

wise

Women in Science and Engineering
Scientists Making a Difference

Conference
April 12-13, 2012

TEXAS  STATE
UNIVERSITY

The rising STAR of Texas

A member of The Texas State University System

Welcome



Welcome to the 2012 Women in Science and Engineering (WISE) Conference at Texas State University. With a primary focus on women's accomplishments in science and engineering, WISE is an exciting forum for sharing Science, Technology, Engineering and Math (STEM) research and education at our university. Texas State is home to an outstanding array of women scientists investigating such diverse fields as understanding the role of pre-mRNA splicing in gene expression, evaluating sustainable textiles and product development, and examining the effects of stress on electrical indices of brain activity, just to name a few.

Inspiring women to pursue careers in science and engineering is of central importance to global problem solving and scientific progress. This conference provides an opportunity for students, faculty, and alumni to see the rich science and engineering resources right here on campus. Of particular importance for students, the conference can help you discover whether a potential field of concentration is right for you. The variety of topics and presenters will inspire you, help you refine your research skills, and introduce new ideas and career paths from highly accomplished women in STEM.

Texas State University is proud to be educating future scientists and engineers. Best wishes for a highly rewarding and successful conference.

Dr. Denise M. Trauth
President, Texas State University

Welcome



It's my pleasure to welcome you to the 2012 WISE Conference at Texas State University. WISE is a showcase for presenting the accomplishments of Texas State women in Science, Technology, Engineering and Math (STEM). At the same time, the conference is a place for women who are considering careers in STEM disciplines to come for support and career advice. The organizers have put together an exciting program. In addition to attending presentations and panels, I hope that you will take time to look at the student research posters and speak with our students. I'm looking forward to speaking with many of you at the conference.

Stephen B. Seidman, Ph.D.
*Dean, College of Science and Engineering
Texas State University*



Welcome to Texas State University's Third Annual Women in Science and Engineering Conference! This conference is the fruit of a multifaceted vision to increase awareness of the prominent role women play in advancing knowledge in the disciplines of science, technology, engineering, math and STEM education. Born of a desire to improve the potential for collaborations both within the university and with outside partners, the WISE Conference brings together faculty, students and alumni for two days of professional development, networking and a celebration of scholarship both in the research laboratories and in the classroom. With this year's expanded program including science and engineering outside of academia, I hope you will find the conference personally enriching and productive.

Dana García, Ph.D.
Conference Chair

Keynote Address



Peggy Glass, Ph.D., Keynote Address

Dr. Peggy Glass has more than 40 years of technical and managerial experience. Since 1988 she has been with Alan Plummer Associates, Inc., an environmental engineering firm that specializes in projects related to water quantity and quality, water supply, wastewater management and stormwater management. She is on the board of directors and serves as executive vice-president.

Prior positions include leadership roles at the predecessor agencies to the Texas Commission on Environmental Quality (TCEQ) and at the engineering firms of CH2M Hill and Forrest and Cotton, Inc. In addition, for seven years she had her own firm, Glass Environmental Consultants, Inc., which provided environmental and engineering services.

Her specialties include water quality management studies, environmental permitting, evaluations of water sources as water supplies, environmental assessments, nonpoint source management, water quality standards and stormwater quality management.

Dr. Glass is on the board of directors of the Texas Water Conservation Association and has previously served as the organization's president. She is a Texas representative on the board of directors of the Western Coalition of Arid States.

She has served on several special technical committees of the Water Environment Federation and TCEQ technical advisory groups. While at TCEQ, she served as national president of the Association of State and Interstate Water Pollution Control Administrators, Water Quality Management Planning Section. She is a member of the Water Environment Association of Texas.

She has a bachelor of science in chemistry from Texas State University and a PhD in chemistry from the University of Texas at Austin.

A frequent presenter at technical conferences, Dr. Glass has published a number of technical papers. She is an active participant in her church, where she has participated in mission trips to Nicaragua, Cuba and Zambia. She is chair of the board of directors of Austin Samaritans, a nonprofit that supports medical, educational and rescue organizations that serve the needy in Nicaragua.

Schedule

Thursday, April 12

1-1:45 p.m.

Registration LBJ Ballroom

1:45-2 p.m.

Welcome LBJ Ballroom

Stephen Seidman, Ph.D., *Dean, College of Science and Engineering*

Opening Remarks LBJ Ballroom

Gene Bourgeois, Ph.D., *Provost and Vice President for Academic Affairs*

2-3 p.m.

Engineering Panel LBJ Ballroom

The new girl-talk: Women leading innovation through strength and sponsorship

Panelists

Tina Cannon, *founder of PetsMD and Texas State University entrepreneur-in-residence*

Crystal Delia, *mechanical engineer, Quality Engineer-Electrical and Drive Train Systems, Toyota Motor Manufacturing*

Kianna Grant, *industrial engineer, Quality Engineering Specialist-Electrical Systems, Toyota Motor Manufacturing*

Laurie A. Moyer, *PE, City of San Marcos*

Facilitator

Terry Chase Hazell, *director, RampCorp, Texas State University Office of Commercialization and Industrial Relations*

3-4 p.m.

Speed networking and high tea LBJ Ballroom

4-6 p.m.

Research poster session and judging LBJ 3-3.1 & 3-9.1

6-9 p.m.

Business meetings LBJ 3-12.1

WISE Planning Committee, Scholarship Committee

Friday, April 13

8:15-9 a.m.

Registration, continental breakfast LBJ Ballroom

9-9:15 a.m.

Welcome and opening remarks LBJ Ballroom

Dana García, Ph.D., *professor, Department of Biology*

9:15-10:15 a.m.

Science Panel I LBJ Ballroom

Leading Women, Women Leading Science

Panelists

Corina Maeder, Ph.D., *assistant professor, Department of Chemistry and Biochemistry*

Debbie Magin, *director of water quality services, Guadalupe-Blanco River Authority*

Ximena McKenna, *DFM engineer, Dresser Wayne, Inc.*

Maria Alejandra Sorto, Ph.D., *associate professor, Department of Mathematics*

Facilitator

Heather Galloway, Ph.D., *dean, Honors College, professor, Department of Physics*

10:30-11:30 a.m.

Science Panel II LBJ Ballroom

Perspectives: Texas State Women in Science

Panelists

Denise Gobert, Ph.D., *assistant professor, Department of Physical Therapy*

Reiko Graham, Ph.D., *associate professor, Department of Psychology*

Gwendolyn Hustvedt, Ph.D., *assistant professor, Department of Family and Consumer Sciences*

Facilitator

Dana García, Ph.D., *professor, Department of Biology*

11:45 a.m.-1 p.m.

Keynote address and luncheon LBJ Ballroom

Texas State alumna **Dr. Peggy W. Glass**, *executive vice-president, Alan Plummer Associates, Inc.; B.S., chemistry, Texas State University; Ph.D., chemistry, University of Texas at Austin*

1-2:30 p.m.

Campus laboratories and research facilities tours

2:30-4 p.m.

Career Development Seminar LBJ 3-14.1

Leadership, Success, and Interviewing

Presenters

Laura McCanlies, *business solutions information manager, Tokyo Electron America*

Ron McCune, *quality assurance supervisor, Tokyo Electron America*

James Mulhall, *M.S.T., installation manager, Tokyo Electron America*

2:30-4 p.m.

Career Development Workshop LBJ 3-13.1

Mentor Match for Career Coaching

4-5 p.m.

Award Ceremony LBJ Ballroom

Science student organization exhibits, reception and awards ceremony

5-6 p.m.

Post-conference WISE Planning Committee business meeting

Speakers *(in alphabetical order)*



Tina Cannon, Engineering Panel

Tina Cannon graduated from Texas State University with a bachelor's degree in accounting and went on to become a financial auditor and business consultant in the private sector. Ms. Cannon transitioned her career and became a seasoned entrepreneur, founding several start-ups based in Austin. She was the CEO and co-founder of PetsMD.com, the leading online pet health resource (acquired by Pet360 in 2011).

Ms. Cannon currently serves as entrepreneur-in-residence at Texas State as well as co-founder and COO of LOCALoyalty Magazine. She was also the co-founder of Book-a-Vet.com, an online, real-time veterinary appointment application awarded top new product by the American Veterinary Association. Ms. Cannon has been a featured presenter and panelist at various technology events and mentored numerous start-up businesses. She has been a guest columnist for BNET.com (now cbsnews.com). Ms. Cannon participated in the inaugural class of the Austin-based Capital Factory, a seed-stage incubator program.



Crystal Delia, Engineering Panel

Crystal Delia is a mechanical engineer at Toyota Motor Manufacturing. After graduating with honors from Ohio University with a bachelor's degree in mechanical engineering and a minor in business administration, she entered Toyota North America's Engineer In Training program. This program was designed to expose recent college graduates to multiple aspects of Toyota's North American operations. Prior to arriving in Texas, she was a field quality engineer at Toyota's Indiana manufacturing facility working with the Tundra, Sequoia, and Sienna products.

During her nearly five years at the Toyota Texas facility, Ms. Delia has served as quality engineer over both electrical and drive train systems. She also led electrical system quality activities as part of the Tacoma launch team.



Reiko Graham, Ph.D., Science Panel II

Dr. Reiko Graham's primary research interests lie in understanding how stimuli of motivational and emotional significance capture attention and affect subsequent cognitive and neural processing. Her area of expertise is the cognitive neuroscience of face processing: the study of how people perceive, judge and react to different aspects of faces and how these processes interact to give rise to higher order social cognition (e.g., Theory of Mind).

Dr. Graham's study of social perception includes the examination of individual differences in personality characteristics, such as anxiety, empathy and self-esteem, and how these might be related to differences in the ability to interpret nonverbal social cues. She is also interested in examining social processing in clinical populations (e.g., autism, anxiety disorders, or schizophrenia), and how various kinds of facial information are integrated by the visual system.



Kianna Grant, Engineering Panel

Kianna Grant is a quality engineering specialist working in electrical systems at Toyota Motor Manufacturing, with diverse experience in both quality and production control. While working full-time, she is currently enrolled in graduate school at Purdue University pursuing her master of science in engineering with a concentration in quality and integrated vehicle systems. Ms. Grant graduated with honors from Florida Agricultural and Mechanical University with a bachelor of science in industrial engineering. While at FAMU, she was a member of organizations including Tau Beta Pi National Engineering Honor Society, Society of Women Engineers, Institute of Industrial Engineers and National Society of Black Engineers. Her work experience began as an apprentice research student with NASA at the Kennedy Space Center and Marshall Space Flight Center where she learned design skills for shuttle mission components and ergonomics.



Terry Chase Hazell, Engineering Panel

Terry Chase Hazell has advanced innovation and entrepreneurship as a start-up executive spinning out companies from universities, as a university employee advancing innovation, and as a university advisor implementing new programs helping women become entrepreneurs and investors. Ms. Hazell is chair of the Texas Emerging Technology Fund Advisory Committee and director of RampCorp, a Texas State University program to help women entrepreneurs across Texas start their first scalable venture. She is a member of the National Advisory Board for Springboard Enterprises, which has helped women raise \$5.5 billion in capital.

Ms. Hazell is a charter member of the Startup America Partnership Women's Entrepreneurship Working Group. Her specific expertise is biologics manufacturing, and she founded two biotechnology-related spinout companies for the University of Maryland. She is also an entrepreneur columnist for the Austin Business Journal. Hazell holds a master of science in biotechnology management from the University of Maryland, University College, and a bachelor of science in life science (microbiology) from the University of Maryland, College Park.



Gwendolyn Hustvedt, Ph.D., Science Panel II

Dr. Gwendolyn Hustvedt is an assistant professor in the School of Family and Consumer Sciences. She received her PhD from Kansas State University in human ecology with an emphasis in apparel and textiles. She teaches textiles, product analysis, fashion economics, and product development.

Past projects include a survey of consumer willingness to pay for animal welfare certification for wool products with collaborators at Kansas State University and an experimental auction designed to measure consumer sensitivity to biotechnology in the fiber supply chain with collaborators at the University of Delaware. In 2008, she received a \$140,000 grant from the USDA Sustainable Agriculture Research and Education (SARE) program to study consumer willingness to pay for eco-labeling on U.S.-produced animal fiber products. The results of the study will help U.S. wool, mohair and alpaca producers compete in the global market for sustainability consumers.



Corina Maeder, Ph.D., *Science Panel I*

Dr. Corina Maeder is an assistant professor in chemistry and biochemistry at Texas State. Before joining the faculty in fall 2011, Dr. Maeder performed her doctoral work in molecular biophysics at Johns Hopkins University. She was a postdoctoral fellow at University of California-San Francisco in the laboratory of Dr. Christine Guthrie. Dr. Maeder teaches advanced biochemistry and molecular biology for undergraduates and graduate students.

Dr. Maeder's research interests center on understanding the basic regulation of the gene expression. Students in her research lab use a variety of biochemical, molecular biological, and genetics techniques to dissect the importance of protein-nucleic acid and protein-protein interactions in the spliceosome.

As a postdoctoral fellow, Dr. Maeder was on the UCSF's Chancellor's Advisory Committee on the Status of Women and helped to initiate the Mommy and Daddy Scientist (MaD) of UCSF group.



Debbie C. Magin, *Science Panel I*

Debbie Magin has more than 36 years of experience working at the Guadalupe-Blanco River Authority in Seguin, Texas. Graduating from Southwest Texas State University (now Texas State University) with a bachelor of science in biology, she also earned a master of science in biology, specializing in aquatic biology.

Working with laboratory analysis of potable water and wastewater and water quality-related issues, Ms. Magin has been involved with the Clean Rivers Program, Texas Stream Team and the Texas Water Utilities Association. Much of her time in recent years has been spent participating in the development of watershed protection plans in the Plum Creek, Geronimo and Alligator creeks, and Cypress Creek watersheds.

The Texas Water Utilities Association Laboratory Analyst Section recently established the Debbie McReynolds/Debbie Magin Scholarship recognizing her outstanding dedication and untiring service to the protection of public health and the environment.



Laura McCanlies, *Career Development Seminar*

Laura McCanlies heads Tokyo Electron's IT Business Solutions Team, which is responsible for project management, business intelligence, ERP, applications support, collaboration and knowledge management tools, deployment of new technology including mobile devices, and developing relationships with TEL stakeholders. The team is actively engaged with users and is focused on the company's critically important value of customer success.

Ms. McCanlies has more than 25 years of experience in technology roles. Prior to joining Tokyo Electron, she managed the IT group at a branch of Sanofi de Mexico, a French pharmaceutical company located in Mexico City. Before that, she had a consultant position at Ernst & Young in Mexico City, providing services to PEMEX and TELMEX, focusing on supply chain improvement and automation. She has a master of business administration and a bachelor's degree in computer science from the Monterrey Tec, ITESM, in Mexico.



Ron McCune, *Career Development Seminar*

Ron McCune has spent the past 11 years working in organization excellence, quality and organization development at Tokyo Electron (TEL). He brings his experience in strategic leadership, problem solving, process management, intercultural communication and project management into this role. He is a certified Six Sigma Black Belt and project management professional and currently spends most of his time leading projects to standardize or improve business processes.

The problem solving training he provides has taken him all over the world to improve troubleshooting skills of all TEL engineers.

Mr. McCune studies many different languages to support his global work and travel. He studied Japanese as an undergraduate, is fluent in the Romance languages, speaks a bit of Mandarin and German, and is currently studying Arabic and Russian. He completed his first half Ironman last year and has a goal of his first full Ironman in November. He has master of business administration from California State University and taught public school for seven years.



Ximena McKenna, *Science Panel I*

Ximena McKenna is a global DFM (design for manufacture) engineer at Dresser Wayne, a leading gasoline dispenser manufacturer headquartered in Austin. She is responsible for influencing the product design that makes assembly cost effective, safe and repeatable across global sites. This includes ergonomic analysis, creation of manufacturing instructions, prescription of the sequence of build, and design of line layouts. Ms. McKenna also develops global processes that affect global products as an effort to ensure global standardization of Dresser's manufacturing methods.

In past roles, Ms. McKenna has been a LEAN process improvement site coordinator and a manufacturing engineer, as well as a quality consultant in the high tech and pharmaceutical industries. She received her bachelor's degree in mechanical engineering from the University of Texas at Austin in 2003 and will receive her industrial technology master of science in May 2012 from Texas State University. She holds a certification in LEAN Green Belt and an IPC Certification.



Laurie Anderson Moyer, *Engineering Panel*

Laurie Moyer has worked for the City of San Marcos for more than 23 years. Beginning as a utility engineer in 1988, she has held the positions of senior engineer, director of environment and engineering, assistant city manager and interim city manager. Most recently she has assumed the role of managing director for transit, airport, fleet and solid waste. Her areas of responsibility have included capital construction, planning and development, water, wastewater, streets, drainage, electric and airport operations.

Highlights of Ms. Moyer's career range from the implementation of GIS and single-stream recycling to numerous projects that improved the environment and quality of life in San Marcos such as the construction of Rio Vista Falls and the Wonder World Drive extension project. She received a bachelor of science in civil engineering from the University of Texas in 1982 and attended the certified public manager program at Texas State University.



James Mulhall, *Career Development Seminar*

James Mulhall has spent the past 18 years learning and growing as a leader. Leveraging his personal, military, academic and industry experience and supported by his lessons learned, he reaches out to all levels of the academic community to “pay it forward.” He is a highly decorated, disabled veteran from past overseas conflicts and has spent the last 12 years working for Tokyo Electron (TEL) in various roles in engineering and management, including technical support, applica-

tions, equipment engineering, R&D and installation support. His current job is leader of TEL Installation Group, responsible for systems installation at all semiconductor manufacturing facilities in the U.S.

Mr. Mulhall has been recognized as an educational/industry partner and looks for opportunities to support students who want more from themselves, their careers, and who are willing to stretch their goals. Mr. Mulhall has bachelor’s and master’s degrees in technology from Texas State University.



M. Alejandra Sorto, *Ph.D., Science Panel I*

Dr. M. Alejandra Sorto received her Ph.D. in mathematics education from Michigan State University. She is currently a faculty member in the Mathematics Department at Texas State University. Her research focuses on the preparation of teachers in the area of statistics, the impact of professional development, and comparative studies in Latin-America and Africa. She is especially interested in developing instruments to measure content knowledge for teaching, teaching quality and analyzing its effect on student achievement.

She has worked with the governments of Chile, Peru, the Dominican Republic, Honduras and Guatemala to help improve the preparation of teachers in mathematics and develop educational standards. The National Science Foundation (NSF) recently awarded her a CAREER research grant to investigate the mathematics instruction of English-language learners in the state of Texas.

Undergraduate Student Panel

High School Student Track



Rachel Purswell
Biology



Jamie Humble
*Manufacturing
Engineering*



**Dori Lynne
Thompson**
Biology



Alysha Moore
Biochemistry

2012 WISE Conference Sponsors

- College of Science and Engineering
- Department of Biology
- Department of Chemistry and Biochemistry
- Department of Computer Science
- Department of Engineering Technology
- Department of Mathematics
- Department of Physics
- Department of Theatre and Dance
- Ingram School of Engineering
- Materials Science, Engineering, and Commercialization Program
- Office of the Associate VP for Research and Federal Relations
- Office of the Provost
- Office of University Marketing
- Office of Undergraduate Admissions
- Texas State Alumni Association
- Texas State Athletics
- University Bookstore
- College of Applied Arts

2012 WISE Scholarship Sponsors

- Women’s Giving Circle / Women in Science Initiative
- Southwest Research Institute
- Samsung

We extend our gratitude to these sponsors for supporting our third conference!

2012 WISE Planning Committee

Dana García, Ph.D., *professor, Department of Biology - Conference Chair*

Nathaniel Dean, Ph.D., *professor, Department of Mathematics*

Debra Feakes, Ph.D., *associate professor, Department of Chemistry and Biochemistry*

Heather Galloway, Ph.D., *dean, Honors College and professor, Department of Physics*

Miguel Guerrero, *career counselor, Texas State University Career Services*

Terry Hazell, *director, Texas State RampCorp*

Vickie Meehan-Clarke, *senior major gift officer, University Advancement*

Anne Hee Hiong Ngu, Ph.D., *professor, Department of Computer Science*

Clara Novoa, Ph.D., *associate professor, Ingram School of Engineering*

Kim Porterfield, *director, Community Relations, Texas State University*

Susan Romanella, M.A., *director, H-LSAMP Scholars Program, College of Science and Engineering*

Stephen Seidman, Ph.D., *dean, College of Science and Engineering*

Vedaraman Sriraman, Ph.D., *professor, Department of Engineering Technology*

TEXAS  STATE[®]
COLLEGE OF SCIENCE
AND ENGINEERING

The Texas State University System Board of Regents

Charles Amato, Chairman, San Antonio • Donna N. Williams, Vice Chair, Arlington
Dr. Jaime R. Garza, San Antonio • Kevin J. Lilly, Houston • Ron Mitchell, Horseshoe Bay
David Montagne, Beaumont • Trisha Pollard, Bellaire • Rossanna Salazar, Austin
William F. Scott, Nederland • Ryan Bridges, Student Regent, Huntsville
Brian McCall, Chancellor