



UT Aerospace Students Seek to Drink Extraterrestrial Water



Inside the vacuum chamber, water vapor is drawn into the condensation chamber and then turned to liquid water.

During the 2004–2005 school year, UT Aerospace students were hard at work developing a process that could provide off-Earth sources of water for space explorers. Developing an extraterrestrial “local” watering hole is part of a broader concept of off-Earth resource exploitation known as in situ resource utilization (ISRU), one that NASA is keen on seeing industry and academia pursue. ISRU should enable launch mass reductions, thereby cutting mission costs and complexity, and dramatically increasing the feasibility of robust, long-duration, manned exploration missions.

Getting its start in Dr. Fowler’s Space and Mission senior design course, the UT Extra-Terrestrial Water Extraction (UT-ETWE) team was comprised of Stewart Geyer, Jeff Jacob, Casey Johnson, Ronald Lum, James Norris, Ronald Lum, Marcin Pilinski, Faheem Qazi, and Dave Weyburn.

In the fall, UT-ETWE developed a discovery class mission to Mars that would test the centerpiece of its design—the water extraction process. During the spring, the team focused on that process and how it could produce water in any extraterrestrial setting if water-ore was available.

UT-ETWE’s design employs simple scientific principles to remove water from an in situ ore. A sublimation or vaporization process (depending on alien locale) removes the water from its ore, and a condensation process returns the water to liquid form for human consumption.



Professor Wallace Fowler and Dave Weyburn with “The Iron Lung”.

The spring semester’s activities primarily involved building a test apparatus and running a battery of tests to validate the team’s concept. Armed with a mid-century, antique thermo-vacuum chamber previously destined for UT surplus and more affectionately known as The Iron Lung, UT-ETWE team members sought to simulate a Martian environment (atmospheric pressure: 6-8 mbar; ambient temperature: -50 to -20°C) in which they could validate the water extraction process. In addition to taking part in the 2005 RASC-AL Forum in Cocoa Beach, the team accomplished quite a bit by the time the semester ended. The Iron Lung did not function per specifications, but intermediate results showed promise.

Though all but one of the team’s members graduated by the end of the summer, UT-ETWE’s work will not be wasted. Possibilities for follow-up projects are being explored and the department has expressed an interest in turning The Iron Lung into a permanent Mars testbed.

Article by Dave Weyburn, BS ASE, 2005

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**LIVE MUSIC with Guy Forsyth
FREE FOOD from O’s**

See back page for more info!



Robert H. Bishop
ASE/EM Chairman
Photo: Caroling Lee

You may have heard that our aerospace engineering program is an "accredited program." Have you ever wondered who has the authority to bestow accreditation upon us? And what does this mean to you as a student, parent, or employer?

The aerospace engineering program review is conducted by the Accreditation Board for Engineering and Technology, known as ABET. ABET is an association of thirty professional and technical societies, including the AIAA, our own professional aerospace engineering society. Given our participation as faculty in the AIAA professional society, it is fair

to say that *we are ABET*. In fact, two faculty members in our department are ABET program evaluators and two others have received ABET training in preparation for volunteering as evaluators. Over twenty-five hundred programs at over five hundred colleges and universities nationwide are accredited by ABET.

One fact that you may not know is that undergraduate *programs* are accredited, not *departments*. In our case, the undergraduate aerospace engineering *program* is accredited, whereas the ASE/EM Department and the engineering mechanics graduate program are not.

Why is accreditation important to you? Because it assures that the aerospace engineering undergraduate program meets the high quality standards that you expect of a top-ten ranked department. Prospective students and their parents can (and should) use accreditation to help them select a superior college program. For employers, accreditation ensures that our graduates are well-prepared for the work environment.

As a department, we voluntarily submit to the ABET review and we agree beforehand to abide by the final findings of the review team. Accreditation helps us by providing a structured mechanism to assess, evaluate, and improve the aerospace engineering curriculum. Frankly, most of our faculty members

are motivated by their professional pride and enthusiasm for teaching to continuously improve their classes, not by ABET. That said, the ABET process does force us to think carefully about our curriculum and its relationship to the educational outcomes we desire for our students. (For more information go to: <http://www.ae.utexas.edu/aerospaceUndergrad/objectives.html>)

The ABET review is a multi-step process. We initiate the process, in unison with the other programs in the College of Engineering, by requesting a review of the aerospace engineering program. We then complete a self-study document that summarizes our internal review of the aerospace engineering program to determine if our students, curriculum, faculty, administration, facilities, and institutional support meet the established criteria. The criteria are established by our faculty working with our constituents, including students, industrial visiting committee members, and alumni. ABET forms an evaluation team and visits campus for several days to review course materials, student projects, and sample assignments. Team members also conduct interviews of students, faculty, alumni, and administrators. Following the campus visit, the team provides a written report of the evaluation. The review process concludes at the annual meeting of all ABET commission members where the final evaluation report containing the recommended accreditation action is voted on by the commission members.

Accreditation requires a tremendous effort on the part of the faculty, students, staff, visiting committee, and alumni to achieve the desired results. In the fall of 2004 we were visited by ABET. Our students met with the ABET evaluation team, alumni traveled to campus from Dallas/Fort Worth and San Antonio, and our faculty worked relentlessly to perfect the written materials required to document the feedback process instituted over the past six years.

We are excited to announce that our ABET review concluded successfully. You can continue to rest assured that the UT aerospace engineering program meets the high standards that you have come to expect.

UT Cubes in Space

Cesar Ocampo, Associate Professor

'Faster, Cheaper, Better, Smaller, and Smarter'

These are the goals that a group of UT students are striving for in their design and fabrication of a one kilogram pico-satellite. The team is comprised mostly of aerospace engineering majors and is being lead by ASE senior Karla Vega. It is proposing to develop, build, test, and operate an affordable plug and play satellite system that will incorporate internal wireless communication technology, while simultaneously creating an infrastructure for future pico-satellite missions. The experiment may also serve as a precursor for more complex satellites in the future.

The structural form of the pico-satellite is based on the CubeSat concept proposed by Professor Robert Twiggs of Stanford University, which was to develop a satellite system simple enough to be designed, built, and flown by undergraduate students in a time frame of twelve to twenty-four months. Several CubeSats have already flown in space, and if successful, UT Austin's first CubeSat could be in space by as early as 2006 or 2007. The UT pico-satellite will be launched onboard a converted Russian SS-18 ICBM along with larger satellites and other CubeSats. The University of Texas CubeSat project is entitled "JANUS", in reference to the 'god of new beginnings'. The team is composed of an interdisciplinary group of UT students, and a portion of the project is being sponsored by National Instruments.



Awards & Updates

Clint Dawson, Professor, was honored for his support and guidance to students with disabilities by the University of Texas Services for Students with Disabilities in Spring 2005. Dr. Dawson's research focuses on numerical simulation of flow in porous media and in the development of algorithms for massively parallel computing. He has served on the College of Engineering faculty since 1995 and has published more than 50 technical reports.

E. Glenn Lightsey, Associate Professor, was selected to receive the Tycho Brahe Award from the Institute of Navigation. This award recognizes outstanding contributions to the science of space navigation, guidance and control. Dr. Lightsey specializes in the dynamics and control of spacecraft using avionics sensors such as GPS navigation and attitude determination. He joined the College of Engineering in 1999, and has published more than 40 technical reports on the dynamics and control of spacecraft.

K. Ravi-Chandar, Professor, has been elected President of the International Congress on Fracture, a member society of IUTAM (International Union of Theoretical and Applied Mechanics). The Congress sponsors the International Conference on Fracture, the premier fracture conference in the world, which has been meeting every four years since 1965. Dr. Ravi-Chandar's research interests include mechanical behavior of materials at high strain rates, fracture in nominally brittle materials, shear banding in polymeric materials, and phase transformation in shape memory alloys. He joined the College of Engineering in Fall of 2000.

J. Tinsley Oden, Associate Vice President for Research and Director of the Institute for Computational Engineering and Sciences, has been elected an Honorary Member of The American Society of Mechanical Engineers. Dr. Oden's research focuses on contemporary topics in computational engineering and mathematics, including a posteriori error estimation, model adaptivity, multi-scale modeling, verification and validation of computer simulations, uncertainty quantification and adaptive control. He has been on the College of Engineering faculty since 1973 and is also a Professor of Mathematics. He has published more than 700 technical articles and reports, and authored or edited 50 books. Dr. Oden is a member of the National Academy of Engineering and is the recipient of many national and international awards.

Philip Varghese, Professor, has been inducted to the University of Texas at Austin's Academy of Distinguished Teachers. Established in February 1995, the Academy of Distinguished Teachers is emblematic of the University's commitment to excellence in teaching. Dr. Varghese's research focuses on understanding the basic molecular processes occurring in high speed and high temperature flows. He applies his work to the study of combustion,

rail-gun and thermal plasmas, and hypersonic flow. His research publications have been extensively referenced, with over 400 citations to his work. Since he joined The University of Texas at Austin in 1983, he has been principal or co-principal investigator on externally funded research grants of over \$5 million.

In Memory of Professor Roger Broucke



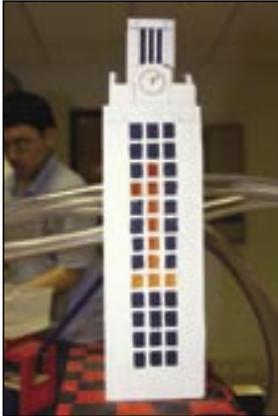
Roger A. Broucke, Professor Emeritus, passed away on Tuesday, June 21, 2005. Dr. Broucke was born on March 25, 1932, in Furnes, Belgium. From an early age he demonstrated great interest in mathematics and was sent to boarding school to study the sciences. In 1957, he received his Master of Science Degree at the University of Louvain, Belgium, where he studied under Professor George LeMaitre, originator of the Big Bang Theory of the expansion of the universe. In 1960, he married his devoted friend, Ludgarde. They shared a lifelong passion for learning and scientific discovery, which they passed on to their children. In 1963, Dr. Broucke received his Ph.D. in Mathematics from the University of Louvain in Belgium. For the next 13 years he was an integral part of NASA's space flight programs. His love of teaching and a desire for more autonomy in his research pursuits led him to accept a teaching position at the University of Texas, College of Engineering, in 1976. For the next 23 years, he taught many classes and lectured on celestial mechanics and satellite theory at conferences and universities around the world. For a complete obituary, visit the Austin American-Statesman obituary archives.

ASE Student Wins Paper Contest



Stephanie Beckett, ASE and Plan II Engineering Honors Student, was recently awarded first place in the Braden Engineering-Communications Contest during her second year as a UT Engineering student. The award paper was entitled, "The Danger of Oil Scarcity: A Two-Pronged Solution." The funds for this award are provided by donors to the Robert S. Braden Endowment Fund which supports excellence in engineering communications. This year's subject was "to identify at least one significant and specific impact of future petroleum shortages, and propose a strategy for preparing for this shortage." Stephanie was presented with a cash award of \$1,500 during an awards presentation by Dr. Ben Streetman and Dr. Hillary Hart of the College of Engineering. Miss Beckett is also a ground crew member of the UT ASE Flame Suppressant Performance in Microgravity Team which will fly its experiment in microgravity aboard NASA's 'Weightless Wonder'.

UT AIAA Student Chapter Places Third at Rube Goldberg Nationals!



A replica of the UT Tower lights up at the end of the AIAA Team's Rube Goldberg machine. Photo: Caroling Lee

Each year, the University of Texas at Austin's AIAA (American Institute of Aeronautics and Astronautics) student chapter aims to build a Rube Goldberg machine, which is then presented at the University's Rube Goldberg Machine contest. The machine is based on the complicated devices featured in the famous newspaper cartoons by Pulitzer Prize-winning artist Rube Goldberg. Groups are given an elementary challenge such as peeling an apple or sharpening a pencil, but must do so in a minimum of twenty steps—the more, the better!

This year's National Rube Goldberg Challenge was to remove both old batteries from a two-battery flashlight, install new batteries, and turn the flashlight on. UT Aerospace Engineering students chose to light up a replica of the UT Tower for their flashlight, and were chosen to represent UT Austin and Aerospace Engineering at the National Rube Goldberg

Competition at Purdue on Saturday, April 9, 2005. This year's AIAA Rube Goldberg team placed third in the National Rube Goldberg Competition!

Congratulations go out to all team members for their hard work and dedication: Jesse Franceschini, Randy Lum, Ronald Lum, Julie Mitchell, Jonathan Reyes, Stephanie Sellers and Steve Walker.

For more information, visit the UT AIAA Rube Goldberg Machine website at: <http://www.ae.utexas.edu/~aiaa/rube> and the official Rube Goldberg website at: <http://www.rubegoldberg.com>.



Julie Mitchell, an aerospace and astronomy junior and AIAA team member, attempts to repair a section of their machine during a break in UT's 2005 Rube Goldberg Machine competition. Photo: Caroling Lee

Aerospace Engineering Parties Tropical Style



Dr. Fowler limbos among students during the Spring Happening 2005. Photo: Anthony Chapman

Members of the UT Aerospace Engineering and Engineering Mechanics community were once again given the opportunity to join together and celebrate the end of the spring semester, and this time they did it tropical-style! On the afternoon of Friday, April 29th, students, alumni, faculty and staff, along with their families, gathered together for an enjoyable evening of music, food, and fun. O's Campus Cafe provided a delicious tropical-flavored buffet, and the talented Austin musician, Darden Smith, led the entertainment with his engaging Texas melodies.

The student chapters of AIAA and SGT planned activities for everyone; a challenging game of limbo seemed to be a favorite of many. Participants of all ages joined the fun to see just how low they could go. At the end of the evening, free door prizes were given away, which

included Darden Smith CDs, Alamo Drafthouse tickets, t-shirts, and more. Many thanks go out to Dr. Bishop for providing us the opportunity to organize such a unifying and enjoyable event, and thanks to all the student and staff volunteers who made such an event possible!

The annual ASE/EM Fall Festival 2005 is scheduled to take place the evening of Friday, October 21st in conjunction with the College of Engineering Homecoming Weekend. This semester's musical guest will be singer/songwriter Guy Forsyth, also a local Austin musician. For more information be sure to visit our website later this fall at <http://www.ae.utexas.edu>. Hope to see you there!



Austin musician Darden Smith led the entertainment with his Texas melodies. Photo: Anthony Chapman

Welcome New Faculty Members

Belinda Marchand, Assistant Professor



Dr. Belinda Marchand

Dr. Belinda Marchand joins us as an Assistant Professor in the Fall 2005 semester after serving as a Visiting Assistant Professor at Purdue University, where she also earned her Ph.D. Her research interests are centered on the application of dynamical systems theory, and nonlinear control methods, to various problems in aerospace engineering and astronomy. Her present research activities focus on the application of large scale constrained nonlinear optimal control algorithms for spacecraft formation flight, in the n-body problem. Formations that evolve near the libration points of the Sun-Earth/Moon system are of particular interest. These efforts are in support of NASA's formation flight initiative, which include missions like MAXIM and Stellar Imager. In years past, Dr. Marchand was also a member of the trajectory design team for NASA's Genesis mission, performed station keeping analyses for the James Webb Space Telescope, and successfully identified a link between the motion of Jupiter family comets and the stable and unstable manifolds near the libration points of the Sun-Jupiter system.

Aside from her research activities, Dr. Marchand's interest and dedication to teaching are reflected in her volunteer work and her past involvement with mentoring and educational outreach programs sponsored by the Purdue University Aeronautics and Astronautics Department, the Society of Women Engineers, and the Society of Hispanic Professional Engineers. This dedication to teaching has earned her several awards including the Clare Boothe Luce Foundation Award, an Outstanding Teaching Award, and several Magoon Teaching Awards.

Outside the office, Dr. Marchand's favorite outdoor activities include biking and white water rafting. Whenever possible, she also enjoys playing a hearty game of racquetball. At home, Dr. Marchand enjoys the company of family and friends, building computers, playing with her dog, and restoring and repairing all the household items her dog likes to eat when she's not looking.

Venkat Raman, Assistant Professor



Dr. Venkat Raman

Venkat Raman joins us as an Assistant Professor in the Fall 2005 semester. He earned his Ph.D. in 2003 from Iowa State University. His research interests are in modeling and simulation of turbulent reacting flows. The main focus is in understanding the complex interaction of fluid flow and chemical transformations. Such flows can be found in stellar explosions, forest fires, pollutant dispersion in the atmosphere, aircraft engines, gas-turbines for power generation, and chemical plants. Dr. Raman plans to conduct both fundamental studies in simple systems that will help understand the physics behind this interesting class of problems as well as to develop numerical techniques that can be used to, say, improve efficiency of aircraft engines, or develop effective methods for controlling forest fires. The complex nature of such computations will test the limits of even the fastest supercomputers available today. Dr. Raman teaches introductory computational fluid dynamics at the undergraduate level and advanced computational methods at the graduate level. In addition, he will introduce a new graduate course which will help graduate students learn and apply the latest numerical and modeling techniques for turbulent flows.



For more info visit
www.texasexes.org

Blast From the Past

1970's

Edward J. Zihlman, Jr., BS ASE, 1972, is a Technical Staff Assistant V for the UT Pickle Research Center Wind Tunnel Laboratory. He recently received an award for his 30 years of service at the University of Texas at Austin.
ezihlman@mail.utexas.edu

1980's

Andrew L. Sylvester, BS ASE, 1985, is a Senior Software Engineer with Rockwell Collins Flight Dynamics in Portland, Oregon. He is a lead software engineer working on development of head-up displays for commercial and military aircraft.
alsylves@rockwellcollins.com

Hyoung-Man Kim, PhD EM, 1998, was one of five new Senior Technical Fellows honored at the Boeing Technical Excellence Conference in March of this year. Dr. Kim has developed powerful structural dynamics-related methods and tools that have been applied to programs throughout Boeing, including the International Space Station, Space Shuttle, Delta, High Speed Research, T-45, 767, and 787 Dreamliner.
hyoung.m.kim@boeing.com

Andrew Grimes, BS ASE, 1995, transferred to Lockheed Martin Space Systems in Denver, Colorado in January 2005, where is working as a Systems Engineer Senior.
andrewgrimes3@comcast.net

Eric Hammer, MS ASE, 1992, writes, "I can't believe it has been 13 years since receiving my degree from UT. After spending 11 years with NASA Johnson Space Center serving in Mission Control as a Flight Dynamics Officer, it was time for a change. I have been in Greensboro since June 2002, serving as the Director of Cessna Caravan Sales for Atlantic Aero. Selling airplanes is a long way from NASA and my graduate days at UT, but the last three years have been fantastic and very exciting. I reside here with my loving wife, Barbara, of four years."
ironhammer@triad.rr.com

Michael Lo, BS ASE, 1992, MS ME, 1994, says, "I have spent the past ten years working outside the engineering field—mainly in manufacturing planning, supply chain consulting, and logistics. I currently work for J.C. Penney as its planning supervisor. Starting this fall, I will attend the University of Washington in Seattle to work on my masters in healthcare administration. It's

definitely an exciting time of change for my family and me. Hopefully I can share some 'Hook 'em Horn' engineering training and attitude with my classmates and healthcare professionals."
mmlloo@aol.com

Jeremy Segers, BS ASE, 1993, is a Manufacturing and Engineering Manager for Pemstar, Inc. in Austin, Texas. He writes, "My wife, April and I now have a beautiful and fun-loving boy to occupy our time. Vaughan Tyler Segers was born December 12, 2004, and already has us both wrapped around his finger. April and I recently celebrated our four year wedding anniversary on March 31st of this year. We also own a hair salon, Mirabella, in Georgetown, TX."
jeremy.segers@pemstar.com

2000's

Juan David Galindo, BS ASE, 2003, is a Propulsion System Engineer for The Boeing Company in Washington state.
pibedavid@alumni.utexas.net



*Emily Marek,
May 2005*

Matthew Marek, BS ASE, 2003, writes, "My wife, Vanessa, is still in law school at Northeastern University. My daughter, Emily, just had her first birthday on June 14th. I am still working at MIT Lincoln Laboratory. I just wrapped up work on a set of experiments that will launch from Hawaii later this year. I have recently been assigned Lead Mechanical Integration Engineer for a Payload Deployment Module that will also launch out of Hawaii next year."
matthew.marek@alumni.utexas.net

Christopher G. McChesney, BS ASE, 2004, is a Future Space Systems Analyst for the United States Air Force in the Space and Missile Systems Center in El Segundo, California.
chris.mcchesney@gmail.com

Frank Mulder, MS ASE, 2004, writes, "Recently I joined the Dutch bank ABN AMRO as an associate in the department Corporate Finance (Investment Banking). Planning to visit campus this fall—hope to see y'all!"
mulder@alumni.utexas.net

Michael D. Newton, Jr., BS ASE, 2004, is an Engineer/Scientist for The Boeing Company in Hunstville, Alabama. He is working as a system analyst on the GMD missile defense program.
cycomiko33@hotmail.com

Where Are They Now?

Michael Webber, BS ASE, 1995

2005 College of Engineering Outstanding Young Engineering Graduate



Michael Webber, with wife Julia, and children David and Evelyn, December 2004

After six spirited years at UT, I graduated with my Bachelor of Science in Aerospace Engineering and my Bachelor of Arts in Plan II on May 20, 1995. One week later I married fellow Longhorn and Architecture graduate, Julia Cook, and shortly thereafter we moved to Palo Alto, California where I started graduate school in Mechanical Engineering at Stanford University.

During graduate school we lived in a tiny cottage in the heart of Palo Alto's downtown neighborhood known as Professorville. Julia worked as an architect while I struggled to pass my qualifying exams and make progress on my research. I ultimately defended my thesis on the morning of Wednesday, November 8, 2000, after staying awake practically all night watching the returns from Florida in the Presidential Election that had occurred the day before. My doctoral dissertation was on the topic of diode-laser-based gas sensors for industrial applications, and along the way I picked up a Master's degree, a Ph.D. Minor in Electrical Engineering, two patents, and a handful of publications in scientific journals. Most importantly, I earned official co-inventor status for the creation of our daughter, Evelyn, in June 1999.

I started a new job one week after my thesis defense at a start-up making laser-based gas-sensing instrumentation in Southern California. The boom in the late 1990's that engulfed Stanford and Silicon Valley burst just as I joined the company, causing capital expenditures and venture capital to dry up. We struggled through the long workdays and late paychecks, eventually achieving stability with long-term R&D contracts and product sales. I then joined the RAND Corporation in August 2004 to use my technical background to solve public policy problems. My present work gives me the opportunity to work with high-level administration officials to analyze problems ranging from the erosion of the U.S. manufacturing base, to the environment and national security.

We added our son, David, to the family in August 2002, and have become active members of our community. Julia is President of the booster club for our daughter's elementary school, while I coach my daughter's soccer team and serve on the board of The Hope Street Group, a nationwide 501(c)3 non-profit and non-partisan organization dedicated to expanding economic opportunity in a growing economy. Though we have been in California for ten years, we find ourselves missing important things like fireflies, humidity, real BBQ, hot nights, and ample parking. UT and Texas are still very much a part of our lives. Hook 'em!

Department News Continued...

Local Art Teachers Learn Engineering Skills from UT Professors

Local art teachers from Pflugerville Independent School District were provided the unique opportunity to learn basic engineering skills from UT aerospace engineering professors this summer. Some may ask the question, "Just how does engineering relate to art?" This is a question that both Professors Robert Bishop and Wallace Fowler helped to clarify in a workshop presented to art teachers who teach various grade levels from elementary through high school.

Teachers learned that art is one of the very basic elements of the engineering design process. Engineers must be able to communicate their ideas to others in a collaborative setting, and often this is done through sketches and diagrams in the early phases of design. Art continues to be used to show the progress of a design, up until the final prototype comes to life. It can be seen in a professional setting as well, when artists use their imaginative skills to depict the unknown, such as an alien landscape. Professor Fowler also provided interesting space facts in his "Exploring Outer Space" presentation, and shared basic design tools that engineers use which included various rulers, protractors and shape templates.

The workshop ended with a hands-on tower building activity. Teachers were given a short time to plan their design, followed by 20 minutes to build a tower with constraints similar to the kind real engineers encounter in the field, such as height, weight bearing ability, and time.

The participants seemed very pleased with the workshop, and collaborated their ideas for future lesson planning. All said the workshop was very beneficial and they look forward to sharing their newly acquired principles and skills with students this coming fall.



Art teachers participate in a collaborative engineering design building contest to see whose tower can hold the most weight.

The University of Texas at Austin
Aerospace Engineering & Engineering Mechanics
1 University Station, C0600
210 East 24th Street
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"The Longhorn Liftoff" is published bi-annually for alumni and friends of the Department of Aerospace Engineering & Engineering Mechanics at the University of Texas at Austin.

The department always welcomes your alumni news and comments. Please send them attention to:

Kendra Harris

The University of Texas at Austin
ASE/EM Department
210 East 24th Street, WRW 215C
1 University Station, C0600
Austin, Texas 78712-0233

Phone: (512) 471-7593

Fax: (512) 471-1730

Web Site: www.ae.utexas.edu

Department Chair: Dr. Robert H. Bishop

Editorial & Design: Kendra Harris

Keep in Touch!

We enjoy receiving your alumni news, and need more from you to keep the "Blast From the Past" column up to date. If you are interested in keeping in touch, please complete the on-line update form on our Alumni webpage at:

<http://www.ae.utexas.edu/alumni>.

Thank you for your interest in the department. We look forward to hearing from you soon!

ASE/EM Fall Festival 2005!



Austin singer/songwriter Guy Forsyth

SAVE THE DATE NOW!

Friday, October 21, 2005

In conjunction with the College of Engineering Homecoming, the ASE/EM Department invites you to attend its annual Fall Festival!

What: ASE/EM parties with LIVE MUSIC by local singer/songwriter Guy Forsyth, FREE FOOD from O's Campus Cafe, student-led activities, and a drawing for free prizes. Activities for kids too!

When: Friday, October 21, 5 - 7 pm

Where: Outdoors Engineering Complex beneath the large tent (near ENS building)

Visit www.ae.utexas.edu for more information.