



COLLEGE OF SCIENCE

E-NEWSLETTER

Fall 2008

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FROM THE DEAN

We are at the beginning of another academic year and wanted to update you on some of the recent happenings in the College of Science. We are delighted to be joined by 15 new faculty members. We welcome them into our college and look forward to many productive years. Our faculty members continue to receive significant grant funding and produce influential research, and they have hosted some important conferences. It is clear that our national reputation has increased significantly and will continue to rise as our new faculty members begin to have an impact. Site preparations have begun for the new Research Building that will provide research, office, and teaching space for both the Colleges of Engineering and Science. The groundbreaking activities will take place on September 26, beginning at 4:30 pm. We will host our annual College of Science Research Day on Friday afternoon, October 3. We will be showcasing our major research activities on posters. The research day is designed to enhance collaborative research activities in the college and to promote our research to potential industrial partners. Representative Joe Barton, a strong supporter of the research programs in science and engineering, will be our keynote speaker. It promises to be another exciting year for the College!

The first section of the newsletter contains information on our new faculty. The link "Read More" takes you to a document that provides a bit more information about their background and interests. We hope you will take the time to learn about our new faculty and will make them feel welcome.

Best wishes for a great semester.

Paul Paulus



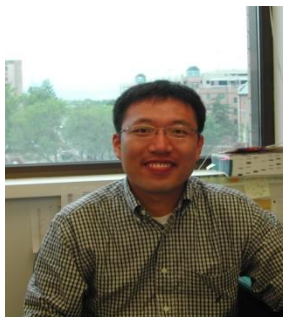
COLLEGE OF SCIENCE

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New Faculty



Woo-Suk Chang Assistant Professor Biology

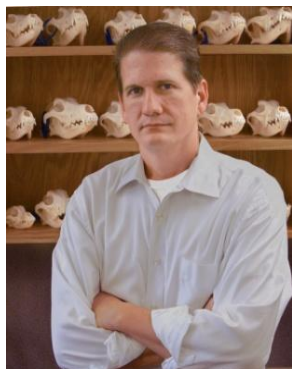
Highest Earned Degree, Institution Conferring: PhD, Iowa State University

Specialization: microbial genomics and molecular microbiology

Experience – Institution(s) and/or Employer(s): Postdoctoral Research Associate, University of Missouri-Columbia

Dr. Chang is a microbiologist interested in microbial genomics and molecular microbiology.

[Read More](#)



John (Trey) W. Fondon III Assistant Professor Biology

Highest Earned Degree, Institution Conferring: PhD, UT Southwestern Medical Center

Specialization: molecular origins of genomic plasticity and the mutational basis of rapid responses to selection

Experience – Institution(s) and/or Employer(s): Sara and Frank McKnight Fellow of Biochemistry and Postdoctoral Fellow, UT Southwestern Medical Center

I utilize the extreme morphological variation among breeds of dogs and other domestic animals and their wild relatives as part of my research into the mutational mechanisms of rapid responses to selection. [Read More](#)



Roshan Perera Assistant Professor Chemistry and Biochemistry

Highest Earned Degree, Institution Conferring: PhD, University of South Carolina-Columbia

Specialization: biochemistry

Experience – Institution(s) and/or Employer(s): Postdoctoral Research Associate, The Scripps Research Institute; Postdoctoral Research Associate, University of South Carolina-Columbia

His research is focused on understanding role of metalloenzymes in cell structure, function and disease pathogenesis. [Read More](#)



Brad S. Pierce Assistant Professor Chemistry and Biochemistry

Highest Earned Degree, Institution Conferring: PhD, Carnegie Mellon University

Specialization: bioinorganic chemistry

Experience – Institution(s) and/or Employer(s): NIH Postdoctoral Fellow, University of Wisconsin-Madison

His research utilizes a variety of spectroscopic techniques including dual-mode electron paramagnetic resonance (EPR) and stopped-flow UV-visible spectroscopy to probe mechanistic and kinetic aspects of metalloenzymology. [Read More](#)



Frank W. Foss Jr. Assistant Professor Chemistry and Biochemistry

Highest Earned Degree, Institution Conferring: PhD, University of Virginia-Charlottesville

Specialization: organic and bioorganic chemistry

Experience – Institution(s) and/or Employer(s): Post Doctoral Research Scientist, Columbia University-New York

His new laboratory will investigate the function of enzymes through molecular design and synthesis (employing both rational and computational approaches). [Read More](#)



Qinhong (Max) Hu Assistant Professor Earth and Environmental Science

Highest Earned Degree, Institution Conferring: PhD, University of Arizona

Specialization: contaminant hydrogeology

Experience – Institution(s) and/or Employer(s): Adjunct professor, Beijing Normal University; Staff Scientist, Lawrence Livermore National Laboratory; Postdoctoral Fellow Geological Scientist, Lawrence Berkeley National Laboratory; Assistant Research Scientist, the University of Arizona

He is particularly interested in the coupled hydrogeologic, chemical, and biological processes for the sustainable management of the environment, energy, and water resources. [Read More](#)



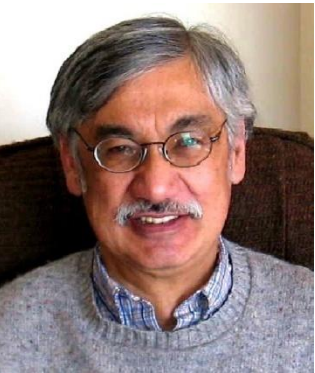
Harry D. Rowe Assistant Professor Earth and Environmental Science

Highest Earned Degree, Institution Conferring: PhD, Stanford

Specialization: geochemistry

Experience – Institution(s) and/or Employer(s): Assistant Professor, University of Kentucky 2002-2008; Visiting Assistant Professor, University of Illinois-Chicago 2001-2002

He works in both modern and ancient geologic environments, with current emphases in caves and in black shale depositional environments. [Read More](#)



Benito Chen-Charpentier Professor Mathematics

Highest Earned Degree, Institution Conferring: PhD, California Institute of Technology

Specialization: applied and computational mathematics

Experience – Institution(s) and/or Employer(s): Professor, Head, Department of Mathematics; Director, Institute of Scientific Computing; Affiliate Faculty, Science and Mathematics Teaching Center; University of Wyoming-Laramie

Visiting Scholar, Stanford University Visiting Professor; Universidad Autonoma Metropolitana; Azcapotzalco D.F. Visiting Associate, California Institute of Technology

His current research is the use of bacteria for bioremediation of contaminated aquifers.

[Read More](#)



Dr. Dimitar Grantcharov Assistant Professor Mathematics

Highest Earned Degree, Institution Conferring: PhD, University of California-Riverside

Specialization: Lie algebras

Experience – Institution(s) and/or Employer(s): Assistant Professor, San Jose State University; Visiting Scientist, Weizmann Institute, Israel Pacific Institute for the Mathematical Sciences; Postdoctoral Fellow, University of Alberta

Dr. Grantcharov is interested in representations of Lie algebras and superalgebras naturally arising from problems in the Quantum Field Theory. [Read More](#)



Dr. Stephen Pankavich Assistant Professor Mathematics

Highest Earned Degree, Institution Conferring: PhD, Carnegie Mellon University

Specialization: partial differential equations

Experience – Institution(s) and/or Employer(s): Zorn Postdoctoral Fellow, Indiana University

Dr. Pankavich is an applied mathematician interested in developing analytic and computational methods to study physical phenomena, specifically in the fields of plasma dynamics and virology.

[Read More](#)



Dr. Madan L. Puri Visiting Professor Mathematics

Highest Earned Degree, Institution Conferring:

PhD, University of California-Berkeley; D.Sc., Punjab University (India)

Specialization: nonparametric statistics

Experience – Institution(s) and/or Employer(s): Professor, Indiana University-Bloomington; College of Arts and Sciences Distinguished Research Scholar, Indiana University-Bloomington; Distinguished Visiting Scholar, Institute for Advanced Study, Indiana University

Dr. Puri is a statistician with a research focus on nonparametric statistics. He is a world renowned scholar with over 230 publications and 13 books. [Read More](#)

Shannon A. Scielzo Assistant Professor Psychology

Highest Earned Degree, Institution Conferring: PhD, University of Central Florida-Orlando

Dr. Scielzo is an Industrial/Organizational Psychologist, who graduated from the University of Central Florida (UCF). Prior to completion of the doctoral degree, she worked at the Institute for Simulation and Training at UCF, and also the Team Training and Workforce Development Lab.

She is joining the Department of Psychology, and plans on starting an academic mentoring program, along with continuing her research examining training, technological applications, and teams. [Read More](#)

Scott L. Coleman Lecturer Psychology

Highest Earned Degree, Institution Conferring: PhD, University of Texas at Arlington

Specialization: animal behavior

Experience – Institution(s) and/or Employer(s): Postdoctoral Research Fellow, University of North Texas Health Science Center

His diverse interests include animal cognition, neural network modeling of animal decision making, animal models of psychostimulant drug sensitization, and applied animal behavior.

[Read More](#)

Nicolette Lopez Lecturer Psychology

Highest Earned Degree, Institution Conferring: PhD, University of North Texas

Specialization: industrial and organizational psychology

Experience – Institution(s) and/or Employer(s): Lecturer, University of Texas at Arlington

Dr. Lopez has worked as an independent consultant performing job analyses for several businesses in the DFW area. [Read More](#)

Pablo Mora Visiting Assistant Professor Psychology

Highest Earned Degree, Institution Conferring: PhD, Rutgers University

Specialization: cognitive and health psychology

Experience – Institution(s) and/or Employer(s): Research Associate, The Institute of Health, Rutgers University Adjunct Professor, Pontificia Universidad Catolica de Chile, Santiago

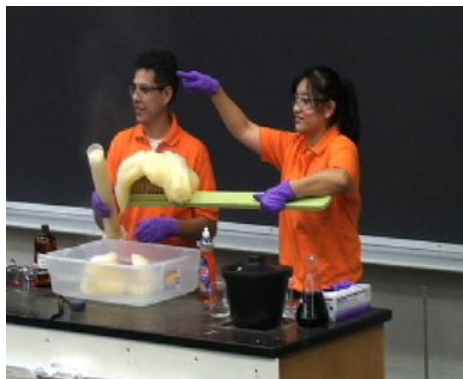
Dr. Mora's research focuses on the relationship of illness cognitions and illness-specific affective responses to illness behavior and illness self-management. [Read More](#)

Retiree Luncheon

A rainy day in May did not keep 48 friends and colleagues of days past from having a good time reminiscing at the College of Science Retirees dinner at the Carlisle Suite in the University Center. The College of Science Dean, Paul Paulus, and his staff, encouraged by Shelly Frank, COS Development Director, arranged the dinner as a means “to keep the retirees connected to UTA.” After all, our retirees have made it possible for us to be here today. Bill Baker for whom the Baker Chemistry Research Building was named was present, and Stella Mae Scharf (Carl W. Scharf Scholarship; Physics) and Wanda Pyburn (William F. Pyburn Scholarship; Biology) enjoyed the fellowship of their spouse’s colleagues. Both scholarships continue to support many deserving students. Dr. Wickham, current chair of Earth and Environmental Sciences, hosted former administrative assistant Wanda Slagle and reiterated his appreciation for the initiation of the Wanda Slagle Endowed Scholarship which has provided deserving students support for geology field trips for several years. Many former faculty and staff, who attended, as well as a number who could not come due to other commitments, expressed interest in another gathering of this sort in the near future. The COS plans to host a similar event in November 2008.



Science Ambassadors



The UT Arlington Science Ambassadors are a group of advanced undergraduate science majors who present free science shows to school groups visiting the UTA campus. The typical show lasts around 45 minutes and has 10-12 science demonstrations. The program was started last October with support from the ExxonMobil Foundation and the College of Science. From October 2007 through July 2008, UT Arlington Science Ambassadors performed 95 science shows for over 7000 students from elementary, middle, and high schools in the DFW area. Around three-quarters of the shows were for elementary school children. One show was even performed in Spanish for students in Fort Worth ISD’s College and Me program. [Read More](#)

Planetarium receives NASA Landing Gear

The Planetarium at UT Arlington has been selected as one of the recipients for the loan of a space shuttle main landing gear tire under the new artifact loan program at NASA. The loan term is for three years, and the tire will be displayed in the Chemistry and Physics Building (CPB), in the Atrium area near the Planetarium. NASA will also provide information regarding the mission from which that tire was used.

The UT Arlington Planetarium developed the show, "Cosmic CSI," in 2007 with the support of NASA. Currently, another two NASA-funded shows, "SOFIA – the Unseen Universe," and "Magnificent Sun" are under development. Federal grants are awarded for the shows to Dr. Manfred Cuntz, Associate Professor of Physics Department and the Co-Director of Astronomy.

ExxonMobil Bernard Harris Summer Science Camp



Dr. Greg Hale, Assistant Dean of Science was awarded a grant in December to host an ExxonMobil Bernard Harris Summer Science Camp this summer. Dr. Ann Cavallo of the UT Arlington College of Education was brought in to be the camp's academic director and Ms. Lia Turk, formerly with the College of Science's Science Learning Center and currently a middle school teacher, was brought in fill the role of program director. A expert staff of instructors and counselors was hired during the spring and early summer, and the camp was successfully run from July 13 to 25. The free residential camp hosted 48 middle school students selected from over 200 applicants from throughout the DFW metroplex. [Read More](#)

College of Science Geology Alumni Mixers



This summer over sixty Earth and Environmental Science alumni gathered in Fort Worth and in Addison to reunite with former faculty members and hear about the current program. EES Department Chair Dr. John Wickham encourages anyone who would like to be a part of the host committee for the next event to contact him at Wickham@uta.edu or (817) 272-2987.

UTA , Korean University launch graduate program

The University of Texas at Arlington Department of Physics has established a joint graduate degree program with the physics department of Changwon National University (CNU) in Korea. Students in this program will complete coursework and research in both Korea and UT Arlington and will receive master's degrees or doctorates from both institutions. The impetus for the joint program arose from a visit to Changwon by Dr. Jaehoon Yu, an associate professor of physics, and department chair Dr. James Horwitz in November 2007. Yu and Horwitz held several discussions with CNU faculty and administrators, including President Seong-Ho Park, on how such a joint program might be structured. During the next several months extensive discussions and documentation were developed involving faculty and administrators at both institutions, including Dr. Philip Cohen, Dean of the UT Arlington Graduate School, to establish agreements signed by Presidents James Spaniolo and Seong-Ho Park. See the [press release](#) for more details.



In Memoriam



Dr. Jia Li, a longtime member of the UT Arlington High Energy Physics group, and his wife Yun Qian were killed in an automobile accident on June 16, 2008. They will be missed greatly by our College of Science family.

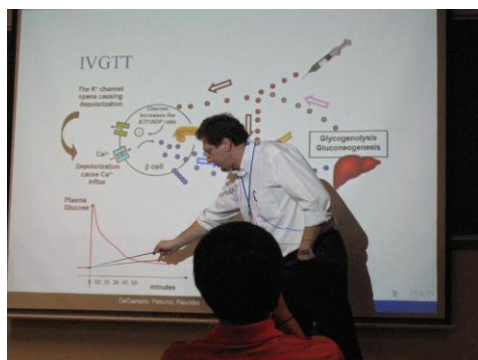
Recent Conferences

7th AIMS Math Conference

The Department of Mathematics at UT Arlington hosted the 7th AIMS Conference on Dynamical Systems and Differential Equations from May 18 to May 21, 2008. This is one of the largest international mathematics conferences ever hosted by a university in north Texas.

The four-day conference attracted 700 participants from more than 70 countries across all continents except the Antarctic. There were 9 plenary lectures and over 700 invited and contributed presentations at the conference, covering a broad range of topics in mathematics and their applications in various areas such as biology, medicine, and materials sciences. Sponsors of the conference include the American Institute of Mathematical Sciences (AIMS), the National Science Foundation, the University of Texas at Arlington, and the University of North Carolina at Wilmington.

The conference was a huge success. Initial feedback from conference participants indicate this was the best-organized conference in the AIMS conference series. The local organizing team led by Dr. Jianzhong Su put in a tremendous amount of effort to ensure the success of the conference. Many faculty, staff, graduate and undergraduate students contributed to the organization of this conference.



Math NSF CBMS Research Conference

The Department of Mathematics at UT Arlington hosted an NSF CBMS Conference on Radar Imaging from May 27 to May 31, 2008. The conference was supported by an NSF grant. Over 40 faculty and students participated in the five-day conference. The main conference organizer was Dr. Tuncay Aktosun. The conference provided participants with ample opportunities to discuss and exchange the latest research progress and new ideas in the field of inverse scattering for radar imaging.

College of Science Highlights

Faculty Highlights

- Ellen Pritham and Cedric Feschotte article featured on the cover of Genome Research <http://www.genome.org/content/vol18/issue5/cover.shtml>
- Esther Betran work on retrogenes highlighted in the New York Times <http://judson.blogs.nytimes.com/2008/05/06/when-genes-go-retro/>
- Sandy Dasgupta receives FIA Honor Award for Science by Japanese Association for Flow Injection Analysis.
- Dr. Krishnan Rajeshwar's new book explores alternative energy sources. [Read More](#)

Student Highlight



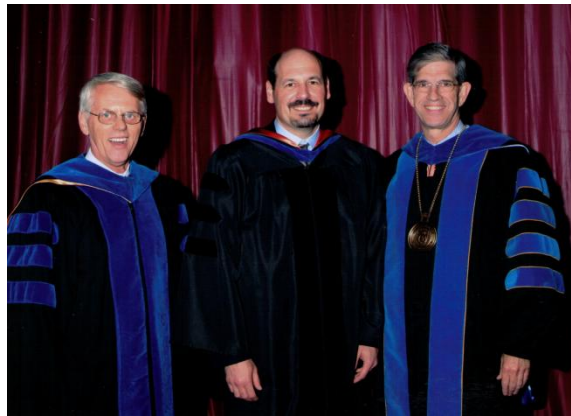
When **Nathalie Tacconi** agreed to represent the College of Science by addressing her graduating class at the campus-wide Graduation Celebration on May 9th, she didn't realize she would share the podium with CBS News icon Bob Schieffer. Her selection as the College of Science student speaker came as a surprise to her, but not to those who have followed her accomplishments during her years at UT Arlington. Tacconi was a member of the Honors College, and earned a BS in Biology with an emphasis in Genomics this spring. She also completed the requirements for a BS in Computer Science Engineering in August. Following her graduation, Tacconi married fellow graduate Chris Aholt, who received his BS in Mathematics. This fall, Aholt will pursue a Ph.D. in Mathematics at the University of Washington, while Tacconi takes what she describes as a "big jump" into the world of industry, where she plans to gain experience before returning to academia for a graduate degree. If her success at UT Arlington is any indication, she will continue to be a "Maverick" throughout her career. [Read More](#)

College of Science Highlights

Alumni Highlight

Keith Crandell, who earned a Master of Science in Chemistry at UT Arlington in 1987, was the Commencement Speaker for the May 2008 graduation. Mr. Crandell is the Co-founder and Managing Director of ARCH Venture Partners, one of the largest providers of seed capital in the United States with approximately \$1.5 billion under management . He passed on the following words of wisdom to our graduates:

1. Look for big ideas. Apply for jobs at places that Venture Capital firms are financing.
2. Judgment is a virtue. Surround yourself with great people. It is the best insurance for success that you can buy.
3. Search for people you do your best with--those with complementary skills. The social expectations of your peer group drives your success.
4. Develop your ability to learn rapidly.
5. Working hard is a virtue. Eighty percent of what you try as a grown-up won't work. Learn how to make mid-course corrections.



Recent Grants

Name	Title	Sponsor	Amount
Robert Gatchel	Temporomandibular Joint Disorders	National Institute of Health	\$4,100,000
Jorge Rodrigues	Amazon Rainforest Microbial Observatory: Functional Diversity, Taxonomic Diversity, and Response to Ecosystem Conversion	NSF/USDA	\$800,000
H. Kojouharov, J. Grover, D.L. Hawkins, C. Kribs Zaleta and L. Mydlarz	Undergraduate Training in Theoretical Ecology Research (UTTER)	NSF	\$780,946
Sandy Dasgupta, X. Guan, S. Mandel, K. Schug	Metals in Environmental and Biological Systems. A Rational Approach to Sample Pretreatment and Analysis	NSF	\$500,000
J. Zhu, T. Aktosun, R. Gornet, T. Jorgensen, and H. Kojouharov	Scholarships for undergraduate to reach goals in education (SURGE)	NSF	\$483,000
Jeff Demuth	Haldane's rule in plants? A test using Silence species both with and without sex chromosomes	NSF	\$356,000
Richard Timmons, Carl Lovely and John Schetz	A " green chemistry" approach for developing environment-friendly, non-release, tethered - antifoulant polymer coatings	ONR	\$300,000
R. Li	Marching over poles: Innovative ways to solve matrix differential Riccati equations	NSF	\$262,256
Christopher Kribs Zaleta	Cross-immunity and geographical invasion in the transmission of Trypanosoma cruzi	ARP	\$150,000
Ann Cavallo and Greg Hale	Math and Science Teacher Scholarship Program	Greater Texas Foundation	\$150,000
Wei Chen	Nanoparticle Self-Lighting Photodynamic Therapy for Breast Cancer Treatment	DOD Cancer Program	\$109,155
Robert Gatchel	The CMAP Protocol	Medical Technologies Unlimited Research Grant	\$70,560
Tuncay Aktosun	Inverse Scattering and Spectral Problems in Human Speech	ARP	\$53,570
Carl Franklin	Assessing Texas Freshwater Turtles	TPWD	\$45,000
Ramon Lopez	Solar Wind Variations Associated with Geo-Effectiveness of Geomagnetic Storms	NASA	\$30,000
Roger Mellgren	NextGen	FAA and Texas Tech University	\$6,750