The Chairman’s Column

I hope you have noticed that we have not published an Alumni Newsletter since 1998. The main reason is that we have had some staff changes in our alumni office. Barbara Reagor, who had tended to this office for a number of years and who developed a strong esprit de corps among ME alumni, left the department and a few months passed before we could find a suitable replacement.

We were very fortunate to be able to employ our new Alumni Office Administrator and Editor of our alumni publications. She is Joanna Hofer who is an expert in web page development, graphic design and writing. She brings a new viewpoint and capability to this office and I think you can see the difference in our 1998-99 Annual Report and in this Alumni Newsletter. Both of these documents were published initially on our Mechanical Engineering web site in the Alumni section, but you may obtain a hard copy if you prefer.

Last fall I also made a major change in the management of our ME Alumni office when I appointed Dr. Steve Nichols (BS 1972) as Associate Chair for Alumni and Industrial Relations. As the Director of our Senior Design Projects Office, Steve generally gets to know EVERY graduate on a first name basis. During the year he and the ME Alumni Steering Committee have hosted a number of successful alumni meetings (see his comments). Clearly these alumni activities are too important to be left to the vagaries of the Chair’s tight schedule. Steve will also provide continuity in the Alumni Program when there is a change in the Chair’s office.

With that introduction, I wish to note that this will be my last year as ME Chair. After 38 years at UT (plus two years at N.C. State), I plan to retire from the faculty at the end of the fall semester 2000. I have been honored to serve as ME Chair on two occasions for a total of eleven years. However, I am also looking forward to my retirement in which I expect to be active in things unrelated to UT. I will maintain an office in ETC until at least August 31, 2001, and will continue to have the same email address: jplamb@mail.utexas.edu. I will be pleased to hear from any of you.

J. Parker Lamb, PhD, PE
Chair of Mechanical Engineering
“...(that) any general system of conveying passengers would go at a velocity exceeding ten miles an hour, or thereabouts, is extremely improbable.”

- Railway engineer, Thomas Tredgold, 1835

DEPARTMENTS
Message from the Chair

Message from the Associate Chair of Alumni and Industrial Relations

Letters

Mechanical Engineering Department News

Student News

Faculty News

Alumni News

FEATURES
Texas Solar Radiation Database

Ken Cockrell Year 2000 Distinguished Engineering Graduate

Executive Engineering Management Program

Recently Endowed Scholarships: Andy Grimes’ Company, Inforte

Tribute to John Spurgeon

General Dynamics Advanced Technology Systems’ Community Outreach
From the Associate Chair of Alumni and Industrial Relations

Dr. Lamb created a new position of Associate Chair for Alumni and Industrial Relations beginning in the Fall of 1999. It has been my pleasure to fill that position and to work with Dr. Lamb, our alumni, industrial sponsors, faculty, and students to define (or invent) the job description. The Department has worked with alumni to organize alumni fund-raising activities, happy hours, golf tournaments, tours, sports events, and numerous other activities. I would like to highlight in this column just a few of the activities that we have pursued in the last year.

The Ford Motor Company has given support to the College (and particularly the Department of Mechanical Engineering) in order to establish the Ford Center of Excellence. In its initial grant, Ford has provided a grant of $1.2 million to the College to support a broad range of activities and events, many of those events are included in this Newsletter. Mechanical Engineering students and faculty wish to express their appreciation for Ford’s support.

On November 13, 1999, alumni and faculty organized a Tailgate party that we held just before the Texas Tech football game. As you know, Texas won the game by a score of 58 to 7. More than 143 joined us for fajitas and football.

The Department recognizes National Instruments for their support of our seniors in their capstone design efforts. National Instruments, with the help of one of their employees, Paulina Mosley-B.S. Class of 1998, provides snacks to the ME466K students the night before their final reports are due. We would like to thank National Instruments and Paulina Mosley for their efforts and support.

This year’s Mechanical Engineering Tailgate party (Tailgate 2000) is planned to coincide with the Missouri football game scheduled for October 21, 2000. We will set aside tickets for the football game, so come join us for some fun. If you are interested in participating, please contact Joanna at 512-471-2832 or at hofer@mail.utexas.edu.

Earlier this year, the UT-ME Alumni Committee began fund raising efforts to create a study and break area for our students similar to the T-Room that generations of engineering students enjoyed in Taylor Hall before we left that building in 1984. I encourage you to read more about Operation Phoenix in this newsletter, and to join us in contributing to the efforts. I want to thank the Alumni Committee for their foresight and dedication to supporting our students.

Lastly, I would like to highlight one more accomplishment. Dr. Lamb mentioned Ms. Joanna Hofer in his column. Joanna provides administrative support to this office. I have included her in the Highlights section of this Newsletter based on her many contributions in organizing this Newsletter, the Alumni Web Site (http://www.me.utexas.edu/~alumni), the Department Annual Report, and the numerous activities of the office of Chair for Alumni and Industrial Relations.

Dr. Steven P. Nichols (BS ‘72)
Associate Chair of Alumni and Industrial Relations
Greetings UT ME Alumni

Recently, many of you were contacted by student Teams in ME 204--Professional Responsibility in Engineering, to gain your input for a semester research project I assigned to them. The subject of the assignment was how to “Bridge the Gap” between the 4-year undergraduate experience and the preferred knowledge and skill assets that an employer wants in their entry level engineers. Your thoughtful and sincere responses to the student teams was extremely helpful to them, as the quality of the completed projects indicates. I think that quite a few eyes were opened as a result of your feedback.

On behalf of the ME 204 students and the Department, I would like to add my own personal thanks to all of you who participated in this joint learning exercise.

Best Regards and Hook ‘Em, Ted Aanstoos (BSME 1980).

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Dear UT-SAE Student Chapter -

As a representative of Ford Motor Company, let me take this opportunity to offer our “Congratulations!” and applause on your recent award at the 2000 SAE Congress in Detroit. The first place award on your student booth was well deserved and is made even more impressive by the fact that this is the first year your chapter has participated. The excellent work by all of your members has certainly raised the expectation of competition for future conferences. I found your display was of professional caliber, well integrated the SAE projects and related research activities, and the hands-on displays of equipment and vehicle to be a winning combination. Obviously the judges agreed. I know that the pressures of school and participation in extra-curricular activities can sometimes be a hard balance to achieve. But I think the pay-off for your members, the student chapter, and your sponsors is well worth the commitment and efforts that everyone has contributed.

Please forward me a copy of the press release and all related magazine and newspaper clipping associated with your achievement. I am certain that the Mechanical Engineering Department, the College of Engineering, and The University of Texas all take pride in your achievement and will publicize your accomplishments accordingly. Thank you for all of your efforts. I look forward to continue strengthening the relationship between Ford Motor Company and your student organization in the future.

Sincerely,

Jerri L. Paul (BSME 1995 MSME & MBA 1997)
Ranger OPD - Chassis Engineer
PDC 1HJ52 --- Dearborn, MI

Jerri:

We appreciate the financial support that Ford provided to get our students to Detroit (through the Ford Center of Excellence) as well as the encouragement from Ford employees.

S. Nichols (BSME 1972)
Associate Chair of Alumni and Industrial Relations

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ME Students Sample Engineering World

Friday five mechanical engineering underclassmen from the University of Texas came to Ford’s Louisville Assembly Plant to watch “engineers at work” for a day. We used this opportunity to expose these students to a manufacturing environment. They were taken on a tour of both the Final Area (where the trim and chassis are built) and the Body Shop (where the car is welded together). They also saw how engineers track build issues, examples of the types of problems manufacturing engineers solve and the engineering skills we use to solve them, and they were introduced to the concepts of reliability and quality for the parts supplied to us by our vendors.

They candidly asked about the function of parts, manufacturing aides, how Ford Motor Company tracks and contains quality problems, the “real life” application of their engineering classes, how many hours we work...

It was a great opportunity for them to be introduced to both another facet of engineering (manufacturing) and also for them to see another side of Ford Motor Company. This is a valuable tool for both the students and Ford Motor Company that should be continued in the future.

Natalie A. Vaughn (BSME 1998)

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Jerri:

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S. Nichols (BSME 1972)
Associate Chair of Alumni and Industrial Relations

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Natalie A. Vaughn (BSME 1998)
Letters

A Report from New Mexico

The editor of this publication noticed one alumni response out of New Mexico. She decided to ask about the situation there as a result of the recent fires. This is his response dated 5/17/2000:

“I have many friends and former students who work for Los Alamos National Lab (LANL), and a large number of these reside in the townsite and White Rock. As a consultant to LANL and frequent visitor, I am familiar with the town, its residential areas and other buildings, etc which make up a community, as well as the many technical areas of the Laboratory. All of these have been placed here and there in the existing forest and canyons, and most of the structures have been there for decades. Now, much of the surrounding forest is gone. Comprehension of the full effects of the loss will take a long time. Everyone in the country has suffered a loss. Because the fire is still burning, our losses continue to grow.

The personal losses can only be imagined by someone not faced with such a tragedy, not fully understood. I will not even try to address this subject.

On consideration of the living environment, all of us are poorer because of the fire, and this is true for all age groups. To give an example most of us are familiar with, consider driving to work everyday. For years for many LANL employees, the part of the commute was made along a forest road lined with pines and meadows, with green mountains at the near horizon. The workday was then spent in a similar setting. Occasionally, in the fall of the year, a herd of elk or a bear might be seen at lunch or in the afternoon. Now, we can only imagine the current conditions. The picture is not encouraging. The residents could give many other, more graphic, and/or significant examples.

At this time about 46,000 acres have been burned. This is an area more than 8 miles square. With man and the Gods working together a full recovery will be made. It will take a lot of work and a long time.”

Dr. W. E. Baker (Ph.D. 1966)
Professor Emeritus
Mechanical Engineering
University of New Mexico

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The American Society of Mechanical Engineers
Wednesday, May 3, 2000

Dear Dr. Nichols,

On behalf of The American Society of Mechanical Engineers (ASME) at the University of Texas at Austin, I would like to thank you and the members of UT’s Mechanical Engineering Alumni for supporting the happy hour that was put together for the graduating ME466K students. The graduating Mechanical Engineering students appreciated this effort, which took place on May 1, 2000. They found in this “K- Happy Hour” a well deserved event to their efforts and perseverance. Both the remainder of ASME and I look forward to teaming up with UT’s Mechanical Engineering Alumni and you again in the future to produce even better events. Feel free to email me at antonio.gomez@mail.utexas.edu or call me at 512-471-3002 for anything you think that I could help you with. Once again, thank you very much.

Sincerely,

Antonio Gomez (BSME 1975)
ASME Academic Affairs Officer
The University of Texas at Austin’s Solar Energy Laboratory is home for the development of a Solar Radiation Data Resource as well as other solar energy applications. The laboratory resides within the Mechanical Engineering Department on the tenth floor of ETC, the Engineering Teaching Center, and is under the direction of Dr. Gary Vliet. It includes space and equipment for solar energy related projects and research.

The primary project of this laboratory is the development of the Texas Solar Radiation Database (TSRDB), which compiles solar radiation measurements across the state of Texas and is publicly accessible at http://www.me.utexas.edu/~solarlab/. The database web site features up to the minute Austin solar radiation data, as well as the previous day’s data from 15 locations around the state of Texas, including ongoing monthly averages, daily data from 15 Texas locations, historical data from the national solar radiation database (NSRDB) and links to other solar radiation and weather data.

The data for Austin go back to 1985 and the data for the other 14 sites encompass approximately the last 4 years. The sites are spread across Texas, but are more concentrated in the western part of the state where the solar resource is the highest.

The data include direct normal (beam) radiation, diffuse horizontal radiation (indirect radiation from the sun) and global horizontal radiation (the combination of direct and diffuse radiation). The data are available at 15 minute intervals and are also compiled into daily averages by month.

The purpose of developing this database is the establishment of reliable information from which a performance assessment of potential solar energy systems may be developed and a selection of the best locations for their implementation may be made.

Solar radiation data provide information on how much of the sun’s energy strikes a surface at a location on earth during a particular time period. The data give values of energy per unit of area. By showing naturally occurring changes in the amount of solar radiation over the course of days, months, and years, these data determine the amount of solar radiation for a location and the characteristics of systems needed to meet specific applications.


The earth receives such a vast amount of energy from the sun in the form of solar radiation that “if we converted to usable energy just 0.2% of the solar radiation that falls on our nation, we would meet the energy demand of the entire United States.”

Dr. Vliet explains further, “Yes. Another way to look at it is that if sunlight were converted to useful energy at 20% efficiency, it would take about 1% of the land area to meet the need of the U.S. This sounds both small and large, but if each home had a portion of its roof area used for solar collection/conversion, one could go far to achieve that. Storage of course is another issue.”
A variety of solar energy technologies can be used to harness the sun’s energy. These include:

- *solar electric (photovoltaic)* for converting sunlight directly into electricity
- *solar heat (thermal)* for heating water for industrial and household uses
- *solar thermal electric* for producing steam to run turbines that generate electricity
- *solar fuel technologies* for converting biomass (plants, crops, and trees) into fuels and by-products
- *passive solar* for lighting and heating buildings
- *solar detoxification* for destroying hazardous waste with concentrated sunlight.

The utilization of these technologies depends on equipment, operating costs, the percentage of the solar radiation that can be converted into the desired energy product, and the amount of solar radiation available. Developers of these technologies need high-quality solar radiation data.

The amount of solar radiation changes throughout the day and year due to weather patterns and the changing position of the sun, and solar radiation data reflect this variability. By knowing the variability, we can size storage systems so they can provide energy at night and during cloudy periods. For technologies with no energy storage, we can evaluate load matching by comparing the profile of the available solar radiation throughout the day with a profile of the energy required by the load. Solar radiation data also help determine the best geographic locations for solar energy technologies (as mentioned above). Other factors being equal, a site receiving more solar radiation will be more economical for the development of these types of technologies.

In order to understand Dr. Vliet’s charts and graphs on his website, the following information may prove useful:

The total or global solar radiation striking a collector has two components, direct beam radiation and diffuse radiation. Additionally, radiation reflected by the surface in front of a collector contributes to the solar radiation received. But unless the collector is tilted at a steep angle from the horizontal and the ground is highly reflective (e.g., snow), this contribution is small.

As the name implies, direct beam radiation comes in a direct line from the sun. For sunny days with clear skies, most of the solar radiation is direct beam radiation. On overcast days, the sun is obscured by the clouds and the direct beam radiation is zero.

Diffuse radiation is scattered out of the direct beam by molecules, aerosols, and clouds. Because it comes from all regions of the sky, it is also referred to as sky radiation. The portion of total solar radiation that is diffuse is about 10% to 20% for clear skies and up to 100% for cloudy skies.

Currently Dr. Vliet sees the main thrust of the program to be the development of a reliable solar radiation data resource. Other projects include assessment of PV systems and the potential for solar cooling.

For more information on this topic, you may access National Renewable Energy Laboratory (NREL) at http://rredc.nrel.gov/.
The Year 2000 Distinguished Engineering Graduate Committee Includes Kenneth D. Cockrell in its Year 2000 Honor Roll.

Mr. Kenneth D. Cockrell
B.S.M.E., 1972
Astronaut, NASA, Lyndon B. Johnson Space Center, Houston

As a naval aviator, pilot, and astronaut, Mr. Kenneth D. Cockrell has logged nearly 8,000 flight hours, over 900 of those hours in space. A native Texan, Mr. Cockrell earned a B.S. in mechanical engineering from The University of Texas in 1972. He then entered the University of Florida and received an M.S. in aeronautical in 1974.

Mr. Cockrell’s long career in the U.S. Naval Reserve began in 1972. He was a member of the U.S. Naval Aviation Reserve Officer Candidate Program at Naval Air Station, Pensacola, Florida, where he was commissioned, and later designated a naval aviator. In 1978, he entered the U.S. Test Pilot School in Maryland. Upon graduation a year later, he remained at the Naval Air Test Center conducting flight tests on a variety of aircraft until 1982, when he reported to the Naval Station in San Diego to become a staff officer and pilot. Mr. Cockrell resigned his commission in 1987 and retired from the U.S. Naval Reserve in 1999.

His career with NASA began in 1987, first as an aerospace engineer and a research pilot. He became an astronaut in 1991, taking on a wide-range of technical assignments responsible for everything from testing craft safety and operations, to preparing procedural manuals carried upon shuttle flights.

A veteran of three space flights, Mr. Cockrell will command the crew of the STS-98 shuttle mission scheduled for Summer 2000. This shuttle will spend six days docked to the International Space Station to deliver a U.S. Laboratory module to the station.
The Executive Engineering Management Program

The Executive Engineering Management Program is a Master of Science in Engineering Degree which specializes in Engineering Management. This program is designed for the engineer with leadership aspirations who would like to maintain contact with his/her engineering career rather than change to a purely management-related role. This Option III Master’s Degree, administered by the Center for Lifelong Engineering Education, allows practicing professionals to earn an advanced degree in two years while maintaining full-time employment. Program Faculty include Tony Ambler, Jonathan Bard, Paul Jenson, Tess Moon, David Morton, Elmira Popova, and Al Traver.

Benefits of Taking the Executive Engineering Management Program Master of Science Degree

* Develop expertise in the management of innovation
* Learn to identify and balance risks associated with technology development
* Gain confidence making timely decisions in complex, rapidly changing environments
* Enhance strategic decision making skills
* Specialize in the management of technology-based organizations
* Study in the energetic entrepreneurial environment of Austin’s high-technology sector
* Earn a master’s degree without interrupting your career

Learn how NOT to make the following mistakes:

* Assign wrong combination of people to project jobs
* Create task overlaps - poor organization, etc.
* Demotivate people through poor working conditions/rewards
* Bring large numbers of people onto project before defining responsibilities
* Fail to prepare needed resources - computers, communications, etc.
* Fail to validate project design requirements and identification of high risk elements

Why a Masters Degree in Engineering Management?

“MBA courses... look at areas such as corporate finance and financial accounting. Engineering Management... looks at the cost analysis, cost-benefit analysis, value engineering, and project evaluation and comparison points of view that make up the enterprise resource allocation decisions.”

Click here to see the Directors’ Powerpoint Presentation

For more information, please access the Executive Engineering Management Program’s web site at: http://www.engineeringmanagement.utexas.org
Inforte, an e-business integrator headquartered in Chicago, recently established the 2000, Inforte & UT Austin, Mechanical Engineering Outstanding Student Scholarship. Andy Grimes, a 1994 BSME graduate from UT and a Manager at Inforte, helped establish the Scholarship.

Grimes commented, “Establishing the scholarship is a great way to give something back to what I consider a great program. It also gives Inforte a chance to meet bright, design oriented students, with leadership potential -- the kind of people a leading edge, technology services company like Inforte is often looking to hire upon graduation. Some of Inforte’s co-founders had recently established scholarships at universities in Illinois. Since Inforte has recently established a larger market presence in Texas, and being from UTME myself, I figured UTME could benefit from a scholarship too, as well as Inforte. Our CFO, Nick Padgett, was 100% supportive.”

A total of $3800 was awarded to six Mechanical Engineering Students. The applicants were evaluated on academic, leadership and extra-curricular merits including work and non-work related activities.

First Place was awarded to Neal Tanner in the amount of $2000.

Second Place went to Malcom Daniel in the amount of $1000.

There were four second runner up awards of $200 given to Andrew Deck, Shawn Dustin, Nicholas Folse and Aaron Townsend. Second Runner up awards were given this year because of the outstanding quality of those applicants and the availability of funds.

Inforte Corp. is a leading eBusiness integrator that focuses on velocity -- delivering better, faster eBusiness strategies and solutions to clients that empower them to compete successfully in the Internet economy. Inforte offers the unique combination of eStrategy, business-to-consumer and business-to-business eCommerce, supply-chain integration, and premier customer experience design and management capabilities required to build end-to-end eBusiness solutions that are integrated across clients’ value chains. Inforte’s client-advocacy approach and delivery methodology, “Velocity to Value”, has enabled the company to achieve 100 % client referenceability and industry-leading project efficiency metrics. Founded in 1993, Inforte has offices in Chicago, Dallas, Los Angeles and San Francisco, and 100% of its employees are owners. For more information, contact Inforte at 800-340-0200 or visit their web sites -- http://www.inforte.com or http://www.eStrategy.com
JOHN SPURGEON MEMORIAL

It is with regret that we inform you that John died unexpectedly on May 1, 2000. He served as the Mechanical Engineering electronics technician for 30 years, and during that time helped countless students with senior design (K) projects, as well as MS and Ph.D. research experiments.

In view of his intense dedication over a long period, Dr. Lamb appointed an ad hoc committee to consider an appropriate memorial. Committee members included Professors Joe Beaman, David Bogard, Mike Bryant, Matt Hall, Jack Howell, Raul Longoria, Ron Panton, and Gary Vliet, along with Undergraduate Advisor Billy Wood and Shop Supervisor Don Artieschoufsky. Based on the committee’s recommendation, Dr. Lamb has approved the following program for memorializing John’s contributions.

1. Name a room in John’s honor by installing a bronze plaque on the door. The room would probably be the Electronics Shop or the Mechatronics Lab (ETC 3.136).

2. Establish an undergraduate scholarship in John’s name. Solicit funds from all former students, faculty, staff, and friends of John’s. The annual scholarship would be for a junior/senior level ME student who best exemplifies creativity and innovation related to design and construction of electro-mechanical devices.

At a memorial service for John, Professor Raul Longoria, who has had a long association with John, related these thoughts.

“I met John in 1983, and had the privilege to learn from him as an undergraduate student, a graduate student and then as a faculty member. I was always at his bench (as I know many others were; it is a wonder he ever got anything done). John taught with his hands. His were the hands of a master craftsman.

I remember being in John’s shop once and another student walked in. John started talking to him about his project. I was a bit jealous, thinking I was unique in getting assistance from him. But there were many others, and despite the fact that he helped so many, John had a way of making you feel “special”. I believe most of the time John did not mind being interrupted .... deep down he knew he was teaching by example ... with his hands. This remains the image I retain of John. Like my grandfather, John used his hands to demonstrate not so much a skill as his desire to share himself and his time.

We sometimes lament that so many of the students we teach today do not learn to use their hands “in a classical way”, but John’s example made me realize that it was his method that is most important. I will always remember these simple lessons John taught me about sharing and giving guidance.”

Former students as well as faculty and friends are encouraged to contribute to this scholarship fund. Please send checks to the following address, marked for the “John Spurgeon Scholarship.”

Dr. J. P. Lamb, Chair
University of Texas at Austin
Mechanical Engineering Department
ETC 5.160
Austin TX 78712-1063
General Dynamics/Advanced Technology System’s Community Outreach

Charles E. (Chuck) McQueary, Ph.D., a native of Gordon, Texas, earned three back-to-back diplomas at The University of Texas at Austin: a bachelor’s degree in mechanical engineering in 1962, master’s degree in mechanical engineering in 1964 and doctorate in engineering mechanics in 1966. He joined Bell Laboratories upon final graduation to work on the Safeguard Antiballistic Missile Program and later headed a team that developed applications for lightwave technology for the military. In 1994, Chuck was tapped as president of Advanced Technology Systems, an outgrowth of the undersea sensor and transmission systems business with Bell Labs that became part of Lucent Technologies.

Though Advanced Technology Systems was purchased by leading defense contractor General Dynamics in 1997, Chuck remains president of the now $400-million subsidiary that has world-class competencies in fiber optics and photonics. The Greensboro, N.C.-company has seen its markets shift dramatically over the past two-and-a-half years. Today, fueled largely by the explosion of the Internet, the commercial sector represents 65 percent of General Dynamics Advanced Technology Systems business. The University of Texas at Austin in 1997 named Chuck a Distinguished Engineering Graduate.

Thirty-four years of climbing the engineering corporate ladder haven’t diminished Chuck’s desire to be a teacher, an ambition inspired while doing engineering graduate work at The University of Texas at Austin under Professor Lyle Clark. Though he never went into teaching professionally, the corporate executive has never forgotten the wonder and value of learning.

“I know from my own experiences of growing up in a small town with a small school, that education, at all levels, exposed horizons and opened opportunities that are almost limitless,” he said.

As president of General Dynamics Advanced Technology Systems in Greensboro, N.C., he has made it his mission to play a key role in the learning of hundreds of students, from elementary school to college. Chuck sits on the board of trustees for North Carolina Agricultural & Technical University and is an active member of the President’s Advisory Committee at Guilford Technical Community College. He also is chairman of the 2000 United Way Campaign of Greater Greensboro, which helps fund two local, at-risk elementary schools. Chuck’s company and community leadership has set the tone for other employees to follow.

Through his involvement with NC A&T - a historically black university, the company’s partnership with the Inroads program - a not-for-profit career development organization that helps identify students - and the New Jersey Institute of Technology, Advanced Technology Systems has recruited a dozen, academically gifted,
minority, engineering interns for summer work. The company’s goal is to target potential employees by building a mutually rewarding relationship with them long before they graduate. The program that offers hands-on experience began last year and one former intern, who graduated in December, is now a full-time engineer in the company’s environmental health and safety department.

Because high-tech companies will continue to depend on an unlimited and diverse pool of highly skilled and committed technical workers to stay ahead of the competition, Advanced Technology Systems has several engineering executives serving as business advisors for North Carolina’s Guilford County Schools. Their role is to help math and science teachers broaden their knowledge about the technical workplace and get a vision for how to use math and science in the classroom. This May, Chuck was the guest speaker at the Guilford County Schools Business Advisory Board’s Math and Science Awards Dinner, which recognizes teaching excellence.

“Teachers play a critical role in the early intervention of children,” Chuck told 200 educators and administrators. “Whenever I think back on things I learned, I always think of my teachers by name.”

A small group of Advanced Technology Systems human resource executives also is part of the Tech Prep Committee, a joint project of the Guilford County Schools and Guilford Technical Community College. They are helping the schools fine-tune their curriculums in order to identify students with technical aptitude so they might be encouraged to pursue a career in technology.

But Chuck’s pet project is the Reading is Fundamental program that the company sponsors at Hampton Elementary, Greensboro’s only year-round school. “Reading is fundamental to comprehension, and comprehension is fundamental to understanding technology,” he explained. Three times a year, employee volunteers from Advanced Technology Systems distribute new books to each of the school’s 600 low-income students to read and keep. “We emphasize reading in elementary schools as early training for the engineers and scientists of tomorrow.”

The RIF program has been so successful - more than 3,000 books distributed to date - that the company plans to expand the program to include a school near its Whippany, N.J., facility.

In the meantime, the company has embraced Hampton. Last fall, more than 40 employees landscaped the school’s front entrance area and, this spring, the company treated 80 students and teachers to a night at the symphony, accompanied by Chuck and 11 of his staff. Although business travel occupies 70 percent of his time, education continues to be a top priority. “As a business leader, I believe it’s important that I spend a portion of my time serving as a mentor to others,” he emphasized. “I find tremendous satisfaction in seeing other people be successful.”
The Ford Center of Excellence

The Ford Motor Company and the College of Engineering at The University of Texas at Austin are working in partnership to produce world-class benefits for faculty and students in the College of Engineering and for employees and shareholders of Ford Motor Company in regard to the mutual educational and research goals of both institutions as they relate to automotive design, performance and manufacture. The Ford Center of Excellence is a cooperative program which seeks to improve the educational programs and experiences of students in the College of Engineering at The University of Texas at Austin. The Center represents a long term commitment on behalf of the Ford Motor Company and its employees to support the College. The Center focuses its academic support in the Department of Mechanical Engineering. Currently, the Ford Center of Excellence is a virtual center where information is collected and electronically stored on the World Wide Web. In this way Ford Motor Company and The University of Texas can better work together to exchange information as needed and can establish a long lasting mutually beneficial relationship. The key areas of corporate involvement are:

* Executive Involvement
* Student Programs and Organization
* Research and Faculty Support
* Alumni Involvement
* Equipment and Contributions
* Continuing Education

This model provides a structured program in which all areas are closely linked. The Corporate Relations office in the College of Engineering can assemble a UT Engineering team comprised of faculty, staff, and student leaders who interact and strategize with Ford corporate representatives to achieve Ford Motor Company’s objectives. Linking the different key areas provides opportunities for expanding involvement and leveraging for improved results for both the Corporation and the College. For example, donating equipment for a student lab can enhance a particular course, which educates students with the skills a company needs.

Below is a visual example of the support structure for the UT Austin Ford Center of Excellence.

Ford and UT- Mechanical Engineering:

Ford’s support of the Department and our students is reflected in the numerous successes our students have achieved in SAE competitions (some of these are discussed in this Newsletter). Ford has challenged the Department to excel in its education and research roles. For additional information or questions, please contact the College of Engineering Corporate Relations Office at 512-232-1810.
Explore UT!

The Biggest Open House in Texas!

The University of Texas at Austin is home to a world of knowledge and discovery. On Saturday, March 3, 2001, UT will open its doors and welcome alumni, students, business partners, neighbors, and friends to come Explore UT!

Explore UT is an open house event where the diversity of the UT campus and the variety of learning opportunities can be explored. The College of Engineering will be hosting a variety of hands-on activities, lectures, and displays. Mark your calendars now to see the latest in solar powered vehicles, learn about the reverse engineering of toys, find out how computers really work, and experience biomedical engineering and how engineering is involved in the making of artificial body parts. Explore those parts of campus you never saw when in engineering school.....learn German in 30 minutes, enjoy the arts and artifacts in Harry Ransom Center and the LBJ Library, hear about “potions and pills” in the College of Pharmacy, and even get a lesson on family tax planning in the College of Business. These are just a few of the many activities that will be available for you to experience and explore on March 3, 2001.

Explore UT will begin at 12:00 p.m. and continue until 6:30 p.m. Watch future alumni publications and the College of Engineering web site (www.engr.utexas.edu) for more information. You may also contact Tricia Berry at 512-475-6830 or tsberry@mail.utexas.edu for more information. Hook’em Horns!

Dr. Robert E. Newnham
Professor Emeritus
Materials Research Laboratory
Pennsylvania State University

THURSDAY, MARCH 30, 2000

“Smart” composites have the ability to perform both sensing and actuating functions. Passively smart materials respond to changes in the nearby environment in a useful manner without assistance, whereas, actively smart materials have a feedback loop which allows them to analyze the sensor signal, recognize the change, and initiate the appropriate response through an actuator circuit. Currently, most of the applications are in vibration control and suppression using piezoelectric and electrostrictive composites made from ceramics, polymers, and metals, but the concept of a smart composite is much more general than that.

During the past decade, we have designed and fabricated a large family of functional composite devices including thermistors, transducers, chemical sensors and micropositioners. These functional composites make use of a number of underlying ideas, including the following: connectivity patterns leading to field and force concentration; the use of periodicity and scale in resonant structures; the symmetry of a composite structure and its influence on physical properties; polychromatic percolation and coupled conduction paths; varistor action and other interfacial effects; sum, combination, and product properties; surface play in many functional-composite materials. These ideas provide a basic understanding of composite sensors and actuators with current
research focused on the miniaturization and integration of functional nanocomposites.

An important approach to making smart materials is to bring together two or more different materials, each of which has a phase transition associated with it. In our transducer program, we combine polymeric materials having phase transitions in which the elastic properties undergo large changes and ferroelectric materials in which the dielectric properties have an associated instability. The two materials have different types of instability, enabling us to build up structures especially good for sensing and actuating.

Many smart materials mimic the functions of biological systems; some of the composite piezoelectric hydrophones we have built are similar to the ways in which fish listen and then speak. More recently, we have been working on very smart materials which have the ability to “learn” by altering their sensing and actuating functions in response to changes in the environment. These composites utilize nonlinear properties, such as electrostriction and higher order elastic constants. The integration of smart materials with silicon chips into compact, multifunction packages is the ultimate goal of this line of research.

Robert E. Newnham is Professor Emeritus of Solid State Science, and associate director of the Materials Research Laboratory. Recently elected to the National Academy of Engineering, Newnham has written 500 research papers on electroceramics and composite materials for electronic applications. During the past few years, he has been awarded the Centennial Prize by the Ceramic Society of Japan, the John Jeppson Medal of the American Ceramic Society, the Turnbull Prize of the Materials Research Society, and the First International Ceramics Prize of the Academy of Ceramics for “distinguished and creative contributions to the advancement of ceramic science and culture, especially in the field of composite electroceramics.” Newnham is active in several professional societies, having served as editor of the Journal of the American Ceramic Society, president of the American Crystallographic Association, and Distinguished Lecturer for the Institute of Electrical and Electronic Engineering.

ME Alumni E-Mail Address List

If you would like to have your e-mail address posted on the Mechanical Engineering Alumni Page so that your classmates can find you, please e-mail Joanna Hofer at hofer@mail.utexas.edu. She will accumulate the names and e-addresses and post them once she has a list.

Announcing UT ME Alumni Happy Hour
(Date To Be Announced) at the Crown & Anchor. Austin, Texas

For More information please contact Marty at:

Marty_Schimcek@amat.com
Mark Your Calendars!

The Fourth Annual Tailgate Party will be held on October 21, 2000.

UT vs. Missouri

Football Ticket Block:
A block of tickets has been reserved for the UT vs. Missouri Football Game. We have a limited supply of tickets. Please contact Joanna Hofer ASAP at hofer@mail.utexas.edu or call 512-471-2832 to hold your tickets. Depending on the response, we may only be able to hold the tickets without payment until October 2nd.

The ticket price is $34. We will accept payment in the form of cash or check. (We are unable to accept credit cards.) Please make checks payable to University of Texas at Austin.

Hotel Block:
A block of Hotel Rooms has been reserved for the Tailgate weekend at the Homestead Village Downtown/Townlake.

Please identify yourselves as ME Alumni Tailgate to get the group rate.

Homestead Village Downtown/Townlake
507 S. First Street
Austin, Texas 78704
Telephone: 512-476-1818

Rate for a queen studio is $89.00 plus tax.
Motorola sponsored a city-wide marathon in Austin, Texas on February 20, 2000. UT Mechanical Engineering Students, Faculty and Staff who participated were:

Full Marathon (26.2 miles or about 42K)

David Dart, ME’s Microcomputer Applications Specialist had this to say, “I went into the race feeling very strong and confident. That strength and confidence was shattered about 15 miles into the run! I finished with a new personal best time (4:22), but it was well short of my goal. I think it was probably also my last full marathon, although I will undoubtedly participate next year as part of a relay team.

Asking why he participated, Rich Crawford responded, “We just did it for the comaraderie. “ Asked how the race went, Professor Crawford responded, “I ran the first leg and started too fast. Adrenaline and just keeping up with the crowd. I started running out of steam after the 3rd mile and had to cut my pace. Still I finished. I can remember being annoyed by the people around me who were talking while I was struggling to breathe.” Rich Crawford was on a five person team which included Carey King, Glenn Masada, Mark Hamilton, and Tess Moon.

Tess Moon says she trained very little, only casually for a couple of months. Asked how she felt about the race, she replied, “Before--excited anticipation, During--it felt great (I after all only ran 7.6 miles--not the full 26.2 miles) and After--sorry it was over; looking forward to next year.”

Ted Aanstoos trained 6 months-Austin Fit Marathon Training Team (part of USA Fit) and Texas Marathon Training Team (a UT Rec Sports Club). Says Aanstoos, “I set a PR (personal record); my best marathon yet, no pain, no disasters.”

Ted Aanstoos, Class of 1980
Exercising Engineers: The Motorola Marathon

Motorola sponsored a city-wide marathon in Austin, Texas on February 20, 2000. UT Mechanical Engineering Students, Faculty and Staff who participated were:

Full Marathon (26.2 miles or about 42K)

Susan Pedregon
David Dart
Ted Aanstoos

12.2K

Tess Moon

10K or less
Rich Crawford ran 10K
Carey King ran 10K
Glenn Masada ran 5 K
Mark Hamilton ran 5 K

The marathon route goes right past ETC on 26th street--a great vantage point.

Editor’s note: Susan later said that despite her above remarks she found the marathon an intensely rewarding experience due to the high degree of self discipline required to finish. Her time was approximately 5 hours.
***The faculty would like to invite alumni to participate next year as individuals or members of ME Faculty/Staff/Student/Alumni teams.

If the response is favorable, we could form multiple teams. If the alumni are interested, it would be nice to have either pre and/or post event activities where participants gather informally at an agreed on location. These activities will be self funded.

Periodically check the Upcoming Events site on the ME Alumni page for more information. (http://www.me.utexas.edu/~alumni)

For those of you who are interested, the next marathon is February 16, 2001

**UT ME Alumni Club Annual Golf Event**

The UT ME Alumni Club held its first annual Golf Event on Saturday, April 10th, 1999 at Bluebonnet Hills golf Club. Several golfers, including faculty of the ME Department, hit the links and enjoyed a great round of golf. The spring weather, with sunshine and a light breeze, created excellent golfing conditions. Participants made several long drives, and we even witnessed a birdie or two. After the golf, the participants swapped stories and memories over a few cold drinks. The UT ME Alumni Club plans to continue the Golf Event annually and we look forward to seeing you out there next year.

If you are interested in participating in the future,
Please contact Marty Schimcek:
E-mail: schimcek_marty@amat.com,
Phone: (512)-272-2907 (work)
Operation Phoenix: Vision, Determination, Funding

Are you old enough to remember this?

“The Student Engineering Council is happy to announce to its many friends that Taylor’s “T” Room, the proposed lounge and coffee shop for the engineering students, will open in September 1956."
- Circa, Summer 1955

Alumni, faculty, and engineering students combined their energies to create the original “T-Room” in the basement of Taylor Hall back in 1954-56.

When they started the project, there was nothing but their vision and an unexcavated space. But engineering students somehow convinced the University administration to approve “Operation Gopher”, in which determined volunteer workers manually removed approximately 1,800 cubic yards of rock and dirt from beneath the building.

Alumni then funded the work necessary to finish the space into an engineering lounge.

Thanks to their vision, determination, and funding, generations of engineering students enjoyed the benefits of a lounge and study hall affectionately known as the T-Room. Unfortunately engineering students lost access to the T-Room after the Mechanical Engineering Department moved out of Taylor Hall in 1983.

The Mechanical Engineering Alumni Committee wants to respond to students’ request for more study space (equipped with Ethernet connections). We think now is a great time to resurrect the student oasis that was the T-Room. The new location will be the Mechanical Engineering Building.

Our Alumni challenge, known as “Operation Phoenix”, will result in a 3000 square feet study area and a much needed lounge for many generations of engineering students. You may ask, “How can I help?”

Students, alumni committees, and faculty worked together over the last year to develop the vision for Operation Phoenix. We have organized a core group of Alumni (the Operation Phoenix Oversight Committee) with the determination to carry out the vision. If you share our vision for a new T-Room, please commit to help fund Operation Phoenix with a financial donation.

Please visit Our web pledge form, which allows you to indicate at what level you would like to support “Operation Phoenix”. Or contact the Alumni Administrative Assistant at hofer@mail.utexas.edu. Please let us know if we can assist you or provide you with additional information.
Operation Phoenix: Levels of Support

$10,000 - (Bronze plaque will feature photograph)
$1000-9,999 - (Recognized on a bronze plaque)
$500-999 - (Recognized with a named tile)
$250-499 - (Included in list of Donors Dedication Plaque)
$1-249 - (Earns the gratitude of generations of engineering students)

We especially would like to recognize the individuals behind these gifts. Future engineers will benefit from your leadership:

($10,000) - Bronze Plaque with Photograph
Rick Relyea

($1000-9,999) - Name on Bronze Plaque
Fluor Daniel/Glenn Gilkey, ASME Central Texas Section, R. D. Bailey, Michael Johnson, National Instruments, Steven P. Nichols, Richard H. Wilson/(Square D), George M. Woodman, Kurt M. Marshek, Kerry E. Russell

($500-999) - Named Tile
Mike Carden/(Rohm & Haas), Ben Edwards/(West Texas Foods, Inc), Bruce Ehni, Mark Finley, John and Judy Forister/(Celanese), George Helland, J. Parker Lamb, Jose and Inga Tapia

($250-499) - Donors Dedication Plaque

($1-249) - Gratitude of Generations of Engineering Students

E-mail us with the amount you would like to pledge: hofer@mail.utexas.edu

Checks should be made to the order of The University of Texas at Austin.

Mail Checks to:
University of Texas at Austin
Mechanical Engineering Alumni Office
c/o Operation Phoenix
ETC 5.160
Austin, Texas 78712
Visiting Committee

Brian Ballard
Generation Manager
Martin Lake Plant
TXU Electric

William G. Beazley
President
Information Assets, Inc.

N. Binz DeWalch
President
DeWalch Technologies, Inc.

Tom Dolbear
Senior Member of Technical Staff
Advanced Micro Devices

Franz T. Geyling
Resident Consultant
Sematech, Inc.

Glenn C. Gilkey
Director of Engineering
Fluor Daniel

Michael W. Harville
Subsea Engineer
Aker Engineering, Inc.

Michael B. Johnson
Vice-President
Daniel Measurement Services

Jeff Kunz
President
Standard Industrial Structures Corp

Richard Lebovitz
President
Factory Logic Software, Inc.

Brian A. Matushek
Vice-President and General Manager
Compression & Production Systems
Schlumberger

Andrew J. Mawer
Manager, Interconnect Reliability
Motorola Semiconductor

Stephen T. Morgan
Director of Operations
Compaq Computer Corporation

Ronald P. Pepin, P.E.
Senior Mechanical Engineer
Applied Science Fiction

Nathan Post
Vice President - Operations
Kvaerner Oilfield Products

Arthur C. Ratzel
Technical Manager
Sandia National Laboratories

Fred Soechting
Fellow-Heat Transfer
Pratt & Whitney

Warren R. Waggoner
Operations Manager
Global Information Systems Company
ExxonMobil Corporation, U.S.A.

Dan Westbrook
Regional President, Southern Cone
BP Amoco Exploration
A team of mechanical engineering students from The University of Texas at Austin won the national championship trophy Saturday, April 8, 2000 with their overly-complicated invention at the 12th Annual National Rube Goldberg Machine Contest at Purdue University.

In honor of their victory, the Tower at UT Austin glowed bright Orange on April 10th, Monday night.

The national competition honors the late cartoonist Rube Goldberg, who drew complicated machines to perform simple tasks. The task in Saturday’s competition was to place seven items that represent the best inventions and discoveries of the century into a time capsule.

The machine the UT team invented, and successfully operated in the competition against six other teams, started with a silver dollar rolling down tracks and going through 47 steps, ending with a torsional spring rotating the time capsule lid to seal 18 objects inside. They called their winning entry, “Rube Goldberg’s Entertainment Machine.”

In addition to the trophy, the team won a prize of $250 for their approximately 1,000 hours of work which began in October. Their investment in the machine was about $300, said team spokesman Chad Bruns of Sugar Land. The other contest winners were University of Toledo, second, and Purdue in third place.

Honeywell Student Booth Competition

The UT Mechanical Engineering student branch of the Society of Automotive Engineers attended the SAE Congress in Detroit in March 2000. Travel expenses were paid for 8 students by the Ford Center of Excellence. Even though this was their first student booth, they won the Honeywell Student Booth Competition.

UT Automotive Engineering Students Win National Award

The Society of Automotive Engineers awarded The University of Texas at Austin student chapter first prize in the Student Exhibit Competition at the 2000 SAE World Congress & Exhibition this spring. It was the UT group’s first visit to the World Congress and was made possible by a grant from Ford Motor Co. through alumni advisor Jerri Paul of Ford.

The award, which included a $1,250 cash prize, was based on the quality of the booth including content interest, graphical presentation, layout, and uniqueness. The competition also required each student group to make presentations to a panel of judges explaining the inner workings of their organization. While the UT group described and displayed information on its typical engineering competition participation, it uniquely displayed important research results and tools developed by the team. This included the group’s Ethanol Vehicle Challenge project with its on-board fuel distillation technology, an innovation to improve cold-starts, co-developed with Ford Motor Co.

Dr. Ron Matthews, mechanical engineering professor and a faculty advisor to the UT group, credited several UT alumni working at Ford Motor Co. for great enhancements of the UT program. Wayne Li has worked extensively with the group in developing a co-patent on the on-board fuel distillation technology, he said. Jerri Paul encouraged UT’s student chapter to attend and provided the travel funds for the group. “She has taken us under her wings and mentored these students in many ways,” said Matthews. The annual SAE World Congress is the largest conference of engineers in the auto industry. Engineers and researchers from around the world attend to share the latest research results and technological advances. It is also the largest exhibit of automotive products and services (from an engineering and production standpoint) in the world. “We wanted to enter the SAE World Congress for the first time this year to celebrate our chapter’s 20th anniversary,” noted John Ramsey, a senior in mechanical engineering and president of UT SAE. “Through our projects and competitions, we give students the opportunity to apply everything they learn in the classroom in a real-world situation. Students develop leadership, communications skills, time and budgetary management. Our students help to push the technological envelope by developing technologies such as hybrid-electric powertrains, liquid-phase propane injection, and most recently on-board fuel distillation and direct-injection gasoline technologies. We help train the engineers who will develop
cleaner, more efficient vehicles. As the SAE Congress theme said, we ‘add value to life through technology and advanced mobility’.” A listing of the UT SAE Representatives who went to Detroit follows with faculty advisors:

Darius Mehta - Graduate Student
Yiqun Huang - Graduate Student
Chad Stovell - Graduate Student
Justin Case - Undergraduate, UT SAE Team Captain
John Ramsey - Undergraduate, UT SAE Student Chapter President
Terry Alger - Graduate Student
Alex Voellinger - High School Student who interned with our group
Ted Kane - Graduate Student
Faculty Advisors:
Dr. Ron Matthews
Dr. Matt Hall

**UT Society of Automotive Engineers Wins Award at the 2000 Formula SAE Competition**

A team of 10 UT Mechanical Engineering students just returned from an international intercollegiate academic competition where they won an award. The 20th annual Formula SAE competition was held at the Pontiac Silverdome near Detroit and involved more than 100 universities. The Formula SAE competition was founded by UT in 1981 and hosted by UT for its first four years. It proved to be such a valuable and exciting engineering educational tool that it is now hosted by a consortium of General Motors, Ford, and DaimlerChrysler and teams are sent from all over the U.S. (including Puerto Rico), Canada, Mexico, England, and Japan. The students are required to apply the technical knowledge gained in their courses to a real-world, complex engineering system - they must design, fabricate, and compete a race car with four-wheel independent suspension and a 600 cc motorcycle engine. The teams compete in both static and dynamic events. The static events include an engineering design inspection, during which the students must answer questions from professional automotive engineers regarding the engineering of their vehicle, a written and oral report about the design of a manufacturing plant to produce four of these vehicles per day for commercial sale, and an oral presentation to interest venture capitalists to invest in the company that will manufacture and sell these race cars. The dynamic events include a 100 yard drag race, a skid pad to test for lateral acceleration, an autocross, and a 15 miles endurance race. Unfortunately, rain curtailed many of the dynamic events.

Justin Case, UT Formula SAE Team Captain, and Courtney Frey, graduating senior in Mechanical Engineering, gave UT’s oral presentation and won 9th Place for the UT team. UT also won the prestigious Visteon Award for Outstanding Cooling System Engineering, bringing home a check for $1500. UT’s sponsors are Ford, General Motors, Peterbilt, and Wood’s Honda with in-kind support from Siemens. Unfortunately, UT is one of the least well-funded schools in the Formula SAE. It is reported that the A&M team received more than $20,000 from their school and alumni. UT received only $300 from its alums. Although our students can engineer with the best of them, money does make a difference. Jerri Paul, former UT SAE active and current Ford employee and UT SAE “sponsor” at Ford, has generously agreed to match any and all donations up to a cumulative $3000, and Ford will match her donation.

Thus, any donation you make will be tripled. (Thank you Jerri Paul and Ford!!) If you wish to make a donation to support intercollegiate academics, please send a check payable to “UT Society of Automotive Engineers” to:

Prof. Ron Matthews
The University of Texas at Austin
Mechanical Engineering (Mail Code C 2200)
Austin, TX 78712.

The UT Formula SAE team that traveled to this year’s competition included: Justin Case (Captain and senior in ME), Jeff Gensler (graduating senior in ME), Kevin Shotts (junior in ME), Steve Nabours (graduating senior in ME), Terry Alger (PhD candidate in ME), David Kieke (senior in ASE), Courtney Frey (graduating senior in ME), Jeremy Moore (graduating senior in ME), Feras Habbal (graduating senior in ME), Lionel Martin (visiting researcher in ME) and his fiancee Hana Bradkova, Clint Frey (team assistant), and Prof. Ron Matthews (SAE Faculty Advisor). We think the UT Formula SAE team has an excellent chance to win the 2001 competition because most of the team will remain intact. Justin Case will not graduate until December, 2000; Jeff Gensler, Steve Nabours, and Courtney Frey will begin graduate school at UT this Fall; Terry Alger, David Kieke, and Kevin Shotts should graduate after next year’s competition; and Jeremy Moore will become the UT SAE “sponsor” at Ford.
A team of seven mechanical engineering students from The University of Texas at Austin won first place overall in the international Ethanol Vehicle Challenge last month, taking home $6,000 in prize money.

The EVC is an international intercollegiate academic competition hosted by the U.S. Department of Energy, Natural Resources Canada, and General Motors. Sixteen universities were entered, including three from Canada, three from the Big XII (UT, Nebraska, and Kansas), and two from Texas (UT and UTEP).

The competition was held in Ottawa, Toronto and Windsor, Ontario. Contestants were challenged to re-engineer Chevrolet Silverado 4-by-4 pickup trucks to run on E85, a mixture of 85 percent ethanol and 15 percent gasoline. The trucks were judged on emissions, fuel economy, cold-start capabilities, power, design strategy and handling. The goal was to produce the most efficient, lowest-emission, best-performing vehicle.

“These students worked very hard and learned a tremendous amount about teamwork, mechanical engineering and budgeting,” said Dr. Ron Matthews, professor of mechanical engineering and co-faculty advisor. “It’s great to celebrate these kinds of academic victories with our students.” Dr. Matthew J. Hall, associate professor of mechanical engineering served as co-faculty advisor to the team.

The EVC is the latest in a series of alternative vehicle challenges organized by Argonne National Laboratory. UT began the challenge series with the Natural Gas Vehicle Challenge (1991-1993, 24 universities competing 3/4-ton GM pickups), followed by the Hybrid Electric Vehicle Challenge (1994 and 1995, about 40 universities in 4 classes, with UT in the Saturn conversion class), the Propane Vehicle Challenge (1996 and 1997, with 16 teams converting Chrysler minivans), and finally the Ethanol Vehicle Challenge (14 schools converting Chevy Malibu in 1998, then Chevy Silverado pickups in 1999, and 16 universities with Silverado conversions in 2000). The vehicles are judged based upon both static and dynamic events. The static events are a written technical report, an oral presentation, and an engineering design inspection, during which the students must answer questions from professional automotive engineers regarding the engineering of their vehicle. The dynamic events include emissions, several measures of fuel economy, several measures of performance, and one or more events focused upon a weakness of that particular alternative fuel.

The winning team’s truck, modified to use ethanol-based fuel, received the
highest combined score in a seven-day competition among 16 North American college and university teams.

The fuel used for the Ethanol Vehicle Challenge is E85, which is 15% gasoline and 85% denatured ethanol. The weakness of E85 is cold start - it is difficult to get these vehicles to start at temperatures below about 25 F. The 1999 EVC included starting at 20 F, driveability after starting at 20 F, and emissions during the driveability test. UT’s 1999 entry started in 3.7 s, with the gasoline control taking more than 6 s and the next fastest E85 entry taking more than 16 s to start. UT had the second lowest emissions during the cold event in 1999. Unfortunately, a small leak prevented UT from competing in the EPA emissions and fuel economy events that year.

This year after soaking overnight at 0 F, 13 of the 16 EVC entries did not start after cranking for 40 s. UT’s entry started in less than 2 seconds and also had the best cold driveability. This garnered the Best Cold Performance plaque and a $1000 check for the UT team. The concept used by UT to achieve exceptional cold start, cold driveability, and low EPA emissions is an “on-board distillation system”. This concept won UT the Most Innovative Component Award, which included another plaque and another $1000. This innovation is now the subject of a joint patent application by UT and Ford and a version suitable for gasoline vehicles is being developed with funds from the Texas Advanced Technology Program with additional Ford support.

The UT Austin team also won first place in the off-road event, driven by Team “Radar” Ted Kane of Phoenix.

UT’s on-board distillation system was also instrumental in achieving second place in EPA Emissions: 195 out of 200 possible points for emissions at the very stringent Low Emission Vehicle level. Additionally, UT placed 4th in combined urban and highway (EPA) fuel economy, 4th in the Written Technical Report, 5th in the Oral Design Inspection (presented by team Captain Yiqun Huang and Srik Aithala), 8th in over-the-road fuel economy, 9th in the Oral Presentation (Ted Kane and Darius Mehta), and 9th in the quarter-mile drag race (beating the GM-calibrated E85 “Team Truck”). Overall, UT gained 830.42 out of 1000 possible points and was the Overall First Place Winner - a trophy and a check for $4000.

Fifteen students worked on UT’s 2000 EVC but only 7 took the trip to Canada. The UT SAE EVC team that traveled to this year’s competition included: Yiqun Huang (Team Captain and PhD candidate in ME), Ted Kane (Team “Radar” and graduate student in ME), Srik Aithala (graduate student in ME), Courtney Frey (graduating senior in ME), Darius Mehta (graduate student in ME), Chad Stovell (graduate student in ME), Steven Vilano (graduating senior in ME), Prof. Ron Matthews (co-Faculty Advisor), and Prof. Matt Hall (co-Faculty Advisor).

UT’s EVC team sponsors were the Texas State Energy Conservation Office, the Western Regional Biomass Energy Program, General Motors, and Betz Dearborn. Nevertheless, UT probably had the least well-funded entry - we won due to outstanding engineering and in spite of the level of funding that is required to do well year-in and year-out. Jerri Paul, former UT SAE active and current Ford employee and UT SAE “sponsor” at Ford, has generously agreed to match any and all donations up to a cumulative $3000, and Ford will match her donation. Thus, any donation you make will be tripled.

If you wish to make a donation to support intercollegiate academics, please send a check payable to

“UT Society of Automotive Engineers”
Prof. Ron Matthews
Mail Code C2200,
The University of Texas Austin, TX 78712.
**Ron Barr**

The American Society for Engineering Education (ASEE) chose Dr. Barr to be a Fellow Member in recognition of his outstanding contributions to the Society. The presentation of ASEE’s new Fellow Members for 2000 occurred at the Annual Awards Banquet on Wednesday evening, June 21 at the America’s Center in St. Louis, Missouri. The banquet is the culmination of the Society’s Annual Conference and Exposition, which was held June 18-21.

Dr. Barr’s selection for Fellow Member was initiated by a nomination, complete with references. The nomination was evaluated in comparison to other nominations by the Fellow Member Committee. The selection was confirmed by the ASEE Awards Policy Committee, and it was subsequently endorsed by the ASEE Board of Directors. The thorough review process enhances the high regard in which Fellow Membership in the Society is held.

**Professor John B. Goodenough**

Texas Materials Institute, received the Olin Palladium Award of the Electrochemical Society at their annual meeting held in Honolulu, Hawaii on October 20, 1999. The Olin Palladium Award is the highest award of the Electrochemical Society and recognizes distinguished “contributions to the field of electrochemical science.” Professor Goodenough was presented with a palladium medal, a nickel replica, and a check for $5,000.

Dr. Goodenough’s involvement with electrochemistry began with the energy crisis in 1974. The need for long-term chemical storage of converted solar energy led him to propose the possibility of photoelectrolysis to generate H2, only to be told of the Fujishima-Honda patent. He demonstrated the concept of skeleton (framework) structures such as NASICON for alkali-ion solid electrolytes. During his stay at the University of Oxford, England, as Head of the Inorganic Chemistry Laboratory, he patented the Li1-xNiO2 and Li1-xCoO2 cathodes now used extensively in lithium-ion rechargeable batteries as well as the manganese-spinel cathodes. His work at Oxford on catalytic electrodes for a direct methanol-air fuel cell was interrupted by his return to the U.S., but in Texas he has been developing alternative materials for the solid oxide fuel cell and he has explored the influence of a counter cation on the redox energies of transition metal ions.

**Dale Klein**

Vice Chancellor for special engineering programs for The University of Texas System, executive director of the Amarillo National Resource Center for Plutonium, and professor of mechanical engineering, Dale Klein has been named fellow of the American Nuclear Society.

**Steven P. Nichols**

Associate Chair of Alumni and Industrial Relations, was elected Fellow Grade, American Society of Mechanical Engineers, 1999.

**Billy H. Wood**

On Friday, November 12, 1999 Billy Wood, received the “Student Engineering Council Engineering - Faculty Appreciation Teaching Award”. Billy was the recipient from the Mechanical Engineering Dept. The Award was presented at the Faculty Appreciation Week Awards Banquet at Jazz on 6th Street.

On February 03, 2000 Billy H. Wood received the “James W. Vick Texas Excellence Award for Academic Advising”. The award came with a check for $500.00 from the Ex-students association. Ten advisors from across the university are recognized each year. This is the 2nd time that Billy has earned this award. The first was in January, 1996.
1940

Willis Raymond Woolrich, Jr. (BSME 1940)

“Members of the Mechanical Engineering Class of 1940 were just settling into their first employment when the Military Draft occurred in October, 1940. I was a Test engineer with General Electric Co. in Philadelphia, PA. My draft number was quite low, as was the pay for the “walking army.” I volunteered for the Naval Aviation Corps. Four and a half years later, I returned to civilian life with three different tours of duty. I was a Flight Instructor in Jacksonville, FL and in Dallas, Texas. A test control pilot in the highly secret Special Task Air Group One, the forerunner of the Cruise Missile Program. This assignment took our group to the Solomon Islands where we combat tested against Rabaul and Bouganville targets. Toward the end of the War, I was reassigned to PB4Y2 bombers and was ready to take my crew and plane to the South Pacific again when the war ended.

“I returned to the University of Texas at Austin to get my Masters in Mechanical Engineering, specializing in Refrigeration. For the next few years I was employed in the field by Central Power and Light Co., of Corpus Christi. In 1948, I received my Professional Engineers License. After a few years of business venture in Harlingen, I moved to Austin where I was employed by the State Board of Control in the Design and Construction Division. This was at the time the State was beginning to air-condition schools and office buildings, which led to my being asked to come to Houston. I spent a number of years as Sales Manager for major air-conditioning manufacturers. I joined Robert R. Clarke and two other engineers in a venture known as Smoke-Ban Mfg. of which I was vice-president in charge of engineering until I retired. We designed and built smokeless flare tips for refineries and Petrochemical plants.

“During my time in Corpus Christi, I taught an engineering course at night in the Corpus Christi Junior College (now a 4 year school). I co-authored with my father a textbook on Air Conditioning and had several other articles published.

“I have been active in the American Society of Mechanical Engineers, Texas society of Professional Engineers, Chairman of the Houston Engineers Council (who sponsored the City Science Fairs), National Society of Professional Engineers, National Society of Practical Refrigeration Engineers, participated in Junior Achievement, and Assistant Leader in Boy Scouting.

“In 1942, I married Sarah Louise Weaver (Sally), BA 1939. We have two children, both graduates of the University, and four grandchildren. Our son is also a M.E. graduate. We are active in St. Francis Episcopal Church and in our Community.”

1943

Charles L. Herndon (BSME 1943, MSME 1948)

is professor emeritus at Montana Tech in Butte, and writes, “though I retired in 1984, I still teach part time. I’ve been a registered engineer for 50 years and active in ASHRAE for that long. I worked at NASA on the Saturn V rocket and performed research at the U.S. Navy’s civil engineering laboratory.

1951

John C. Tittle, Jr., (BSME 1951, MSME 1952)

retired in 1993 from Lockheed in Ft. Worth as a senior engineering specialist.

1954

Ronald M. Guinn (BSME 1954)

has been retired since November 1, 1995, BUT, only about 2 and 1/2 years of that was practicing as an Engineer. He worked for the Dow Chemical Company, as a production engineer at the Texas Division, Plant B. He left Dow and subsequently entered Seminary and have been an Ordained Minister in the Presbyterian Church since 1959. He has served congregations in El Paso, Sugar Land, Beaumont, Tyler, Sherman, Austin, New Braunfels, San Marcos, and Junction. During the 1980’s he was with Mutual Of New York as an insurance agent.

1962

Charles L. Goerner (BSME 1962, MSME 1965)

retired from the Texas Natural Resource Conservation Commission as an engineer and resides in Cedar Creek, TX.
Ruell F. Solberg, Jr. (BSME 1962, MSME 1967)

retired from Southwest Research Institute in San Antonio, Texas after 33 years as principal engineer. He is continuing some of his activities in ASME International where he has received many honors and awards.

1966
William E. Baker (PhD. 1966)

retired recently from the University of New Mexico, as a Professor Emeritus in the Mechanical Engineering Department, after a career in New Mexico. He initially worked at Sandia Laboratories, but began a teaching career at UNM after a few years there. Along the way, he earned a MSME (’61) from UNM and a PhD (’66) from UT in EM. (There was only one at that time.) While he still resides in Albuquerque, he uses his Texas passport frequently.

James P. Brill, P.E. (Ph.D 1966)

became a member of the National Academy of Engineering in 1997 and has been an ASME member since 1984. He has been on the engineering faculty at the University of Tulsa since 1966 and is currently the F. M. Stevenson Professor of Petroleum Engineering Flow Projects, an industry consortium to conduct research on multiphase flow in pipes. Results on mechanistic modeling of multiphase flow phenomena are used by most oil and gas companies to size wellbores and pipelines. Brill is the author or co-author of more than 100 publications. He is active in the Petroleum Division, serves as technical editor of J. Energy Resources Technology, and is a member of the ABET Board of Directors.

1978
Tom Bullion (BSME 1978)

worked for a while for the Center for Electromechanics at UT, then went to law school at SMU, graduating in 1984. He is a partner in Brown McCarroll & Oaks Hartline, a law-firm with offices in Austin, Dallas, Houston, and Longview. His main work is defending products manufacturers, mainly Ford Motor Company and Michelin North America.

1981
Joe Diaz (BSME 1981)

Mr. Joe Diaz, founder and President of MIRATEK Corporation, is a home grown product of El Paso (graduate of Jefferson High School). He holds a BS Degree in Mechanical Engineering from the University of Texas at Austin and an MBA degree from the University of North Texas. His extensive technical expertise was developed over a multi-year career with internationally recognized companies (Exxon, IBM, General Dynamics and EG&G) in roles involving program development/administration, problem-solving/data analysis, staff training/supervision, field research and technical reporting program oversight. With both internal and external liaison responsibilities at the executive level, MIRATEK is a professional high technology information systems, business and engineering firm dedicated to providing outstanding technical services to government agencies and private industry leaders in the United States and Mexico.

MIRATEK was recently named as SBA Prime Contractor of the Year (2000) by Fort Bliss and also received the US SBA Award of Excellence (2000). View his web site at http://www.miratekcorporation.com/

1982
Mat Waltrip (BSME 1982)

develops semiconductor capital equipment. He is a Senior Program Manager at Applied Materials in Santa Clara, California. His work involves leading cross-functional teams to develop silicon wafer process equipment. Recently Mat has been focused on changing his organization’s culture to incorporate “Design for Environment” into the overall equipment design process. Many of the processes involved in semiconductor manufacturing potentially impact the environment through air emissions, water pollution and consumption of resources. If minimizing these impacts is established as a design
criteria early in the design process, significant improvements can often be gained when sources of waste are identified and eliminated. “That’s when everybody wins, and that’s something I can support with enthusiasm.” Mat can be reached at mat_waltrip@alumni.utexas.net

Mauricio A. Ubidia (MSME 1982)

is now with Williams Brothers in Quito, Ecuador working as lead mechanical engineer in the design and construction of the Ecuadorian oil pipeline improvement project.

1983

Greg Milliken (BSME 1983)

is currently the VP of Marketing for Alibre, Inc. Alibre provides an Internet-based collaborative mechanical design service. http://www.alibre.com

1985

Jerome DeLaCruz (BSME 1985)

is currently working for Conoco Inc. in Houston, Texas as an Engineering Supervisor in the Natural Gas & Gas Products Division. Jerome is Project Manager for a Inlet Gas Compression System Upgrade project at Conoco’s Maljamar Gas Plant in SE New Mexico. Jerome is serving as an engineering technical supervisor for 2 engineers at Conoco’s Pocahontas Gas Partnership operation in western Virginia and will be supervising 4 new-hire full-time engineers and 2 summer engineering interns. Jerome is also leading the Conoco Natural Gas & Gas Products engineering recruiting effort and has and will be on campus for the Engineering Expo and Fall Recruiting. This recruiting effort is aimed at finding good ME and ChE candidates for summer intern and full-time engineering positions. Jerome has spoken recently at the student chapter ASME, AIChE and SHPE meetings and intends to participate with these organizations in the future.

1986

George Wilkinson (BSME 1986)

has worked as a structural test engineer at General Dynamics in Fort Worth for two years before returning to law school at UT. He graduated JD in 1991 and clerked for Texas Supreme Court Justice Eugene Cook for a year before joining the environmental practice in the Houston office of international law firm Vinson & Elkins L.L.P. He has recently been admitted to the partnership. His practice focuses on environmental litigation, toxic tort litigation, environmental criminal defense, environmental enforcement defense and environmental compliance counseling. He has used his engineering background regularly while practicing law. His engineering background has been very useful in understanding technical side of his cases. In some situations, he has assisted in personal injury cases which did not involve environmental matters where the manner of injury involved metallurgical failures or other technical issues.

Bear Poth (BSME 1986)

married Lisa Poth, has three kids Jordan age 7, Reece age 6, Bryn age 2. He is the President and CEO of ClearSource in Austin Texas. He has 165 employees and is building fiber optic based networks in Waco, Corpus Christi, Midland, Odessa and Amarillo. More on ClearSource at http://www.clearsource.com.

1987

Denzil Brinley (BSME 1987)

(Operations Management) went on to get his MBA in 1988 from Baylor University in Marketing. His work experience includes Exxon Company, Andersen Consulting, Pacific Enterprises Oil Company, Systems Application Engineering and Landmark Graphics. “I have not really used my engineering degree (except it helped me get jobs, allows me to talk with engineers on an equal footing, and makes me more analytical). I have mainly been involved with Information Systems (software) either as a programmer/analyst, software sales/implementation consultant, software implementation project manager, and now an Operations Manager who manages a team of 30 people who implement reservoir/production software solutions to the oil & gas industry.”

1988

TS Kelso (ME Ph.D 1988)

In August 1998, Dr. Kelso was selected as the Associate Dean of the Graduate School of Engineering at the Air Force Institute of Technology. He continued in that job until May 1999 when he was selected as the Vice Commandant-the equivalent of university vice president. Dr. Kelso was selected this year as an Associate Fellow of the American Institute of Aeronautics and Astronautics (AIAA) The Air Force Institute of Technology (AFIT) is the US Air Force’s institution of higher education for engineering, science, and management. AFIT consists of the Graduate School of Engineering and Management, with 100 faculty and 450 full-time
MS and PhD students, and two schools for continuing education—the School of Systems and Logistics and the Civil Engineer and Services School—which educate 18,000 students each year through various short courses. AFIT has 485 permanent faculty and staff and operates on a $80 million annual budget.

As Vice Commandant, Dr Kelso acts as the Chief Information Officer (CIO) for the Institute—responsible for all forms of information from their web site to their marketing efforts—and is also responsible for operating the computer support directorate and maintaining overall network security. Together with his many other duties, he is kept gainfully employed.

Wesley Stone (BSME 1988)

http://precision.me.gatech.edu/wstone graduated in 1988 from the University of Texas at Austin and headed to Penn State for his MSME. He finished at Penn State in August 1990 and began his professional career in General Electric’s Manufacturing Management Program (MMP). While on MMP, he spent his first year at GE-Armament Systems Department in Burlington, VT. His second year on MMP was in Cincinnati, OH at GE-Aircraft Engines. His two years on MMP included 4 different jobs that gave me a well-rounded manufacturing education. After graduating from MMP, he accepted a permanent job at GE-Gas Turbines in Greenville, SC. He spent 6.5 years at Gas Turbines with jobs in Final Assembly and Buckets (i.e., turbine airfoils). His jobs in Greenville ranged from Process Flow Engineer (continuous improvement focus) to Cell Engineer (supervisory/process) to Black Belt (6-sigma quality). In March of 1999 he left GE to pursue a PhD in Mechanical Engineering at Georgia Tech, moving his wife and infant son to Atlanta, GA. At Georgia Tech he is one year into his coursework and research, which will focus on process monitoring of high-speed super-abrasive machining of super alloys. Following his Ph.D, he hopes to locate a challenging job as a professor of Mechanical Engineering in a location that is excellent to raise a family.

1989

Mark Boyden (BSME 1989)

joined Athens Group in October 1999 as an eBusiness consultant. Athens Group, a premier consulting firm in Central Texas, is an employee-owned organization that specializes in technology strategies, eBusiness solutions, and custom software development. The previous seven years were spent at Fisher-Rosemount (Emerson Electric), the world’s largest provider of process control and management technologies, as the Worldwide Webmaster responsible for global strategic Internet operations. Boyden worked with ProjectEngineer earlier this year as a team leader for a team that visited schools to open children’s eyes to the wonders of Engineering. This was a wonderful experience for him. He is also spending time as an Area Governor for Toastmasters International, working with the Boy Scouts, spending time canoeing local rivers and playing volleyball. His web site is located at http://www.mark.boyden@noise.org

John Edson (BSME 1989)

“Art or science? While I struggled with this career question as a senior in high school, I ultimately decided to follow my science and math leanings to study mechanical engineering at UT. Visual art continued to be a compelling avocation for me, and through a chance meeting with an industrial designer, I was introduced to a career at the intersection of art and engineering. The seed was planted, and I pursued a quirky graduate experience combining aesthetic sensibilities and technical capability in the Product Design Program at Stanford University. Upon graduation, I started as a mechanical engineer around the corner from Stanford at LUNAR Design, an internationally recognized product development firm. LUNAR has given me the chance to participate in the development programs of world leaders like Hewlett-Packard, Sony, Motorola, Oral-B, Philips and In Focus. On the side, I’ve been helping teach courses in creative problem solving and product development at Stanford. Over my 7 years at LUNAR, I’ve moved into project and client management, gaining experience at the front end of programs. In 1999, LUNAR gave me the chance to head up our business development activities while continuing a role in engineering program mentorship. It’s been a fun ride, filled with unpredicted turns, made possible by a solid undergraduate engineering experience at UT and a strong compulsion to be involved in the creative processes between science and art.

Christopher Schneider (BSME 1989)

is employed by GE Medical Systems as Region Manager located in Houston. His family
moved back to Texas a year ago and reside in The Woodlands. Here recruits engineers at the UT College of Engineering for the General Electric company. http://www.gemedicalsystems.com

1990
Anthony L. Alex (BSME 1990)
is currently working with at EquiStar Chemical’s Chocolate Bayou plant in Alvin, Texas. He is a Senior Engineer in charge of the turbomachinery.

1992
Scot Gallaher (BSME 1992)
is currently studying international development at Harvard University in Cambridge. This summer he will be working for the Small Enterprise Assistance Funds in Estonia. The fund invests in small to medium size technology enterprises in transitional economies. Just after college, Mr. Gallaher worked for Chevron Chemical as a Capital Projects Manager. He returned to Austin with Applied Materials in their Automation Technology group. Most recently prior to returning to graduate school he was with 3M in Austin as a Sr. Market Analyst for their Electronics Markets. He earned an MS in Science & Technology Commercialization in 1996 in the first graduate class from the University of Texas IC2 Institute and had the wonderful opportunity to work with Dr. George Kozmetsky.

Carolyn McWilliams (BSME 1992)
formally Carolyn Young is working in Cenk, Belgium, on an international service assignment for Ford Motor Company.

John McWilliams (MSME 1992)
is working in Cenk, Belgium, on an international service assignment for Ford Motor Company.

1993
Brett Chandler (BSME 1993)
has joined Technical and Quality Solutions, Inc., in Houston, an engineering consulting firm in the oil and gas industry specializing in drilling and OCTG tubular reliability engineering services.

William F. Schneider (BSME 1993)
is currently a Senior Dynamics Engineer at Lockheed Martin Aeronautics Company (formerly Lockheed Martin Skunk Works) in Palmdale, California. After he earned his MSME from Georgia Tech in 1995, he accepted a position in Dynamics with Lockheed Martin Advanced Development Company in California. During his 5 years at Lockheed, he has worked on a variety of classified military programs for the Department of Defense. He is currently the lead Dynamics Engineer on a stealthy missile program. Most of his work focuses on random vibrations, structural dynamics and flutter analysis.

1994
Mike Henneke (MSE 1994, PhD 1998)
is a computational fluid dynamics (CFD) engineer at John Zink Company, LLC. John Zink is a manufacturer of combustion products for the hydrocarbon and petrochemical processing industries. The CFD group at John Zink uses high-performance computers to simulate combustion processes within industrial furnaces and incinerators, as well as to simulate non-reacting flows to support business needs. We are using CFD to predict flame shapes from our ultra-low NOx burners as well as radiant heat transfer from flames and surfaces to process chemicals in several different furnace geometries, such as vacuum heaters and ethylene pyrolysis furnaces. I recently completed work on a chapter entitled “CFD in the Petrochemical Industry” for a compilation book entitled “CFD in Industrial Combustion” to be printed by CRC Press later this year. ( www.johnzink.com)

David Cash (BSME 1994)
works part time as a HVAC design Engineering at the University of Texas at Austin in the department of Architectural and Engineering Services and part time trading commodity futures. He is a technical trader - a trader who applies a more quantitative study of the markets and develops trading systems using quantitative data analysis.

1995
David Levine (BSME 1995)
did his graduate research under Dr. Ron Barr. He then immediately began law school at The George Washington University in Washington, D.C. “(You don’t know what you’ve got until it’s gone. GWU can’t hold a flame to UT.)” During law school I worked at a law firm in Dallas, at the United States Patent and Trademark office and in the chambers of Chief Judge Mayer of the U.S. Court of Appeals for the Federal Circuit - the only court in the country with appellate jurisdiction over patent cases. He will graduate from law school in May 2000 and will immediately move to Palo Alto, California to study
for the bar exam. Following the bar exam he will begin as an associate at the law firm Morrison & Foerster. His group specializes in patent law dealing with medical devices.

1996
Karen Nyberg (BSME 1996)

has been employed by NASA JSC to work on design of the next generation space suit. She also has made the final cut for becoming an astronaut.

Hope Yin (BSME 1996)

is a quality manager for Proctor and Gamble in Sherman, Texas.

Sara Thurwachter (BSME 1996)

got her MSME at UC Berkeley, and she is receiving her PhD in ME at UC Berkeley this May. She has been working part-time in the Environmental Solutions Products Division at Applied Materials in Santa Clara for her research, improving manufacturing impacts on the environment. Sara is starting out on a new career path after graduation with McKinsey & Company out of their San Francisco office. While strategic management consulting, she hopes to keep up her engineering and save-the-world skills by working with high-tech manufacturing clients.

Kevin Brand (BSME -1996)

moved out to Silicon Valley after graduation and worked at Arthrocare, a biomedical device start-up in Sunnyvale. After two years, he took an opportunity with Somnus, another biomedical device company. Somnus is working to cure snoring and sleep apnea with RF energy and Kevin’s knowledge of manufacturing technology. Kevin is currently finishing his MSME in the evenings at San Jose State University.

Douglas Cudd (BSME 1996)

is presently employed by The Boeing Company Reusable Space Systems in Houston, TX. For the past 3 years, he has provided thermal analysis and real time mission support for the Space Shuttle Orbiter’s active cooling system and environmental control and life support subsystems (ECLSS).

Charles Corey Scott (BSME 1996)

attended Stanford University in 1997 and obtained a MSME in 1999 while on a Whitaker Fellowship. He is currently in the MD, PhD program at Baylor University, in his first year (the Whitaker fellowship is on pause currently). He has researched in the area of Orthopedics and intends to go to Rice’s Bioengineering program for his PhD. His current plan is to continue research in Orthopedics and become an Orthopedic surgeon.

1997
Laura Henyan (BSME 1997)

is a design engineer with H.G. Engineering in Toronto, Canada.

Kurt Lyell (BSME 1997)

works for Applied Materials, “but, vastly more important than any career jump, my wife and I have added Kurt Jr. to our family. He was born April 20, 2000 in Eugene, Oregon. Kurt Jr. is our first baby and we are thrilled to have him.” Here is a picture before he left the hospital.

Brent Nowak (Ph.D. 1998)

Dr. Brent Nowak is a graduate of the Mechanical Engineering Department, from Dr. Del Tesar’s Robotics Research Group. Dr. Nowak is group leader of the Machine Perception and Controls Group in the SwRI Automation and Data Systems Division. As Project Manager, his team recently completed a major upgrade and retrofit program for a complex robotic depaint system for F-15 aircraft. A summary of this work can be found at http://www.swri.org/3pubs/ttoday/spring00/stripper.htm. Dr. Nowak’s group conducts research and development in the areas of vision systems, infrared technologies, machine perception, image processing, non-deterministic and adaptive controls, and sensing systems as they apply to robotics.

Steven Manson (PhD, ME- Nuclear and Radiation Engineering 1999)

has taken a position with Raytheon Missile Systems in Tucson, Arizona, the nation’s largest producer of missile technology. Steven reports that Raytheon is hiring large numbers of technically qualified engineers and scientists. The Tucson team is diverse, and has many openings for mechanical engineers, computer programmers, electronics designers, aerospace engineers, and physicists. If you are interested in opportunities at Raytheon, send your resume to Steven Manson, P.O. Box 11337, Bldg 807, MS L3, Tucson, AZ, 85734.
Deaths

German Amador, (BS 1962) of Sugarland, Texas passed away on October 16, 1999.

Benjamin S. Atkinson, Jr., (BS 1938) passed away on June 18, 1999.

Roger Aude, (BS 1942), of Houston, Texas, the owner, manager, CEO of RCA Enterprises passed away on May 12, 1999.


Norman Davis, (BS 1943), of Twinsburg, Ohio passed away on November 28, 1999.


1938

John Vincent Felter, (BSME 1938) passed away on February 28, 2000. Mr. Felter began an entrepreneurial life at the age of 8 sacking pecans from his mother’s farm and selling them for five cents a bag. He worked his way through the university often working several jobs. He was awarded an honorary membership in Pi Tau Sigma. During his life, Mr. Felter was an inventor who received 18 patents. He was the founder of the American Ventilation Association and at times served as president. It is said he liked nothing better than a good idea. In his later years he began developing a foundation to carry on his dreams for improving the lives of others.


Bill Harris, (BS 1940), of Austell, Georgia, former employee of AT&T, passed away on April 2, 2000.

Mickey Heimlich, (BS 1971), of Dallas, Texas, former employee of Raytheon, passed away on November 12, 1999.


William H. Marsh, (BS 1939), of Tyler, Texas, passed away on December 5, 1999.


Frank McBee, (BS 1947), of Austin, Texas, Chairman and Chief Executive of McBee Investments, passed away on April 7, 2000.

Jack Arista Nendell, (BS 1939), passed away on March 10, 1999.


Raymond Pechacek, (BS 1939) of the Woodlands, Texas, retired from Hahn and Clay, passed away on January 30, 1999.


Michael Kent Reardon, (MS 1987) of Attleboro, Massachusetts, passed away in April 1999.

Harry L. Rhodes, (BS 1951) of Port Arthur, Texas, passed away on February 24, 1999.

Zane Rusk, (BS 1953) of Keene, Texas, retired from Westinghouse, passed away on April 4, 2000.


Clyde Smith P.E., Sr. (BS 1938) of Austin, Texas passed away on September 20, 1999.

Weldon Maurice Walker, (BS 1950) of Aledo, Texas passed away on August 4, 1999.

Stanley Paul Weiss, (BS 1962) of New Ulm, Texas, retired from NASA - Johnson Space Center, passed away on April 21, 2000.

Donovan B. Young P.E., Jr. (Ph.D. 1970) of Decatur, Georgia, Associate Professor of Georgia Tech passed away on January 31, 1999