: International Program and International Advisory Committees (Member)

National
▷ Event: 17th International Workshop on Laser Physics (Organizer), 37th Winter Colloquium Physics of Quantum Electronics (Organizer), 38th Winter Colloquium Physics of Quantum Electronics (Organizer)
▷ Committee/Panel: APS Fellowship Committee (Member)

Department
▷ Committee/Panel: Advisory Committee for the Institute of Quantum Studies (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 691. — Research (total enrollment: 2)

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

Fall
▷ PHYS 208. — Electricity and Optics (total enrollment: 236)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Laser Manipulations of Nuclear Transitions, Air Force Office of Scientific Research
▷ Spin-Based Lattice-Gas Quantum Optics in Solids Using Optical Addressing, Air Force Office of Scientific Research
▷ Atomic and Nuclear Interference Phenomena in Solids, National Science Foundation
Coherent Control of the Fundamental Optical Processes in Solids via Atomic Interference, *U.S. Civilian Research and Development Foundation*

**PRESENTATIONS DURING 2007**

- “Nuclear Levels Anti-Crossing Transparency,” Texas A&M University, College Station, TX, January, 2007. (Individual)

**PUBLICATIONS DURING 2007**

• SERVICE DURING 2007

International
▷ Event: Symposium “Bose-Einstein Condensation” (Organizer)
▷ Committee/Panel: Advisory Committee of the International Conference Frontiers of Nonlinear Physics (Member)

National

Department
▷ Committee/Panel: Astronomy/Cosmology Faculty Search Committee (Member), Doctoral Student’s Advisory Committee (Graduate Council Representative), Institute for Quantum Studies Advisory Committee (Member), Nanoscience Faculty Search Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 218. — Mechanics (total enrollment: 205)

Summer
▷ PHYS 685. — Directed Studies (total enrollment: 2)
▷ PHYS 691. — Research (total enrollment: 2)

Fall
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ New Mid/Far-Infrared CW Room-Temperature Semiconductor Lasers Based on IntraLaser Wave-Mixing Technique, Air Force Office of Scientific Research, coworkers: K. Dorfman (G)
▷ New Types of Mid/Far-Infrared Semiconductor Lasers for CW Room-Temperature Operations, National Science Foundation, coworkers: K. Dorfman (G)
▷ Quantum Optics Initiative I, Office of Naval Research
▷ Real-Time Detection of Anthrax via FAST CARS and Gain-Swept Super-Radiance, Sandia National Laboratories, coworkers: A. Biryukov (G)
Mid/Infrared Lasers Based on Difference Frequency Generation in GaAs/InGaAs/InGaP Nanostructures, *U.S. Civilian Research and Development Foundation*, coworkers: A. Biryukov (G)

Private

Semiconductor Transistor Laser for Multitwavelength Operation, *Research Corporation*, coworkers: A. Biryukov (G)

• **PRESENTATIONS DURING 2007**


  ▶ “Experimental Study of Nonlinear Mode Mixing in the Dual-Frequency Interband Cascade Laser with a Tunnel Junction,” 11th International Symposium Nanophysics and Nanoelectronics, Nizhny Novgorod, Russia, March, 2007. (Contributed)


  ▶ “Self-Consistent Current Filaments in Collisionless Plasma with Anisotropic Particle Distribution,” 3rd International conference Frontiers of Nonlinear Physics, Nizhny Novgorod, Russia, July, 2007. (Contributed)


“Non-Polynomial Averages in Statistical Physics,” 16th International Laser Physics Workshop, Leon, Mexico, August, 2007. (Contributed)


“A New Mechanism for Particle Acceleration in Relativistic Jets,” International Conference High-Energy Processes in Relativistic Outflows, Dublin, Ireland, September, 2007. (Contributed)


“Nonlinear Mode Mixing in the Multi-Frequency Interband Two-Cascade Laser,” Ekaterinburg, Russia, September, 2007. (Contributed)

“Prospects for New Sources of Coherent Terahertz Radiation Two-Color Heterolasers with Intracavity Mode Mixing,” 17th International Conference UHF-Technique and Telecommunication Technologies, Sevastopol, Ukraine, September, 2007. (Contributed)


**PUBLICATIONS DURING 2007**


- Belyanin, A.A.; Kocharovsky, V.V.; Kocharovsky, V.V.; Kukushkin, V.A.; Andrianov,


KEVIN KRISCIUNAS

LECTURER (979) 845-7018
PHYS-Observational Astronomy krisciunas@physics.tamu.edu

• SERVICE DURING 2007
  Department
  ▷ Committee/Panel: Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ PHYS 306. — Basic Astronomy (total enrollment: 77)
  Fall
  ▷ PHYS 306. — Basic Astronomy (total enrollment: 82)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, National Science Foundation

• PRESENTATIONS DURING 2007
  ▷ “Cosmology with Type Ia Supernovae,” International Meeting on Cosmology, Kiev, Ukraine, May, 2007. (Individual)
  ▷ Historical talk at a Meeting Dedicated to the Science of the Ukrainian/American Astronomer Otto Struve, Kharkov, Ukraine, May, 2007. (Individual)

• PUBLICATIONS DURING 2007

SEC. 6.1 PROFESSIONAL ACTIVITIES 681
Campaigns *Astronomical Journal*, vol. 133.


• SERVICE DURING 2007

  International
  ▶ Event: Symposium on Statistical Physics and Quantum Field Theory (Organizer)

  National

  Department
  ▶ Committee/Panel: Nanoscience Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Emergent Behavior in Magnet-Superconductor Hybrids, *Department of Energy*, coworkers: D. Rathnayaka (P), H. Lee (G), E. Ozmetin (G)
  ▶ Acquisition of a Scanning Hall Probe Microscope for Nanomagnetics Research and Student Training, *National Science Foundation*

  State
  ▶ Producing Ultracold Molecules via Magnetic Traps-on-a-Chip, *Texas Higher Education Coordinating Board*, coworkers: D. Rathnayaka (P), M. Hickey (G), B. Savoie (U)

• PRESENTATIONS DURING 2007

  ▶ “Cooling Molecules with Magnetic Field,” Texas A&M UniversityMolecular Physics and Quantum Optics Symposium, College Station, TX, January, 2007. (Invited)

• PUBLICATIONS DURING 2007

• CHAIRS/PROFESSORSHIPS
  ▷ Mitchell/Heep Chair in Experimental High Energy Physics [2004]

• SERVICE DURING 2007

University
  ▷ Committee/Panel: Faculty Senate (Faculty Senator - 02), Faculty Senate (Faculty Senator - 14)

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

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▷ PHYS 485. — Directed Studies (total enrollment: 2)
  ▷ PHYS 603. — Electromagnetic Theory (total enrollment: 21)
  ▷ PHYS 691. — Research (total enrollment: 3)

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

Fall
  ▷ PHYS 302. — Advanced Mechanics (total enrollment: 29)
  ▷ PHYS 485. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
  ▷ High Energy Physics at Texas A&M, Department of Energy
  ▷ High Energy Physics at Texas A&M University, Department of Energy
  ▷ (REN) New Technology for Future Colliders, Department of Energy, coworkers: A. McInturff (Research Scientist), A. Sattarov (Research Scientist), R. Blackburn (Technician), N. Diaczenko (Technician), T. Elliott (Technician), A. Jaisle (Technician), T. Holik (G), C. English (U), B. Ragland (U)
  ▷ Texas A&M Participation in AMS Experiment, Department of Energy, coworkers: K. Stiff (Technician), R. Romero (U)

• PUBLICATIONS DURING 2007


Abulencia, A.; et al. (2007) Measurement of the Ratios of Branching Fractions $B(B_s \rightarrow D_s\pi\pi\pi)/B(B_d \rightarrow D_d\pi\pi\pi)$ and $B(B_s \rightarrow D_s\pi)/B(B_d \rightarrow D_d\pi)$ Physical Review Letters, vol. 98, 061802.


SASKIA MIODUSZEWSKI
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PHYS-Experimental Nuclear saskia@comp.tamu.edu

• SERVICE DURING 2007

National
▷ Event: STAR Collaboration Council Chair (Organizer)
▷ Editorial/Board: Department of Energy (Review: Proposals)
▷ Committee/Panel: God-Parent Committee for a STAR Paper on the Scaling of Strangeness Production in Au+Au Collisions (Chair)

Department
▷ Committee/Panel: Advisory Committee (Member), Faculty Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 201. — College Physics (total enrollment: 95)
▷ 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: 85)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Toward Understanding the QGP with the STAR Experiment at RHIC, Department of Energy

Private
▷ Alfred P. Sloan Fellowship, Alfred P. Sloan Foundation, coworkers: M. Codrington (G)

• PRESENTATIONS DURING 2007

▷ “Probing the Matter Created at the Relativistic Heavy Ion Collider,” Florida Memorial University, College of Natural Science, Miami Gardens, FL, April, 2007. (Invited)
▷ “Probing the Medium with Photons,” School of Collective Dynamics in High-Energy Collisions, Berkeley, CA, May, 2007. (Contributed)
“Overview of RHIC with a Look to the Future,” Carpathian Summer School of Physics, Sinaia, Romania, August, 2007. (Invited)
“Electron Identification at STAR and the Barrel Pre-Shower Detector,” Division of Nuclear Physics (DNP) of the American Physics Society, Newport News, VA, October, 2007. (Contributed)
“Electron Identification at STAR and the Barrel Pre-Shower Detector,” Meeting of the Texas Section of the APS, College Station, TX, October, 2007. (Contributed)
“Gamma-Jet Analysis in $\sqrt{s_{NN}} = 200$ GeV Au + Au Collisions with the Solenoidal Tracker at the Relativistic Heavy Ion Collider (STAR),” Division of Nuclear Physics (DNP) of the American Physics Society, Newport News, VA, October, 2007. (Graduate)
“Gamma-Jet Analysis in $\sqrt{s_{NN}} = 200$ GeV Au + Au Collisions with the Solenoidal Tracker at the Relativistic Heavy Ion Collider (STAR),” Industry-University Cooperative Chemistry Program (IUCCP), Texas A&M University, College Station, TX, October, 2007. (Graduate)
“Using the Calorimeter Pre-Shower Detector in STAR,” Division of Nuclear Physics (DNP) of the American Physics Society, Newport News, VA, October, 2007. (Contributed)

• PUBLICATIONS DURING 2007

Abelev, B.I.; et al. (2007) Rapidity and Species Dependence of Particle Production at Large Transverse Momentum for d+Au Collisions at $s(NN)^{1/2} = 200$-GeV Physical Review C: Nuclear Physics, vol. 76, 054903.


• SERVICE DURING 2007
  
  Regional
  ▷ Event: Brazos Valley Home School Class Group (Speaker)

  Department
  ▷ Event: Fall and Spring Science Fair (Participant)

• TEACHING ASSIGNMENTS DURING 2007

  Summer
  ▷ PHYS 222 — Modern Physics for Engineers (total enrollment: 9)

  Fall
  ▷ PHYS 205. — Concepts of Physics (total enrollment: 47)
DIMITRI V. NANOPoulos

DISTINGUISHED PROFESSOR

PHYS- High Energy, Cosmology

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- CHAIRS/PROFESSORSHIPS

- AWARDS DURING 2007
  - International
    - Honorary Citizen, Golden Medal of the City, Larisa, Greece
  - National
    - Distinguished Hellen Award, Hellenic Medical Society

- SERVICE DURING 2007
  - National
    - Editorial/Board: Department of Energy, National Science Foundation (Review: Proposals), Physical Letters B (Referee: Journals)

- TEACHING ASSIGNMENTS DURING 2007
  - Spring
    - PHYS 689. — Special Topics in (total enrollment: 8)
    - PHYS 691. — Research (total enrollment: 3)
  - Summer
    - PHYS 685. — Directed Studies (total enrollment: 1)
    - PHYS 691. — Research (total enrollment: 4)
  - Fall
    - PHYS 689. — Special Topics in (total enrollment: 8)
    - PHYS 691. — Research (total enrollment: 3)

- RESEARCH PROJECTS DURING 2007
  - Federal
    - High Energy Physics at Texas A&M, Department of Energy
    - High Energy Physics at Texas A&M University, Department of Energy, coworkers: C. Chen (P), T. Li (P), E. Mayes (P), T. Leggett (G), J. Maxin (G), D. Xie (G)
    - Electromagnetic and Informational Processes in Biomolecular Polymers, National Science Foundation

- PRESENTATIONS DURING 2007
“Arts and Science,” International Festival for Science Cinem, Athens, Greece, April, 2007. (Individual)
“Brain’s Microcosm,” Neurosciences Center, Salonica, Greece, April, 2007. (Individual)
“Science and Technology in the 21st Century,” Conference in Honor of his Excellency, Dr. A. Kamal, President of India, Athens, Greece, April, 2007. (Invited)
“How SSC Affects LHC,” International Conference, PPC, College Station, TX, May, 2007. (Invited)
“Modern Cosmogony,” Symposium of the Free University of Athens, Athens, Greece, May, 2007. (Invited)
“From Icarus to the Beginning of the Universe,” International Conference of Science and Philosophy, Icaria, Greece, June, 2007. (Invited)
“Modern Cosmogony,” Department of Philosophy, University of Athens, Athens, Greece, June, 2007. (Individual)
“Modern Cosmogony,” University of Patra, Patra, Greece, June, 2007. (Individual)
“Modern Cosmogony,” Democritos Nuclear Research Center Summer School, Athens, Greece, July, 2007. (Invited)
“Modern Cosmogony,” Lecture, in the Ceremony in my Honor, Honorary Citizen of Larisa, Larisa, Greece, October, 2007. (Individual)
“From Icarus to Modern Cosmogony,” Keynote Lecture at a Conference in my Honor, University of Missouri, Saint Louis, MO, November, 2007. (Individual)
“Modern Cosmogony,” Hippocration Hospital Series of Distinguished Lectures, Athens, Greece, November, 2007. (Individual)
- “Modern Cosmogony and the Velocity of Light,” Municipal Theater, Tripoli, Greece, December, 2007. (Individual)
- “Modern Cosmogony and the Velocity of Light,” Physics Union Students, University of Athens, Athens, Greece, December, 2007. (Individual)

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

• SERVICE DURING 2007

  International
  ▶ Editorial/Board: New Zealand Science Foundation (Marsden Foundation), and US-Israeli Cooperative Grants (Review: Proposals), *European Journal of Physics B* (Referee: Journals)

  National
  ▶ Committee/Panel: Strongly-Correlated and Spin-Glass Systems at the 52nd Annual Conference on Magnetism and Magnetic Materials (Chair)

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

  Department
  ▶ Committee/Panel: Condensed Matter Experiment Search Committee (Chair), Condensed Matter Theory Search Committee (Member), Long Range Planning Committee (Member), Nanoscience Search Committee (Chair), Promotions, Tenure, and Appointments Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Executive Committee of Materials Science & Engineering (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ PHYS 485. — Directed Studies (total enrollment: 2)
  ▶ PHYS 691. — Research (total enrollment: 3)

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

  Fall
  ▶ MSEN 691 — Research (total enrollment: 1)
  ▶ PHYS 218. — Mechanics (total enrollment: 83)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
• PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2007

 Federal
▷ Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: K. Rathnayaka (P), Z. Ye (P), L. Chapman Smith (G), A. DuMar (G), H. Lee (G), T. Morrison (G), E. Ozmetin (G), C. Bracher (U), K. Huggins (U), G. Rosaire (U), C. Weldy (U)
▷ Acquisition of a Scanning Hall Probe Microscope for Nanomagnetics Research and Student Training, National Science Foundation
▷ (REN) Intrinsic Interactions Between Superconductivity and Magnetism in Quaternary and Pseudoquaternary Borocarbides, National Science Foundation

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

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 2007

Spring
▷ PHYS 327. — *Experimental Physics* (total enrollment: 20)
▷ PHYS 691. — *Research* (total enrollment: 2)

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

Fall
▷ PHYS 485. — *Directed Studies* (total enrollment: 1)
▷ PHYS 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Atomic and Molecular Ions in Ultraintense Ultrashort Laser Fields, *Department of Energy*
▷ Quantum Optics with Single Optical Cycles, *National Science Foundation*

Private
▷ Attosecond Dynamics of Strong-Field Dissociation of the Molecular Hydrogen Ion, *The Robert A. Welch Foundation*, coworkers: F. Pham (G)

Other
▷ Attosecond Optical Technology Based on Recollision and Gating, *Kansas State University*, coworkers: L. Arissian (Research Assistant), E. Frunker (P)
• PUBLICATIONS DURING 2007

No report received from faculty member.
• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 624. — Quantum Mechanics (total enrollment: 25)
▷ PHYS 689. — Special Topics in (total enrollment: 9)
▷ PHYS 691. — Research (total enrollment: 1)

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

Fall
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Theory of Magnetic Heterostructures on the Submicron Scale, Department of Energy, coworkers: K. Ryvkin (P)

• PUBLICATIONS DURING 2007
• CHAIRS/PROFESSORSHIPS
  ▶ Stephen Hawking Chair in Fundamental Physics [2002]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, George P. & Cynthia Woods Mitchell Institute for Fundamental Physics & Astronomy, Physics, [2002]

• SERVICE DURING 2007
  International
  ▶ Event: Cambridge-Mitchell Conference and Workshop (Organizer)
  ▶ Editorial/Board: Oxford and Cambridge College Research Fellowships (Referee), The Engineering and Physical Sciences Research Council, UK (Review: Proposals)

  National
  ▶ Committee/Panel: George P. & Cynthia W. Mitchell Institute for Fundamental Physics (Director)
  ▶ Committee/Panel: Computer Committee (Member), Graduate Advisory Committee (Member), New Buildings Committee (Member), Performance Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 616. — Methods of Theoretical Physics II (total enrollment: 6)
  ▶ PHYS 691. — Research (total enrollment: 1)

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

  Fall
  ▶ PHYS 611. — Electromagnetic Theory (total enrollment: 20)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
High Energy Physics at Texas A&M, *Department of Energy*

High Energy Physics at Texas A&M University, *Department of Energy*, coworkers: J. Vazquez-Poritz (P), W. Chen (G), J. Mei (G)

**PRESENTATIONS DURING 2007**

- Centre for Mathematical Sciences, University of Cambridge, United Kingdom, May, 2007. (Invited)
- “Kac-Moody Symmetries in Reductions to Two Dimensions,” String and M-theory Approaches to Particle Physics and Cosmology, Galileo Galilei Institute, Florence, Italy, June, 2007. (Invited)
- Galileo Galilei Institute, Florence, Italy, June, 2007. (Invited)
- “Lorentz Violation and Finsler Geometry,” University Barcelona, Spain, July, 2007. (Individual)
- “Lorentz Violation and Metrics of Special Holonomy,” University Pennsylvania, Philadelphia, PA, October, 2007. (Individual)
- “Infinite-Dimensional Symmetries of 2-Dimensional Coset Spaces Coupled to Gravity,” Centre for Mathematical Sciences, University Cambridge, United Kingdom, December, 2007. (Individual)

**PUBLICATIONS DURING 2007**


RALF RAPP
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PHYS-Quantum Chromodynamics, Nuclear Theory rapp@comp.tamu.edu

• AWARDS DURING 2007

International
▷ Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation

• SERVICE DURING 2007

International
▷ Event: International Workshop, Electromagnetic Probes of Strongly Interacting Matter: The Quest for Medium Modifications of Hadrons (Organizer), Working group on “In-Medium Excitation” for the physics of compressed baryonic matter (CBM) at the future Facility for Antiproton and Ion Research (FAIR) (Co-convener)
▷ Committee/Panel: CBM Physics Handbook (Editorial Board)

National

Department
▷ Event: Nuclear Theory Seminar Series at the Cyclotron Institute (Organizer), Saturday Morning Physics (Speaker), Saturday Morning Physis (Organizer)
▷ Committee/Panel: Nuclear Experiment Search Committee (Member), Performance Evaluation Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 201. — College Physics (total enrollment: 95)
▷ PHYS 485. — Directed Studies (total enrollment: 2)
▷ PHYS 691. — Research (total enrollment: 1)

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

Fall
▷ PHYS 201. — College Physics (total enrollment: 209)
▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
CAREER: Spectral Properties of Hot and Dense QCD Matter, *National Science Foundation*, coworkers: L. Ravagli (P), H. van Hees (P), X. Zhao (G), T. Strong (U)

International

Spanish Government Postdoctoral Fellowship: Mesons at Finite Nuclear Density and Temperature and Application to the Study of Heavy-Ion Collisions, *Spanish Government*, coworkers: D. Cabrera (P)

**PRESENTATIONS DURING 2007**

- “Heavy Quarks and Quark-Gluon Plasma,” State University of New York, Stony Brook, NY, 2007. (Invited)
- “Heavy Quarks in sQGP and Observables at RHIC and LHC,” International Heavy Quark Workshop, Lawrence Berkeley National Laboratory, Berkeley, CA, 2007. (Invited)
- “Heavy-Quark Diffusion in Heavy-Ion Collisions,” International Conference on Early Time Dynamics in Heavy-Ion Collisions, Montreal, Canada, 2007. (Invited)
- “Heavy-Quark Diffusion in the Quark-Gluon Plasma,” Joint Texas Meeting of APS, SPS, NHSP, AAPT, NSBP and FIAP, Texas A&M University, College Station, TX, 2007. (Postdoc)
- “Heavy-Quark Kinetics in the QGP at LHC,” International Workshop on Heavy-Ion Collisions at the LHC: Last Call for Predictions, CERN, Geneva, Switzerland, 2007. (Postdoc)
- “Phase Transitions with Subnucleonic Degrees of Freedom,” Carpathian Summer School of Physics 2007 on Exotic Nuclei and Nuclear/Particle Astrophysics, Sinaia, Romania, 2007. (Invited)
- “Quarkonium Correlators in Medium,” Quarkonium Working Group Workshop (QWG 07), DESY, Hamburg, Germany, 2007. (Invited)
“Thermal Dileptons at LHC,” International Workshop on Heavy-Ion Collisions at the LHC: Last Call for Predictions, CERN, Geneva, Switzerland, 2007.( Postdoc)


“Transverse Momentum Dependence of J/psi in Heavy-Ion Collisions,” Joint Texas Meeting of APS, SPS, NHSP, AAPT , NSBP and FIAP, Texas A&M University, College Station, TX, 2007.( Postdoc)

• PUBLICATIONS DURING 2007
JOHN F. READING

PROFESSOR

PHYS-Atomic Physics: Ion Atom Collisions

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reading@physics.tamu.edu

• SERVICE DURING 2007

International

▷ Editorial/Board: Computer Physics Communications (Editor), Physics Review A, Physics Review Letters, Reviews of Modern Physics (Referee: Journals)

Department

▷ Committee/Panel: Atomic Physics Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring

▷ PHYS 489. — Special Topics in (total enrollment: 3)

▷ PHYS 615. — Methods of Theoretical Physics I (total enrollment: 4)

▷ PHYS 685. — Directed Studies (total enrollment: 1)

Summer

▷ PHYS 202. — College Physics (total enrollment: 26)

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

Fall

▷ PHYS 420 — Concepts Connections (total enrollment: 7)

▷ PHYS 615. — Methods of Theoretical Physics I (total enrollment: 26)

▷ PHYS 685. — Directed Studies (total enrollment: 2)

▷ PHYS 691. — Research (total enrollment: 1)
• PRESENTATIONS DURING 2007
  ▶ “Capillary Condensation in Nanopores,” Condensed Matter Physics Seminar, Texas A&M University, College Station, TX, September, 2007. (Individual)

• PUBLICATIONS DURING 2007

Faculty member hired 06/01/2007

On leave.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Chair, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Chair, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007

  National
  ▶ Editorial/Board: National Science Foundation (Review: Proposals), National Science
  of Physics (Referee: Journals)

  University
  ▶ Committee/Panel: Interdepartmental Program Chairs Committee (Member), Nanosum-
  mit Committee (Co-Chair)

  Department
  ▶ Committee/Panel: Advisory Committee (Member), Colloquium Committee (Member),
  Graduate Admissions Committee (Member), Nanoscience Search Committees (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Materials Science and Engineering Executive Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ PHYS 208. — Electricity and Optics (total enrollment: 120)
  ▶ PHYS 691. — Research (total enrollment: 2)

  Summer
  ▶ PHYS 222. — Modern Physics for Engineers (total enrollment: 8)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)

  Fall
  ▶ PHYS 617. — Physics of the Solid State (total enrollment: 22)
  ▶ PHYS 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Acquisition of a Scanning Hall Probe Microscope for Nanomagnetics Research and Student
  Training, National Science Foundation
IGERT: New Mathematical Tools for Next Generation Materials, National Science Foundation, coworkers: A. Nandyala (G), T. Wellington (G)

Private
(REN) Magnetism in Silicon Clathrates: New Nanostructured Magnetic Materials, The Robert A. Welch Foundation, coworkers: J. Chi (G), V. Goruganti (G), W. Gou (G)

International
Manufacture of Templates for Self-Assembly of Magnetic Nano-Structures, Materials and Manufacturing Ontario

• PRESENTATIONS DURING 2007
  “Phase Transitions in NdNiPb and \(Nd_5NiPb_3\),” 52nd Magnetism and Magnetic Materials Conference, Tampa, FL, 2007. (Graduate, V. Goruganti)
  “NMR Studies of Ba8AlxGe46-x and Ba8GaxGe46-x Clathrates,” American Physical Society, Denver, CO, March, 2007. (Contributed)
  “Superconductivity of Ba8Si46-xGax clathrates,” American Physical Society, Denver, CO, March, 2007. (Contributed)
  “Field-induced Heavy-Fermion State in Al20V2Eu,” International Conference on Strongly Correlated Electron Systems, Houston, TX, May, 2007. (Graduate, J. Chi)
  “Crystal Fields and Metamagnetism in NdNiPb and Nd5NiPb3,” Texas Section APS Meeting, College Station, TX, October, 2007. (Graduate, V. Goruganti)
  “Experimental Study of Ba8AlxGe46-x Clathrates by NMR and other Techniques,” Texas Section APS Meeting, College Station, TX, October, 2007. (Graduate, W. Gou)
  “NMR measurements of Al20V2La and Al20V2Eu,” Texas Section APS Meeting, College Station, October, 2007. (Graduate, H. Qian)

• PUBLICATIONS DURING 2007
AWARDS DURING 2007
National
▷ Outstanding Junior Investigator Award, U.S. Department of Energy

SERVICE DURING 2007
International
▷ Committee/Panel: Particle Physics and Cosmology Conference (Member)
National
▷ Event: Tau Reconstruction Group at the US CMS LHC Physics Center (Convener)
▷ Editorial/Board: Institutional Board on the US CMS EMU Project (Member), US Department of Energy (Review: Proposals)
Department
▷ Committee/Panel: High Energy Search Committee (Member)

TEACHING ASSIGNMENTS DURING 2007
Spring
▷ PHYS 218. — Mechanics (total enrollment: 119)
Summer
▷ PHYS 691. — Research (total enrollment: 2)
Fall
▷ PHYS 218. — Mechanics (total enrollment: 215)
▷ PHYS 691. — Research (total enrollment: 1)

RESEARCH PROJECTS DURING 2007
Federal
▷ CMS Endcap Muon M&O, Department of Energy, coworkers: A. Golyash (Technician), A. Elagin (P), C. Nguyen (P), J. Pivarski (P)
▷ High Energy Physics at Texas A&M, Department of Energy

PRESENTATIONS DURING 2007
▷ “Recent Electroweak Results from CDF,” Lake Louise Winter Institute for Fundamental Interactions, Canada, February, 2007. (Invited)
▷ “Tau Reconstruction and Identification at CDF,” LHC Tau Workshop, Pisa, Italy, June, 2007. (Invited)
▷ “Muon Track Based Alignment at CMS,” LHCC Commissioning Workshop, July, 2007. (Individual)

- PUBLICATIONS DURING 2007
  - Safonov, A. (2007) Measurement of $\sigma (pp \rightarrow Z) \cdot B(Z \rightarrow \tau \tau)$ in $pp$ Collisions at $\sqrt{s} = 1.96$ TeV. *Physical Review D: Particles and Fields*, vol. 75, 092004.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  > Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007

  National
  > Event: Joint Fall Meeting of the Texas Sections of the APS and AAPT (Co-Organizer)

  College
  > Editorial/Board: Texas Science Olympiad (Volunteer)
  > Committee/Panel: Grievance Committee (Elected Member)

  Department
  > Event: Chemistry Open House (Presenter), Physics Open House (Presenter)
  > Committee/Panel: Awards Committee (Member), Cooperative Education and Scholarships Committee (Member), Graduate Advisors Committee (Member), Mitchell Institute and Building Committee (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  > PHYS 221. — Optics and Thermal Physics (total enrollment: 74)

  Summer
  > PHYS 208. — Electricity and Optics (total enrollment: 81)

  Fall
  > PHYS 601. — Analytical Mechanics (total enrollment: 26)

• RESEARCH PROJECTS DURING 2007

  Federal
  > (REN) Theory of Magnetic Heterostructures on the Submicron Scale, Department of Energy

• PRESENTATIONS DURING 2007

Continuous Neel to Bloch transition as Thickness Increases: Statics and Dynamics,” 2007 Joint Fall Meeting of the Texas Sections of the APS and AAPT, College Station, TX, October, 2007. (Contributed)

“How Batteries Fail,” 2007 Joint Fall Meeting of the Texas Sections of the APS and AAPT, College Station, TX, October, 2007. (Contributed)

“How Batteries Fail,” Texas Southern University, Houston, TX, October, 2007. (Invited)

PUBLICATIONS DURING 2007


• **CHAIRS/PROFESSORSHIPS**
  ▶ Schuessler/Mitchell/Heep Chair in Experimental Optical and Biomedical Physics [2004]

• **SERVICE DURING 2007**

  **National**
  ▶ Event: Physics of Quantum Electronics Conference (PQE2007) (Organizer)

  **Department**
  ▶ Committee/Panel: AMO Search Committee (Member), Search Committee for Experimental Condensed Matter Group (Member)

• **TEACHING ASSIGNMENTS DURING 2007**

  **Spring**
  ▶ PHYS 218. — **Mechanics** (total enrollment: 237)
  ▶ PHYS 691. — **Research** (total enrollment: 3)

  **Summer**
  ▶ PHYS 218. — **Mechanics** (total enrollment: 44)

  **Fall**
  ▶ PHYS 485. — **Directed Studies** (total enrollment: 1)
  ▶ PHYS 685. — **Directed Studies** (total enrollment: 1)
  ▶ PHYS 691. — **Research** (total enrollment: 2)

• **RESEARCH PROJECTS DURING 2007**

  **Federal**
  ▶ Development of a Phase-Coherent Laser System for Attosecond Science and Precision Spectroscopy, *National Science Foundation*
  ▶ Development of Submillimeter/Terahertz Instrumentation for Spectroscopy and Dynamics, *National Science Foundation*
  ▶ Electromagnetic and Informational Processes in Biomolecular Polymers, *National Science Foundation*, coworkers: A. Kolmenski (Research Scientist), A. Bradshaw (U), A. Dunbar (U), R. Nava (U), S. Peng (U), V. Thukral (U), L. Wright (U)
  ▶ Precision Spectroscopy of the Helium Ion in the XUV-Region, *National Science Foundation*
  ▶ REU: Electromagnetic and Informational Processes in Biomolecular Polymers, *National Science Foundation*
Private
▷ Preparation of Ultracold Molecular Ions and Their Optical Studies Using Femtosecond Laser Pulses, The Robert A. Welch Foundation, coworkers: F. Zhu (G)

International
▷ Utilizing Laser Spectroscopy of Noble Gas Traces for Mapping Oil and Gas Deposits, Qatar Foundation

• PRESENTATIONS DURING 2007
▷ “Towards High Precision Spectroscopy in the XUV: 1s-2s in He⁺,” German Physical Society (DFG) Meeting, Dortmund, Germany, March, 2007. (Contributed)
▷ “Precision Spectroscopy with Frequency Combs,” Japan Atomic Institute, Tokai-Mura, Japan, June, 2007. (Individual)
▷ “Crystallization of Ca⁺ Ions in a Linear Octupole Trap,” Ringberg Conference, Castle Ringberg, Germany, September, 2007. (Individual)
▷ “Precision Spectroscopy of Be⁺ using Frequency Combs,” Ringberg Conference, Castle Ringberg, Germany, September, 2007. (Invited)
▷ “Two-Photon Excitation by Chirped and Optimally Shaped Pulses,” APS meeting Texas Section, College Station, TX, October, 2007. (Poster Contributed)

• PUBLICATIONS DURING 2007
MARLAN O. SCULLY
DISTINGUISHED PROFESSOR (979) 862-2333
PHYS-Applied Physics, Quantum Optics scully@tamu.edu

• CHAIRS/PROFESSORSHIPS
  ▶ Distinguished Research Chair (TEES) [2000]
  ▶ Hershel E. Burgess Chair in Physics (Non-High Energy Physics) [1997]

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Professor (J), Chemistry, [2007]
  ▶ Associate Dean for External Relations, Office of External Relations, College of Science, [2005]
  ▶ Professor (J), Mechanical Engineering, [2004]
  ▶ Director, Institute for Quantum Studies (IQS), Physics, [2001]
  ▶ Director, Center for Theoretical Physics, [1995]

• AWARDS DURING 2007
  University
    ▶ Morris Loeb Lecturer in Physics, Harvard University

• SERVICE DURING 2007
  International
    ▶ Committee/Panel: Academia Europaea (Member), Max Planck Society (Member)

  National
    ▶ Professional Affiliation: American Physical Society (Fellow), Optical Society of America (Fellow)
    ▶ Event: Foundations of Quantum Mechanics Workshop (Organizer), Physics of Quantum Electronics Conference (Organizer), Texas A&M University-Princeton Workshop on Classical, Semi-Classical, and Quantum Noise (Organizer), Texas A&M University-Princeton Workshop on Fundamental Aspects of Quantum Mechanics (Organizer), Texas A&M University-Princeton Workshop on Quantum Coherence and Laser Spectroscopy (Organizer), Texas A&M University-Princeton Workshop on Quantum Informatics and Another One Molecular Physics (Organizer), Texas A&M University-Princeton Workshop on Quantum Mechanics, Informatics and Control (Organizer), Texas A&M University-Princeton-Casper College Summer School (Organizer)

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

  Department
    ▶ Committee/Panel: AMO Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

718 2007 PHYSICS ANNUAL REPORT
Spring
▷ PHYS 691. — **Research** (total enrollment: 5)

Summer
▷ PHYS 691. — **Research** (total enrollment: 7)

Fall
▷ PHYS 691. — **Research** (total enrollment: 7)

• **RESEARCH PROJECTS DURING 2007**

**Federal**
▷ Quantum Optical Implementations of Quantum Computing and Quantum Informatics Protocols, *Air Force Office of Scientific Research*

▷ Spin-Based Lattice-Gas Quantum Optics in Solids Using Optical Addressing, *Air Force Office of Scientific Research*

▷ Quantum Coherence, Stand-off Spectroscopy, and Quantum Optics, *Office of Naval Research*

▷ Quantum Optics Initiative I, *Office of Naval Research*, coworkers: J. Giordmaine (Research Scientist), A. Hill (Research Scientist), F. Li (Research Scientist), M. Pilloff (Research Associate), Y. Rostovtsev (Assistant Research Scientist), N. Kalouguine (Research Staff), Y. Dou (P), N. Erez (P), K. Kapale (P), C. Ooi (P)

▷ Quantum Optics Initiative II, *Office of Naval Research*, coworkers: A. Hill (Research Scientist), R. Xie (Research Scientist), N. Kalouguine (Research Staff), Y. Dou (P), N. Erez (P), A. Muthukrishnan (P), C. Ooi (P), A. Patnaik (P), V. Sautenkov (P), S. Hanna (G), K. Urtekin (G)

▷ Real-Time Detection of Anthrax via FAST CARS and Gain-Swept Super-Radiance, *Sandia National Laboratories*

**Private**

• **PRESENTATIONS DURING 2007**


▷ “Directed Spontaneous Emission II,” Texas A&M University, College Station, TX, January, 2007.( Individual)

▷ “Quantum Control of Light: From Slow Light and FAST CARS to Nuclear γ-Ray Spectroscopy,” University Of California, Irvine, CA, February, 2007.( Individual)


“Application of Femtosecond Laser Spectroscopy to the Detection of Anthrax and other Pathogens,” Texas A&M University, College Station, TX, April, 2007. (Individual)

“Dimensional Scaling Approach to the Chemical Bond,” University Of North Texas, Denton, TX, April, 2007. (Individual)


“Quantum Control of Light: From Slow Light and FAST CARS to Nuclear γ-Ray Spectroscopy,” DAMOP, Calgary, Canada, June, 2007. (Individual)


“Quantum Control of Light: From FAST CARS and Slow Light to Anthrax Detection and Dicke Superradiance,” University of Texas, Austin, TX, November, 2007. (Individual)


“Quantum Erasure & the Foundations & Applications of Quantum Mechanics e.g. for the Detection of Anthrax,” Rutgers University, Piscataway, NJ, December, 2007. (Individual)

**PUBLICATIONS DURING 2007**


ERGIN SEZGIN
PROFESSOR
PHYS-High Energy Theory
sezgin@physics.tamu.edu

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Co-Director, George P. & Cynthia Woods Mitchell Institute for Fundamental Physics & Astronomy, Physics, /2002/

• SERVICE DURING 2007

  International
  ▷ Editorial/Board: Engineering and Physical Sciences Research Council (Review: Proposals)

  National

  University
  ▷ Committee/Panel: Undergraduate Admissions Advisory Committee (Member)

  Department
  ▷ Committee/Panel: Promotions, Tenure, and Appointments Committee (Member), PTA (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ PHYS 305. — Advanced Electricity and Magnetism II (total enrollment: 12)
  ▷ PHYS 691. — Research (total enrollment: 2)

  Fall
  ▷ PHYS 304. — Advanced Electricity and Magnetism I (total enrollment: 28)
  ▷ PHYS 485. — Directed Studies (total enrollment: 2)
  ▷ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▷ Elementary Particle Theory, National Science Foundation, coworkers: D. Jong (P), J. Kumar (P)
  ▷ Strings, Branes, and the Search for Unification, National Science Foundation, coworkers: J. Kumar (P), D. Jong (G)

• PRESENTATIONS DURING 2007

722 2007 physics annual report
▷ “Higher Spin Gauge Theories and Their Exact Solutions,” Abdus Salam International Center for Theoretical Physics, Trieste, Italy, June, 2007. (Individual)
▷ “M-Algebra Re-visited,” Mini Workshop on Symmetries in M-Theory, held in Bosphorus University, Istanbul, Turkey, June, 2007. (Invited)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT,

• SERVICE DURING 2007

  International
  ▶ Editorial/Board: European and Asian Agencies (Review: Proposals), Various International Journals (Referee: Journals)
  ▶ Committee/Panel: International Conference of Strongly Correlated Electron Systems (Member)

  National
  ▶ Committee/Panel: National Science Foundation Panels (Review Panel)

  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 08)

  Department
  ▶ Event: Chemistry Open House (Volunteer), Condensed Matter Seminar (Organizer), Physics Open House (Volunteer)
  ▶ Committee/Panel: Building Committee (Member), Nano-Science Search Committee (Chair), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 2)

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

  Fall
  ▶ PHYS 221. — Optics and Thermal Physics (total enrollment: 27)
  ▶ PHYS 302 — Advanced Mechanics (total enrollment: 30)
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)
• RESEARCH PROJECTS DURING 2007

Federal
▶ CAREER: Spin Dependent Phenomena in Semiconductors, National Science Foundation, coworkers: A. Kovalev (P), M. Borunda (G), X. Liu (G)

State
▶ South West 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)

Industrial
▶ NRI Center: South West Academy of Nanoelectronics, North American Electric Reliability Corporation

• PRESENTATIONS DURING 2007
▶ “How to make Semiconductors Magnetic,” International Workshop on Strongly Correlated Systems, Austin, TX, October, 2007. (Invited)

• PUBLICATIONS DURING 2007
▶ Jungwirth, T.; Sinova, J.; MacDonald, A.H.; Gallagher, B.L.; Novak, V.; Edmonds, K.W.; Rushforth, A.W.; Campion, R.P.; Foxon, C.T.; Eaves, L.; Olejnik, E.; Masek, J.; Yang,


ALEXEI V. SOKOLOV

ASSOCIATE PROFESSOR
PHYS-At. and Mol. Phys., Quantum Optics

(979) 845-7733
sokol@physics.tamu.edu

- **CHAIRS/PROFESSORSHIPS**
  - Stephen E. Harris Professorship in Quantum Optics [2006]

- **ADDITIONAL UNIVERSITY TITLES HELD DURING 2007**
  - Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

- **AWARDS DURING 2007**
  - National
    - Robert S. Hyer Award, Texas Section APS
  - University
    - Montague Center for Teaching Excellence Award, Texas A&M University

- **SERVICE DURING 2007**
  - International
    - Committee/Panel: Nonlinear Optics and Novel Phenomena Program Sub-committee for the (CLEO/IQEC) (Member)
  - National
    - Event: Attosecond Science at the 37th Winter Colloquium on the Physics of Quantum Electronics (Organizer), Quantum Coherence and Molecular Spectroscopy Symposium (Coordinator)
  - Department
    - Event: Chemistry Open House & Science Exploratorium (Presenter)
    - Committee/Panel: Graduate Admissions Committee (Member), Quantum Optics Faculty Search Committee (Member), The Shop Committee (Member)

- **TEACHING ASSIGNMENTS DURING 2007**
  - Spring
    - PHYS 485. — Directed Studies (total enrollment: 1)
    - PHYS 685. — Directed Studies (total enrollment: 1)
    - PHYS 691. — Research (total enrollment: 4)
  - Summer
    - PHYS 685. — Directed Studies (total enrollment: 1)
    - PHYS 691. — Research (total enrollment: 4)
  - Fall
    - PHYS 218. — Mechanics (total enrollment: 104)
• RESEARCH PROJECTS DURING 2007

Federal

▷ Ultrashort Laser Pulse Propagation in Water, Department of Defense
▷ Development of a Phase-Coherent Laser System for Attosecond Science and Precision Spectroscopy, National Science Foundation
▷ Sub-Cycle Optical Pulse Shaping by Parametric Beating with Adiabatically Prepared Raman Coherence, National Science Foundation, coworkers: A. Chugreev (P), A. Burzo (G), J. Peng (G), M. Zhi (G), J. Krause (U), J. Trevino (U)
▷ Quantum Optics Initiative I, Office of Naval Research, coworkers: J. Peng (G), M. Zhi (G)

Private

▷ Sub-cycle Optical Pulse Shaping for Precise Control of Electronic and Nuclear Motion, Research Corporation, coworkers: D. Pestov (G), M. Zhi (G)
▷ Generation and Control of Femtosecond Pulses by Molecular Modulation, The Robert A. Welch Foundation, coworkers: A. Burzo (P), A. Chugreev (P), J. Peng (G), M. Zhi (G)

Other

▷ Attosecond Optical Technology Based on Recollision and Gating, Kansas State University

• PRESENTATIONS DURING 2007

▷ “Hybrid CARS for Bacterial Spore Detection,” Texas A&M University Molecular Physics and Quantum Optics Symposium, College Station, TX, January, 2007. (Invited)
▷ “Molecular Modulation in Gasses and Solids,” Texas A&M University Molecular Physics and Quantum Optics Symposium, College Station, TX, January, 2007. (Invited)
▷ “Applications of Molecular Coherence,” Workshop at Kansas State University, Manhattan, KS, May, 2007. (Invited)


“Detection of Bacterial Endospores by Hybrid CARS,” 16th International Workshop on Laser Physics, Leon, Mexico, August, 2007. (Invited)

“Hybrid Technique for Coherent Raman Spectroscopy,” Frontiers in Optics / Laser Science XXIII, San Jose, CA, September, 2007.( Contributed)

“Applications of Molecular Coherence,” NRC, Ottawa, Canada, October, 2007. (Individual)


- PUBLICATIONS DURING 2007


• CHAIRS/PROFESSORSHIPS
  ▶ Mitchell-Heep-Munnerlyn Endowed Chair in Observational Astronomy [2006]

• AWARDS DURING 2007
  International
  ▶ Gruber Cosmology Prize, Gruber Foundation

• SERVICE DURING 2007
  National
  ▶ Professional Affiliation: American Astronomical Society (Councilor)
  ▶ Editorial/Board: Kavli Institute for Particle Astrophysics and Cosmology (Reviewer),
    Physics Division of Lawrence Berkeley National Lab (Reviewer), Astrophysical Journal,
    and Astronomical Journal Committee on Astronomy and Public Policy (Referee: Journals)
  ▶ Committee/Panel: Dark Energy Task Force - DOE, NASA, NSF (Member)

University
  ▶ Committee/Panel: Giant Magellan Telescope Board (Member)

Department
  ▶ Committee/Panel: Astronomy Search Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ PHYS 306. — Basic Astronomy (total enrollment: 83)
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 3)

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

Fall
  ▶ PHYS 314. — Survey of Astronomy (total enrollment: 18)
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining
    Models with Observations, National Science Foundation
  ▶ Resolving the LMC Microlensing Puzzle: Where are the Lensing Objects, Space Telescope
    Science Institute
• PRESENTATIONS DURING 2007
  ▶ Summer Science Program, Socorro NM, July, 2007. (Individual)
  ▶ Texas A&M Dallas Alumni Club, Dallas, TX, August, 2007. (Individual)
  ▶ Texas A&M Houston Alumni Club, Houston, TX, August, 2007. (Individual)
  ▶ Workshop on Supernova Physics, University of Chicago, Chicago, IL, October, 2007. (Individual)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

National
▷ Editorial/Board: Physical Review Letters and Physical Review A (Referee: Journals)
▷ Committee/Panel: Princeton-Texas A&M University Symposium on Quantum Mechanics, Informatics and Control (Co-Chair)

• PRESENTATIONS DURING 2007

▷ “Interface Between AMO, Quantum Optics and many Body Theory: Dimensional Scaling Analysis of Molecules, BEC Statistics and Correlated Spontaneous Emission of N Atoms,” Physics Colloquium, Texas A&M University, College Station, TX, January, 2007. (Individual)
▷ “Master Equation Analysis of Fluctuations in Interacting BEC,” 37th Winter Colloquium on the Physics of Quantum Electronics, Snowbird, UT, January, 2007. (Contributed)
▷ “Recent Thoughts on Non-Equilibrium BEC: Hybrid Approach to Fluctuations in Mesoscopic Interacting Bose-Einstein Condensate,” Texas A&M University Molecular Physics and Quantum Optics Symposium, College Station, TX, January, 2007. (Individual)

• PUBLICATIONS DURING 2007

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Computational Nanoscience and Materials - IGERT, [2006]
  ▶ Member, Interdisciplinary Faculty, Materials Science and Engineering, [2006]

• SERVICE DURING 2007

  International
  ▶ Editorial/Board: Various International Journals (Referee: Journals)

  National
  ▶ Editorial/Board: American Physical Society (Review: Proposals), National Science Foundation (Review: Proposals)

  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 02), University Search Committee for new Director of Information Technology (Member)

  Department
  ▶ Committee/Panel: Faculty Search Committee (Member), Physics Building Committee (Member)

  Interdisciplinary/Intercollegiate
  ▶ Committee/Panel: Materials Science and Engineering Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ PHYS 425. — Physics Laboratory (total enrollment: 13)
  ▶ PHYS 685. — Directed Studies (total enrollment: 3)
  ▶ PHYS 691. — Research (total enrollment: 7)

  Summer
  ▶ PHYS 485. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 8)

  Fall
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 8)

• RESEARCH PROJECTS DURING 2007

  Federal
A Systematic Study of the Structural Magnetic and Spectroscopic Properties of Clusters and Extended Arrays Based on Cyanide Ligands, National Science Foundation

Acquisition of a Scanning Hall Probe Microscope for Nanomagnetics Research and Student Training, National Science Foundation

NUE: Infusing Nanomaterials into Undergraduate Science and Engineering Curricula, National Science Foundation

State

Nanotechnology and Its Impact on Construction, University of Texas

University

Center for Nanoscale Science and Technology, College of Science, coworkers: A. Ford (G), K. Kim (G)

(REN) International Research Travel Grant: Conductance of Molecular Magnets in Mechanical Break Junctions, Texas A&M University International Center

International Research Travel Grant: Conductance of Molecular Magnets in Mechanical Break Junctions, Texas A&M University International Center

Private

(REN) Enhanced Anisotropy of Molecular Nanomagnets, The Robert A. Welch Foundation, coworkers: A. Ford (G), K. Kim (G), D. Seo (G), R. Srivastava (G)

Enhanced Anisotropy of Molecular Nanomagnets, The Robert A. Welch Foundation, coworkers: K. Kim (G), D. Seo (G)

• PRESENTATIONS DURING 2007


“Interactions Between Thin Metallic Films and Mn$_{12}$-Acetate,” March Meeting of the American Physical Society, Denver, CO, 2007. (Contributed)

“Magnetic Alignment Behavior of Mn$_{12}$-ac Micro-crystals in a Solvent Matrix and its Interpretation,” Texas Section Meeting of the American Physical Society, Houston, TX, 2007. (Contributed)


“Metal-Insulator Transition in Thin Gadolinium Films,” REU Program Site: Nanotechnology and Materials Systems, College Station, TX, 2007. (Poster Contributed)

“Metal-Insulator Transition in thin Gadolinium Films,” Texas Section Meeting of the American Physical Society, Houston, TX, 2007. (Contributed)
“Observation of Self-Assembled $Mn_{12}$-ac Molecules on Highly Ordered Pyrolytic Graphite,” March Meeting of the American Physical Society, Denver, CO, 2007. (Contributed)

“Surface Engineering for Microtubule Manipulation,” Texas Section Meeting of the American Physical Society, Houston, TX, 2007. (Contributed)

“The Interaction Between Superconductors and $Mn_{12}$-Acetate Single-Molecule Magnets,” Texas Section Meeting of the American Physical Society, Houston, TX, 2007. (Contributed)

“Use of Abrikosov-Gorkov Density of State to Extract Spin Polarization at the Metal-Insulator Transition,” March Meeting of the American Physical Society, Denver, CO, 2007. (Contributed)

- **PUBLICATIONS DURING 2007**

  
  
  


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• AWARDS DURING 2007
  University
  ▷ Distinguished Achievement Award - Teaching, The Association of Former Students

• SERVICE DURING 2007
  International
  ▷ Editorial/Board: The Physics Teacher (Reviewed)
  ▷ Committee/Panel: Organizing Committee International Workshop on the Interface of Particle Physics and Cosmology (Member)

  National
  ▷ Committee/Panel: MIT Undergraduate Admissions Committee, Education Council (Member)

  State
  ▷ Committee/Panel: Particle Physics Section, Texas Section of APS (Chair)

  Department
  ▷ Service Position: Physics 218 Mechanics Scholar Program (Administrator), WebCT Courses for Physics 201, 202, 208, 208 Honors, 218 and 218 Honors, 289 (Course Coordinator)
  ▷ Committee/Panel: High Energy Experiment Faculty Search (Chair), Performance Evaluation Committee (Member), REU Admissions Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ PHYS 289. — Special Topics in (total enrollment: 20)
  ▷ PHYS 685. — Directed Studies (total enrollment: 2)
  ▷ PHYS 691. — Research (total enrollment: 2)

  Summer
  ▷ PHYS 491 — Research (total enrollment: 1)
  ▷ PHYS 685. — Directed Studies (total enrollment: 1)
  ▷ PHYS 691. — Research (total enrollment: 3)

  Fall
  ▷ PHYS 289. — Special Topics in (total enrollment: 25)
  ▷ PHYS 491 — Research (total enrollment: 1)
  ▷ PHYS 685. — Directed Studies (total enrollment: 2)
  ▷ PHYS 691. — Research (total enrollment: 2)
• RESEARCH PROJECTS DURING 2007

Federal
▷ High Energy Physics at Texas A&M, *Department of Energy*
▷ High Energy Physics at Texas A&M University, *Department of Energy*
▷ Supporting the CDF Run II Operation by the Texas A&M University, *FERMI National Accelerator Laboratory*
▷ US CMS Hadron Calorimeter M&O Subsystem, *FERMI National Accelerator Laboratory*

• PRESENTATIONS DURING 2007

▷ “Searches for New Physics at CDF,” Lake Louise Winter Institute, Chateau Lake Louise, Canada, February, 2007.( Graduate, P. Wagner)
▷ “Search for Heavy, Long-Lived Particles at CDF,” Fermilab Wine and Cheese, March, 2007.( Postdoc)
▷ “Searches for Heavy, Long-Lived Particles at CDF,” Texas Tech University, Lubbock, TX, April, 2007.( Graduate, P. Wagner)
▷ “Searches for Heavy, Long-Lived Particles at CDF,” University of California, San Diego, CA, April, 2007.( Graduate, P. Wagner)
▷ “Searches for Heavy, Long-Lived Particles at CDF,” University of California, Santa Cruz, CA, April, 2007.( Graduate, P. Wagner)
▷ “Searches for Heavy, Long-Lived Particles at CDF,” University of Pennsylvania, Philadelphia, PA, April, 2007.( Graduate, P. Wagner)
▷ “Particle Physics and Cosmology in the Co-Annihilation Region,” International Workshop on the Interface of Particle Physics and Cosmology, Texas A&M University, College Station, TX, May, 2007.( Individual)
▷ “Searches for Heavy, Long-Lived Particles at CDF,” 15th International Conference Supersymmetry and Unification of Fundamental Interactions, Karlsruhe, Germany, July, 2007.( Postdoc)

• PUBLICATIONS DURING 2007

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, Cyclotron Institute, College of Science, [2003]

• SERVICE DURING 2007

  International
  ▶ Editorial/Board: Review of Progress in Physics (Editor)
  ▶ Committee/Panel: Experiments Evaluation Committee, TRIUMF, Vancouver, British Columbia (Chair), International Union of Pure and Applied Physics WG9 (IUPAP) (Member), Office of Economic Cooperation and Development Global Science Forum Working Group on Nuclear Physics (Member)

  National
  ▶ Advisory Board: Department of Energy/National Science Foundation Nuclear Science Advisory Committee (Chair)
  ▶ Committee/Panel: Neutrino Science Assessment Group (Member), Program Advisory Committee, National Superconducting Cyclotron Laboratory, Michigan State University (Member), Program Review and Advisory Committee for Fundamental Neutron Physics Beamline at the SNS (Chair), Radioactive Ion Beam (RIB) Task Force (Member), Visitors for the Office of Nuclear Physics, Department of Energy (Member)

  University
  ▶ Committee/Panel: IPECC (Member), Study Abroad Program Policy Committee (Member)

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

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ PHYS 691. — Research (total enrollment: 5)

  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 5)

  Fall
  ▶ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2007
Federal
▷ (REN) Cyclotron-Based Nuclear Science, *Department of Energy*, coworkers: V. Goldberg (Visiting Scientist), L. Trache (Research Scientist), A. Zhanov (Research Scientist), C. Fu (G), E. Simmons (G), Y. Zhai (G), M. McClesky (U)
▷ Extending the Capabilities of the Texas A&M University, Cyclotron Institute to Include Reaccelerated Radioactive Beams, *Department of Energy*
▷ (REN) QCD and Standard Model Studies, *Department of Energy*
▷ Development of New Techniques to Determine Neutron and Charged-Particle Induced Reaction Rates, *National Nuclear Security Administration*, coworkers: L. Trache (P), A. Zhanov (P), M. McCluskey (G)

Private
▷ Extending the Capabilities of the Texas A&M University, Cyclotron Institute to Include Reaccelerated Radioactive Beams, *The Robert A. Welch Foundation*

• PRESENTATIONS DURING 2007
▷ “Latest Results on Muon Decay from the TWIST Collaboration,” Division of Nuclear Physics Fall Meeting, October, 2007. (Invited)
▷ “Report to NuPECC on NSAC Activities,” NuPECC Meeting, Bucharest Romania, October, 2007. (Individual)

**PUBLICATIONS DURING 2007**

- Abelev, B.I.; et al. (2007) Energy Dependence of $\pi^\pm$, $p$ and $\bar{p}$ Transverse Momentum Spectra for Au+Au Collisions at $\sqrt{s_{NN}} = 62.4$ and 200 GeV *Physical Review B: Condensed Matter*, vol. 655, 104.
- Abelev, B.I.; et al. (2007) Rapidity and Species Dependence of Particle Production at Large Transverse Momentum for $d+Au$ Collisions at $\sqrt{s_{NN}} = 200$ GeV *Physical Review C: Nuclear Physics*, vol. 76, 054903.
- Adams, J.; et al. (2007) $\Delta \phi \Delta \eta$ Correlations in Central Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV *Physical Review C: Nuclear Physics*, vol. 75, 034901.


• CHAIRS/PROFESSORSHIPS

• SERVICE DURING 2007

  International
  ▷ Service Position: Chinese Center for Antarctic Astronomy (Director)
  ▷ Editorial/Board: Chinese Astronomy and Astrophysics (Member)

  National
  ▷ Editorial/Board: Astrophysical Journal (Referee: Journals)

  Department
  ▷ Committee/Panel: Faculty Search committee (Member), Graduate Admission Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ PHYS 689. — Special Topics in (total enrollment: 4)

  Fall
  ▷ PHYS 306. — Basic Astronomy (total enrollment: 64)
  ▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▷ Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, National Science Foundation, coworkers: S. Gooding (G)

• PRESENTATIONS DURING 2007
  ▷ “Supernova Cosmology,” Beijing Normal University, Beijing, China, January, 2007. (Individual)
• PUBLICATIONS DURING 2007


• CHAIRS/PROFESSORSHIPS
  ▶ Ed Rachal Chair in High Energy Physics /2007/

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Dean for Undergraduate Research, Vice President for Research, /2005/

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: Department of Energy (Review: Proposals), National Science Foundation, MRI (Review: Proposals)
  University
  ▶ Committee/Panel: Education Environment Council (Member), Faculty Senate Research Committee (Member), Graduate Operations Committee (Chair), Quality Enhancement Plan and Executive Committee (Member)
  College
  ▶ Ad Hoc Committee: College Nuclear Chemistry Search Committee (Chair)
  ▶ Committee/Panel: Diversity Committee (Member)
  Department
  ▶ Committee/Panel: Astronomy Search Committee (Member), Experimental HEP Search Committee (Member), Long Range Planning Committee (Chair), Nuclear Physics Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ BIOL 491. — Research (total enrollment: 1)
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▶ PHYS 685. — Directed Studies (total enrollment: 1)
  ▶ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
High Energy Physics at Texas A&M, *Department of Energy*

High Energy Physics at Texas A&M University, *Department of Energy*

Development of a High Density, High Performance Beowulf Cluster, *National Science Foundation*

**PRESENTATIONS DURING 2007**

- “Neutrinos: Past, Present and Future,” Particle Physics and Cosmology Conference, Texas A&M University, College Station, TX, 2007. (Individual)
- “Why Inquiry?,” Texas A&M University Galveston Campus Fall 2007 Faculty Forum, Galveston, TX, Augus, 2007. (Individual)
- “Texas A&M’s CIRTL Program: NAB Site Visit,” CITRL Advisory Board Members, College Station, TX, May, 2007. (Individual)

**PUBLICATIONS DURING 2007**

• SERVICE DURING 2007

National
▷ Committee/Panel: State Nanotechnology Laboratory (Panel), Texas APS Meeting (Session Chair)

University
▷ Committee/Panel: Council of Principal Investigators (Member), Texas A&M Research Foundation Advisory Committee (Member)

Department
▷ Committee/Panel: Graduate Curriculum Committee (Chair), Graduate Student Recruitment Committee (Member), Undergraduate Student Recruitment Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 201. — College Physics (total enrollment: 89)
▷ PHYS 691. — Research (total enrollment: 3)

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

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

• RESEARCH PROJECTS DURING 2007

Federal
▷ Mid-Infrared Technologies for Health and the Environment, National Science Foundation, coworkers: H. Yang (Research Scientist), K. Kanedy (G), F. Lopez (G)

Industrial
▷ Atomic Scale Analysis of Type II Superlattice Detector Structures, Rockwell Scientific Company, LLC, coworkers: H. Yang (Research Scientist), K. Kanedy (G), F. Lopez (G)

• PRESENTATIONS DURING 2007

GEORGE R. WELCH

PROFESSOR

(979) 845-1571
grw@tamu.edu

• SERVICE DURING 2007

International
▶ Advisory Board: International Council of the Optical Society of America (Member)

National
▶ Event: 36th Winter Colloquium on Quantum Electronics (Organizer), Slow Light and Applications at “Frontiers in Optics,” the Annual Meeting of the Optical Society of America (Organizer)
▶ Editorial/Board: *Journal of Modern Optics* (Member), *Physics Review A*, *Journal of modern Optics*, and *Journal of Molecular Spectroscopy* (Referee: Journals), *Special Issue of Journal of Modern Optics* (Co-Editor)

College
▶ Committee/Panel: Faculty Advisory Council (Elected Member), Tenure and Promotion Advisory Committee (Member)

Department
▶ Event: Chemistry Festival (Participant), Physics Festival (Participant)
▶ Committee/Panel: AMO Faculty Search Committee (Chair), Evaluation Committee (Member), Long Range Planning Committee (Member), Undergraduate Curriculum Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▶ PHYS 208. — *Electricity and Optics* (total enrollment: 100)
▶ PHYS 691. — *Research* (total enrollment: 2)

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

Fall
▶ PHYS 218. — *Mechanics* (total enrollment: 84)
▶ PHYS 691. — *Research* (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▶ Spin-Based Lattice-Gas Quantum Optics in Solids Using Optical Addressing, *Air Force Office of Scientific Research*
▶ Real-Time Detection of Anthrax via FAST CARS and Gain-Swept Super-Radiance, *Sandia National Laboratories*

Private

- **PRESENTATIONS DURING 2007**
  - “Non-linear Magneto-Optic Polarization Rotation with Intense Laser Fields,” Rice University Atomic Physics Seminar, Houston, TX, October, 2007. (Individual)

- **PUBLICATIONS DURING 2007**
• SERVICE DURING 2007
  Department
  ▶ Committee/Panel: Graduate Admissions Committee (Member), High Energy Experiment Search Committee (Member), Physics 218 Book Review Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ PHYS 666. — Scientific Instrument Making (total enrollment: 9)
  ▶ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▶ PHYS 666. — Scientific Instrument Making (total enrollment: 18)
  ▶ PHYS 691. — Research (total enrollment: 2)
  Fall
  ▶ PHYS 218. — Mechanics (total enrollment: 222)
  ▶ PHYS 666. — Scientific Instrument Making (total enrollment: 5)
  ▶ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ High Energy Physics at Texas A&M, Department of Energy
  ▶ High Energy Physics at Texas A&M University, Department of Energy
  ▶ DUSEL R&D SIGN-Scintillation and Ionization in Gaseous Neon, National Science Foundation
  Industrial
  ▶ Multichamber Gas Proportional Counter for Screening Ultra-Low Background and Materials and Identifying Radioactive Contaminants, Phase I, Reeves and Sons LLC
  ▶ Multichamber Gas Proportional Counter for Screening Ultra-Low Background and Materials and Identifying Radioactive Contaminants, Phase II, Reeves and Sons LLC

• PRESENTATIONS DURING 2007
  ▶ “Recent Developments in WIMP Dark Matter Searches,” HEP Seminar, Texas A&M University, College Station, TX, April, 2007. (Individual)
  ▶ “SIGN-Potential WIMP Detection using Pressurized Nobles,” International Workshop on the connection between Particle Physics and Cosmology, Texas A&M University, College Station, TX, May, 2007. (Invited)
Station, TX, May, 2007. (Invited)
▷ “A Wavelength-Shifting Readout Method for Large Gaseous Particle Detectors,” Texas Physics 2007, Joint Fall Meeting of the Texas Sections of APS and AAPT, College Station, TX, October, 2007. (Individual)
▷ “Development of a New WIMP Detection Concept based on High Pressure Xenon Gas,” Texas Physics 2007, Joint Fall Meeting of the Texas Sections of APS and AAPT, College Station, TX, October, 2007. (Individual)
▷ “Investigation of New Methods for Ultra-Low Background Counting,” Texas Physics 2007, Joint Fall Meeting of the Texas Sections of APS and AAPT, College Station, TX, October, 2007. (Individual)
▷ “The LUX Two-Phase Dark Matter Search Experiment,” Texas Physics 2007, Joint Fall meeting of the Texas Sections of APS and AAPT, College Station, TX, October, 2007. (Individual)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International
▷ Editorial/Board: Israel Science Foundation, United States-Israel Binational Science Foundation (Review: Proposals), Journal of Modern Physics, Modern Physics Letter, Europhysics (Referee: Journals)

National

Department
▷ Committee/Panel: Graduate Admissions Committee (University of Rochester) (Member), Nano Experimental Search Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ PHYS 201. — College Physics (total enrollment: 78)
▷ PHYS 691. — Research (total enrollment: 5)

Summer
▷ PHYS 685. — Directed Studies (total enrollment: 1)
▷ PHYS 691. — Research (total enrollment: 4)

Fall
▷ PHYS 202. — College Physics (total enrollment: 36)
▷ PHYS 691. — Research (total enrollment: 4)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Emergent Behavior in Magnet-Superconductor Hybrids, Department of Energy, coworkers: Z. Ye (P), I. Schultz (G)
▷ Electron Correlations in Strongly Disordered Low Dimensional Systems, National Science Foundation, coworkers: Z. Ye (P), H. Liu (G), M. Sears (G), H. Zhang (G), H. Zhang (G)
▷ Probing Superconducting Fluctuations on Mesoscopic Scales: Conductance Fluctuations and Oscillations, and Electron Tunneling, National Science Foundation, coworkers: J. Chiang (G), H. Liu (G), A. Nandyala (G), I. Schultz (G), H. Zhang (G)

• PRESENTATIONS DURING 2007
“Superconductivity of Nanowires in Contact with Bulk Metals,” APS March Meeting, Denver, CO, 2007. (Contributed)


“Conductance Fluctuations in Al ultrathin Films Quenched Condensed on Porous Membranes,” International Conference on Strongly Correlated Electron Systems, Houston, TX, May, 2007. (Contributed)


“Superconductivity in Thin Film-Nanowirethin Film Systems,” International Conference on Strongly Correlated Electron Systems, Houston, TX, May, 2007. (Contributed)


“Field-Tuned Superconductor-Insulator Transition at the Critical Resistance $h/(2e)^2$,” Workshop on Disorder and Interactions in Low Dimensions, Hsinchu, Taiwan, June, 2007. (Invited)


“Can the Superconductor-Insulator Transition be a Duality Quantum Phase Transition?,” Physics Department, Texas A&M University, College Station, TX, September, 2007. (Individual)

“Anomalous Long-Range Proximity Effect Observed in Single-Crystal Superconducting Nanowires,” APS Meeting-Texas Section, College Station, TX, October, 2007. (Contributed)


**PUBLICATIONS DURING 2007**

• TEACHING ASSIGNMENTS DURING 2007

Spring
➤ PHYS 208. — Electricity and Optics (total enrollment: 110)
➤ PHYS 691. — Research (total enrollment: 1)

Summer
➤ PHYS 691. — Research (total enrollment: 2)

Fall
➤ PHYS 218. — Mechanics (total enrollment: 112)
➤ PHYS 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
➤ (REN) Cyclotron-Based Nuclear Science, Department of Energy, coworkers: Y. Lui (Research Scientist), Khrishichayan (Research Associate), X. Chen (G)

Private
➤ (REN) Study of Nuclei at High Excitations, The Robert A. Welch Foundation

• PUBLICATIONS DURING 2007

• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Associate Director, Institute for Quantum Studies (IQS), [2001]

• AWARDS DURING 2007
  International
  ▷ Humboldt Research Prize, Alexander von Humboldt Foundation

• SERVICE DURING 2007
  International
  ▷ Event: 1st International Symposium on Quantum Optics (Chair), 2nd International Symposium on Quantum Optics (Chair), SPIE Symposium on Fluctuations and Noise (Chair)
  National
  ▷ Event: Technical Program Sub-Committee on Quantum Optics, Quantum Information, and Applications, The 7th Pacific Rim conference on Laser and Electro-Optics (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ PHYS 691. — Research (total enrollment: 1)
  Summer
  ▷ PHYS 691. — Research (total enrollment: 1)
  Fall
  ▷ PHYS 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Quantum Optical Implementations of Quantum Computing and Quantum Informatics Protocols, Air Force Office of Scientific Research
  ▷ Spin-Based Lattice-Gas Quantum Optics in Solids Using Optical Addressing, Air Force Office of Scientific Research
  ▷ Quantum Optics Initiative I, Office of Naval Research, coworkers: F. Li (Research Scientist), H. Xiong (G)

• PRESENTATIONS DURING 2007
• PUBLICATIONS DURING 2007


7. Research Activity, 2007

This section contains information on all funded research activity for the calendar year 2007. 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 2007 = # Days 2007 × Daily Grant Award
## 7.1 Summary of Research Support, 2007

### FEDERAL AGENCIES

#### Air Force Office of Scientific Research

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<tbody>
<tr>
<td>Belyanin, A.</td>
<td>New Mid/Far-Infrared CW Room-Temperature Semiconductor Lasers Based on Intralaser Wave-Mixing Technique, (with: A. Belyanin, V. Kocharovsky)</td>
<td>5/15/2005 12/31/2007</td>
<td>33,556</td>
<td>4,361</td>
<td>37,917</td>
<td></td>
</tr>
<tr>
<td>Belyanin, A.</td>
<td>New Widely Tunable Room Temperature Terahertz Coherent Sources</td>
<td>7/1/2005 9/30/2008</td>
<td>30,702</td>
<td>4,352</td>
<td>35,055</td>
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<tr>
<td>Kocharovskaya, O.</td>
<td>Laser Manipulations of Nuclear Transitions</td>
<td>2/1/2005 2/28/2008</td>
<td>171,422</td>
<td>0</td>
<td>171,422</td>
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<tr>
<td>Kocharovsky, V.</td>
<td>New Mid/Far-Infrared CW Room-Temperature Semiconductor Lasers Based on Intralaser Wave-Mixing Technique, (with: A. Belyanin, V. Kocharovsky)</td>
<td>5/15/2005 12/31/2007</td>
<td>33,556</td>
<td>4,361</td>
<td>37,917</td>
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SEC. 7. RESEARCH ACTIVITY 761
<table>
<thead>
<tr>
<th>Name</th>
<th>Project Description</th>
<th>Start Date</th>
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<th>Total Budget</th>
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<th>Total Incurred Cost</th>
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<td>Dutta, B.</td>
<td>GAANN(Graduate Assistance in the Areas of National Need)</td>
<td>9/1/2007</td>
<td>8/31/2010</td>
<td>42,393</td>
<td>0</td>
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<tr>
<td>Hardy, J.C.</td>
<td>Nuclear Structure Evaluations for ENSDF</td>
<td>10/1/2006</td>
<td>9/30/2007</td>
<td>11,657</td>
<td>0</td>
<td>11,657</td>
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<tr>
<td>Hardy, J.C.</td>
<td>(REN) Nuclear Structure Evaluations for ENSDF</td>
<td>10/1/2007</td>
<td>9/30/2008</td>
<td>4,475</td>
<td>0</td>
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**Subtotal:** Air Force Office of Scientific Research

|                     | 320,665 | 30,327 | 350,991 |

**Subtotal:** Department of Defense

|                     | 69,325  | 20,446 | 89,771  |

**Subtotal:** Department of Education

|                     | 42,393  | 0      | 42,393  |

**Subtotal:** Department of Energy

|                     | 30,082  | 0      | 30,082  |

**Subtotal:** Department of Energy

|                     | 382,799 | 0      | 382,799 |

**Subtotal:** Department of Energy

|                     | 101,439 | 23,516 | 124,956 |

**Subtotal:** Department of Energy

|                     | 382,799 | 0      | 382,799 |

**Subtotal:** Department of Energy

|                     | 11,657  | 0      | 11,657  |

**Subtotal:** Department of Energy

|                     | 4,475   | 0      | 4,475   |

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2007 PHYSICS ANNUAL REPORT
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<th>Grantee</th>
<th>Title</th>
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<th>Direct</th>
<th>Indirect</th>
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<tr>
<td>McIntyre, P.M.</td>
<td>(REN) New Technology for Future Colliders</td>
<td>1/1/2006</td>
<td>12/31/2008</td>
<td>610,000</td>
<td>0</td>
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<td>McIntyre, P.M.</td>
<td>Texas A&amp;M Participation in AMS Experiment</td>
<td>12/1/2007</td>
<td>11/30/2008</td>
<td>4,110</td>
<td>0</td>
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<td>Mioduszewski, S.</td>
<td>Toward Understanding the QGP with the STAR Experiment at RHIC</td>
<td>7/1/2007</td>
<td>6/30/2010</td>
<td>68,252</td>
<td>5,115</td>
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SEC. 7. RESEARCH ACTIVITY 763
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<td></td>
<td>McIntyre, D. Nanopoulos, C. Pope, A. Safonov, D. Toback, R. Webb, J.</td>
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<td>White)</td>
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<td>McIntyre, D. Nanopoulos, C. Pope, D. Toback, R. Webb, J. White)</td>
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<td>Safonov, A.N.</td>
<td>CMS Endcap Muon M&amp;O</td>
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<td>6/30/2008</td>
<td>16,019</td>
<td>6,865</td>
<td>22,884</td>
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<td>(with: V. Pokrovsky, W. Saslow)</td>
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<td>McIntyre, D. Nanopoulos, C. Pope, D. Toback, R. Webb, J. White)</td>
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<td></td>
<td>Hardy, J. Natowitz, R. Tribble, S. Yennello, D. Youngblood)</td>
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<td>Tribble, R.E.</td>
<td>Extending the Capabilities of the Texas A&amp;M University, Cyclotron</td>
<td>4/1/2004</td>
<td>3/31/2008</td>
<td>450,000</td>
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<td>Institute to Include Reaccelerated Radioactive Beams</td>
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<td>McIntyre, D. Nanopoulos, C. Pope, A. Safonov, D. Toback, R. Webb, J.</td>
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**Subtotal:** Department of Energy  
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**Fermi National Accelerator Laboratory**


**Subtotal:** Fermi National Accelerator Laboratory  
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**National Nuclear Security Administration**


**Subtotal:** National Nuclear Security Administration  
142,127  33,033  175,160

**National Science Foundation**

| Becker, M.     | Flux Compactification of M-Theory, Cosmology, and the Standard Model of Elementary Particles | 9/1/2005 | 8/31/2008 | 45,000 | 0       | 45,000  |

SEC. 7. RESEARCH ACTIVITY 765
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<td>Sub-Cycle Optical Pulse Shaping by Parametric Beating with Adiabatically Prepared Raman Coherence</td>
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* Office of Naval Research

SEC. 7.

RESEARCH ACTIVITY 769
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- **Subtotal: Space Telescope Science Institute**  
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- **U.S. Army**
  
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  Bioaerosol Sampling and Collection: Optics and Forward Scattering by Aerosols  
  8/1/2003  
  9/30/2007  
  16,752  
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  Fry, E.S.  
  Bioaerosol Sampling and Collection: Optics and Forward Scattering by Sampling and Collection  
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- **Subtotal: U.S. Army**  
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- **U.S. Civilian Research and Development Foundation**
  
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  1/1/2007  
  12/31/2008  
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  Kocharovsky, V.  
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- **Subtotal: Federal Agencies**  
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**Industrial/Corporate Agencies**

SEC. 7.

RESEARCH ACTIVITY  

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**INTERNATIONAL AGENCIES**

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| * Qatar Foundation | Schuessler, H.A.  Utilizing Laser Spectroscopy of Noble Gas Traces for Mapping Oil and Gas Deposits | 12/1/2007 | 11/30/2010 | 20,547 | 0 | 20,547 |
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772  
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* Subtotal: Private/Non-Profit Agencies 978,826 15,160 1,002,686

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776 2007 Physics Annual Report
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  7/1/2007  6/30/2012  21,049  1,177  22,227

  Space Telescope Science Institute
  Resolving the LMC Microlensing Puzzle: Where are the Lensing Objects
  1/1/2006  12/31/2007  18,586  0  18,586

  Space Telescope Science Institute
  SAINTS: Supernova 1987A Intensive Survey (Cycle 13)
  1/1/2005  12/31/2007  3,327  0  3,327

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  NUE: Infusing Nanomaterials into Undergraduate Science and Engineering Curricula
  9/1/2005  8/31/2007  9,396  3,852  13,248

  The Robert A. Welch Foundation
  Enhanced Anisotropy of Molecular Nanomagnets
  6/1/2004  5/31/2007  20,567  0  20,567

  The Robert A. Welch Foundation
  (REN) Enhanced Anisotropy of Molecular Nanomagnets
  6/1/2007  5/31/2010  29,178  0  29,178

  University of Texas
  Nanotechnology and Its Impact on Construction
  9/1/2007  8/31/2008  2,051  932  2,984

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<td>5/31/2008</td>
<td>700</td>
<td>0</td>
<td>700</td>
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<tr>
<td><strong>Subtotal Teizer, V.</strong></td>
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<td></td>
<td></td>
<td>245,339</td>
<td>4,785</td>
<td>250,123</td>
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**Toback, D.**

<table>
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<th>Indirect</th>
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<td><strong>Subtotal Toback, D.</strong></td>
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<td>278,258</td>
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<td>283,580</td>
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**Tribble, R.E.**

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<tr>
<td>Department of Energy</td>
<td>Extending the Capabilities of the Texas A&amp;M University, Cyclotron Institute to Include Reaccelerated Radioactive Beams</td>
<td>4/1/2004</td>
<td>3/31/2008</td>
<td>450,000</td>
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<td>450,000</td>
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</table>

790 2007 PHYSICS ANNUAL REPORT
<table>
<thead>
<tr>
<th>Granting Agency</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
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<th>Indirect</th>
<th>Total</th>
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<tr>
<td>The Robert A. Welch Foundation</td>
<td>Extending the Capabilities of the Texas A&amp;M University, Cyclotron Institute to Include Reaccelerated Radioactive Beams</td>
<td>4/1/2004</td>
<td>3/31/2008</td>
<td>250,000</td>
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* Subtotal Tribble, R.E. 1,255,302 40,033 1,295,335

| Wang, L.                              | Collaborative Research: Three-Dimensional Simulations of Type Ia Supernovae Constraining Models with Observations, (with: K. Krisciunas, N. Suntzeff, L. Wang) | 7/1/2007  | 6/30/2012 | 21,049 | 1,177    | 22,227    |

* Subtotal Wang, L. 21,049 1,177 22,227


* Subtotal Webb, R.C. 138,630 0 138,630

| Weimer, R.B.                           |                                                                       |           |           |        |          |           |

SEC. 7. RESEARCH ACTIVITY 791
<table>
<thead>
<tr>
<th>Granting Agency</th>
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<th>End</th>
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<tr>
<td>National Science Foundation</td>
<td>Mid-Infrared Technologies for Health and the Environment</td>
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<td>31,250</td>
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<td>Rockwell Scientific Company, LLC</td>
<td>Atomic Scale Analysis of Type II Superlattice Detector Structures</td>
<td>2/1/2005</td>
<td>1/31/2009</td>
<td>77,500</td>
<td>35,000</td>
<td>112,500</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>8/1/2007</td>
<td>8/7/2009</td>
<td>31,405</td>
<td>4,687</td>
<td>36,092</td>
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</table>

- Subtotal Veimer, N.B. 167,500 66,250 233,750

- Welch, G.R.
<table>
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<th>Title</th>
<th>Start</th>
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<tbody>
<tr>
<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>8/1/2007</td>
<td>8/7/2009</td>
<td>31,405</td>
<td>4,687</td>
<td>36,092</td>
</tr>
</tbody>
</table>

- Subtotal Welch, G.R. 332,662 70,837 403,500

- White, J.T.
<table>
<thead>
<tr>
<th>Granting Agency</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
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792 2007 PHYSICS ANNUAL REPORT
<table>
<thead>
<tr>
<th>Granting Agency</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
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<tbody>
<tr>
<td><strong>Subtotal White, J.T.</strong></td>
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<td>3/1/2007</td>
<td>2/28/2010</td>
<td>26,925</td>
<td>12,070</td>
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<td></td>
<td>Electron Correlations in Strongly Disordered Low Dimensional Systems</td>
<td>7/1/2006</td>
<td>6/30/2009</td>
<td>103,706</td>
<td>11,294</td>
<td>115,000</td>
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<td>12/31/2007</td>
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<td><strong>Total: All Faculty</strong></td>
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<td>3/15/2003</td>
<td>3/30/2007</td>
<td>10,509,041</td>
<td>1,063,330</td>
<td>11,581,336</td>
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</tbody>
</table>
Annual Report, 2007

THE DEPARTMENT OF STATISTICS
TEXAS A&M UNIVERSITY

College Station, Texas
Contents

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1. Foreword from the Department Head

This annual report summarizes the activities during 2007 of the Statistics faculty in their teaching, research, and service.

Research Grants Awarded in 2007

- Soumendra Lahiri received funding from the National Science Foundation for his research on Higher Order Accuracy of Bootstrap Methods for Temporal and Spatial Processes and research on Resampling Methods for Temporal and Spatial Processes and their Higher Order Accuracy.
- Faming Liang received funding from the National Science Foundation for his research grant entitled Development of Stochastic Approximation Monte Carlo Methods.
- Bani Mallick received funding from the National Science Foundation for his research on CMG: Multiscale Data Integration Using Facies Based Hierarchical Models.
- Naisyin Wang received funding from the National Cancer Institute for her research grant entitled Measurement Error, Missing Data and Semiparametrics.

Honors and Awards

- The faculty of the Department of Statistics was recognized with numerous honors and awards.
- James A. Calvin was appointed to Interim Vice President for Research
- Jeff Hart was the recipient of the Don Owen Award for 2007. This award was presented on behalf of the San Antonio chapter of the American Statistical Association.
- Ursula Müller-Harknett was elected as a member of the International Statistical Institute.
- Michael Longnecker received a 2007 Alumni Achievement Award from the College of Arts & Sciences at Western Michigan University
- Bani Mallick was awarded the 2007 Young Researcher’s Award from the International Statistical Institute.
- Michael Sherman was elected as a member of the International Statistical Institute.
- Cliff Spiegelman was selected as the 2007 recipient of the Jerome Sacks Award “for outstanding cross-disciplinary contributions to the statistical sciences, chemometrics, forensics, transportation and environmetrics.

Several of the department’s graduate students received awards.

- Dana Bergstresser received the 2007 Eva and Lee Smith Fellowship.
- Soma Dhavala was granted a patent ”Method and System for Coding Data” by the USPTO for his work on Lossy/Lossless Source Coding.
- Heng Gu received an International Education Fee Scholarship.
- Arnab Maity was awarded the 2007 Parzen Graduate Research Fellowship.
- Mingqi Wu received an International Education Fee Scholarship.

Departmental Events

- The 12th annual Advanced Placement Summer Institute for high school teachers was held in July. Ms. Kathy Fritz, Chair of the Math Department at Plano West, Senior High School was
the lead presenter, with Ms. Jessica Wickersham, Lecturer in the Department of Statistics, assisting.

- In March 2007 the Board of Regents approved the new Center for Statistical Bioinformatics. The center is a joint activity of Texas A&M University, TAES and TEES. It builds upon our successful National Cancer Institute funded Biostatistics, Bioinformatics and Nutrition Training program. Professor Raymond J. Carroll will be initial director of the Center.

- The department hosted the Aggie Reunion at the Joint Statistical meetings in Salt Lake City, Utah. At the reception, former student, Shane Reese of Brigham Young University, was recognized as being named the 2006 Hartley Award recipient and Arnab Maity was awarded the 2007 Parzen Graduate Research Fellowship as well as the 2006 Conner Award. There was also a special presentation for Mike Longnecker in honor of his 30 years of outstanding service to the department

- In August, the department held its third annual New Graduate Student Conference. Our current supported students mentored our new incoming graduate students. Faculty members involved were Fred Dahm, Michael Longnecker, Simon Sheather, Henrik Schmiediche and H. Joseph Newton. From other departments, Dr. Valen Johnson of MD Anderson and Don Birkelbach of the College of Science gave presentations at this important event.

- The Department celebrated its third Annual Faculty Retreat in August. The retreat was designed for the faculty to have more direct interaction with one another. The retreat focused on strategic planning, teaching and on line learning, Center for Statistical Bioinformatics and the Bayesian Bioinformatics lab, and hiring.

- The department honored Distinguished Professor, Emanuel Parzen with the premiere of his ASA feature film. The red carpet ceremony took place at Rudder Theater and even featured “celebrity interviews” with Dean Newton, Distinguished Professor Raymond Carroll and several graduate students.

**Faculty Updates**

- Dr. Willa Chen has been promoted to the rank of Associate Professor of Statistics.

- Dr. Mike Sherman has been promoted to the rank of Professor of Statistics.
2. Departmental Statistics

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

I. Personnel

Tenure-Track Faculty

▷ Compiled from the College of Science Faculty Database. (Fall 2006, Fall 2007) Baselines_Title, Gender, Ethnicity.

Non-Tenure-Track Faculty

▷ Compiled from the College of Science Faculty Database Faculty_List.

Postdoctoral Fellows

▷ Provided by the Department

Graduate Student/Undergraduate Majors

▷ Office of Institutional Studies and Planning (OISP). (Fall 2006, Fall 2007) Enrollment Profile, Headcount by Major by Level, Fall for [Year].

Support Staff

▷ Compiled from the College of Science Dean Database Baselines_Staff.

II. Instructional Activities

Graduate Semester Credit Hours/Undergraduate Semester Credit Hours

▷ SCH: Undergraduate and Graduate - Office of Institutional Studies and Planning (OISP). (Fall 2007) SCH Summaries by College for [Semester] [Year].

PhD Degrees/Masters Degrees

▷ Queried from COGNOS and calculated through the College of Science Dean Database Degrees_Grad.

Undergraduate Degrees

▷ Queried from COGNOS and calculated through 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>2006</th>
<th>2007</th>
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<td><strong>a. Tenured and Tenure-Track Faculty</strong></td>
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<td></td>
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<tr>
<td>Professor</td>
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<td>16</td>
</tr>
<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>6</td>
</tr>
<tr>
<td>Distinguished Professor</td>
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<td>2</td>
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<tr>
<td><strong>b. Non-Tenure-Track Faculty</strong></td>
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<td></td>
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<tr>
<td>Visiting Professor</td>
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<td>0</td>
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<tr>
<td>Visiting Assistant Professor</td>
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<td>0</td>
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<tr>
<td>Visiting Associate Professor</td>
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<td>0</td>
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<tr>
<td>Lecturer</td>
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<tr>
<td>Senior Lecturer</td>
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<tr>
<td>Assistant Lecturer</td>
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<td><strong>c. Postdoctoral Fellows</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>7</td>
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<tr>
<td><strong>d. Graduate Students</strong></td>
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<td></td>
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<tr>
<td></td>
<td>91</td>
<td>131</td>
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<tr>
<td><strong>f. Support Staff</strong></td>
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<td></td>
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## II. Instructional Activities

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<td><strong>a. Graduate Semester Credit Hours</strong></td>
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<td>4,956</td>
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<td><strong>b. Undergraduate Semester Credit Hours</strong></td>
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<td>13,479</td>
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<tr>
<td><strong>c. PhD Degrees</strong></td>
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<td>6</td>
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<tr>
<td><strong>d. Masters Degrees</strong></td>
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<td>18</td>
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<tr>
<td><strong>e. Undergraduate Degrees</strong></td>
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## III. Research Activities

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</thead>
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<td>108</td>
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<tr>
<td><strong>b. Research Presentations</strong></td>
<td>125</td>
<td>103</td>
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<td><strong>c. Federal</strong></td>
<td>2,652,663</td>
<td>3,500,690</td>
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<td><strong>d. State</strong></td>
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<td><strong>g. Industrial/Corporate</strong></td>
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<td><strong>h. International</strong></td>
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<tr>
<td><strong>i. Other Govt</strong></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>2,688,819</strong></td>
<td><strong>3,519,533</strong></td>
</tr>
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</table>
3. Honors & Awards, 2007

By Faculty
▶ This section contains all honors and awards, as reported by individual faculty members, during the calendar year 2007.

By Students
▶ This section contains all honors and awards, as reported by the department, during the calendar year 2007.
### 3.1 Honors & Awards Received by Faculty, 2007

<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
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<tbody>
<tr>
<td>J. Hart</td>
<td>Don Owen Award, San Antonio Chapter of the American Statistical Association</td>
</tr>
<tr>
<td>M. Longnecker</td>
<td>Alumni Achievement Award, College of Arts and Sciences at Western Michigan University</td>
</tr>
<tr>
<td>B. Mallick</td>
<td>Young Researcher’s Award-Applied Statistics, International Indian Statistical Association</td>
</tr>
<tr>
<td>C. Spiegelman</td>
<td>Jerome Sacks Award, National Institute of Statistical Sciences</td>
</tr>
</tbody>
</table>
### 3.2 Honors & Awards Received by Students, 2007

#### Graduate

- **Eva and Lee Smith Fellowship**  
  Dana Bergstresser

- **International Education Fee Scholarship Award**  
  Heng Gu  
  Mingqi Wu

- **Parzen Graduate Research Fellowship**  
  Arnab Maity
4. Students, 2007

This section contains all degrees awarded, as reported by the department, during the calendar year 2007.
4.1 Graduate Degrees Awarded, 2007

Spring

▷ M.S.
  
  Ying Chen
  Advisor(s): M. Longnecker

  Beverly Jane Gaucher
  Advisor(s): M. Genton

  Blair David Sterba-Boatwright
  Advisor(s): F. Speed

  Ming Zhong
  Advisor(s): R. Fan

▷ Ph.D.
  
  Sooyoung Cheon
  Protein Folding and Phylogenetic Tree Reconstruction Using Stochastic Approximation Monte Carlo
  Advisor(s): F. Liang

Summer

▷ M.S.
  
  Ethelyn Mejia Arriola
  Advisor(s): F. Speed

  Diego Alberto Cuellar Ortiz
  Advisor(s): S. Wang

  John Douglas Dougherty
  Advisor(s): R. Carroll

  Kristin Patricia Lennox
  Advisor(s): M. Sherman

  Nathaniel Alan Litton
  Advisor(s): M. Longnecker

  Jose Luis Montes Velarde
  Evolution of Gender Wage Gap in Peru, 1997-2000
  Advisor(s): M. Longnecker

  Krista Dianne Rister
  Advisor(s): M. Longnecker

  Xiuzhen Sun
  Advisor(s): S. Wang

  Yong Yi
  Advisor(s): S. Wang

▷ Ph.D.
  
  David Lee Gold
  Bayesian Learning in Bioinformatics
Lei Jin  
Generalized Score Tests for Missing Covariate Data  
Advisor(s): B. Mallick

Sang Han Lee  
Estimating and Testing of Functional Data with Restrictions  
Advisor(s): S. Wang

Lian Liu  
Topics in Measurement Error and Missing Data Problems  
Advisor(s): M. Vannucci

Yingxue Liu  
Estimation of Circadian Parameters and Investigation in Cyanobacteria via Semiparametric Varying Coefficient Periodic Models  
Advisor(s): N. Wang
## 5. Colloquium and Seminar Speakers, 2007

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Affiliation</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>1/22/2007</td>
<td>Karen Kafadar</td>
<td>University of Colorado, Denver</td>
<td>Effect of Length Based Sampled Sojourn Times on the Survival Distribution from Screen-Detected Diseases</td>
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<tr>
<td>1/25/2007</td>
<td>Birgir Hranfinkelsson</td>
<td>University of Iceland</td>
<td>Bayesian Modeling of Spatially Correlated Extreme Values</td>
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<tr>
<td>1/30/2007</td>
<td>Hongkai Ji</td>
<td>Harvard University</td>
<td>Detecting Gene Regulatory Signals from Genome-Wide Chip-Chip and Sequence Data</td>
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<tr>
<td>2/1/2007</td>
<td>Abel Rodriguez</td>
<td>Duke University</td>
<td>The Nested Dirichlet Process</td>
</tr>
<tr>
<td>2/6/2007</td>
<td>Lingling Li</td>
<td>Harvard School of Public Health</td>
<td>Robust Inference Using Higher Order Influence Function</td>
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<tr>
<td>2/8/2007</td>
<td>Jacqueline Hughes-Oliver</td>
<td>North Carolina State University</td>
<td>Analysis of High-dimensional Structure-Activity Screening Datasets Using the Optimal Bit String Tree</td>
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<tr>
<td>2/13/2007</td>
<td>Evan W. Johnson</td>
<td>Harvard University</td>
<td>Doubly Stochastic Latent Variable Analysis of Application on Genome Tiling Arrays</td>
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<tr>
<td>2/15/2007</td>
<td>Fei Liu</td>
<td>Duke University</td>
<td>Bayesian Functional Data Analysis for Computer Model Validation</td>
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<tr>
<td>2/21/2007</td>
<td>Ping Li</td>
<td>Stanford University</td>
<td>Non-Conventional Sampling Techniques in Massive Data</td>
</tr>
<tr>
<td>2/22/2007</td>
<td>Jan Johannes</td>
<td>University of Heidelberg</td>
<td>Instrumental Regression in Partially Linear Models</td>
</tr>
<tr>
<td>3/1/2007</td>
<td>Emanuel Parzen</td>
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</table>
3/22/2007 Venkatesh Shanker
*Texas A&M University*
Statistical Models in Marketing: A review and an Application

3/27/2007 Yingxue Cathy Liu
*Texas A&M University*
Estimation of Circadian Parameters in Cyanobacteria via Semiparametric Varying Coefficient Periodic Models

3/29/2007 Nicole Lazar
*University of Georgia*
No Different Parts of the Brain Have the Same Dependence Structure?

4/5/2007 Yu Ding
*Texas A&M University*
Statistical Issues and Methods in Analysis and Design of Sensor Networks

4/12/2007 Jeongyeon Ahn
*University of Georgia*
High Dimension Low Sample Size Geometric Representation

4/19/2007 Maurice Hasson
*Texas A&M University*
Optimal Bandwidth and Wavelets with Many Vanishing Moments

4/26/2007 Wayne Woodward
*Southern Methodist University*
Analyzing Time Series Data with Time Varying Frequencies

8/30/2007 Wolfgang Wefeimeyer
*University of Cologne, Germany*
Non-Standard Behavior of Density Estimators for Sums of Squares

9/12/2007 Brian Hartman
*Texas A&M University*
Making Bucket-Loads of Money Predicting the Future or What an Actuary Does and How to Become One

9/13/2007 Ji Meng Loh
*Columbia University*
Accounting for Spatial Correlation in the Scan Statistic

9/20/2007 Jianhui Zhou
*University of Virginia*
Dimension Reduction Based on Constrained Canonical Correlation and Variable Filtering

9/27/2007 C. Shane Reese
*Brigham Young University*
Dispersion Model Based Identification of Pollution Source Directions

10/3/2007 Raymond Carroll
*Texas A&M University*
Why Would a Person Want to get a Post-Doc...?

**Haiyan Wang**  
*Kansas State University*  
Nonparametric Clustering of Functional Data

10/11/2007  
**Cindy Greenwood**  
*Arizona State University*  
Understanding Neural Firing and Quiescence

10/12/2007  
**James Perrett**  
*University of Northern Colorado*  
A Look at Online Instruction, Course Disks, and Statistical Consulting Labs

10/25/2007  
**Zhiguang Qian**  
*University of Wisconsin*  
Some Recent Advantages in Data Integration, Modeling and Design Strategies for Computer Experiments

10/31/2007  
**Don Birkelbach**  
*Texas A&M University*  
Confessions of a Former Recruiter and Statistics Department Head

10/31/2007  
**Simon Sheather**  
*Texas A&M University*  
Confessions of a Former Recruiter and Statistics Department Head

11/1/2007  
**Sam Efromovich**  
*University of Texas, Dallas*  
Several Topics in Nonparametric Curve Estimation

11/7/2007  
**Soumendra Lahiri**  
*Texas A&M University*  
Resampling Methods and their Uses in Statistical Inference for Independent and Serially Correlated Data

11/8/2007  
**Ranjan Maitra**  
*Iowa State University*  
Clustering in the Presence of Scatter

11/13/2007  
**Edward George**  
*University of Pennsylvania*  
The Variable Selection Problem

11/14/2007  
**Edward George**  
*University of Pennsylvania*  
Bayesian Additive Regression Trees

11/15/2007  
**Edward George**  
*University of Pennsylvania*  
High Dimensional Predictive Inference

11/16/2007  
**Jianxin Pan**  
*University of Manchester*  
Variable Selection in Joint Modelling of Mean-convariance Structures
11/29/2007  Sujit Sahu
University of Southampton
High Resolution Space-Time Ozone Modeling for Assessing Trends
6. Faculty*: 2007

Derya Akleman .......................... Lecturer
May Boggess ................................ 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 .......................... Assistant Professor
David B. Dahl .......................... Assistant Professor
P. Fred Dahl ............................ Professor
Ruzong Fan .............................. Associate Professor
Marc Genton ............................ Associate Professor
Jeffrey D. Hart .......................... Professor
Keith L. Hatfield ........................ Lecturer
Jianhua Huang ......................... Associate Professor
Mikyoung Jun .......................... Assistant Professor
Soumendra N. Lahiri ................... Professor
Erning Li ............................... Assistant Professor
Faming Liang .......................... Associate Professor
Michael T. Longnecker ............... Professor
Yanyuan Ma ............................ Assistant Professor
Bani K. Mallick ........................ Professor
Yuming Mu ............................. Assistant Professor
Ursula Mueller-Harknett ............. Assistant Professor
H. Joseph Newton ........................ Professor
Emanuel Parzen ....................... Distinguished Professor
Henrik Schmiediche ................... Senior Lecturer
Simon J. Sheather ........................ Professor
Michael Sherman ...................... Professor
Samiran Sinha .......................... Assistant Professor
F. Michael Speed ........................ Professor
Clifford H. Spiegelman ............... Professor
Suhasini Subba Rao .................... Assistant Professor
Ellen H. Toby .......................... Lecturer
Marina Vannucci ...................... Professor
Naisyin Wang ......................... Professor
Suojin Wang .......................... Professor
Thomas E. Wehrly ...................... Professor
Webster West ........................ Associate Professor
Jessica Wickersham .......................... Lecturer
Li Zhu ................................. Assistant Professor (J)
Joel Zinn ............................. Professor (J)

*For the Annual Report, Faculty are defined as tenure and non-tenure track employees who were employed at any time during 2007 (01/01/2007-12/31/2007).
6.1 Professional Activities, 2007

This section contains information, as reported by individual faculty members, encompassing each faculty member’s professional activities for the calendar year 2007.

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 2007.
▷ 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 2007.
▷ 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 2007

University
▷ Committee/Panel: Academic Affairs Committee, Faculty Senate (Member), Faculty Senate (Faculty Senator - 07), Faculty Senate (Caucus Leader), Personal and Welfare Committee, Faculty Senate (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 651. — Statistics in Research I (total enrollment: 61)
▷ STAT 652. — Statistics in Research II (total enrollment: 41)

Summer
▷ STAT 651. — Statistics in Research I (total enrollment: 104)
▷ STAT 652. — Statistics in Research II (total enrollment: 31)

Fall
▷ STAT 651. — Statistics in Research I (total enrollment: 68)
▷ STAT 652. — Statistics in Research II (total enrollment: 51)
• **SERVICE DURING 2007**

  **National**
  - Event: AP Statistics (Reader)

  **Department**
  - Service Position: Century Scholar (Faculty Advisor)
  - Professional Affiliation: Actuarial Study Group MATH285 (Participant), STAT211 (Co-Coordinator), STAT407 (Co-Coordinator), STAT684 Statistics Department Graduate Students Help Desk (Consultant)
  - Event: Brown Bag Lunch (Speaker), Honors Open House (Participant), Mathematics High School Math Competition (Grader), TAMU Math Club Careers Night (Speaker)

• **TEACHING ASSIGNMENTS DURING 2007**

  **Spring**
  - STAT 211.(H) — *Principles of Statistics I* (total enrollment: 12)
  - STAT 307. — *Sample Survey Techniques* (total enrollment: 22)

  **Summer**
  - STAT 211. — *Principles of Statistics I* (total enrollment: 56)

  **Fall**
  - STAT 307. — *Sample Survey Techniques* (total enrollment: 26)
  - STAT 407. — *Principles of Sample Surveys* (total enrollment: 9)

• **PRESENTATIONS DURING 2007**

• **PUBLICATIONS DURING 2007**
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ⊳ Interim Vice President for Research, Vice President for Research, [2007]
  ⊳ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ⊳ Member, Interdisciplinary Faculty, Toxicology, [2006]
  ⊳ Executive Associate Vice President for Research, Vice President for Research, [2004]

• SERVICE DURING 2007
  National
  ⊳ Editorial/Board: National Science Foundation Major Program (Reviewed), NIEHS P01 Proposal (Chair)
  ⊳ Committee/Panel: National Research Council-NIST ITL Review Committee (Member), NIEHS Environmental Health Sciences Committee (Chair)
  University
  ⊳ Committee/Panel: VTPB Head Search Committee (Member)
  Department
  ⊳ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ⊳ STAT 302.(H) — Statistical Methods (total enrollment: 22)
  Summer
  ⊳ STAT 691. — Research (total enrollment: 1)
  Fall
  ⊳ STAT 302.(H) — Statistical Methods (total enrollment: 29)

• RESEARCH PROJECTS DURING 2007
  Federal
  ⊳ Center for Environmental Rural Health, National Institute for Environmental Health Sciences
  ⊳ Development of a High Density, High Performance Beowulf Cluster, National Science Foundation

No report received from faculty member.
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Director, Center for Statistical Bioinformatics, [2007]
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▶ Member, Interdisciplinary Faculty, Nutrition, [2006]
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2007
  International
  ▶ Editorial/Board: Oxford Statistical Society Series (Co-Editor)
  National
  ▶ Editorial/Board: Department of Statistics, Oklahoma State University (Review Panel),
  Electronic Journal of Statistics (Associate Editor), Journal of the American Statistical
  Association (Associate Editor)
  ▶ Committee/Panel: IMS Committee on Nominations (Chair)
  Interdisciplinary/Intercollegiate
  ▶ Research Group: Center for Statistical Bioinformatics (Director)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 681. — Seminar (total enrollment: 3)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 691. — Research (total enrollment: 2)
  Summer
  ▶ STAT 691. — Research (total enrollment: 1)
  Fall
  ▶ STAT 681. — Seminar (total enrollment: 13)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Nutritional Countermeasures to Radiation Exposure, National Aeronautics and Space Ad-
    ministration
  ▶ Nutritional Countermeasures to Radiation Exposure, National Aeronautics and Space Ad-
    ministration
Center for Environmental Rural Health, \textit{National Institute for Environmental Health Sciences}

Bayesian Models for Gene Expression with Microarray Data, \textit{National Institutes of Health}

(REN) Measurement Error, Nutrition and Breast/Colon Cancer, \textit{National Institutes of Health}

(REN) Nutrition, Biostatistics, and Bioinformatics, \textit{National Institutes of Health}

Development of a High Density, High Performance Beowulf Cluster, \textit{National Science Foundation}

Private

Nutritional Countermeasures to Radiation-Enhanced Colon Cancer, \textit{Baylor College of Medicine}

\textbf{PRESENTATIONS DURING 2007}

- Columbia University (Biostatistics), New York, NY, 2007. (Invited)
- III Cycle Romand de statistique, Switzerland, 2007. (Invited)
- Monash University, Victoria, Australia, 2007. (Invited)
- Rutgers University, Newark, New Jersey, 2007. (Invited)
- University of Bielefeld, Germany, 2007. (Invited)
- University of Bonn, Bonn, Germany, 2007. (Invited)
- University of Bristol, England, 2007. (Invited)
- University of Melbourne, Victoria, Australia, 2007. (Invited)
- University of North Carolina, Chapel Hill, NC, 2007. (Invited)
- University of Padua, Italy, 2007. (Invited)
- University of South Carolina, Columbia, SC, 2007. (Invited)

\textbf{PUBLICATIONS DURING 2007}


• SERVICE DURING 2007
  Department
  ▷ Committee/Panel: Undergraduate Service Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ STAT 303. — Statistical Methods (total enrollment: 131)
  Fall
  ▷ STAT 303. — Statistical Methods (total enrollment: 147)
• SERVICE DURING 2007
  National
  College
  ▶ Committee/Panel: Diversity Committee (Member)
  Department
  ▶ Committee/Panel: Recruiting Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Summer
  ▶ STAT 626. — Methods in Time Series Analysis (total enrollment: 15)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ STAT 651. — Statistics in Research I (total enrollment: 119)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Fractional Cointegration and Tapering in Long Memory Time Series, National Science Foundation
  ▶ Long Memory Time Series Modelling: Computational and Statistical Efficiency, Nonstationarity/Noninvertibility and Goodness of Fit, National Science Foundation

• PRESENTATIONS DURING 2007
• SERVICE DURING 2007

National

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

Department
▷ Committee/Panel: Ad hoc Committee for Graduate Program Revision (Member), Colloquium Committee (Chair), Faculty Advisory Council (Member), Grievance Committee (Member), Promotion and Tenure Committee (Member), Theory Qualifying Exam (Chair)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 611. — Theory of Statistics II (total enrollment: 43)
▷ STAT 681. — Seminar (total enrollment: 14)

Summer
▷ STAT 601. — Statistical Analysis (total enrollment: 18)

Fall
▷ STAT 685. — Directed Studies (total enrollment: 1)

• PRESENTATIONS DURING 2007

▷ Econometrics Workshop, Economics Department, Texas A&M University, College Station, TX, 2007. (Invited)
▷ Graybill VI Conference, Colorado State University, Fort Collins, CO, 2007. (Invited)

• PUBLICATIONS DURING 2007


ALAN R. DABNEY
ASSISTANT PROFESSOR (979) 862-7581
STAT-Bioinformatics, Applied Statistics adabney@stat.tamu.edu

• SERVICE DURING 2007

National

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 211. — *Principles of Statistics I* (total enrollment: 60)

Fall
▷ STAT 211. — *Principles of Statistics I* (total enrollment: 39)

• PRESENTATIONS DURING 2007

▷ University of California, Department of Biostatistics, San Francisco, CA, January, 2007. (Invited)
▷ Joint Statistical Meeting, August, 2007. (Invited)

• PUBLICATIONS DURING 2007

DAVID B. DAHL
ASSISTANT PROFESSOR
STAT-Nonparametric Bayesian Models, Bioinformatics
dahl@stat.tamu.edu

• SERVICE DURING 2007
  National
  ▷ Editorial/Board: *Biostatistics and Bayesian Analysis* (Referee: Journals)
  Department
  ▷ Committee/Panel: Bioinformatics Faculty Committee (Member), Computing Committee (Member), Theory Qualifying Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ STAT 651. — *Statistics in Research I* (total enrollment: 41)
  Fall
  ▷ STAT 604. — *Special Problems in Statistical Computations and Analysis* (total enrollment: 28)
  ▷ STAT 651. — *Statistics in Research I* (total enrollment: 58)
  ▷ STAT 691. — *Research* (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Side Chain Driven Refinement of Protein Structure, *National Institutes of Health*

• PRESENTATIONS DURING 2007

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Graduate Advisor, Statistics Graduate Advising Office, [1989]

• SERVICE DURING 2007

  Department
  ▶ Committee/Panel: Promotion and Tenure Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

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

  Summer
  ▶ STAT 685. — Directed Studies (total enrollment: 3)
  ▶ STAT 691. — Research (total enrollment: 1)

  Fall
  ▶ STAT 212. — Principles of Statistics II (total enrollment: 58)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 691. — Research (total enrollment: 2)

• PRESENTATIONS DURING 2007
  ▶ “Careers in Statistics,” Texas A&M UniversitySummer 2007 REU Participants, College Station, TX, 2007.(Invited)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Genetics, [2006]

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: American Journal of Human Genetics, Statistical Applications in Genetics and Molecular Biology, Genetic Epidemiology (Referee: Journals)
  Department
  ▶ Research Group: Bioinformatics (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 652. — Statistics in Research II (total enrollment: 16)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  Fall
  ▶ STAT 652. — Statistics in Research II (total enrollment: 39)
  ▶ STAT 681. — Seminar (total enrollment: 17)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Haplotype Linkage and Association Mapping of Quantitative Trait Loci, National Science Foundation

• PRESENTATIONS DURING 2007
  ▶ University of California, Los Angeles, CA, February, 2007.( Invited)
  ▶ Columbia University, Manhattan, NY, December, 2007.( Invited)
  ▶ Mount Sinai School of Medicine, Manhattan, NY, December, 2007.( Invited)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

International
  ▶ Editorial/Board: *Chilean Journal of Statistics* (Associate Editor)

National
  ▶ Editorial/Board: *Journal of Statistical Planning and Inference* (Associate Editor)

Department
  ▶ Committee/Panel: Examination Committee (Member), Faculty Recruiting Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ STAT 691. — Research (total enrollment: 1)

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

  Fall
  ▶ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Statistical Methods for AIDS Clinical Trials, *National Institutes of Health*

• PUBLICATIONS DURING 2007


*On leave.*
• AWARDS DURING 2007

National
▷ Don Owen Award, San Antonio Chapter of the American Statistical Association

• SERVICE DURING 2007

National
▷ Committee/Panel: American Statistical Association Section on Nonparametric Statistics (Chairman)

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

Department
▷ Committee/Panel: Grant Opportunities Committee (Member), Promotion and Tenure Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 627. — Nonparametric Function Estimation (total enrollment: 17)

Fall
▷ STAT 632. — Statistical Decision Theory (total enrollment: 19)
▷ STAT 685. — Directed Studies (total enrollment: 1)
▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Cluster-Based Bootstrapping in Multiple Hypothesis Testing, National Science Foundation
▷ Development of a High Density, High Performance Beowulf Cluster, National Science Foundation

• PRESENTATIONS DURING 2007


• PUBLICATIONS DURING 2007
• TEACHING ASSIGNMENTS DURING 2007

    Spring
    ▶ STAT 211. — Principles of Statistics I (total enrollment: 105)

    Fall
    ▶ STAT 211. — Principles of Statistics I (total enrollment: 170)
• SERVICE DURING 2007
  National
  ▷ Editorial/Board: Biometrika, Biometrics, Journal of the American Statistical Association,
    Journal of the Royal Statistical Society (Series B), Journal of Statistical Planning and
    Inference, Statistica Sinica, Studia Sci. Math. Hungarica, Test (Referee: Journals)
  ▷ Committee/Panel: Southeast Texas Chapter of the American Statistical Association (Vice
    President)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▷ STAT 685. — Directed Studies (total enrollment: 6)
  ▷ STAT 689. — Special Topics in (total enrollment: 16)
  ▷ STAT 691. — Research (total enrollment: 3)
  Summer
  ▷ STAT 685. — Directed Studies (total enrollment: 1)
  ▷ STAT 691. — Research (total enrollment: 6)
  Fall
  ▷ STAT 613. — Intermediate Theory of Statistics (total enrollment: 24)
  ▷ STAT 685. — Directed Studies (total enrollment: 2)
  ▷ STAT 689. — Special Topics in (total enrollment: 6)
  ▷ STAT 691. — Research (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▷ Collaborative Research: Statistical Learning and Object Oriented Data Analysis, National
    Science Foundation

• PRESENTATIONS DURING 2007
  ▷ International Biometric Society ENAR 2007 Spring Meeting, Atlanta, GA, 2007.( Invited)
  ▷ Department of Statistics, Oregon State University, Corvallis, OR, May, 2007.( Invited)

• PUBLICATIONS DURING 2007
  ▷ Huang, J.Z.; Liu, L.; Liu, N. (2007) Estimation of Large Covariance Matrices of Longitudi-
    ninal Data with Basis Function Approximations Journal of Computational and Graphical
MIKYOUNG JUN
ASSISTANT PROFESSOR (979) 845-3141
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- SERVICE DURING 2007
  National
  ▶ Committee/Panel: ASA/ENVR Student Award Committee (Member)

  Department
  ▶ Committee/Panel: Graduate Student Admissions Committee (Member)

- TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 71)
  ▶ STAT 685. — Directed Studies (total enrollment: 5)

- PRESENTATIONS DURING 2007
  ▶ Joint Statistical Meeting, Salt Lake City, UT, August, 2007. (Invited)
  ▶ Department of Management Science and Statistics, University of Texas, San Antonio, TX, October, 2007. (Invited)
  ▶ Department of Statistics, University of Wisconsin, Madison, WI, October, 2007. (Invited)

- PUBLICATIONS DURING 2007
SOUMENDRA N. LAHIRI

PROFESSOR
STAT-Resampling Methods; Spatial Statistics

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snlahiri@stat.tamu.edu

• SERVICE DURING 2007

National
▷ Committee/Panel: International Indian Statistical Association (Program Chair), Section on Nonparametric Statistics, American Statistical (Program Chair)

State
▷ Editorial/Board: Sankhya (Associate Editor), Sankhya, Series A (Editor), Statistical Methodology (Associate Editor)

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

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

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 614. — Probability for Statistics (total enrollment: 15)
▷ STAT 691. — Research (total enrollment: 1)

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

Fall
▷ STAT 620. — Statistical Large Sample Theory (total enrollment: 15)
▷ STAT 647. — Spatial Statistics (total enrollment: 8)
▷ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ (REN) Higher Order Accuracy of Bootstrap Methods for Temporal and Spatial Processes, National Science Foundation
▷ Higher Order Accuracy of Bootstrap Methods for Temporal and Spatial Processes, National Science Foundation
▷ Resampling Methods for Temporal and Spatial Processes and Their Higher Order Accuracy, National Science Foundation

• PRESENTATIONS DURING 2007

▷ “Choice of Tapers in the Tapered Block Bootstrap for Higher Order Accurate Distributional Approximations,” IISA Joint Statistical Societies Meeting, Kochi, India, January,
2007. (Invited)
▷ “Higher Order Properties of Block Bootstrap Confidence Intervals,” Joint Statistical Meetings of the ASA, ENAR/WNAR, IMS, SSC, Salt Lake City, UT, August, 2007. (Invited)

• PUBLICATIONS DURING 2007
• SERVICE DURING 2007

National

Department
▷ Committee/Panel: Grant Opportunities Committee, EEO Officer (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 644. — *Biostatistics II* (total enrollment: 8)

Fall
▷ STAT 211. — *Principles of Statistics I* (total enrollment: 110)
▷ STAT 685. — *Directed Studies* (total enrollment: 1)

• PRESENTATIONS DURING 2007

▷ “Division of General Internal Medicine/Welch Center for Prevention, Epidemiology & Clinical Research,” The Johns Hopkins University, Baltimore, MD, 2007.(Poster Invited)

• PUBLICATIONS DURING 2007

• SERVICE DURING 2007

National
▷ Committee/Panel: Bayesian Recruitment Committee (Member)

Department
▷ Committee/Panel: Qualifying Examination Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 408. — Introduction to Linear Models (total enrollment: 2)

Fall
▷ STAT 414. — Mathematical Statistics I (total enrollment: 30)
▷ STAT 610. — Theory of Statistics I (total enrollment: 57)
▷ STAT 685. — Directed Studies (total enrollment: 3)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Bayesian Models for Gene Expression with Microarray Data, National Institutes of Health
▷ A Contour Based Monte Carlo Algorithm with Applications to Computational Statistics and Bioinformatics, National Science Foundation
▷ (REN) Development of Stochastic Approximation Monte Carlo Methods, National Science Foundation

• PRESENTATIONS DURING 2007

▷ “Improving Stochastic Approximation Monte Carlo using Kernel Smoothing Method,” Joint Statistical Meetings, Salt Lake City, UT, 2007.( Contributed)
▷ “Evolutionary Stochastic Approximation Monte Carlo for Global Optimization,” The Third Cape Cod Workshop on Monte Carlo Methods, Harvard University, Cambridge, MA, May, 2007.( Invited)

• PUBLICATIONS DURING 2007


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Department Head, Statistics, [2005]/

• AWARDS DURING 2007
  National
  ▶ Alumni Achievement Award, College of Arts and Sciences at Western Michigan University

• SERVICE DURING 2007
  National
  ▶ Committee/Panel: American Statistical Association Academic Representative (Member)
  College
  ▶ Committee/Panel: College Quality Enhancement Plan Council (Member)
  Department
  ▶ Service Position: Assistantship Duties (Chairman), Departmental Consulting Service (Chairman), Internship Program (Coordinator), Teaching Assignments (Chair)
  ▶ Professional Affiliation: Statistics Graduate Program (Advisor)
  ▶ Committee/Panel: CTE Faculty Teaching Academy Committee (Member), Departmental Examinations Committee (Chair), Graduate Program Committee (Member), Graduate Service Committee (Member), Hartley Award Committee (Member), Methods Examination Committee (Chairman), Selection Committee for Presidential Professor for Teaching Excellence Awards (Member), SRPH Faculty Hiring Committee (Member), Undergraduate Service Committee (Member), University Professor for Undergraduate Teaching Selection Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ STAT 642. — The Methods of Statistics II (total enrollment: 46)
  ▶ STAT 684. — Professional Internship (total enrollment: 12)
  ▶ STAT 685. — Directed Studies (total enrollment: 2)
  ▶ STAT 691. — Research (total enrollment: 2)

Summer
  ▶ STAT 684. — Professional Internship (total enrollment: 18)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 691. — Research (total enrollment: 2)

Fall
> STAT 641. — **The Methods of Statistics I** (total enrollment: 66)
> STAT 684. — **Professional Internship** (total enrollment: 19)
> STAT 685. — **Directed Studies** (total enrollment: 2)

• **PRESENTATIONS DURING 2007**
  > “Some Insights on Teaching,” CTE Faculty Teaching Academy,, March, 2007. (Invited)
• SERVICE DURING 2007

National

Department
▷ Committee/Panel: Equal Opportunity Committee (Officer)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Measurement Error, Missing Data, and Semiparametrics, *National Cancer Institute*

• PUBLICATIONS DURING 2007


*On leave.*
BANI K. MALLICK

PROFESSOR (979) 845-1275
STAT-Bayesian Modeling bmallick@stat.tamu.edu

- ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▶ Director, Bayesian Bioinformatics Lab, //

- AWARDS DURING 2007
  International
  ▶ Young Researcher’s Award-Applied Statistics, International Indian Statistical Association

- SERVICE DURING 2007
  National
  ▶ Professional Affiliation: Southeast Texas Chapter (President)
  ▶ Editorial/Board: Biometrics (Associate Editor), Biostatistics (Associate Editor), Journal of Computational and Graphical Statistics (Associate Editor)
  Department
  ▶ Research Group: Bioinformatics Committee (Chair)
  ▶ Committee/Panel: Recruitment Committee (Member)

- TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 689. — Special Topics in (total enrollment: 6)
  ▶ STAT 691. — Research (total enrollment: 4)
  Summer
  ▶ STAT 685. — Directed Studies (total enrollment: 4)
  ▶ STAT 691. — Research (total enrollment: 5)
  Fall
  ▶ STAT 691. — Research (total enrollment: 3)

- RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Bayesian Models for Gene Expression with Microarray Data, National Institutes of Health
  ▶ (REN) Measurement Error, Nutrition and Breast/Colon Cancer, National Institutes of Health
  ▶ A Unified Framework for Statistical Modeling with Multivariate Skewed Distributions and Application to Spatial Selection Models, National Science Foundation
stalk

> CMG Research on Multiscale Spatial Models for Petroleum Mapping Using Static and Dynamic Data, *National Science Foundation*

> CMG Research: Statistical Analysis of Large Non-Gaussian Datasets in Climate Science, *National Science Foundation*

> Development of a High Density, High Performance Beowulf Cluster, *National Science Foundation*

> Multiscale data integration using facies based hierarchical Bayesian models, *National Science Foundation*

**PRESENTATIONS DURING 2007**

> “Bayesian Nonparametric Workshop,” Cambridge University, Cambridge, United Kingdom, 2007. (Invited)


**PUBLICATIONS DURING 2007**


PRESENTATIONS DURING 2007
- University of California, Davis, CA, January, 2007. (Invited)
- Department of Biostatistics, M.D. Anderson Cancer Center, Houston, TX, February, 2007. (Invited)
- Department of Biostatistics, Columbia University, Columbia, NY, March, 2007. (Invited)

PUBLICATIONS DURING 2007
  *Journal of the American Statistical Association*, vol. 102, 269-279.
• SERVICE DURING 2007
  
  International
  ▶ Committee/Panel: International Statistical Institute (Member)
  
  College
  ▶ Committee/Panel: Diversity Committee (Member)
  
  Department
  ▶ Event: Visits and Colloquium Talks (Host/Organizer)
  ▶ Committee/Panel: Graduate Student Qualifying Exam Committee (Member)
  
• TEACHING ASSIGNMENTS DURING 2007
  
  Spring
  ▶ STAT 651. — Statistics in Research I (total enrollment: 25)
  
  Fall
  ▶ STAT 610. — Theory of Statistics I (total enrollment: 26)
  
• PRESENTATIONS DURING 2007
  
• PUBLICATIONS DURING 2007
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 2007
▷ Dean, Main Office, [2002]

SERVICE DURING 2007
University
▷ Committee/Panel: Council on the Research Environment (Chair)
College
▷ Committee/Panel: Campus Community Campaign Committee (Member), Executive Committee (Chair)

TEACHING ASSIGNMENTS DURING 2007
Summer
▷ STAT 685. — Directed Studies (total enrollment: 2)

RESEARCH PROJECTS DURING 2007
Federal
▷ Center for the Application of Information Technology in the Teaching and Learning of Science, National Science Foundation
▷ Noyce Scholarship (Supplement to ITS Center Grant), National Science Foundation
▷ Supplement to the ITS Center, National Science Foundation
• TEACHING ASSIGNMENTS DURING 2007

Fall
▷ STAT 211.(H) — Principles of Statistics I (total enrollment: 21)
▷ STAT 671. — Methods of Statistical Data Modeling I (total enrollment: 3)

• PRESENTATIONS DURING 2007
▷ Stanford University, Statistics Department, Palo Alto, CA, March, 2007. (Invited)
▷ Joint Statistical Meetings Roundtable Leader, August, 2007. (Invited)
• SERVICE DURING 2007

  College
  ▷ Committee/Panel: Systems Administrators Committee (Chair)

  Department
  ▷ Committee/Panel: Computing Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ STAT 211. — Principles of Statistics I (total enrollment: 60)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Department Head, Statistics, [2005]

• SERVICE DURING 2007

National
  ▶ Editorial/Board: Computational Statistics and Data Analysis on Robust and Nonparametric Methods (Co-Editor), American Statistical Association (Referee: Journals)
  ▶ Committee/Panel: Southern Regional Council on Statistics (Member)

University
  ▶ Committee/Panel: International Faculty and Scholar Network (President), IPECC College Representative (Member)

College
  ▶ Committee/Panel: Executive Committee (Member)

Department
  ▶ Committee/Panel: Head Council (Member), State Employee Charitable Campaign (Representative)

• TEACHING ASSIGNMENTS DURING 2007

Spring
  ▶ STAT 608. — Least Squares and Regression Analysis (total enrollment: 39)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)

Summer
  ▶ STAT 685. — Directed Studies (total enrollment: 1)

Fall
  ▶ STAT 685. — Directed Studies (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
  ▶ Developing Prevalence Measures of Elder Abuse in Residential Long-Term Care Settings, Department of Health and Human Services
  ▶ Gene expression analysis of coding and non-coding RNAs in colon cancer prevention, Department of Health and Human Services
  ▶ Development of a Controlled Hemorrhage Model in Mature Male Miniature Pigs for Multi-Center Application and Trial of Novel Field-Expedient Treatment, National Institutes of Health
• PRESENTATIONS DURING 2007
  ⯢ “Genzyme,” San Antonio, TX, April, 2007. (Invited)
  ⯢ American Statistical Association-San Antonio Chapter, San Antonio, TX, April, 2007. (Invited)
  ⯢ Brigham Young University, Salt Lake City, UT, November, 2007. (Invited)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2007
  National
  Regional
  ▶ Professional Affiliation: Southeast Chapter of the American Statistical Association (President)
  College
  ▶ Committee/Panel: Grievance Committee (Elected Member)
  Department
  ▶ Committee/Panel: Awards Committee (Member), Tenure and Promotion Advisory Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 616. — *Multivariate Analysis* (total enrollment: 4)
  ▶ STAT 691. — *Research* (total enrollment: 1)
  Summer
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)
  ▶ STAT 691. — *Research* (total enrollment: 1)
  Fall
  ▶ STAT 685. — *Directed Studies* (total enrollment: 1)
  ▶ STAT 689. — *Special Topics in* (total enrollment: 14)
  ▶ STAT 691 — *Research* (total enrollment: 1)

• PRESENTATIONS DURING 2007
  ▶ “ASA Section on Nonparametric Statistics,” Joint Statistical Meeting, Salt Lake City, UT, August, 2007. (Invited)

• PUBLICATIONS DURING 2007


• **SERVICE DURING 2007**

  **National**
  ▶ Event: Epidemiology Section in the JSM 2008 (Organizer)

  **Department**
  ▶ Research Group: Bioinformatics Group and Departmental Examination Committee (Member)

• **TEACHING ASSIGNMENTS DURING 2007**

  **Spring**
  ▶ STAT 211. — *Principles of Statistics* I (total enrollment: 47)
  ▶ STAT 611. — *Theory of Statistics* II (total enrollment: 16)

  **Fall**
  ▶ STAT 211. — *Principles of Statistics* I (total enrollment: 109)

• **PRESENTATIONS DURING 2007**


  ▶ “Some Bayesian Approaches for Analyzing Case-Control Data,” Department of Mathematical Sciences, Central Connecticut State University, Britain, CT, November, 2007. (Invited)

• **PUBLICATIONS DURING 2007**


• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Associate Dean for Technology Mediated Instruction and Distance Education, Technology
  Office, [2006]

• SERVICE DURING 2007
  University
  ▶ Committee/Panel: Chancellor’s Century Committee (Member)

  College
  ▶ Committee/Panel: Executive Committee (Member), Information Technology Committee
  (Member), Qatar Advisory Committee (Member), Technology-Mediated Instruction Com-
  mittee (Chair)

  Department
  ▶ Service Position: On-Line Learning (Director)
  ▶ Committee/Panel: Curriculum Committee (Chair), Various Departmental Committees
  (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 652. — Statistics in Research II (total enrollment: 30)

  Summer
  ▶ STAT 685. — Directed Studies (total enrollment: 3)

  Fall
  ▶ STAT 653. — Statistics In Research III (total enrollment: 18)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)

• PRESENTATIONS DURING 2007
  ▶ Quintiles, Research Triangle Park, NC, 2007. (Invited)
  ▶ SAS, 2007. (Invited)
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Senior Research Scientist, Texas Transportation Institute, 2007
  ▶ Senior Res. Instrument Specialist, 2007

• AWARDS DURING 2007
  National
  ▶ Jerome Sacks Award, National Institute of Statistical Sciences

• SERVICE DURING 2007
  National
  ▶ Editorial/Board: Chemometrics and Intelligent Laboratory Systems (Editor), Journal of Environmetrics (Member), Journal of Proteome Research (Advisory Board), Journal of Transportation and Statistics (Member)
  ▶ Committee/Panel: National Institute of Statistical Sciences (Member), National Research Council Panel on Bullet Evidence (Member), The Institute for Studies in Science and the Law (Board of Directors), TRB (NAS) Committee on Transportation Statistics (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Summer
  ▶ STAT 691. — Research (total enrollment: 2)

• PRESENTATIONS DURING 2007
  ▶ University of South Carolina, Columbia, SC, March, 2007. (Invited)
  ▶ “JFK Bullet Talk,” Army Conference, Houston, TX, October, 2007. (Invited)
  ▶ “JFK Talk,” Johns Hopkins University, Baltimore, MD, October, 2007. (Invited)
  ▶ “JFK Talk,” Dallas Conference, Dallas, TX, November, 2007. (Invited)

• PUBLICATIONS DURING 2007


• SERVICE DURING 2007
  University
  ▶ Committee/Panel: Library Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 651. — Statistics in Research I (total enrollment: 14)

• PRESENTATIONS DURING 2007
  ▶ “Residual Based Bootstrap for tvARCH Processes,” 3rd-Lehmann Symposium, Houston, TX, May, 2007. (Invited)
  ▶ “Statistical Inference for Time-Varying ARCH Processes,” Research Seminar, University of Manchester, Manchester, United Kingdom, November, 2007. (Invited)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Undergraduate Advisor, Statistics, /2006/

• SERVICE DURING 2007
  University
  ▶ Committee/Panel: Faculty Senate (Faculty Senator - 04)
  Department
  ▶ Service Position: STAT 302 (Coordinator)
  ▶ Committee/Panel: Faculty Senate’s Academic Affairs Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 302. — Statistical Methods (total enrollment: 246)
  Fall
  ▶ STAT 302. — Statistical Methods (total enrollment: 242)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]

• SERVICE DURING 2007
  International
  ▶ Committee/Panel: International Society for Bayesian Analysis (Member), ISBA Savage Fund Trust Committee (Member)

  National
  ▶ Professional Affiliation: American Statistical Association, Section of Nonparametric Statistics (Treasurer)
  ▶ Event: Invited Session Bayesian Bioinformatics, Joint Statistical Meetings, Salt Lake City, UT (Organizer)
  ▶ Editorial/Board: National Science Foundation Statistics and Probability (Panelist), Bayesian Analysis (Associate Editor), Chemometrics and Intelligent Laboratory Systems (Associate Editor), Journal of American Statistical Association, Bioinformatics, Biometrika, Bayesian Analysis (Referee: Journals), Journal of the American Statistical Association (Associate Editor), National Institutes of Health Study Sessions (Reviewer), Technometrics (Associate Editor)
  ▶ Committee/Panel: IMS Travel Awards Committee (Member), Mitchell Price Committee (Member), Travel Award Committee, IMS (Member)

  Department
  ▶ Committee/Panel: Faculty Recruiting Committee (Member), Methods Qualifying Exam Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 212. — Principles of Statistics II (total enrollment: 30)
  ▶ STAT 685. — Directed Studies (total enrollment: 1)
  ▶ STAT 689. — Special Topics in (total enrollment: 11)
  ▶ STAT 691. — Research (total enrollment: 2)

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

  Fall
  ▶ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007
  Federal
Adaptive Methodology for Functional Biomedical Data, *National Institutes of Health*

Bayesian Methods for Genomics with Variable Selection, *National Institutes of Health*

Development of a High Density, High Performance Beowulf Cluster, *National Science Foundation*

Wavelet-Based Statistical Modeling and Applications, *National Science Foundation*

**PUBLICATIONS DURING 2007**


*On leave.*
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▷ Member, Interdisciplinary Faculty, Bioinformatics, [2006]
  ▷ Member, Interdisciplinary Faculty, Toxicology, [2006]

• SERVICE DURING 2007

  International
  ▷ Professional Affiliation: International Chinese Statistical Association (Board of Directors)
  ▷ Committee/Panel: International Biometrics Society Organizing Committee (Member),
    International Biometrics Society, ENAR (Member)

  National
  ▷ Editorial/Board: National Institutes of Health MBRD Study Section (Member), NIH
    Special Study Section on Assessment of Physical Activity and Nutritional Health Effects
    (Member), Biometrics (Editor), Statistical Science (Co-Editor)
  ▷ Committee/Panel: Biometrics Editor Selection Committee (Member)

  Department
  ▷ Committee/Panel: Award Selection Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▷ STAT 691. — Research (total enrollment: 2)

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

  Fall
  ▷ STAT 643. — Biostatistics I (total enrollment: 18)
  ▷ STAT 691. — Research (total enrollment: 2)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▷ Measurement Error, Missing Data, and Semiparametrics, National Cancer Institute
  ▷ (REN) Measurement Error, Missing Data, and Semiparametrics, National Institutes of
    Health
  ▷ Melanoma Detection by Oblique-Incidence Optical Spectroscopy, National Institutes of
    Health
  ▷ Non-invasive Optical Detection of Skin Cancer, National Institutes of Health
  ▷ Development of a High Density, High Performance Beowulf Cluster, National Science
    Foundation

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Industrial
▷ Non-Invasive Detection of Intestinal Gene Expression Profiles Using Exfoliated Cells: Development of Robust Classifiers for Nutritional, Mead Johnson & Company

• PRESENTATIONS DURING 2007
▷ “Modern Challenges of Curve Modeling,” Bristol, United Kingdom, 2007. (Invited)
▷ Biostatistics Department, Emory University, Atlanta, GA, 2007. (Invited)
▷ Biostatistics Department, Yale University, New Haven, CN, 2007. (Invited)
▷ Department of Biostatistics, Bioinformatics, and Epidemiology, Medical University of South Carolina, Columbia, SC, 2007. (Invited)
▷ Department of Statistics, University of Georgia, Athens, GA, 2007. (Invited)
▷ International Mixture Modeling Symposium, Dublin, Ireland, 2007. (Invited)
▷ Multiple Decision Process International Conference, Taipei, Taiwan, 2007. (Invited)
▷ The Third Erich L. Lehmann Symposium, 2007. (Invited)

• PUBLICATIONS DURING 2007
• ADDITIONAL UNIVERSITY TITLES HELD DURING 2007
  ▶ Member, Interdisciplinary Faculty, Bioinformatics, [2006]

• SERVICE DURING 2007
  National
  ▶ Professional Affiliation: International Chinese Statistical Association (Board of Directors)
  ▶ Editorial/Board: Grant Proposals, External Tenure and Promotion Cases (Reviewed), National Science Foundation (Review Panel), *Journal of Nonparametric Statistics* (Executive Editor), *Various Articles for Journals* (Referee: Journals)

  State
  ▶ Editorial/Board: *InterStat* (Editor), *Journal of Nonparametric Statistics* (Associate Editor)

  University
  ▶ Professional Affiliation: Faculty Fellow (Fellow)

  Department
  ▶ Editorial/Board: Biostatistics and Bioinformatics Facilities Core of CERH (Co-Director)
  ▶ Committee/Panel: Awards Committee (Chair), College of Science Strategic Planning Committee (Member), Graduate Student Qualifying Exams Committee (Member), Graduate Student Recruiting (Member), Parzen Prize Committee (Chair)

• TEACHING ASSIGNMENTS DURING 2007
  Spring
  ▶ STAT 212. — *Principles of Statistics II* (total enrollment: 53)
  ▶ STAT 685. — *Directed Studies* (total enrollment: 3)
  ▶ STAT 691. — *Research* (total enrollment: 2)

  Summer
  ▶ STAT 685. — *Directed Studies* (total enrollment: 4)
  ▶ STAT 691. — *Research* (total enrollment: 2)

  Fall
  ▶ STAT 607. — *Sampling* (total enrollment: 12)

• RESEARCH PROJECTS DURING 2007
  Federal
  ▶ Health Maintenance Consortium Resource Center Grant, *National Institutes of Health*
  ▶ The Program for Rural and Minority Health Disparity Research, *National Institutes of Health*
Development of a High Density, High Performance Beowulf Cluster, National Science Foundation

**PRESENTATIONS DURING 2007**

- Lecture at the Advanced Placement Teacher’s Workshop in Statistics, College Station, TX, 2007. (Invited)
- Presentation at the Annual Meetings of the Statistical Society of Canada, St. John’s, Canada, 2007. (Invited)
- Seminar presentation at University of Texas, Dallas, TX, 2007. (Invited)
- Seminar presentation at Zhejiang University, China, 2007. (Invited)

**PUBLICATIONS DURING 2007**

• SERVICE DURING 2007

National
▷ Editorial/Board: *Statistics and Probability Letters* (Associate Editor), *Various Journals* (Referee)
▷ Committee/Panel: Search Committee for the Editor of JASA Reviews (Member)

University
▷ Committee/Panel: Kappa Chapter of Phi Beta Kappa (Treasurer), University Athletic Council (Chair)

College
▷ Committee/Panel: College Quality Enhancement Plan Council (Member), Research Advisory Committee (Member), Undergraduate Curriculum Committee (Member)

Department

• TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 485. — Directed Studies (total enrollment: 1)
▷ STAT 601. — Statistical Analysis (total enrollment: 34)
▷ STAT 659. — Applied Categorical Data Analysis (total enrollment: 24)
▷ STAT 691. — Research (total enrollment: 1)

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

Fall
▷ STAT 601. — Statistical Analysis (total enrollment: 56)
▷ STAT 630 — Overview of Mathematical Statistics (total enrollment: 71)
▷ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

Federal
▷ Integrated Undergraduate Research Experiences in Biological and Mathematical Sciences, *National Science Foundation*
• SERVICE DURING 2007

National
  ▶ Committee/Panel: ENAR Technology Oversight Committee (Member)

Department
  ▶ Committee/Panel: Awards Committee (Member), Curriculum Committee (Member), Hiring Committee (Member), Homeland Security Interim Steering Committee (Member), Promotion and Tenure Committee (Member), Technology Committee (Member)

• TEACHING ASSIGNMENTS DURING 2007

  Spring
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 36)

  Fall
  ▶ STAT 211. — Principles of Statistics I (total enrollment: 79)
  ▶ STAT 691. — Research (total enrollment: 1)

• RESEARCH PROJECTS DURING 2007

  Federal
  ▶ Low Dose Risk Bounds via Simultaneous Confidence Bands, National Institutes of Health

• PRESENTATIONS DURING 2007


• PUBLICATIONS DURING 2007

TEACHING ASSIGNMENTS DURING 2007

Spring
▷ STAT 302. — Statistical Methods (total enrollment: 235)

Fall
▷ STAT 302. — Statistical Methods (total enrollment: 242)
7. Research Activity, 2007

This section contains information on all funded research activity for the calendar year 2007. 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 2007 = # Days 2007 × Daily Grant Award
### 7.1 Summary of Research Support, 2007

<table>
<thead>
<tr>
<th>Grantee</th>
<th>Title</th>
<th>Start</th>
<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<td><strong>Federal Agencies</strong></td>
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<tr>
<td><strong>Department of Health and Human Services</strong></td>
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<tr>
<td>Sheather, S.J. Developing Prevalence Measures of Elder Abuse in Residential Long-Term Care Settings</td>
<td>9/15/2007</td>
<td>6/30/2009</td>
<td>15,163</td>
<td>2,512</td>
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<td><strong>Subtotal: Department of Health and Human Services</strong></td>
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<td>33,331</td>
<td>10,301</td>
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<td><strong>National Aeronautics and Space Administration</strong></td>
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<tr>
<td>Carroll, R.J. Nutritional Countermeasures to Radiation Exposure</td>
<td>10/1/2007</td>
<td>9/30/2008</td>
<td>58,667</td>
<td>0</td>
<td>58,667</td>
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<td><strong>Subtotal: National Aeronautics and Space Administration</strong></td>
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<td>116,579</td>
<td>44,835</td>
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<td><strong>National Cancer Institute</strong></td>
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<td><strong>Subtotal: National Cancer Institute</strong></td>
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<td>56,495</td>
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<td><strong>National Institute for Environmental Health Sciences</strong></td>
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<td><strong>Subtotal: National Institute for Environmental Health Sciences</strong></td>
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<td>16,731</td>
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<td><strong>National Institutes of Health</strong></td>
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<tr>
<td>Carroll, R.J. Bayesian Models for Gene Expression with Microarray Data, (with: R. Carroll, F. Liang, B. Mallick)</td>
<td>6/1/2006</td>
<td>5/31/2009</td>
<td>10,867</td>
<td>4,853</td>
<td>15,520</td>
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2007 Statistics annual report
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<tr>
<th>Grantee</th>
<th>Title</th>
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<th>End</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
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<tbody>
<tr>
<td>Carroll, R.J.</td>
<td>(REN) Nutrition, Biostatistics, and Bioinformatics</td>
<td>7/1/2006</td>
<td>6/30/2011</td>
<td>460,000</td>
<td>40,000</td>
<td>500,000</td>
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<tr>
<td>Genton, M.</td>
<td>Statistical Methods for AIDS Clinical Trials</td>
<td>9/1/2003</td>
<td>8/31/2008</td>
<td>97,036</td>
<td>0</td>
<td>97,036</td>
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<tr>
<td>Sheather, S.J.</td>
<td>Development of a Controlled Hemorrhage Model in Mature Male Miniature Pigs for Multi-Center Application and Trial of Novel Field-Expeditient Treatment</td>
<td>9/1/2007</td>
<td>8/31/2008</td>
<td>177,121</td>
<td>0</td>
<td>177,121</td>
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<tr>
<td>Wang, N.</td>
<td>Melanoma Detection by Oblique-Incidence Optical Spectroscopy</td>
<td>4/1/2004</td>
<td>3/31/2009</td>
<td>344,979</td>
<td>97,000</td>
<td>441,979</td>
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<td>Wang, N.</td>
<td>Non-invasive Optical Detection of Skin Cancer</td>
<td>4/1/2004</td>
<td>3/31/2009</td>
<td>360,000</td>
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<td>Wang, S.</td>
<td>The Program for Rural and Minority Health Disparity Research</td>
<td>10/1/2007</td>
<td>5/31/2012</td>
<td>160,211</td>
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<td>West, W.</td>
<td>Low Dose Risk Bounds via Simultaneous Confidence Bands</td>
<td>2/27/2007</td>
<td>6/30/2008</td>
<td>20,404</td>
<td>9,284</td>
<td>29,688</td>
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- **Subtotal**: National Institutes of Health
  2,048,985  290,603  2,339,589

- **National Science Foundation**

SEC. 7. RESEARCH ACTIVITY 875
<table>
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<tr>
<th>Grantee</th>
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<tr>
<td>Hart, J.D.</td>
<td>Cluster-Based Bootstrapping in Multiple Hypothesis Testing</td>
<td>6/1/2006</td>
<td>5/31/2009</td>
<td>22,740</td>
<td>9,593</td>
<td>32,333</td>
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<td>Huang, J.</td>
<td>Collaborative Research: Statistical Learning and Object Oriented Data Analysis</td>
<td>6/1/2006</td>
<td>5/31/2009</td>
<td>23,236</td>
<td>9,819</td>
<td>33,055</td>
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<tr>
<td>Grantee</td>
<td>Title</td>
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<tr>
<td>Liang, F.</td>
<td>A Contour Based Monte Carlo Algorithm with Applications to Computational Statistics and Bioinformatics</td>
<td>9/1/2004</td>
<td>8/31/2007</td>
<td>19,909</td>
<td>0</td>
<td>19,909</td>
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<tr>
<td>Mallick, B.K.</td>
<td>Multiscale data integration using facies based hierarchical Bayesian models</td>
<td>9/1/2007</td>
<td>8/31/2010</td>
<td>53,822</td>
<td>20,215</td>
<td>74,037</td>
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<td>Newton, H.</td>
<td>Noyce Scholarship (Supplement to ITS Center Grant), (with: R. Ewing, H. Newton, J. Schielack)</td>
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*Subtotal: National Science Foundation*  
738,676  
99,964  
838,640

*Subtotal: Federal Agencies*  
3,010,797  
489,892  
3,500,690

---

**Industrial/Corporate Agencies**

878  
*2007 Statistics annual report*
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<td>10/1/2007</td>
<td>9/30/2008</td>
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* **Subtotal: Head Johnson & Company**
  9,330 1,866 11,196

** Subtotal: Industrial/Corporate Agencies
  9,330 1,866 11,196

---

**Private/Non-Profit Agencies**

**Baylor College of Medicine**

| Carroll, R.J. | Nutritional Countermeasures to Radiation-Enhanced Colon Cancer        | 10/1/2007 | 9/30/2008 | 5,256  | 2,391    | 7,647  |

* **Subtotal: Baylor College of Medicine**
  5,256 2,391 7,647

* **Subtotal: Private/Non-Profit Agencies**
  5,256 2,391 7,647

*** Total: All Grantees
  3,025,383 491,150 3,519,533
# 7.2 Summary of Individual Support, 2007

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<td>6/30/2011</td>
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**Calvin, J.A.**

**Subtotal Calvin, J.A.**

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**Carroll, R.J.**

**Subtotal Carroll, R.J.**

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<td>9/30/2007</td>
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880  2007 Statistics Annual Report
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SEC. 7. RESEARCH ACTIVITY 881
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• Subtotal Hart, J.D. | 24,777 | 9,593 | 34,370 |

• Subtotal Huang, J. | 23,236 | 9,819 | 33,055 |

• Subtotal Lahiri, S.K. | 85,449 | 8,932 | 94,381 |

• Liang, F. |
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SEC. 7. RESEARCH ACTIVITY
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<td>National Science</td>
<td>Wavelet-Based Statistical Modeling and Applications</td>
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* Subtotal Vanucci, N. 176,119 54,600 230,719

* Wang, Y. *
| National Institutes of Health | Melanoma Detection by Oblique-Incidence Optical Spectroscopy | 4/1/2004    | 3/31/2009   | 344,979 | 97,000   | 441,979 |
| National Institutes of Health | Non-invasive Optical Detection of Skin Cancer | 4/1/2004    | 3/31/2009   | 360,000 | 0        | 360,000 |

* Subtotal Wang, Y. 775,135 126,954 902,089

* Wang, S. *
| National Institutes of Health | Health Maintenance Consortium Resource Center Grant | 1/1/2004    | 12/31/2009 | 44,424 | 0        | 44,424 |

SEC. 7. RESEARCH ACTIVITY 885
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