Dr. Quig Hui

Dr. Qing Hui joined the TTU ME faculty in the Fall of 2008. His research interests include analysis and control of cooperative networks, hybrid systems, biomedical systems, large-scale systems, and adaptive control. He is currently working on coordinated and decentralized control of large-scale network systems, modeling and control design for biomechanics systems and drug delivery systems, transient hybrid stabilization of power systems, and control of spatially invariant systems using dynamical system theory.

For further details, visit http://www.prism.gatech.edu/~gtq040j/.

Dr. Jingzhou (James) Yang

Dr. Jingzhou (James) Yang joins ME faculty Fall 2008. His research interests include human-centered design, digital human modeling, human motion simulation, robotics, biomechanics, and ergonomics.

For further details, visit www.webpages.ttu.edu/jiyang.

And said Good Bye to a colleague...

Carmen began her career at Texas Tech University in the Fall of 1980, settling for good in the Mechanical Engineering Department in 1996, and retired this past June.

When asked about her time here Carmen says, “Many friendships were formed during my time at TTU and I am lucky enough to still maintain those friendships with many professors, staff members and students”.

(continued on page 17)
ASME Fellows

Pamela A. Eibeck, PHD - 2007
Pamela A. Eibeck is dean of the College of Engineering and professor of Mechanical Engineering at Texas Tech University. While on the faculty at the University of California at Berkeley, Dr. Eibeck contributed to the fields of convective heat transfer and advancing innovation in engineering education. She has been chair of the Mechanical Engineering department and vice provost for undergraduate studies at Northern Arizona University. She is the recipient of numerous awards including the Boeing Outstanding Educator Award and the Distinguished Engineering Educator Award from the Society of Women Engineers. She is the vice-chair of the Engineering Deans Public Policy Committee and she currently represents the ASME as one of the seven members of the Engineering Accreditation Commission of ABET, Inc..

Valery I. Levitas, SCD - 2007
Dr. V.I. Levitas’ career spans thirty years. He is internationally recognized for his development of basic theories, material models and performing computational modeling for various material processes and engineering applications. This includes development of theory of materials behavior under extreme parameters (large plastic deformations under high pressure and temperature), models for industrial diamond synthesis and strength of high pressure apparatuses for diamond synthesis, improvement of high pressure apparatuses, development of the theory of structural changes in plastic materials that includes phase transformations, twinning, and chemical reactions, and development of the multiscale theory for high pressure mechanochemistry. He discovered new mechanisms for phase transformations via virtual melting in energetic, electronic, superhard and geological materials. He also developed new mechanochemical mechanism (melt-dispersion-mechanism) for oxidation of aluminum nanoparticles that changes particle synthesis strategies. Dr. Levitas received a number of prestigious international awards, presented numerous keynote lectures and was listed in various "Who is Who" books.

Fulbright Scholars bring back unique experience

Dr. Stephen Ekwaro-Osire, an associate professor of mechanical engineering and the department’s director of graduate studies, was a Texas Tech’s recipient of 2007-2008 Fulbright Fellowship. He was chosen with approximately 800 other U.S. Faculty and Professionals to lecture and conduct research in 140 countries around the world.

Dr. Ekwaro-Osire lectured and participated in faculty service in the Department of Mechanical Engineering at Bogazici University in Istanbul, Turkey. Bogazici University was founded in 1860 as the first American college outside of the US. Currently, it is Turkey’s most prestigious university. While at Bogazici University, he taught a new graduate-level course, collaborated with professors at different Turkish universities and presented three papers at the International Global Colloquium on Engineering Education Conference. Additionally, he presented eight invited seminars at four different universities.
Fulbright Scholars (continued from page 2)

“I feel both proud and grateful to have received this prestigious fellowship,” Dr. Ekwaro-Osire noted in an interview.

“Hopefully, I made some contributions to Turkey through my academic and professional interactions. On the receiving end, the exposure to a different culture is always stimulating and thought-provoking. I’m hoping for a continued exchange between Texas Tech University, and the Turkish universities and their students.”

For the duration of the Fulbright fellowship, Dr. Ekwaro-Osire relocated to Istanbul, Turkey, with his family. His family traveled with him to various engagements in the different cities in the country. The graciousness and hospitality of the Turkish people and the beauty of the country impressed them deeply.

Jordan Berg spent the first seven months of 2008 as a Fulbright Scholar in Sri Lanka.

In the Spring semester he taught at the University of Ruhuna, near the southern city of Galle. At Ruhuna, Berg developed a course on robotics, dynamic modeling, and control that featured a robotics competition. In that competition, teams of students had to build a robotic tractor-trailer capable of driving backwards around a course without human assistance. The course emphasized innovation and creativity over rote learning, and was warmly received by the students—who produced several remarkable robots, made from inexpensive toys and electronic odds and ends.

After the end of the semester, Berg moved to the University of Peradeniya, located in the center of Sri Lanka near the city of Kandy. There he gave a keynote lecture on MEMS and NEMS in a week-long workshop on Emerging Opportunities in Nanotechnology. Berg was invited to Sri Lanka by Texas Tech ME graduate Dr. D. H. S. "Muga" Maithripala, who is now a Senior Lecturer (equivalent to an Associate Professor) at the University of Ruhuna. Berg worked collaboratively on research problems with Sri Lankan students and faculty, and recruited one exceptionally talented student for graduate study in Lubbock. Accompanying Berg to Sri Lanka was his wife Colleen and their three children. Colleen—who has a Master’s degree in Computer Science and is an Instructor in the TTU ME Department—helped teach the microprocessor programming segment of the robotics course.
Sabbatical Leave

**Dr. Barhorst** spent July 2007-July 2008 working for Texas A&M University in Qatar (TAMUQ). TAMUQ is one of several US Universities (Virginia Common Wealth, Weill-Cornell Medical School, Carnegie-Mellon, Georgetown, Northwestern) in Qatar that is part of Education City. This Qatar Foundation educational project is part of the Qatari government's efforts to bring western educational ideals to their country.

Dr. Barhorst served as Program Coordinator of the Mechanical Engineering Program. He taught statics and a seminar course while there as well as writing the TAMUQ MEEN ABET (accreditation) Self Study document. He led the program through a mock ABET visit in the winter. He helped get the TAMUQ labs in working order. He helped recruit local and multinational companies to support the MEEN program for capstone design projects.

He helped lay the groundwork for Qatari government support of the Middle Eastern Turbomachinery Symposium that is to be hosted by the Turbo Lab at TAMU. He organized and hosted Qatar's first rotor dynamics short course taught by Professor Childs of the TAMU Turbo Lab. He was mentor to the junior faculty and the students. His year was full of activities that made it rapidly pass. He and his family got to experience parts of the world he never thought he would visit.

Dr. Barhorst is happy to have been given the opportunity by TAMUQ and TTU to gain leadership and international experience at TAMUQ, but is most happy he and his family are back in his adopted home of 17 plus years that is Lubbock and Texas Tech University. Red Raiders are everywhere, including TTU ME Alumni Amy and Mark Powell, Dr. Barhorst appreciates the warm welcome the Powell's showed him and his family while in Doha, Qatar.

**Dr. Ming Chyu**, professor, was on sabbatical leave during the spring 2008 semester. Chyu worked at the University Hospital of State University of New York at Stony Brook (SUNY-SB), Long Island, NY, to learn state-of-the-art experimental techniques in their world-renowned Bone Mineral Research Center.

Chyu is currently collaborating with SUNY-SB and the TTU School of Medicine on a research project funded by the National Institutes of Health to investigate mitigation of osteoporosis in postmenopausal women ($572,000, 2007-2009). Efforts were made during Dr. Chyu's sabbatical leave to expand the existing research collaboration between TTU and SUNY-SB on bone research by exploring new research ideas that will lead to joint grant proposals and research programs.

Proposals Awarded

**Dr. Sukalyan Bhattacharya** was awarded $100,000 by the ACS PRF Advisory Board for his research proposal entitled "Fast Simulation of Suspension Dynamics in Presence of Particle-Clusters Inside Partially Blocked Channels."

**Dr. Bhattacharya** was also awarded $22,905 by the Air Force Office of Scientific Research. The title of the proposal was "Analysis of Flow Around and Inside Solid Surfaces using Generic Exact Solutions."

**Dr. Jordan M. Berg**, Dr. Ayrton Bernussi, Dr. Mark W. Holtz, Dr. Sergey A. Nikishin, and Dr. Henryk Temkin were awarded $280,222 by the National Science Foundation. The title of the proposal was "NIRT: Nano-Engineering Efficient Optoelectronic Devices."

(continued on page 5)
**Proposals Awarded** (continued from page 4)

**Dr. Jordan M. Berg, Dr. Ayrton Bernussi, Dr. Luis Grave de Peralta, and Dr. Darryl L. James** were awarded $199,995 by the Defense Advanced Research Projects Agency. The title of the proposal was "Finite-Element Simulation for Electro-thermal Characterization of High-Power Diode Laser Bars."

**Dr. Ming-Chien Chyu** was awarded $47,844.50 by the National Institutes of Health/Texas Tech University Health Sciences Center. The title of the proposal was "T06-06 Green Tea Polyphenols and Tai Chi for Bone Health: A Pilot Study."

**Dr. Ming-Chien Chyu** was also awarded $19,446.47 by the USDA/Texas Tech University Health Science Center. The title of the proposal was "Community-Based Approaches to Overweight and Obesity Among Young Children in West Texas."

**Dr. Valery I. Levitas and Dr. Michelle L. Pantoya** were awarded $100,000 by the National Science Foundation. The title of the proposal was "Melt-Dispersion Mechanism for Energetic Reactions of Aluminum Nanoparticles."

**Drs. Levitas and Pantoya** were also awarded $100,000 for "Fundamental Understanding and Improvement of Energetic Reactions of Aluminum Particles with Oxidizers and Metals by the Office of Naval Research."

**Dr. Michelle L. Pantoya** was awarded $94,483 by the DOD/DTRA/University of Texas. The title of the proposal was "Impact Driven Reactions in Select Thermites and Reactive Materials."

**Dr. Pantoya** was also awarded $100,000 by the U.S. Army Research Office. The title of the proposal was "PECASE - Propagation Physics and Ignition of Nanocomposite Energetic Materials."

Additionally, **Dr. Pantoya** was awarded $70,000 for "Examining the Combustion Behaviors of Nanocomposite Thermites in Aqueous Environments," from the Department of Energy, $100,000 for "Combustion Behaviors of Nanocomposite Energetic Materials", through the Department of Defense Army Research Office Presidential Early Career Award for Scientists and Engineers.

**Dr. Alexander Idesman** was selected as a Faculty Fellow for the 2008 Air Force Summer Faculty Fellowship Program (SFFP) at AFRL/RW EGLIN AF BASE, FLORIDA in the program "Continuum Mechanics" for 10 weeks (May-July 2008).

**Dr. Derrick E. Tate** was awarded $1,700 by the Texas Space Grant Consortium. The title of the proposal was "Texas Space Grant Consortium Design Challenge."

**Dr. Jingzhou (James) Yang** received a grant for $41,784 from Caterpillar Inc. and The University of Iowa, for his research project entitled “Hand Simulation Model”.

**Dr. Dr. Alexander Idesman** was selected as a Faculty Fellow for the 2008 Air Force Summer Faculty Fellowship Program (SFFP) at AFRL/RW EGLIN AF BASE, FLORIDA in the program "Continuum Mechanics" for 10 weeks (May-July 2008).

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Other News

New Masters Degree option in Healthcare Engineering

Dr. Ming Chyu established in May this year a new Master of Engineering degree option in Healthcare Engineering in the TTU College of Engineering. This is the first Healthcare Engineering degree option/program in the state of Texas, and one of the first in the US. Healthcare Engineering covers engineering involved in all aspects of healthcare delivery processes and systems, with emphases on improving safety, quality, efficiency, accessibility, and cost effectiveness. More information can be found at http://www.depts.ttu.edu/coe/academics/healthcare_engineering/index.php, or internet search using keywords: “texas tech healthcare engineering”.

External Grant Recognition & Research Awards

Dr. Jordan Berg was recognized for receiving a grant over $500,000 from the College of Engineering.

Dr. Jordan Berg was awarded the Whitacre Excellence in Research Award.

Dr. Michelle Pantoya was recognized for receiving a grant between $250,00 and $500,000.

Dr. Michelle Pantoya was named a Whitacre Faculty Fellow.

Staff Awards

Isaac Mora received the Orval Leroy Lewis Award.

Nanofiber Research Work Reaches a Milestone and Crosses 100 Citations

In April 2005, Dr. Seshadri Ramkumar, an Associate Professor in the Institute for Environmental and Human Health, and collaborators published a peer-reviewed paper entitled "Electrospinning of Nanofibers" in the Journal of Applied Polymer Science. This paper was classified as Highly Cited paper by ISI's Web of Knowledge Database. As of August 21, 2008, this paper reached a milestone and has crossed 100 citations. Two well known databases-Elsevier's SCOPuS shows 115 citations and ISI's Web of Knowledge shows 100 citations. Moreover, non-self citation for this paper has crossed 100, which is worthy of mentioning. The collaborators of Seshadri Ramkumar who contributed to this paper include Dr. Siva Parameswaran, Professor, Department of Mechanical Engineering, TTU, Dr. Richard Tock, Professor, Dept. of Chem. Engineering, TTU, Dr. Gajanan Bhat, Professor, Department of Material Science and Engineering, University of Tennessee, Knoxville and Mr. T.Subbiah, former student of Ramkumar, Department of Chemical Engineering, TTU. This work showcases true collaborations between units and Universities.

Years of Service Awards

Twenty Years of Service
Ming-Chien Chyu
Sivapathasund Parameswaran
Jahan Rasty

Fifteen Years of Service
Alan Barhorst
Darryl James

Five Years of Service
Yanzhang Ma
Dr. Jahan Rasty was invited to serve on the ASME Region E District Operating Board. One of the main objectives of Dr. Rasty is to develop a local ASME professional chapter in Lubbock in order to have a forum for local and surrounding professional ME members, as well as providing mentorship for our local TTU ASME Student Chapter.

Dr. Sergey Smirnov attended the “Coastal Trapped Waves” American Geophysical Union Ocean Science Meeting, March 1-7, 2008. Orlando, FL, USA.

Dr. Smirnov was the recipient of the Texas Tech Research Enrichment Grant. April, 2008. “Development of the Mechanical Lungs Model for Studies of Artificial Ventilation and Drug Delivery”.

Dr. Smirnov was the reviewer of the manuscript “Engineering Fluid Mechanics”, (9th Ed) by Clayton T. Crowe. John Wiley & Sons, Inc.

Dr. Smirnov was also invited to speak on “Development of laboratory-numerical tools for studies of oceanic fronts” at the Mechanical Eng Dept seminar at Louisiana State University, April, 2008. Baton Rouge, USA.

Dr. Smirnov served in the NSF panel (CBET/Fluid Dynamics Section, June 2008)

Additionally, Dr. Smirnov served as Chairman of the session “Rotating Stratified Flows” at the International Symposium on Environmental Hydraulics (ISEH-V). December 4-7, 2007. Tempe, AZ, USA.


In August, Dr. Ming Chyu was invited to speak on “Healthcare Engineering and Women’s Health” to a group of 200+ women leaders from all over Texas at the Laura W. Bush Institute for Women’s Health at Amarillo, TX.

Dr. Jahan Rasty was invited to serve on the ASME Region E District Operating Board. One of the main objectives of Dr. Rasty is to develop a local ASME professional chapter in Lubbock in order to have a forum for local and surrounding professional ME members, as well as providing mentorship for our local TTU ASME Student Chapter.

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Dr. Jingzhou (James) Yang was invited to be session chair for the SAE World Congress, Cobo Center, Detroit, Michigan, April 20-23, 2009, the SAE Digital Human Modeling for Design and Engineering Conference and Exhibition, Gothenburg, Sweden, June 9-11, 2009, and the International Human Computer-Interaction (HCI) 2009, 2nd Conference on Digital Human Modeling and Simulation, San Diego, CA, USA, 19-24 July 2009.

Dr. Idesman has also been invited to give a seminar in the Aerospace Engineering department at Texas A&M in November 13, 2008. The title of his presentation is "A New Fast, Accurate and Non-Oscillatory Numerical Approach For Wave Propagation Problems In Solids".

Dr. Ed Anderson served on a teaching of Statics (Mechanics I) discussion panel at the October Frontiers in Education Conference in Sarasota Springs, NY.

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Dr. Yanzhang Ma was Tenured and Promoted to Associate Professor.

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Faculty

Dr. Ed Anderson
Professor

Dr. Alan Barhorst
Professor

Dr. Jordan Berg
Professor

Dr. S. Bhattacharya
Assistant Professor

Dr. Jharna Chaudhuri
Chair & Professor

Dr. Ming Chyu
Professor

Dr. Steven Ekwaro-Osire
Associate Professor

Dr. Atila Ertas
Professor

Dr. Seon Han
Assistant Professor

Dr. Javad Hashemi
Professor

Dr. Zhaoming He
Assistant Professor

Dr. Quig Hui
Assistant Professor
Instructors

Mrs. Colleen Berg
Mr. Dave Branson
Mr. Jeff Hanson
Mr. Scott Fanning
Mr. Andrew Mosedale

Staff

Mrs. Tosha Chambers
Assistant Advisor
Mrs. Vanessa Jehangiri
Sr. Business Assistant
Mrs. Katie McNeil
Assistant Advisor
Mr. Isaac Mora
Senior Technician
Mr. Michael Philpott
Senior Technician

IT Support

Mrs. Tonette Rittenberry
Academic Program Advisor
Mrs. Lori Walraven
Business Manager
Mr. Will Geiger
Mr. Mike Kent
In April 2008, The Academy welcomed three new distinguished members.

**Mr. Chris Kirksey**, BSME ‘84, is the Sr. Vice-President of Power Production and is responsible for management of all assigned resources for Austin Energy’s Power Production systems and began his career with them in 1985. He lives in Austin with his wife Betsey and their three children Kelsey, Haley, and Matthew.

**Mark T. Laney**, BSME ‘86, has been at Bell Helicopter since 1996 and serves as a Staff Engineer and is currently the Integrated Product Team (IPT) Air Vehicle Deputy were he is responsible for the overall management, direction, and coordination of the Amarillo Air Vehicle team on the UH-IY and AH-1Z helicopter upgrades program. Mark lives in Amarillo with his wife Lee Ann and their two children, Ben and Sam.

**Gerald R. Sayer**, BSME ‘59, vast knowledge and experience obtained over the years had lead to his current position as President of G.L. International, a management consulting firm who deals in conceptual design, and program management to name a few. Gerald lives in Laguna Hills, CA with his wife Lorraine. They have four children, Michelle, Scott, Chris, and Greg.

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**Texas Tech Academy of Mechanical Engineers Announces New Members**

Mr. Carl V. Alexander  
President  
Vanguard Metal Technologies  
5737 Hefferman  
Houston, TX 77087  

Dr. Jharna Chaudhuri  
Chair-Mechanical Engineering Dept.  
Texas Tech University  
Dept. of Mechanical Engineering  
Box 41021  
Lubbock, TX 79409  

Mr. Alan J. Davidson  
4115 Pinehurst  
Amarillo, TX 79109  

Mr. Louis A. Gritzo, Ph.D.  
Vice President and Manager of Research  
FM Global  
1151 Boston-Providence Highway  
Norwood, MA 02062  

Mr. Daniel E. Henke (Dan)  
Vice President  
Fossil Business Sector  
Utility Engineering Corporation  
5601 I-40 West  
Amarillo, TX 79106  

Mr. Tim Hunter  
Technical Excellence Manager  
Mechanical Service Equipment  
Duncan Technology Center  
2600 South 2nd St.  
Duncan, OK 73536  

Mr. Dwight Jackson  
Senior Advisor Recruiting & Staffing  
ConocoPhillips  
600 North Dairy Ashford St.  
Houston, TX 77079  

Mr. Mark Laney  
Bell Helicopter  
Military Aircraft Assembly Center  
6404 Palacio Dr.  
Amarillo, TX 79109  

Mr. Bruce McCain  
1804 E. Reppto  
Brownfield, TX 79316  

Mr. Aaron Ramos  
F/A-22 VMS  
Flight Control Hardware  
Lockheed Martin Aeronautics  
Fort Worth, TX  

Mr. Mark S. Ramsey  
President  
Texas Drilling Associates  
6130 Inway Dr.  
Spring, TX 77389  

Ms. Lisa Tuerff  
Electronic Commerce Manager  
Electrical Products Division  
3M Austin Center  
6801 River Place Blvd.  
Austin, TX 78726  

Mr. David A. Ufford, P.E.  
Manager  
Product Development Engineering  
Raytheon Missile Systems  
P.O. Box 405, Bldg. 809/P3  
Tucson, AZ 85734  

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Bell Helicopter  
Military Aircraft Assembly Center  
6404 Palacio Dr.  
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Manager  
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Raytheon Missile Systems  
P.O. Box 405, Bldg. 809/P3  
Tucson, AZ 85734  

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**IAC**

The Department of Mechanical Engineering would like to express our gratitude and appreciation to the members of the Industrial Advisory Committee.
Alumni News (continued)

Scott Funderbunk, BSME ’94; MSME ’96

Scott was recently promoted to the position of Global Business Director for the pipeline market segment with Lincoln Electric, located in Hudson, Ohio. In this role, he will be responsible for Lincoln Electric’s global marketing efforts to provide exceptional welding equipment and consumables for the onshore and offshore pipeline industry.

He has been with Lincoln Electric since 1996 and have held these positions: Welding Design Engineer, Technical Sales Rep, and Application Engineering Manager.

Lincoln Electric is the world leader in the design, development and manufacture of arc welding products, robotic arc-welding systems, plasma and oxyfuel cutting equipment and has a leading global position in the brazing and soldering alloys market. Headquartered in Cleveland, Ohio, Lincoln has 37 manufacturing locations, including operations, manufacturing alliances and joint ventures in 19 countries and a worldwide network of distributors and sales offices covering more than 160 countries.

For more information about Lincoln Electric, its products and services, visit the Company’s Web site at http://www.lincolnelectric.com.

Drew Joines, BSME ’06

Drew has been working at ConocoPhillips for two years now. Previously in Houston, he is now working on the largest private construction project in North America from a field office in Tok, AK.

For more information on Denali-The Alaska Gas Pipeline and the new field office in Tok, AK go to www.denali-thealaskagaspipeline.com.

Bethanyanne Hunt Bahm, BSME Dec. ’98

Bethanyanne is currently working for Chevron Refining at their Refinery located in Hawaii. She has been there for almost 5 years.

Bethanyanne and her husband just had their first child, a little boy named Pierce.

Carolyn Holden, BSME Dec. ’06

After graduation Carolyn began work as a petroleum production engineer with British Petroleum. For the past year, Carolyn has been working on a field in the Gulf of Mexico and this March will begin a six-month rotation to the North Slope of Alaska.

Nathan W. Poerner, BSME; MSME ’07

Nathan joined Southwest Research Institute in San Antonio in February as an Engineer in the Plant Engineering Section - Fluids Engineering Department. He will support the section and department by diagnosing, evaluating, and solving pulsation, vibration, and operational problems in fluid handling machinery and piping systems.

While at Texas Tech University Nathan had internships at BWXT Pantex, Sandia National Labs, and Los Alamos National Labs and his thesis involved experiment and numerical analysis of residual stresses under the direction of Dr. Jahan Rasty.

Ramkumar Kunnavakkamvinjamur, PhD ME ’07

Ramkumar accepted a position in January of 2008 at Fatigue Technology, Inc. (FTI) in Seattle, WA. His Ph.D. Dissertation was entitled, “Experimental and Finite Element Study of Material Behavior under Conditions of High Strain-Rate and High Heating-Rate,” which he completed under the supervision of Dr. Jahan Rasty.
Jim Potts, BSME ‘85

1985-1986, Engineer Liaison for Mojango, Inc. - Floydada, TX (owned by J. Frank Potts III, 1962 Mechanical Engineer Grad from TTU)
1986-1987, Medical Product Engineer & Production Manager Composite Horizons - West Covina, CA
1987 - 1989, Mechanical Engineer at Northup's Mantech Division B2 Stealth Bomber Project
1989 - Present, Pres. of Potts Composites, Inc., Floydada, TX
pottscomposites.com

Mechanical Passions:
1975 - Present, Avid Car/Motorcycle Enthusiasts/Restorer. Still has his 73 Pontiac Trans Am from high school.
1983 - 1985, Participated in the Mini Baja sponsored by TTU
1992 - 1993, Constructed a 1962 Convertible GTO Ferrari - Kit Car (Work in Progress)

Student News

The Texas Tech ChallengeX team of engineering students accompanied their 2005 Chevrolet Equinox to the final ChallengeX competition May 12 through May 21, 2008. The team won two awards, the Outstanding Long-Term Faculty Advisor Award and the National Instruments: Most Innovative Use of Graphical System Design Award. Dr. Tim Maxwell, professor of Mechanical Engineering, received the faculty advisor award, and Stephen Barrett, Electrical and Computer Engineering undergraduate student, received the innovation award for the team.

The Texas Tech team consists of puter Engineering graduate student and Mechanical Engineering undergraduate student, Matt Harneering graduate student, and undergraduate student. Dr. Timm Parten are advisors. Chal- petition sponsored by the US Depart- ration, and other national sponsors. Visit www.challengex.org to see a listing of all participating teams. The Texas Tech Equinox is powered by a 2.4 L engine which burns E85 and hydrogen. The engine is assisted by a 4 kW electric motor to allow hybrid stops and a 10 kW hydrogen fuel cell to provide electric power for the motor and vehicle accessories.

This is Texas Tech’s 21st year to compete in one of the Department of Energy-sponsored events, the next is EcoCAR: The NeXt Challenge, beginning in the fall of 2008. The other 16 schools that will compete in the EcoCAR challenge include:

- Embry-Riddle Aeronautical University
- Georgia Tech
- Howard University
- Michigan Technological University
- Mississippi State University
- Missouri University of Science and Technology
- North Carolina State University
- The Ohio State University
- Ontario Institute of Technology
- Pennsylvania State University
- Rose-Hulman Institute of Technology
- University of Victoria
- University of Waterloo
- University of Wisconsin
- Virginia Tech
- West Virginia University
Student News (continued)

Texas Tech was represented by a Mechanical Engineering design team from the Design II course in the 2007-2008 Raytheon Air to Air University Design Competition. It was hypothesized that premature wear on the missile launch rail was induced as a result of the high structural stiffness of the Captive Air Training Missile. The objective of the competition was to analyze and redesign the CATM to match the natural frequency, mass properties, and structural integrity of its tactical variant. Of the universities that competed only the top two teams were invited to Tucson, Arizona based on a design review conducted in December of 2007. Team Texas Tech, consisting of team leader Richard Borge, Hector Guardado, Austin Smith, and Leroy Arce, was one of the two teams given that honor. The team presented their design to Raytheon and the U.S. Air Force in April 2008. After the presentations had concluded the teams were scored in several areas and Team Texas Tech won the 2007-2008 competition!

Post-Doctoral News

Dr. Luke Nyakiti was hired as a post-doctoral research associate working on “Experimental structure-property relationship of nanocrystalline metallic alloys and composites.

Graduate Student News


Bo Gao has won 3rd place of TTU Graduate School 7th Annual Research Competition. Congrats!

Doctorial Student News

ME recipients of the AT&T Chancellor’s Endowed Fellowships:

Fisseha Alemayehu (Ph.D ’11)

Ilker Durukan (Ph.D’11)

Sanjana Datta (BSME ’08; MSME ’10)

Fisseha Alemayehu

Mrughesh Dhorje (not pictured) received the 2008 Summer Thesis Research Award
**Under-Graduate Student News**

Adrian Escudero, BSME ’10 and Didiana Rojas, undergraduate researchers with the McNair Scholars Program, attended the West Texas A&M research conference in Canyon on April 11 and placed second for undergraduate research in "Cartilage Segmentation of the Human Arthritic Knee." Adrian and Didiana are mentored by Dr. Javad Hashemi.

The Texas Tech College of Engineering has named Travis Turnbull the recipient of the McAuley Distinguished Engineering Student Award for 2008. The award is named in memory of James A. McAuley, a Texas Tech Distinguished Engineer.

Marsye Metcalfe, BSME ’11; The Center for Engineering Outreach is proud to announce the selection of this year’s Engineering Outreach Mentors. Chosen from top students in the College of Engineering, Engineering Outreach Mentors work with K-12 students and teachers to help them understand more about engineering. These paid, student mentors help teach and facilitate engineering lessons in K-12 classrooms, but more importantly, they’re role models for kids.

For more information about this year’s eleven mentors, please visit: http://www.engineeringoutreach.ttu.edu/mentors/2007/

**Student Organization News**

This year, ASME has opened up a new division of itself: the Design Committee. With Dain Johnson, Andrew Blunt, Lizzy Scheers, Mark Scheers, and Kirk Williams, the Design Committee, focusing primarily on creativity and engineering ingenuity, will be hosting a design competition between Tech ASME members each semester. These competitions follow in the footsteps of Junkyard Wars by having the teams design and construct purely mechanical machines.

The first competition, tennis ball launchers for tennis practice, has already concluded, but another is already in the works for the spring semester. Because this is a very new committee for ASME, only two teams gathered to compete with tennis ball launchers.

Because only two teams registered to compete, the committee was able to award prizes to everyone who competed. The Design Committee worked with Sears to receive discounted Craftsman tools as prizes for the competition. The members of the first place team received either a set of mechanic tool set or power tools worth at least $100 per member; the second place team was also awarded Craftsman tools worth at least $25 per person.

With the excitement generated from this first competition, and the talk among students, we hope that the competitions will greatly expand to include half of the registered ASME members in each competition.
Student Organization News (continued)

The Playa Lake Water Testing Program will allow junior high students to experience first-hand the satisfaction of performing scientific experiments in the field by examining the quality of water in their local community using water testing kits. The students will learn about water sanitation, the global issues related to water quality, as well as engineering concepts that are employed to improve water quality.

Engineers Without Borders introduced The Playa Lake Water Testing Program to students from O.L. Slaton Middle School. Project developer and lead, Dana Rosenbladt, will be working with 8th Grade Science students in an effort to introduce them to Science and Engineering. The project will also include incoming Bridge students in the College of Engineering as an opportunity to increase involvement and awareness of EWB.

ASME and SPE sponsored a back-to-school cookout on September 3, 2008, with El Paso Corporation. Over 1200 students attended the event, which featured a live performance from the Jeff Strahan Band. Free hot dogs and sausage wraps were provided to all the students as well as an opportunity to meet and speak with representatives from El Paso Corporation. Overall, the event was very successful in promoting the ASME and SPE organizations and recruiting new members.
**Pi Tau Sigma** participated in its national convention in Atlanta in February. There are two national awards given at the convention and our student chapter won both - the Outstanding Service Award and the Outstanding Chapter Award!

Additionally, one of our students, **Sanjana Datta**, was awarded the Ed and Faye Griggs Scholarship *(one of three awarded nationally). Finally, Texas Tech was chosen as the sight for the 2010 Pi Tau Sigma National Convention. I'd say that is a clean sweep!

We have an fantastic group of students led by motivated and outstanding officers (PTS officers are: Meredith Macha, president; Troy Mills, vice-president; Amanda Gordon, secretary; Seth Berry, treasurer; Billy Clark, Michael Morse, Richard Borge, initiate coordinators; Travis Turnbull, web master; Dana Rosenbladt, Oliver Harrison, graduate advisers).

*Quote/thank you from Darryl James, PTS Faculty Advisor*

“I'd like to thank the College of Engineering and the Mechanical Engineering Department for providing the funds for Sanjana to attend the convention and receive her scholarship, and the ME department for assisting our PTS officers attend the convention.”

*Quote from Richard Gale regarding national recognition:*

“That is really outstanding, Darryl. This is the sort of national recognition all of our student organizations should strive for. Congratulations to all of these students.”

Richard Gale  
Associate Dean, Undergraduate Studies  
Professor, Electrical and Computer Engineering

*ADDITIONAL INFO:*

The Ed and Faye Griggs Scholarship was awarded to three member nominated by Pi Tau Sigma chapters in good standing. This is the first year that this scholarship has been awarded. The scholarships are worth $2000 each and they were awarded to the recipients on February 16, 2008 at the Pi Tau Sigma Convention that was hosted by Georgia Tech Nu. The two other recipients were from Virginia Tech and Oregon State. The recipients for this scholarship were chosen based upon academic performance, contribution to the organization and the profession. The applicants were required to write an essay on why they deserve the scholarship for their contributions to Pi Tau Sigma, the ways in which they have been active in their chapter, and how they wish to contribute to society as a mechanical engineer in the future.

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**Good Bye** *(continued from page 1)*

In her retirement, Carmen plans to spend time with her family, work on their farm, and volunteer, “I will soon be going thru a process to become a child advocate with the organization CASA. The work on our farm also keeps me very busy. Helping Edward with the horses and cows (feeding and caring of the animals) is an everyday process. It's amazing how enjoyable this work can be.”

Carmen has been a valued member of the Mechanical Engineering Department and Texas Tech University and we wish her the best in her retirement.
COE Job Fair 2008

2008 Engineering Job Fair

The 2008 Engineering Job Fair was held on September 30th at the Lubbock Memorial Civic Center. This fair was the college's largest job fair, welcoming 600 more students than the largest job fair in the past. More than 1,975 students registered at the door and 496 recruiters from 191 companies were able to reschedule to the new date to accommodate the victims of Hurricane Ike.
### Mechanical Engineering Graduates 2007-2008

#### Fall 2007 Bachelor of Science Recipients
- Justin Oluwolege
- Jonathan Oluwolege
- Stephen Oluwolege
- Brian Oluwolege
- Kelly Oluwolege
- Timothée Oluwolege
- Joseph Oluwolege
- Lee Oluwolege
- Jody Oluwolege

#### Fall 2007 Master’s Recipients
- Casey Peter
- Jacob Jacob
- Justin Stewart
- Arthur Daniel
- Adam Peter
- Stephen Robert
- Bryan Bryan
- Aaron Nathan
- Casey Nathan
- Matthew Brandon
- Peter Emily
- Edward Justin
- Bryan Nathan
- Ben Matthew
- Chelsia Weston
- Adam Kyle
- Jason Andrew
- Mark Douglas
- Alan Malachi

#### Fall 2007 Doctorate Recipients
- Ramkumar
- Barath
- Emre

#### Fall 2008 Bachelor of Science Recipients
- Jacob Michael
- Jeffrey Aaron
- Blake Lee
- Melissa Chester
- Treessha Stephen
- Steven Jeffrey
- Adam Adam
- Peter Cory
- Morenike Caleb
- Sherman Jon
- Michael Brian
- Richard James
- James Brian
- Sherman Mrugesh
- Suryaprakash Anika
- McFarland Shawn
- Erick Joel
- Jeffrey Jeffrey
- Jesus Travis
- Homer Lacey
- John Adriel
- Scott Nicholas
- Mehul Carlos
- Sibi Tyler
- James David
- Palkala Palakala
- Smith Brian
- Sibola Zachry

#### Spring 2008 Bachelor of Science Recipients
- Paul Leroy
- Jacob Trane
- Seth Eric
- Billy William
- Scott Alyssa
- Whitney Frank
- Elder Frank
- Alexander Gary
- Carl Kelly
- James Matthew
- Eon Matthew
- Rachel Hector
- Guarino Mark
- Mark Mark
- Rob Ryan
- Christopher Robert
- Huyse Robert
- Beilin Abell
- Jansson Ryn
- Steven Jeremy
- Jones Nabeel
- Khan Russell
- Lechuga Marcos
- Lipcomb David
- Tyler Marci
- Mackey Lucas
- Mathew Eric
- McConnell Shane
- McKeely Troy
- Mills Eric
- Ortiz Farrus
- Parker Robert
- Patel Nicholas
- Reff Graham
- Rollins Ryan
- Ross Jonathan
- Russell Abel
- Salazar Adam
- Sanchez Jason
- Schneider Scott
- Schoenariah Matthew
- Smith Austin
- Taylor John
- Homer Travis
- Turner Travis
- Vega Jesus
- Jeffrey Jeffrey
- Ryan Ryan
- Watson John
- Wegenka Jeffrey
- Wegener Woff

#### Spring 2008 Doctorate Recipients
- Resul Peru
- Luke Nyakiti

#### Spring 2008 Master’s Recipients
- Sivesh Sai
- Tharikur Blu
- Johnny Jesus
- Columbia Erick
- Nitoi Shawn
- Ismail M. I.

#### Summer 2008 Bachelor of Science Recipients
- Aditya Suryakrishna
- Aparajita
- Anika Aheera
- Rameshkrishan
- Mgaghihj Dhorja
- Prakash Alagro
- Himadri Sekhar
- Aruna Jaya
- Kirtikar De
- Kumar Dil
- Kumar Guroo

#### Summer 2008 Master’s Recipients
- Richard Borge
- Brian Brian
- James Scott
- Michael Jon
- Sherman Fed
- Caleb Oscar
- Cory Jordan

#### Congratulations!
Pledge of Support

I wish to support the ME department in the form of:
(Please check one)  Students:  □ Scholarships  □ Organizations
Faculty:  □ Facilities:  □

□ $25               □ $50
□ $100              □ $200              □ Other $ _________

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Home Phone: ( ) __________________ Work Phone: ( ) __________________
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Attn: Lori Walraven, TTU-ME, Box 41021, Lubbock TX 79409

The department appreciates your financial support!

Keeping in Touch

The TTU Department of Mechanical Engineering would like to know what is happening in your professional life. Please send the following information with your news to: vanessa.jehangiri@ttu.edu

Name: ________________________________
Address: _______________________________________
City: ____________________________ Zip: _________
State: _______ E-mail: ____________________________
Graduation year: _______ Degree: _______
Current Occupation: ____________________________
Employer: __________________ Location: _______
The news of your accomplishments/promotions can be included on a separate sheet. (Please feel free to include newspaper articles, photos, etc)

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