

# The Longhorn Liftoff



## FASTRAC Victorious, Headed to Space!

FASTRAC has won the University Nanosatellite-3 Competition and the University of Texas at Austin's student built satellite is going to be launched into space!

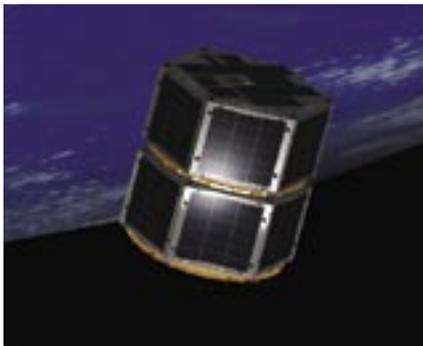
On Sunday January 9, 2005, in Reno, Nevada, engineering students from UT-Austin presented their mission design and hand-built satellites to a panel of judges in a nationwide competition. The contest was sponsored by the US Air Force and NASA to pick a student built satellite to be launched into space. A field of 13 Universities had previously been selected as finalists in 2003 and had worked on their satellites for the past two years. The Universities were free to propose any mission, but the competition rules stipulated that the satellites must weigh less than 30 kilograms (about 70 pounds) and cost less than \$100,000.

UT-Austin's entry, the Formation Autonomy Spacecraft with Thrust, Relnav, Attitude, and Crosslink (FASTRAC) is actually a pair of satellites designed to demonstrate new technologies that enable spacecraft to work together in groups. It is believed that once these new technologies are mature, clusters of smaller satellites will outperform the larger and more expensive individual satellites that are used for many tasks today.

With the entire team working over the holidays, the UT-Austin team was able to deliver all of the hardware in working order at the Flight Competition Review held in Reno, Nevada. This remarkable accomplishment, along with the results from an extensive series of environmental tests, enabled FASTRAC to win against a strong field of worthy designs from other Universities. All of the judges remarked that they were highly impressed with the overall quality of the field.

As the UN-3 winner, the FASTRAC program enters a new phase as it prepares for flight. The existing hardware will be refurbished and selected components will be replaced with better flight quality parts. The next major milestone is delivery of a complete set of hardware to the Air Force on May 15 for a battery of flight qualification tests to be performed over the summer. FASTRAC will likely be launched into space in 2006, making it the first-ever UT-Austin built satellite to be launched into orbit.

Congratulations to the FASTRAC student team on their well-deserved victory!



The FASTRAC Satellites, built by University of Texas students, will soon be ready for flight.



Members of the FASTRAC student team surround the satellite they designed and built which will be launched into space in 2006.

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**Friday, April 29, 2005**

**LIVE MUSIC with Darden Smith**  
**FREE FOOD from O's**

**See back page for more info!**

## Chairman's Corner



ASE/EM Chairman and Professor, Robert H. Bishop

How about a short sub-orbital flight to experience weightlessness or a longer duration flight around the moon? If it's reasonably safe and affordable, you can count me in. Imagine what it would be like if we lived in a world where we could take a vacation to space. For ordinary folk (like myself), a space vacation would need to be relatively inexpensive. The twenty million dollars that the first space tourist Dennis Tito paid to fly aboard Soyuz to the International Space Station does not fit into my personal budget. Given the historic flights of SpaceShipOne of last fall, the dawn of affordable space travel for ordinary citizens may be within sight.

On October 4, 2004, exactly 47 years after the Soviet launch of Sputnik, the first privately funded manned spacecraft, known as SpaceShipOne, triumphantly claimed the ten million dollar Ansari Prize by exceeding an altitude of 328,000 feet twice within the span of two weeks. Three weeks later, Burt Rutan, the founder of Scaled Composites, LLC and creator of SpaceShipOne, visited the UT campus to meet with aerospace and mechanical engineering students. He transported the public packed into the LBJ Auditorium on a virtual trip of SpaceShipOne's historic flight. Rutan lit a fire of enthusiasm under our students and faculty, giving us hope for an exciting future of space exploration that has been absent for a long time.

Paul Allen, of Microsoft fame, funded the successful SpaceShipOne project and subsequently entered into an agreement with Sir Richard Branson of the Virgin Group to license the technology to develop the world's first privately funded spaceships dedicated to carrying commercial passengers on space flights. The first three thousand space tourists are expected to pay about two hundred thousand dollars per ticket. Not cheap, but getting within range. Indeed we seem to be on the way to affordable space tourism in our lifetime.

While watching the SpaceShipOne roll unexpectedly about thirty times during ascent, I wondered why the automatic control system seemingly failed. During Rutan's visit to campus, I learned that the automatic control systems on-board SpaceShipOne were non-existent. On the one hand, that surprised me. But the flip side is the implicit challenge to develop reliable automatic control systems for spacecraft, which have affordable life-cycle costs, and are robust and adaptable. "Plug-n-play" systems are a necessity to enable cost-effective space travel. So, while the thrill of space travel in the near term remains limited to a special few, the technical challenges limiting access to space are open to investigation by us all.

### Four UT KC-135 Teams Selected to Fly Aboard NASA's Weightless Wonder!

Four UT Aerospace Teams have again been selected by NASA to test their science experiments while floating aboard the agency's famous "Weightless Wonder" aircraft. Each year, the Reduced Gravity Student Flight Opportunities Program at NASA's Johnson Space Center, Houston, gives undergraduate student teams the opportunity to research, design, fabricate, fly and evaluate a reduced gravity experiment. The student teams follow much the same path as scientists who develop experiments that fly in space.

The Electromagnetically Guided Autonomous Docking and Separation in Micro-Gravity (EGADS) experiment provides a simple, inexpensive method for controlling the docking attitude and velocity of a nanosatellite and the speed at which it is repelled from an original satellite configuration. Such systems are vital as smaller satellites find a growing niche in the space industry. Added control of payloads by this system will enhance the effectiveness of missions requiring a docking or disembarking procedure.

The Inspector Satellite Imaging System (ISIS) will analyze an ISIS in microgravity. An Image Processing System (IPS) can be a valuable instrument used to measure the position and orientation of the target satellite by transmitting images taken at small intervals of time. Implementing this type of program can reduce the cost and time to service a dysfunctional satellite.

The Flame Suppressant Performance in Microgravity experiment will test the effectiveness of various fire suppressants in a microgravity environment, with the goal to determine which fire suppressants work best in microgravity so that future manned space exploration efforts can be better prepared for dealing with unplanned-for fires.

The Fluidic Momentum Controller experiment will conduct a performance test of closed-loop Fluidic Momentum Controller in one axis, as opposed to last year's open-loop Fluidic Momentum, with an objective to detumble the test apparatus in one axis.

Three months after their flights, the teams are expected to issue a final report to include their scientific findings, analysis of the experiment's effectiveness, and conclusions drawn from the findings.



ASE Students with their "Particle Damping" experiment aboard NASA's KC-135

## Faculty Awards & Recognition



**Maruthi Akella** has been promoted to Associate Professor effective Fall, 2005. Dr. Akella specializes in the control of nonlinear dynamical systems that are subject to large uncertainties. He has served on the College of Engineering faculty since 1999. He has published more than 20 research papers and technical reports.



**Ivo Babuska**, ASE/EM Professor, has been elected to the National Academy of Engineering, widely considered the highest honor to be earned in the engineering profession. He was elected for contributions to the theory and implementation of finite element methods for computer-based engineering analysis and design.

Dr. Babuska specializes in numerical solution of partial differential equations, especially the finite element method, and applied mathematics in general. He has served on the College of Engineering faculty since 1995, and has published more than 300 scientific publications in the field of mathematics, numerics and mechanics.



**Noel Clemens** has been promoted to Professor effective Fall, 2005. Dr. Clemens specializes in the study of compressible turbulent flows and turbulent combustion with an emphasis on the use of laser imaging diagnostics. He has served on the faculty of the College of Engineering since 1993, has two years of experience at Sandia National Laboratories, and has published numerous technical articles and reports.



**Wallace Fowler**, ASE/EM Professor and Director, Texas Space Grant Consortium, has been elected a Life Member of the American Society for Engineering. Dr. Fowler's research focuses on the area of design and design methodology, the modeling and design of spacecraft, aircraft, and planetary exploration systems. He has served on the College of Engineering faculty since 1965 and has three years of industrial experience. Dr. Fowler has published more than 50 technical articles and reports and co-authored two books.



**David Goldstein** has been promoted to Professor effective Fall, 2005. Dr. Goldstein specializes in fluid dynamics, particularly in the areas of incompressible turbulence, hypersonics and rarefied gas dynamics. He has served on the College of Engineering faculty since 1993. He has one year of industrial experience and has published numerous technical articles and reports.



**Thomas J. R. Hughes**, ASE/EM Professor and Computational and Applied Mechanics Chair III, was elected Fellow of the American Society of Civil Engineers. Dr. Hughes joined the Department in Fall 2002. He is an internationally known expert in computational engineering and sciences, has published over 300 scientific works on computational mechanics, and is the author or editor of eighteen books.



**Cesar Ocampo** was promoted to Associate Professor in Fall, 2004. He has served on the College of Engineering faculty since 2000. Before he joined the department, he was employed with Hughes Space and Communications Company in Los Angeles as a senior orbital analyst. Dr. Ocampo was recently honored with the ASE/EM Teaching Excellence Award for 2003 - 2004.



**J. Tinsley Oden**, ASE/EM Professor and Director, Institute for Computational Engineering and Sciences, received The University of Texas Presidential Citation Award in September 2004. The Presidential Citation was created in 1979 to recognize the extraordinary contributions of individuals who personify the University's commitment to the task of transforming lives. Dr. Oden is a member of the National Academy of Engineering and has published extensively in the field of computational mechanics and related areas. He is the author and editor of more than 700 scientific books, chapters, essays, articles, conference proceedings and technical reports.

## Student Awards & Recognition

**May Ann Li**, **Stephanie Sellers**, and **Jessica Williams** were recent recipients of a special Lockheed Martin Scholarship for student members of the local chapter of the American Institute of Aeronautics and Astronautics (AIAA). Each student received \$1,500 in the Fall 2004 semester. Congratulations!

## Congratulations to the FASTRAC Team!

**Faculty Advisors:** Glenn Lightsey, Wallace Fowler, and Laxminarayan L. Raja

**Graduate Members:** Greg Holt, Thomas Campbell, Jeffery Mauldin, Shaun Stewart, Jamin Greenbaum, Tobias Berthold, Millan Diaz-Aguado, Tena Wang, and Stephen Yeldell

**Undergraduate Members:** Michael Linford, Emily Burrough, Gary Raney, Stephanie Sellers, Cinnamon Wright

**Honorary Member:** Sam Morrison, 8th grade student

**Previous Members:** Philip Eckhoff, Ahmed Saleh

### ASE/EM Fall Festival Enjoyed by Many!



Local musician Sara Hickman gave a lively performance during the ASE/EM Fall Festival.

Hundreds of Aerospace Engineering students, faculty, staff, and alumni attended yet another eventful evening of great music, food and fun during the ASE/EM Fall Festival 2004. The Fall Festival was held in conjunction with the annual College of Engineering Homecoming weekend, and was an excellent way to celebrate the fall semester.

Local musician, Sara Hickman, gave an engaging and upbeat musical performance on the crisp, fall evening of October 15<sup>th</sup>. By the end of the evening, she had even the quietest members of the audience singing along! Compliments of the department, O's Café provided its own version of barbecue, along with delicious side dishes and a variety of tempting desserts. Events during the party included a piñata contest hosted by the AIAA student chapter, an Aerospace Trivia contest hosted by the Sigma Gamma Tau student chapter, and open volleyball. Student members of the Design, Build, Fly team and the KC-135 teams were also present to talk about their team projects. The evening closed with a free raffle for prizes such as gift certificates (thank you to O's Café and the University CO-OP for donations), CDs, and football tickets to the UT vs. Missouri game (thank you to Dr. Varghese for donating his!).

The department would like to thank its many staff and student volunteers for their hard work preparing for this event – each of you made it possible! The annual Spring Happening 2005 is scheduled for Friday, April 29<sup>th</sup>, 2005, with a live performance by local musician Darden Smith. Watch for more information to come!

For more information about this and other special events, please contact Kendra Harris, Special Projects Coordinator, at [kendra.harris@mail.utexas.edu](mailto:kendra.harris@mail.utexas.edu) or 512-471-4234.

### Satellite Design Lab Selected to Compete in University Nanosatellite-4 Competition

The Satellite Design Lab was selected in December as one of 12 finalists to compete in the University Nanosatellite-4 competition. The University Nanosatellite program is a national competition held every two years to design, build, and test a real satellite with a budget of approximately \$100,000. The competition is sponsored by the US Air Force Office of Space Research, NASA, and the AIAA. The grand prize of the competition is a free launch into space for the winning team's satellite.

The new University of Texas proposal, called PORTIS (Proximity Operations Rapid Turnout Inspector Satellite) is advised by Professors Lightsey, Bishop, and Raja in the ASE/EM Department. PORTIS builds upon the success of the FASTRAC mission (Formation Autonomy Spacecraft with Thrust, Relnav, Attitude, and Crosslink). FASTRAC was recently selected as the winner of the UN-3 competition and is planned to be launched into space in 2006.

Like FASTRAC, PORTIS is designed to improve the ability of small satellites to work together in space. However, the experiments on PORTIS will be different from those on FASTRAC. Before PORTIS even launches, it will be assembled and tested within five days, as opposed to months for traditional satellites. This means the satellite could be rapidly launched if needed. Like FASTRAC, PORTIS will separate into two satellites on-orbit. However, unlike FASTRAC, the PORTIS satellites will stay within 10 kilometers of each other and there are several controlled approaches of the satellites to within a few meters. Each PORTIS satellite contains a camera used to take pictures of the other, which will then be transmitted to the ground. PORTIS is sort of like two robot tourists going on a trip and taking souvenir photos of each other when they reach their destination.

These capabilities are important for future satellite missions which will emphasize small satellites working in groups. For example, a satellite like PORTIS could be launched on short notice and used to inspect the Space Shuttle or Space Station for damage. There are many other possible applications of these same technologies.

Congratulations to the Satellite Design Lab on their selection as a finalist in another Nanosatellite competition!



## Most Changes in the Earth's Shape are Tied to Climate Swings

Researchers at The University of Texas at Austin have found that significant changes in the shape of the Earth in the past 28 years may be linked to climate events such as the El Niño weather pattern. The Earth's shape changes because the climate events shift where the mass of water is stored: in oceans, continents and the atmosphere. Dr. Minkang Cheng and Dr. Byron D. Tapley of the university's Center for Space Research used nearly 30 years of NASA satellite laser ranging (SLR) data to examine how much the Earth flattens at the poles and widens at the equator.

Cheng, a research scientist, and Tapley, the director of the center, looked at events like El Niño-Southern Oscillation and Pacific Decadal Oscillation that affect the amount of water moving in the oceans, atmosphere and continents around the world. The scientists found that two large variations of increases in the Earth bulging at the equator were connected to the strong El Niño-Southern Oscillation events from 1986-1991 and 1996-2002. Although El Niño is normally associated with warming of surface waters in the eastern Pacific Ocean, it also causes changes in weather patterns and the way the ocean circulates. During an El Niño heavy rains associated with the warmer waters move into the central Pacific Ocean and typically cause drought in Australia, and floods in Peru. That is, there's more water in Peru, less water in Australia.

Similar to El Niño, but lasting 20 to 30 years instead of months, the Pacific Decadal Oscillation is a long-term temperature fluctuation in the Pacific Ocean. The oscillation also brings changes in the location of the cold and warm water masses that also alter the path of the jet stream, which moves storms around the world. These changes redistribute water mass among the oceans, and water vapor in the atmosphere, and in soil on the continents, resulting in slight but detectable changes of the Earth's gravity field. Cheng and Tapley found that the variations in mass, which caused the change in the gravity field, were predominantly over the continents, with a smaller contribution due to changes over the ocean.

The Texas scientists also found that another change in mass may have started in late 2002, which coincides with the moderate El Niño that developed at that time. The cause of a variation in the Earth's shape over a 21-year period between 1978 and 2001, however, still remains a mystery. "The main idea is that the Earth's large scale transport of mass is related to the long-term global climate changes," Cheng said.

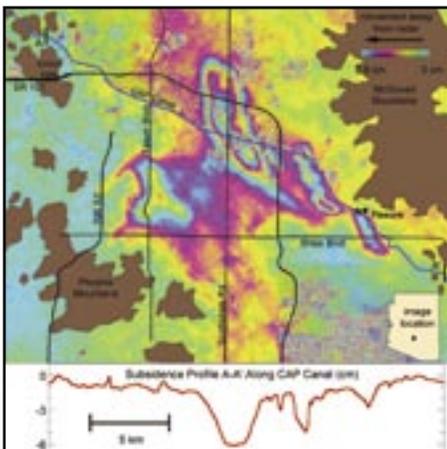
Cheng and Tapley used the NASA SLR data, which measured the distance from ground stations to satellites by using satellite lasers that are accurate within a millimeter. The SLR data reflected mass changes as water was redistributed around the world and resulted in the changes of Earth's gravity field. The NASA Satellite Laser Ranging Mission studies the Earth's mass and gravity changes. The long-term history of these range measurements makes it possible for scientists to see how the large-scale mass was redistributed around the world, and the long-period and secular changes in the melting of glaciers and polar ice sheets and the associated sea level change. The laser range data have also been used to detect the motion of global tectonic plates on which land masses rest, the deformation of the Earth's crusts near plate boundaries, and the orientation and rate of spin of the Earth.



Dr. Byron Tapley, Director, Center for Space Research

## Satellites Used to Measure Centimeter-Level Ground Motion

Assistant Professor Sean M. Buckley and his students are using new satellite remote sensing techniques to provide scientists and urban planners with unprecedented spatial images of earth-surface movement over time.



Ground motion observed with InSAR during a three-year period in the late 1990s near the Central Arizona Project canal in Phoenix and Scottsdale

Satellite interferometric synthetic aperture radar (InSAR) has revolutionized the natural sciences over the past decade. The technique utilizes pairs of satellite radar images separated in time to measure any ground motion that may have occurred. Armed with InSAR measurements of centimeter to meter-level surface movement associated with earthquakes, volcanoes and glaciers, scientists are developing new insights into natural land processes.

Professor Buckley focuses on the use of InSAR to measure ground motion associated with human activities. For example, his group has observed several centimeters of subsidence, or sinking of the ground, across the Central Arizona Project canal in Phoenix (figure to left). The results are being used to refine groundwater pumping strategies and to help mitigate future infrastructure damage.

Professor Buckley's group has several deformation study sites throughout Texas and beyond. The likely causes of deformation range from mineral mining to oil, gas and ground water pumping. They have even measured ground motion associated with previous underground nuclear tests in China. The work has garnered broad interest and is supported by NASA, the National Science Foundation, the Department of Energy National Nuclear Security Administration, and the State of Arizona.

## Blast From the Past

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### 1970's

**Terry Schmidt, BS ASE 1972**, is a Senior Quality Engineer for SAIC in Houston, TX.

### 1980's

**Hyung-Man Kim, PhD EM 1988**, of Boeing-Houston, has been named a Senior Technical Fellow of The Boeing Company. This is the highest technical recognition given by Boeing. Dr. Kim was recognized for his leadership in numerous high-profile structural dynamics projects of MacDonnell-Douglas and Boeing, including the Shuttle-Mir on-orbit vibration tests. He was also recognized for his leadership roles in the development of new technology and supervising young engineers. Dr. Kim served on the ASE/EM Visiting Committee for several years. His PhD program was supervised by Dr. Roy Craig.

### 1990's

**Vit Babuska, PhD ASE 1993**, who works for General Dynamics-Advanced Information Systems at the Air Force Research Lab in Albuquerque, NM, has been named an Associate Fellow of AIAA. Vit has been very active recently in the Adaptive Structures Technical Committee of AIAA, and served as General Chair of the 12th Adaptive Structures Conference. Dr. Babuska's PhD program on control of flexible structures was supervised by Dr. Roy Craig.

**Kengo Nakajima, MS ASE 1993**, is an Associate Professor in the Department of Earth and Planetary Science at The University of Tokyo. He writes, "I am hired by a Center of Excellence project funded by the Japanese Government, which forces strong collaboration between earth science and computational science. I am teaching high-performance computing (HPC) to graduate students  
*nakajima@eps.s.u-tokyo.ac.jp*

**Bruce Boulanger, BS ASE 1988**, is an Engineering Manager at RTI Fabrication Business in Houston, TX.  
*bruceboulanger@netzero.net*

**Kristi Crutchfield, BS ASE 1999**, is a Thermal Aerospace Engineer for Ball Aerospace & Technologies in Boulder, CO. She writes, "I have worked at Ball Aerospace since graduation and very much love my job. I get to work on many space programs and classified work. My department also has me hire coordinate interns and I get to come back to UT to recruit. Hook Em!"  
*kjcrutch@yahoo.com*

**Darin Deaver, BS ASE 1997**, is a Patent Attorney for Siegesmund & Associates in Dallas, TX. He writes, "I graduated from Southern Methodist University Dedman School of Law in 2003, and am currently practicing law in Dallas, with an emphasis on intellectual property law, including patent procurement and litigation."  
*dwdeaver@msn.com*

**Ido Dubrawsky, BS ASE 1990, MS ASE 1992**, is a Network Security Architect for Cisco Systems, currently residing in Silver Spring, MD. He writes, "After completing my Master's degree with Dr. Fowler, I worked at NASA's Jet Propulsion Laboratory for a year and a half. There I gained a lot of experience in system and network administration. I then returned to work on my PhD in Molecular Biology at UT under Drs. George Georgiou and Brent Iverson. After realizing that I did not want to work in Molecular Biology, I left without completing my dissertation and returned to system and network administration at the Physics Department working with Dr. C. Fred Moore."

"I've worked for a couple of start-ups before landing a job with Cisco Systems, Inc. in Austin as a Network Security Consultant. I have since moved into architecture and design. I have just recently completed the second edition of my book on SAFE network security architecture for Cisco Press. While I miss the work in aerospace engineering immensely, I have found equal enjoyment in network security research, architecture and design."

**Berry Gibson, BS ASE 1988, MS ASE 1990**, is Director of A&D Product and Market Strategy for PTC in GA.  
*berrygibson@yahoo.com*

**David Heim, MS EM 1994**, is a Senior Finite Element Analyst for Freudenberg-NOK in NH.  
*drheim@comcast.net*

**Dean Meledrez, BS ASE 1992**, is Director of Quality Assurance for Sierra Microwave Technology in Georgetown, TX.  
*dean@austin.rr.com*

**Nader, Mansour, BS ASE 1997**, writes, "After resigning from Bombardier Aerospace in October 2003 (where I did Stress Analysis on corporate aircraft interiors) and spending some time looking for a job, I decided to change careers to teaching. I will be teaching Mathematics to 5th, 6th and 8th graders at the International School of Choueifat in Cairo, Egypt. I also have a side job selling my photography."  
*n\_mansour@excite.com*

## Where Are They Now?

### George W. Davis, BS ASE 1987, MS ASE 1990, PhD ASE, 1996



George Davis with wife, Elizabeth, and children Kieran (3), Graham (6) and Tristan (8).

Rare is the day that I do not think of the University of Texas and Austin. I spent 13 years there getting three degrees in Aerospace Engineering, following Longhorns sports with a passion, and taking in the sights, sounds and adventures of one of the best cities in America. It was a dream come true when I received my acceptance letter and my Cockrell engineering scholarship offer. I always envisioned working at NASA Johnson Space Center, or perhaps another aerospace company in Dallas, but I now live in Laurel, Maryland, with my wife Elizabeth (BA 87, UT Austin) and our children Tristan (8), Graham (6), and Kieran (3). It is here that I founded Emergent Space Technologies, Inc., a small business focused on emerging navigation, communication, and information technologies for the space industry.

Upon finishing my PhD in 1996, Elizabeth and I moved to Boulder, Colorado where I pursued a career in academia at the University of Colorado. I began as a post-doctoral research scientist, and my first project was to manage the development of a GPS-based automated orbit determination system for DigitalGlobe, a commercial imaging satellite company. When Tristan was born, however, I could no longer afford to be a post-doc, and I began looking for a job in industry. I eventually joined the Orbital Sciences Corp. as a contractor at the NASA Goddard Space Flight Center (GSFC). Here I worked on spaceborne GPS technology projects. Some of the GPS receivers I worked with flew on real spacecraft, like the Shuttle, the International Space Station, and EO-1.

At the peak of the Internet bubble, I left the aerospace industry and joined an e-commerce company, which had a division with spacecraft ground system projects at GSFC. This allowed me to leverage my aerospace knowledge while learning about information technology. I saw a lot of problems being solved for e-commerce, the World Wide Web, and the Internet that could be applied to NASA missions to reduce cost. Thus, when the Internet bubble burst, I decided to start Emergent to bring modern information technology to the aerospace industry. After three (seemingly) short years, our company has grown to 12 full-time engineers, and we expect to double that by the end of 2005. We already have four Texas-Exes in Emergent, and as we grow we will be looking for more.

Being more of a businessman than an engineer has taken some getting used to, but it is rewarding because there is so much more to a successful company than just the technical side. My entire experience at UT has definitely helped prepare me for this challenge. It helped define who I am and who I was to become when I left Austin. Now, if I can just find a way to get back!

## 1990's (cont.)

**Victor Ugaz, BS ASE 1991, MS ASE 1994**, writes, "I have been working as an Assistant Professor in the Department of Chemical Engineering at Texas A&M since January 2003. My research deals with developing microfluidic technologies for use in DNA analysis applications."

[ugaz@tamu.edu](mailto:ugaz@tamu.edu)

**Greg Vajdos, BS ASE 1994**, writes, "I'm the Boeing GN&C Operations Manager for the International Space Station in Houston. My wife Jennifer and I have a beautiful 10-month old daughter named Cara."

[gvajdos@houston.rr.com](mailto:gvajdos@houston.rr.com)

**Stephanie Wilson, MS ASE 1992**, has been selected to receive an "Outstanding Young Texas Ex Award" for 2005. The award presentation will be held on Saturday, May 21st at 5:00 pm in the Connally Banquet Hall in the Harbin Alumni Center. The recipients will also be formally recognized at the University-wide Commencement Ceremony on the South Mall that evening.

Stephanie is a NASA astronaut, who has been assigned to the second shuttle mission STS-121 which is scheduled to launch this coming July.

## 2000's

**Angela (Bowes) Getzewich, MS ASE 2001**, is a Member of the Technical Staff at NASA Jet Propulsion Laboratory in CA. [bowesa@hotmail.com](mailto:bowesa@hotmail.com)

**Paul Garrison Frisinger, BS ASE 2003**, writes, "I graduated and earned my commission from Air Force Officer Training School in November, 2004. I am now a 2nd Lieutenant working as a subsystems engineer in the F/A-22 System Program Office at Wright Patterson Air Force Base, OH." [frupzigga@yahoo.com](mailto:frupzigga@yahoo.com)

**Cherian A. Idicheria, PhD ASE 2003**, is a Postdoctoral Appointee at Sandia National Laboratories in Livermore, CA. [idichius@yahoo.com](mailto:idichius@yahoo.com)

**Jennifer Sembera, BS ASE 2003**, is a Member of the Technical Staff for The Aerospace Corporation in El Segundo, CA. [sembera@usc.edu](mailto:sembera@usc.edu)

**Shara Walenta, BS ASE 2004**, is a Systems Engineer for Millennium Engineering and Integration in Arlington, VA. [swalenta@meicompany.com](mailto:swalenta@meicompany.com)

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

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**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 at <http://www.ae.utexas.edu/alumni/updateForm.html> Thank you for your interest in the department. We look forward to hearing from you soon!

## ASE/EM Spring Happening 2005!



**SAVE THE  
DATE NOW!**

**Friday, April 29, 2005**

To celebrate the Spring semester, the ASE/EM Department invites you to attend its annual Spring Happening 2005!

**What:** ASE/EM parties Tropical-style! With LIVE MUSIC by local musician Darden Smith, FREE FOOD from O's Cafe, student-led activities (including limbo), and a drawing for free prizes. Wear your Tropical attire and join us for an evening of fun!

**When:** Friday, April 29, 2005, 5 - 7 pm

**Where:** Outdoors Engineering Complex beneath the BIG TENT (near ENS building)

Contact Kendra Harris at [kendra.harris@mail.utexas.edu](mailto:kendra.harris@mail.utexas.edu) or 512-471-4234 for more information about this event.