



The Blueprint Newsletter

Message from the Chair

Dear Friends, Colleagues, and Alumni:

We are pleased to share exciting news from the last year in the Texas Tech Department of Mechanical Engineering. Currently, we have more than 950 undergraduates, 52 master's students, and 57 doctoral students. The department has welcomed new faculty members Drs. Jerzy Blawdziewicz, Todd Lillian and Jenny Qiu, and new staff members Casey Bush and Aubrey White.

Our undergraduate and graduate students are receiving numerous awards and recognition. The graduate program ranked for the first time within the top 100 of U.S. News and World Report's best graduate engineering programs in mechanical engineering with a rank of 93. According to ASEE data, the Texas Tech undergraduate mechanical engineering program is the 23rd largest program in the United States, as determined by the number of graduates produced per year.

The Whitacre College of Engineering is one of the Wall Street Journal's Top 25 schools that produce the best graduates, according to recruiters for the nation's largest public and private companies, non-profit organizations and federal agencies.

The department has a strong connection with the our Academy and Industry Advisory Board (IAB) members. We are able to provide a number of scholarships to our undergraduate students through donations from the industry, ME Academy and IAB, and other alumni and friends.

Whatever we accomplish in our education and research programs is possible because of our excellent and dedicated staff members. If you are in the Lubbock area, please stop by to learn about the exciting things happening in the department. I would like to thank: Aubrey White, front office staff; Crystal Baker, MSME student; and Linda Whitebread, financial manager, for producing such a wonderful newsletter.

Jharna Chaudhuri
Professor and Department Chair of Mechanical Engineering



Alumnus Awarded Distinguished Engineer Award

Randy Howard graduated with honors in 1976 with a bachelor of science in mechanical engineering and received the 2010 Distinguished Engineer Award for his career success and contributions to society. He is a project executive for ExxonMobil Development Company in Houston where he has worked for 33 years. Howard is a registered professional engineer in Texas and a member of the Petroleum Industry Advisory Board at Texas Tech.



Alumnus Serving as Commander of Navy Aircraft Carrier

A Texas Tech engineering alumnus is now the captain of a Navy aircraft carrier that is roughly half the size of his hometown. Capt. John D. Alexander, a native of Port Neches and a 1982 mechanical engineering graduate, took over in January as commanding officer of the USS Abraham Lincoln during a ceremony on board the ship. "I am very humbled and excited to be on board the Lincoln," said Alexander. "The ship looks great, and the crew is highly motivated. I'm proud to take command of this extraordinary warship."



Faculty News

The Department Welcomes New Instructors

Dr. Todd Lillian

Todd Lillian is excited to join the Mechanical Engineering faculty at Texas Tech University. He recently completed his Ph.D. in mechanical engineering at the University of Michigan, where he also received a master of science in mechanical engineering in 2007. Before studying at the University of Michigan, he received a bachelor of science in mechanical engineering from Brigham Young University in 2004.

His primary area of interest is the application of traditional mechanical engineering principles and tools, especially dynamics, to study important biophysics problems. He is particularly interested in long-length and time scale dynamics of DNA and has developed computational models to study this area.

When he is not compiling or running code, he enjoys spending time with his wife and three month old daughter.

Dr. Jingjing Qiu

Jingjing "Jenny" Qiu graduated from Florida State University with a Ph.D. in 2008. Her dissertation is focused on multi-scale flow behavior during the manufacturing of nano-composites.

She has also served as an instructor in the department of construction engineering and engineering technology and the department of chemical engineering during the last two years. She taught Engineering Graphics, Engineering Experimentation and Engineering Analysis 1.

Her research interests include modeling and simulation of micro/nano flow, multiscale composites and biological materials.

Dr. Jerzy Blawdziewicz

Dr. Jerzy Blawdziewicz's work focuses on dynamical phenomena in nanostructured and microstructured materials that are relevant for emerging technologies, such as fabrication of functional nanocomposites, processing of bulk metallic glasses, and design of microfluidic assays. He also studies the physics of soft and biological matter, and microhydrodynamics of particulate and macromolecular flows.

Blawdziewicz previously worked at Yale University. His collaborative projects involve researchers from the U.S. and Europe.



Dr. He Awarded Two-Year NIH Grant

The National Institutes of Health has given the Whitacre College of Engineering a two-year grant to fund Zhaoming He's proposal entitled "Mitral Valve Coaptation Plate for Ischemic Mitral Regurgitaion."



Drs. Chaudhuri and Pantoya Receive DoD Award

Drs. Jharna Chaudhuri and Michelle Pantoya received an award from the Department of Defense and the Advanced Technology Institute for their proposal entitled "Synthesis, Characterization, and Environmental Impact Studies of Advanced Energetic Materials."



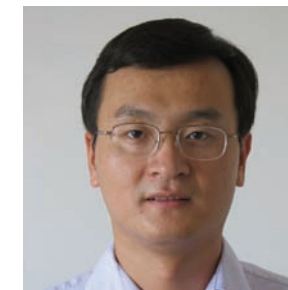
Dr. Parameswaran Co-Chairs Session on Wind Energy

Dr. Siva Parameswaran, May 23-27, 2010, co-chaired a session on Wind Energy I with Dr. Sidney Xue from Vestas at the Fifth International Symposium on Computational Wind Engineering in Chapel Hill, N.C.



Dr. Hui Awarded Grants from DTRA and NSF

Dr. Qing Hui was awarded a grant by the Defense Threat Reduction Agency (DTRA) for his research entitled "Balanced Coordinated Algorithms for Damage Mitigation and Resource Allocation in Network Systems."



Hui also received a grant with Drs. Stephen Bayne, Vittal Rao, and Susan Urban from the National Science Foundation for their research entitled "Development of Real Time Simulator for Smart Grid Systems Integrated with Distributed Renewable Energy Sources."

Drs. Osire, Bayne, Hui, Rice, and Smith, Receive DoE Funding

Dr. Stephen Ekwaro Osire, along with Drs. Stephen Bayne (ECE), Qing Hui (ME), Jennifer Rice (CEE), and Doug Smith (CEE), received funding from the Department of Energy for their research entitled "Midsize Wind Turbine Designed and Manufactured in the U.S.. Industry partners for this research are Carter Wind Energy and General Dynamic SATCOM.



Drs. Maxwell, Rasty, and Tate to Study Hall Pump

Drs. Timothy T. Maxwell, Jahan Rasty, and Derrick E. Tate were awarded a grant from T&B Financial Services. The title of the proposal was "Study and Improve the Hall Pump."



Dr. Chyu Initates New Peer-Reviewed Journal

Dr. Ming Chyu has initiated a new international peer reviewed journal entitled "The Journal of Healthcare Engineering." The journal publishes fundamental and applied research on all aspects of engineering involved in healthcare delivery processes and systems.



Chyu has also edited a book entitled "Advances in Critical Care Engineering" that will be published in 2011.

Dr. Pantoya Receives Funding from ARO, LLNL, BEA, and NSF

Dr. Michelle Pantoya was awarded funding for the many attributes of her research done within the mechanical engineering department from the following:

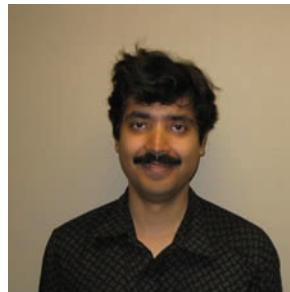


- U.S. Army Research Office for her research entitled "Analysis of Gas Phase Chemistry from Nanoenergetic Material Formulations."
- Lawrence Livermore National Laboratories for the proposal entitled "Energetic Material Combustion."
- Battelle Energy Alliance, LLC for her proposal entitled "Examining Nanocomposite Thermite Combustion in Aqueous Environments."
- National Science Foundation for her proposal entitled "Melt Dispersion Mechanism for Energetic Reactions of Aluminum Nanoparticles."

Faculty News

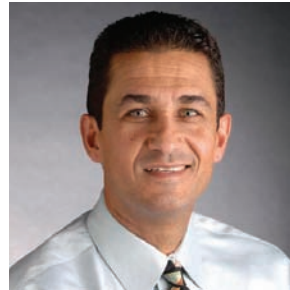
Dr. Bhattacharya Receives NSF Grant

Dr. Sukalyan Bhattacharya was awarded by the National Science Foundation for the proposal titled "Radial Migration of Suspended Particles and its Effect on Multispecies Flow Inside a Conduit."



Dr. Rasty Teaches New Graduate Course

Dr. Jahan Rasty is teaching a new graduate level Forensic Engineering course at the Texas Tech Institute for Forensic Sciences (TTIFS) starting in the fall semester.



Dr. Berg Receives U.S. Army Grant

Dr. Jordan M. Berg, Ayrton Bernussi, Zhaoyang Fan, Luis Grave de Peralta, Mark W. Holtz, and Sergey A. Nikishin, were awarded by the U.S. Army. The title of the proposal was "Nanophotonics Devices Research."



Dr. Desrosiers Retires from Texas Tech

Dr. Ray Desrosiers retired in the spring semester of 2010. His immediate plans involve making some improvements to the retirement home him and his wife have purchased in North Carolina.

Ertas Organizes The ATLAS Conference

Dr. Atila Ertas organized The Academy of Transdisciplinary Learning & Advanced Studies (The ATLAS) Transdisciplinary-Transnational Transcultural bi-annual meeting at Southwestern University in Georgetown, Texas on May 23-28, 2010. The meeting honoring Red McCombs.



Transdisciplinary Sustainable Development was the main theme of the conference. The meeting was sponsored by The ATLAS and Southwestern University in Georgetown, Texas.

Co-sponsors of the meeting were City of Georgetown, Georgetown Chamber of Commerce, Georgetown Economic Development, Transdisciplinary Sustainable Energy Research Lab (TSER), Texas Tech University, Academy of Transdisciplinary Studies (ATS), Texas Tech University, George Kozmetsky Endowment (GKE) and Texas Disposal Systems (TDS).

Southwestern University was the local host. Ertas presented The ATLAS Academy Gold Medal of Honor to Lily Yeh.

Distinguished Teaching Awarded to Dr. Anderson

The Texas Tech Chancellor's Council Distinguished Teaching Award was awarded to Dr. Edward Anderson, professor of mechanical engineering in the Whitacre College of Engineering.



Anderson joined Texas Tech in 1986 as chairman of the department of mechanical engineering.

He is known for using the latest technology to develop new and innovative teaching techniques and has received more than \$400,000 in National Science Foundation funding related to computer-based instruction and engineering education.

The highest awards given by the Texas Tech University System to faculty members at its member institutions were announced on Dec. 11 by Chancellor Kent Hance.

Dr. Yang Receives Grants from NIOSH, NSF, and NIST

Dr. Jingzhou Yang was awarded funding for the many attributes of his research done within the mechanical engineering department from the following:

- National Institute for Occupational Safety and Health for the proposal "Computer Aided Predictive Models for Respirator Fit and Comfort."
- Griffin Limited Liability Corporation for the proposal "Thermodynamic Predictive Models for Assessing the Characteristics of Gas Wells."
- National Science Foundation "REU SUPPLEMENT: BRIDGE: Optimization-based Prediction of Seated Posture in Pregnant Women."
- National Institute for Occupational Safety and Health for "Acquisition of Head and Face 3D Scanner System."
- National Institute of Standards and Technology (NIST) for the project titled "Modeling of Fire-fighter Respirators and Headforms."
- Private Sector Grant for the proposal titled "Design and Analysis of a Novel Ear pieceless Eye-glass Frame."



Dr. Pantoya Writes Children's Book

When Texas Tech leadership wished to highlight a science engineering integrated scholar in the recently developed strategic plan for 2010-2020 (Making it possible . . .), they chose to highlight an apt exemplar—Dr. Michelle Pantoya.

Known principally for her work in mechanical engineering, her academic efforts do not stop there. Her concern for the education and development of the youngest of current generations led her and a colleague to publish a children's book, "Engineering Elephants."

The book was illustrated and designed to help children ages 4-8 not only to grasp the concepts of engineering, but also see how vital the field of engineering is to our 21st century world. "Engineering Elephants" has been selected as an award-winning finalist in the Children's Picture Book Non-fiction category of the Best Books 2010 Awards, sponsored by USA Book News.

Dr. Janowski Receives Research Gift from Alums Terry and Linda Fuller

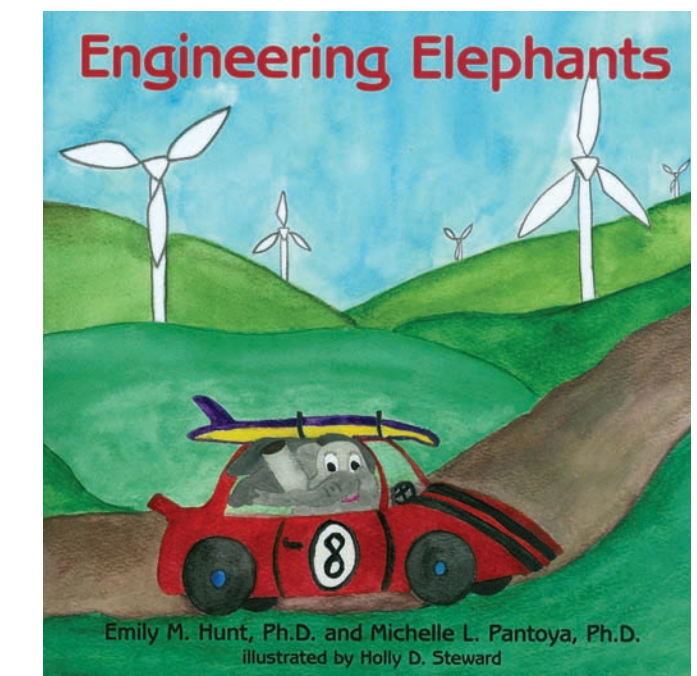
Dr. Alan Jankowski received a tier one research gift from Terry and Linda Fuller. He also delivered keynote presentations at the 16th International Symposium on Plasticity, "Session on Thin Layers, Micro-samples and Structures", January 3-8, 2010, titled "Tensile Deformation of Micro-to-Nanoporous Metal Membranes."



He also gave keynotes at the Symposium on "Mechanical Behavior of Nanomaterials Experiments and Modeling," and "Mechanical Behavior of Nanocrystalline, Nanoporous, and Nanotwinned Materials I."

At the Materials Research Society Fall Meeting, November 30 - December 4, 2009, he presented "Interface Effects on the Mechanical Properties of Nanocrystalline Nanolaminates."

Jankowski also made a seminar presentation "Interface Effects on the Mechanical Properties of Nanostructured Materials", at Naval Postgraduate School, Mechanical and Astronautical Engineering Department Seminar, Monterey, CA, January 11, 2010.



Student Organization News

Pi Tau Sigma Host National Convention



In the spring of 2010, the Texas Tech chapter of Pi Tau Sigma hosted the national convention. Over 75 different chapters and nearly 200 students were in attendance. The convention was a huge success, and the national officers spoke very highly of the chapter and the way they represented Texas Tech.

For the fourth year in a row, the Texas Tech chapter of Pi Tau Sigma was awarded the Most Outstanding Chapter, as well as the Most Active Chapter. Pi Tau Sigma is still highly involved in the department and community, with four service projects scheduled each year. These service projects include Meet ME Day, the Lubbock Arboretum Cleanup, and many others.

New Contract for Combustion Lab

The Combustion Lab has a new contract starting in August with EMPI - Energetic Materials Products Inc. for approximately \$75,000. They will be measuring energy released for detonation reactions. They recently acquired new space at the East Loop Building (shared with Pulsed Power) for these explosive reactions.

A pilot program with Slaton School District was initiated to introduce engineering concepts to three 5th graders during their three week summer school program. Results from assessments of these students before and after the program show a considerable growth in understanding of many engineering concepts ranging from statics and dynamics to combustion.



WIME Participates in Organization Fair

Last year, WIME participated in the organization fair held by the Whitacre College of Engineering. They had a trifold poster and some sweets to attract some traffic passing through. They also had a few fund raisers selling donuts and t-shirts in front of the ME office.

Another fundraiser that WIME helped with was SHPEs 'n Salsa, an event with the Society of Hispanic Professional Engineers. SHPE allowed them to sell desserts while they sold fajitas, chips and salsa.

This year WIME will focus on gaining membership as well as getting involved in the community.



New Entry for F.A.C.E Project

The Texas Tech mechanical engineering F.A.C.E. entry was a project from the Combustion Lab group developing new diagnostics for quantifying the energy generated from highly exothermic reactions.

The heat flux sensor allows measurements of heat flux in highly corrosive, high temperature, high pressure environments and adds a new dimension for the characterization of highly exothermic energetic material reactions.

This project also developed a thermite spray gun, a nozzle that projects a thermite reaction much like an acetylene torch. This work is published in "Measurement Science and Technology", 2010.

Texas Tech EcoCAR- The Next Challenge Team Continues to Compete

Texas Tech University is one of the 16 universities competing in EcoCAR—The Next Challenge, a three year collegiate advanced vehicle technology competition where teams are challenged to re-engineer a GM-donated vehicle to achieve improved fuel economy and reduced emissions while maintaining stock performance, safety and consumer appeal.

The Texas Tech team selected a GM two-mode hybrid architecture. During the first two years the team selected and sized components and developed software-in-the-loop (SIL), hardware in-the-loop (HIL) techniques and rapid control system prototyping. The team is thrilled because the vehicle has recently been reassembled, and for the first time they had their vehicle moving under its own power.



The team took their car on the road to test electric-only mode for up to 25 miles per hour. They also started the engine with the help of a two-mode transmission. The engine provides power to the vehicle and simultaneously charges the battery at low load.

The team is refining the optimization strategy for operating in the most efficient modes with electric as well as mechanical power. The team and vehicle will go to the Environmental Protection Agency (EPA) laboratory facility in Ann Arbor, MI for the spring workshop from March 6-18. EcoCAR vehicles will undergo emissions testing on the EPA's dynamometers and face evaluations similar to those in the industry including highway, city, vehicle energy use and exhaust particulate tests.

ASME Volunteers at Animal Shelter and Habitat for Humanity

In the spring of 2010 the Texas Tech chapter of the American Society of Mechanical Engineers participated in many social and professional events. They volunteered at Haven Animal Shelter and Habitat for Humanity.

Many ASME members enjoyed playing paintball and intramural softball with each other. ASME also participated in the CASA Dodgeball Tournament and supported the Vertical Challenge Competition.

The organization also arranged tours of Lockheed Martin, Conoco Phillips Refinery, Parkhill Smith and Cooper, and Amarillo Gear. In the fall semester of 2010 they plan on taking tours of the Valero Refinery and Bell Helicopter in Dallas.



The Human-Centric Design Research Laboratory Provides Outreach Opportunities

The Human-Centric Design Research (HCDR) Lab collaborated with the Cross-Cultural Academic Advancement Center (CCAAC) at Texas Tech University to organize the annual program for the Native American Summer Bridge Institute, and offer a week-long summer workshop on digital human modeling and simulation on June 6, 2010.



This activity had a high impact on the students and their parents and stimulated the high school students' interests in science and engineering.

The Applied Math and Engineering Team at Dunbar Middle School visited the HCDR Lab twice, on January 20 and May 7, to prepare for the UT at Arlington Future City Competition and to utilize the university's equipment for their project's competition. The lab provided pizza, acted as a panel of mock engineer judges, and provided a tour of the HCDR Lab.

Student News

Undergraduate News

Matte Presents Paper on Nanoparticles

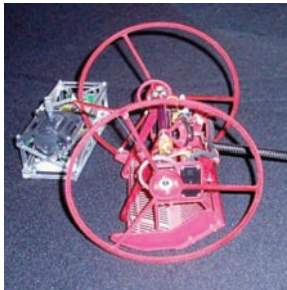
Alex Matte, an undergraduate student, presented a paper at the Society of Hispanic Professional Engineers National Conference in Cincinnati, Ohio, in October 2010 titled, "High Resolution Transmission Electron Microscopy Study of Gallium Nitride Nanoparticles."



Other authors of the paper are Ph.D. students Archis Marathe and Xianwen Zhang, and faculty Drs. Yanzhang Ma and Jharna Chaudhuri.

Doyle Gets First Place at Student Design Competition

Adam Doyle, a junior in the Department of Mechanical Engineering, took first place in the American Society of Mechanical Engineers (ASME) Student Design Competition in Orlando, FL.



The competition challenged students to design and build a vehicle that will retrieve rocks and bring them to a designated spot. The robot had to surmount small obstacles both in getting to the rocks and in bringing the rocks back to the designated deposit area.

Lubbers Receives Distinguished Student Award

The Whitacre College of Engineering has named undergraduate Amber Lubbers the recipient of the McAuley Distinguished Engineering Student Award for 2010.



This award, provided by members of the Whitacre College of Engineering Dean's Council, is named in memory of James A. McAuley, an active member of the Dean's Council and a Texas Tech Distinguished Engineer. Lubbers competed for this honor and was selected because of her outstanding academic achievements, honors, activities, interests and aspirations.

Hannon Awarded Fullbright Student Grant

Sean Hannon was awarded the prestigious Fulbright Student Grant from the U.S. Student Fulbright program.



He will study aerospace engineering at the Technische Universität München, focusing on a project titled "Computerized Model of a Telepresence Enabling Satellite Communication System."

Graduate Student News

Graduate Assists Dr. Chyu in Publication

As an assistant to the editor, Sean Mullen assists Dr. Chyu by seeking potential reviewers to critique the manuscripts submitted for publication in his "Journal of Healthcare Engineering."

Powelson Awarded Fellowship

Thomas J. Powelson was awarded a Texas Tech University Presidential Master's Fellowship starting in the fall of 2010. He joined the Human Centric Design Research Laboratory under Dr. Yang to perform research. Mr. Powelson received a bachelor's degree from University of California, Berkeley, CA.



Dr. Hu Presents Paper on Wake Development

Dr. Yingying Hu, a post-doctoral research associate presented the a paper at the Fifth International Symposium on Computational Wind Engineering in Chapel Hill, NC on the wake development behind a wind turbine, "Computing Turbulent Far-Wake Development Behind a Wind Turbine With and Without Swirl."



Tan Presents Paper on Cross Wind Effects

Giannan Tan, a doctoral student, presented a paper entitled "Effects of cross wind on sport utility vehicles (SUV): A Computational Study", which was well received by the audience at the Fifth International Symposium on Computational Wind Engineering in Chapel Hill, NC.

Ozsoy Presents Literature Review

Burak Ozsoy attended the 2010 Applied Digital Human Modeling Conference in Miami, FL to present the literature review and his current progress about his research entitled "Human Jumping Motion Analysis and Simulation in Computational Approaches for Digital Human Modeling Session."



Zou Gives Presentation on Posture Prediction

Qiuling Zou joined the Human Centric Design Research Laboratory in 2009 in pursuit of a Ph.D. She attended the 2010 Applied digital Human Modeling Conference in Miami to deliver a presentation "Determining Weights of Joint Displacement Function in Direct Optimization Based Posture Prediction: A Pilot Study."



The third annual Engineering Kick-Off Event was held on Friday, September 10, 2010 on the Engineering Key. This event showcased the exciting world of engineering and brought students, faculty, staff and industry partners together for fun.





Student News

Graduate Student News (Continued)

Howard Predicts Posture in Pregnant Women

Brad Howard attended the 2010 Applied Human Factors Engineering Conference in Miami, FL to present his work titled "Toward a New Digital Pregnant Woman Model and Kinematic Posture Prediction."



In his presentation he talked about the methods required to accurately predict posture in pregnant women.

Gragg Awarded for Poster Competition

Jared Gragg was awarded 3rd Place in the Ninth Annual Graduate Student Research Poster Competition on April 8, 2010. He also received the prestigious 2010-2011 AT&T Chancellor's Fellowship Awards and presented a paper entitled "Digital Human Model for Driver Seat Adjustment Range Determination" at the 2010 SAE World Congress in Detroit, MI.



Ahmed Reveives a Fellowship

Tanvir Ahmed, a Ph.D. student in the Nano-materials Lab, received a Summer Dissertation Award fellowship from the graduate school.



Upshaw Presents Research Poster

Over the summer, David Upshaw worked as a graduate research assistant at Los Alamos National Laboratory in the weapons systems engineering group under advisor, Dr. Jahan Rasty, and mentor, Dr. Michael Steinzig. He participated in the Nuclear Regulatory Commission's Welding Residual Stress (WRS) program.



Upshaw presented a poster on his research in Lake Tahoe, CA at the September 2010 Residual Stress Summit.

Lei Presents Research on Headforms and Respirators

Zhipeng Lei attended the 2010 Applied Digital Human Modeling Conference in Miami to present his research "Toward High Fidelity Headform and Respirator Models."



In his presentation, he provided finite element models of headform and respirator which can be used in contact simulation.

His research was partly supported National Institute for Occupational Safety and Health (NIOSH) project.

Umstead Awarded Provost Fellowship

Christopher Umstead received the Provost Fellowship from Texas Tech University. He will pursue his Ph.D. under Dr. Barhorst studying the mechanism of abusive head trauma on infants.

Alumni News

ME Academy Inductees

Steve Arnold

Steve Arnold graduated in 1974 with a bachelor of science in mechanical engineering from Texas Tech. His wife, Janie, and two of his three children also graduated from Texas Tech. He and his wife reside in San Antonio.



Arnold is currently Vice President of Automotive Testing and Development Services, Inc. Steve is responsible for identifying new customers, new services, and new products for automotive testing and technical service businesses.

John Estill

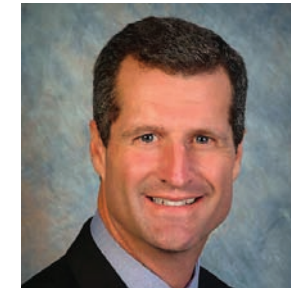
Upon graduation, John Estill began a career as an engineer with Collins Radio in Richardson, TX. Within a few months, he was drafted and subsequently enlisted in the U.S. Army where he became an Infantry Officer and Aviator.

Currently he is Technical Project Manager with the same company (now Rockwell Collins) and he plans to retire within two years.

He regards his time at Texas Tech as a strong contributor to his journey through his career, and fondly remembers his time studying and socializing with Red Raiders.

Bradley Jones

Bradley Jones graduated with a bachelor of science in mechanical engineering from Texas Tech in 1986 and a MBA in Finance from the University of Texas at Arlington. He currently resides in Austin with his wife, Lynette, and their six children.



He is currently Vice President of Government Relations at Luminant. Bradley has testified before both the Public Utility Commission of Texas and the Texas Legislature on matters relating to electric markets and retail competition.

Porter Davis

Porter Davis graduated from Tech in 1962 with an master of science in mechanical engineering. Following graduation, he taught engineering at Texas Tech, was married and then began working for Sperry Corporation in 1963. Currently he is a Senior Fellow and Chief Systems Engineer for Honeywell Space Systems Division in Glendale Arizona and is chairing one of the conferences of the SPIE Smart Structures Consortium.

Davis has 32 publications and holds 22 patents. I

In 2001, he was awarded the Honeywell Lifetime Achievement Award. He and his wife, Donna, live north of Phoenix in a planned community call Anthem.

Facts about the Department of Mechanical Engineering

College Enrollment

| | |
|---------------------|-------|
| PreEngineering..... | 776 |
| Undergraduate..... | 3,532 |
| Graduate | 725 |
| Total..... | 5,033 |

Department Enrollment

| | |
|------------------------|-------|
| Undergraduate..... | 971 |
| New Undergraduate..... | 151 |
| Graduate | 80 |
| Total..... | 1,051 |

Scholarships

| | |
|----------------------------|----|
| Departmental Scholarships | |
| Awarded in Fall 2010 | 73 |

2009-2010 Graduates

| | |
|--------------------|-----|
| Doctoral | 12 |
| Master | 26 |
| Undergraduate..... | 147 |





TEXAS TECH UNIVERSITY

Department of Mechanical Engineering™

The Blueprint

Box 41021 | Lubbock, Texas 79409-1021

Keeping in Touch

The Texas Tech Department of Mechanical Engineering would like to know what is happening in your professional life. The news of your accomplishments or promotions can be included on a separate sheet if necessary. Please feel free to include newspaper clippings. Please send the following information to

Department of Mechanical Engineering
Box 41021
Lubbock, TX 79409

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Home Phone: _____ Work Phone: _____

E-mail: _____ Graduation Year: _____ Degree: _____

Current Occupation: _____ Employer: _____

Location: _____

You can also email information to tonette.rittenberry@ttu.edu

Visit the following web site for more information: www.coe.ttu.edu/alumni/information_update.php

If you are interested in being a member of the ME Academy, please contact our Chair,
Dr. Jharna Chaudhuri at jharna.chaudhuri@ttu.edu