Dr. Steve Stice, Professor and Georgia Research Alliance Eminent Scholar at the University of Georgia, gave the ninth annual Harold W. Gegenheimer Lecture on Innovation at the end of October 2003. He presented a very interesting lecture on Cloning Technology at a Crossroad: Raelians or Real Science? He talked about advances and innovations made in cloning, such as the production of safer and cheaper drugs through cloned animals. He said that as is the case with any technological advance, there have been setbacks and we will need to decide whether the potential benefits of cloning outweigh the risks. To listen to Dr. Stice's lecture, go to our home page at www.me.gatech.edu and click on the Gegenheimer Lecture icon.

Dr. Stice's research focuses on developing innovative animal cloning and stem cell technologies. He produced the first cloned rabbit in 1987 and the first cloned transgenic calves in 1988. He holds 14 patents and six patent applications.

Dr. John Brooks Slaughter, the 2003 Woodruff Distinguished Lecturer, talked about The Search for Excellence and Equity in Higher Education: A Perspective from an Engineer. He said, "There is an inevitable divergence between the desire for selectivity and the goal of diversity in higher education. Historically, matters of diversity and pluralism have not been highly visible on the radar screens of science and engineering departments in our nation's colleges and universities and the relative absence of women and minorities in and in front of the classrooms and laboratories is one indication of this reality. America requires all of the scientific and engineering talent it can muster to maintain a competitive edge in the global marketplace of ideas and artifacts."

Dr. Slaughter is the fifth president and CEO of NACME - The National Action Council for Minorities in Engineering, Inc. He has a long and illustrious career as a leader in the education, engineering, and scientific communities. He is a member of the National Academy of Engineering, a fellow of the American Association for the Advancement of Science, the Institute of Electrical and Electronic Engineers, the American Academy of Arts and Sciences, and an eminent member of the Tau Beta Pi Honorary Engineering Society.

For a complete biography of Dr. Slaughter and to listen to the webcast of his lecture, view www.me.gatech.edu and open the George Woodruff icon. A transcript of his stimulating lecture is now available.
Because of budgetary constraints on the University System of Georgia, we will not have a Woodruff Distinguished Lecture in 2004. However, we are already making plans for the 2005 lecture, and we will use these pages to keep you posted about the arrangements. Also, check frequently the Calendar of Events on our home page. As soon as the lecture is scheduled, we will post it on the calendar.

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I sometimes think we are not making as much progress and doing as much innovating as we should in our programs, but when I stop and reflect on what to include in this newsletter, I am always impressed with how much change has occurred since the last edition. There have been many changes in personnel, student resources, and activities which we can convey to you with pride in this issue of Mega Tech.

Unfortunately, over the last several months, we have had deaths among our current and former colleagues. On Tuesday, the 24th of February, Professor Bob Fulton died. Bob was an active faculty member, who was teaching two sizable and important classes, and also had several graduate students under his guidance at the time of his death. Many people at Tech did not realize how active Bob was in community service through his elected position on the Fulton County Commission. Bob will be missed here at Tech and in Fulton County. On November 30, 2003, Jim Brazell passed away. Jim taught capstone design for several years to which he brought an element of reality to our students’ design experience. Jim was a practicing engineer whose consulting firm developed products for numerous companies. Also in the past year, Virgil McConnell, a former staff member from the 1970s and early 1980s, passed away. These colleagues will be missed. In addition, I am sorry to report that our 2002 Distinguished Alumni, Ralph Pries (BSME 1940), passed away. We are pleased that we had the opportunity to honor him.

As with most state supported universities, Georgia Tech has struggled with budget cuts over the last few years. In addition, the Woodruff Endowment income, which has been a tremendous asset for the School, has been reduced the last couple of years and is expected to be reduced again in the coming year. I estimate that next year, compared to three years ago, our combined budget from the Institute and the Woodruff Endowment will be down about 11 percent or $1.3 million. Consequently, we are looking at ways to reduce our spending. We expect to accomplish this with as little damage to our educational programs as possible. Fortunately, our faculty members continue to bring in external funding from grants and contracts that help our program. As the general economy picks up we expect our financial support to improve.

We had two very successful lectures last year. Professor Steven Stice, from the University of Georgia, gave the Gegenheimer Lecture on Innovation and Dr. John Slaughter, current president of the National Action Council for Minorities in Engineering (NACME), gave the Woodruff Distinguished Lecture. Unfortunately, one of the ways we will save on our budget will be to forego the Woodruff Lecture in 2004.

Our students continue to do very well in their coursework and activities on campus as well as in external student competitions. The gt motorsports team did very well in the Detroit Competition, and went to Australia in December 2003 and won first place in the international event. The Pi Tau Sigma chapter received recognition at their national convention for outstanding performance. We also include in this issue interesting short stories about three of our students who are away from campus: Brad Range is serving on a scientific expedition team in Antarctica; Marshall Groves is serving in Iraq while working on his master's degree; and recent graduate Kris Kozac, who received his bachelor's, master's, and Ph.D. degrees from the Woodruff School, is currently on a postdoctoral position at Tsinghua University in Beijing, China. While there, Kris is spending some of his time interviewing prospective graduate students to help us make the best choices in admitting students from China.

During the past year, we introduced two new degree programs offered by the School of Mechanical Engineering. One is an interdisciplinary Master of Science Degree in Paper Science, which is also offered by Chemical Engineering, Chemistry, and Materials Science, and is the result of the integration of the Institute for Paper Science and Technology into Georgia Tech. Also as a result of that integration, we obtained four additional faculty members who are presented in this issue. In addition, the Nuclear and Radiological Engineering Program received approval from the Board of Regents to convert the Master of Science in Health Physics to a Master of Science in Medical Physics. This medical physics program is being offered in cooperation with Emory University and will greatly broaden opportunities for our students compared to the very successful Health Physics program that we have had for many years.

I want to thank all of our alums and friends in industry for your continued interest and support of our program. We will continue to strive to be worthy of your support.
gt motorsports placed fourth in a field of 129 college teams at the U.S. Formula SAE competition in Pontiac, Michigan in May. An Australian team from the University of Wollongong won that competition, the first time a team from outside the United States won the national competition. On December 7, 2003, gt motorsports returned the favor, winning the Formula SAE Australasia event held in Tailem Bend, Australia.

The Formula SAE competition comprises a blend of static and dynamic events, intended to challenge the student's knowledge of their car's design, and to challenge the performance and ruggedness of the car itself. In the static events, gt motorsports placed 5th in presentation, 5th in design, and 4th in cost. In the dynamic events, the team placed first in skid pad, 7th in acceleration, and 6th in autocross. These finishes, plus a first place performance in the endurance/fuel event (40% of the total points are at stake) led to the award for best overall performance in the dynamic events, and best total point score for the entire event. The team faced a number of difficulties in the course of the competition, including having to perform a complete engine change between the morning and afternoon endurance events on the last day of competition. The car overheated in the Australian summer. They rigged up an evaporative cooling system using a juice bottle and parts from their rental car! And, yes, they returned all the parts to the rental car.

Twenty-one teams from Australia, Japan, Sweden, Germany and the U.S. competed in the event. The other U.S. teams were Auburn and R.I.T.

Georgia Tech won the international SAE competition in Birmingham, England in 2001 and 2002. They placed 3rd in the 2002 national competition. The team bypassed the competition in England in 2003, so they could enter the Australia competition. Dr. Ken Cunefare is the faculty advisor.

THE ANNUAL SPRING BANQUET

The Annual Spring Banquet is planned and organized by the Woodruff School Student Advisory Committee (WSSAC) and sponsored by the Woodruff School. Approximately 200 people attended the event that honors graduating seniors. After the buffet dinner, Dr. Winer introduced the Woodruff School Distinguished Alumnus, Joseph H. Anderer, and the Outstanding Educator, James Hartley. Then, the members of the Spring Banquet Executive Committee: Saniya Ahsan, Sena Apewokin, Jacob Brand, Steve Cheuk, Milnes David, Sabrina Singh, Scott Spencer, and Chris Tsigalas, presented faculty awards based on well-known sponsors/ads: Most Challenging Professor, Minami Yoda; Most Entertaining Professor, Jonathan Colton; Best Professor, David Sanborn; Professor with the Longest Classes, Sheldon Jeter; Professor with the Best Physique, William Singhose; Professor with the Best Research, Kenneth Cunefare; Best New Professor, Zhoumin Zhang; Most Popular Professor, Jeffrey Streator; Most Inspiring Professor, Dennis Ballou; and Best Student Relations, Jack Lackey.
The 2003 Woodruff School Distinguished Alumnus Award was given to Mr. Joseph H. Anderer (BME 1947). He delivered an entertaining message to the assembled students at the Spring Banquet about the changes that he had seen around campus since his days as a student. He remembered the time that Jackie Robinson came to Atlanta for a baseball game and what an uproar it caused. Then, years later, Hank Aaron broke the home run record and he was a local hero. "Atlanta and Georgia Tech," he said, "had both changed for the better."

Mr. Anderer transferred into the NROTC program at Tech in 1943 and was subsequently commissioned a Second Lieutenant in the U.S. Marine Corps. He returned to Georgia Tech in 1946 and graduated with a BME degree in 1947 and a BIE degree in 1948. He then began his engineering career with the Atlantic Refining Company. He went on to various companies in increasing levels of responsibility. In 1978 Mr. Anderer formed the Grendel Corporation of Greenwood, South Carolina and bought the Warren Corporation of Stafford Springs, Connecticut. He served as Chairman and CEO of both textile companies until his retirement in 1987.

Mr. Anderer served on the Georgia Tech National Advisory Board for six years and was its chairman in 1982. He was also a member of the Mechanical Engineering Advisory Board in 1983 and 1984 and has been an active member of the New York Georgia Tech Club for many years. In 1996 he was inducted into the Georgia Tech College of Engineering Hall of Fame. He endowed the Joseph H. Anderer Faculty Fellow Program in the Woodruff School in 2002.
THE JACK M. ZEIGLER OUTSTANDING EDUCATOR AWARD

Professor James G. Hartley received the 2003 Jack M. Zeigler (BME 1948) Woodruff School Outstanding Educator Award for his sustained excellence in the classroom and personal touch in challenging and motivating students. In 1992, he received the Outstanding Teacher Award, the highest teaching award at Georgia Tech; he also served the Woodruff School as the Associate Director for Graduate Studies for four years in the 1980s. Dr. Hartley's research interests are heat and mass transfer in porous media.

Dr. Hartley received a bachelor's and a master's degree from Louisiana Tech in 1969 and 1970, respectively, and a Ph.D. from Georgia Tech in 1977. He was on the faculty of the School of Mechanical Engineering for 26 years; he retired in August 2003.

PI TAU SIGMA IS RECOGNIZED

The Georgia Tech chapter of Pi Tau Sigma, the mechanical engineering honorary society, was recognized with an Outstanding Performance Award at its national convention at Texas Tech University. According to Dr. Janet Allen, faculty advisor, the chapter has become "one to watch." Representing the Woodruff School were Ed Wong, President, and Ryan Halchak, Treasurer.

In the fall, the chapter hosted the Mechanical Challenge, a Jeopardy-type quiz competition. Sponsors for the yearly activity were Schlumberger and Kimberly Clark. First place went to Robert Stachow, Shaun Black, and Adam Reich (all seniors in mechanical engineering). The second place team was Brian Lockwood (ME sophomore), Stephen Webb (physics), and Anish Ghodadra (biomedical engineering sophomore). The third place team was Jesse Hill, Carl Laniak, and Andrew Cannon (all seniors in mechanical engineering). Dr. David Sanborn read the questions; judges were Mario Araya (BME 2001) from Schlumberger and Dr. Tim Patterson.

Dr. Farrokh Mistree is secretary-treasurer for the national organization. The national office of the society is housed in the Woodruff School.

THIRD ANNUAL LEGO ROBOT CHALLENGE

The third annual Lego Robot Challenge, with the theme of Mission Mars, was held in November. Students from local Atlanta-area high schools learned to build robots made from special Lego kits. The students were assisted by members of the Robojackets, a competitive robotics club at Tech. The challenge introduces students to engineering; shows them a variety of fields such as physics, mechanics, and electronics; gives them hands-on experience in solving an engineering problem from design to construction; develops teamwork and communications skills; and gives them the chance to work with engineering students at Georgia Tech.

Each team is comprised of three students. They receive one Lego Mindstorm Robotics Invention System kit to build a robot for competition. The robots must be engineered to perform relay-type activities that involve capturing balls and placing them into goals. The students worked on Friday after school, then most of the day Saturday and Sunday, planning, building, and debugging their robots. The final competition was held on Sunday.

The Center for the Enhancement of Teaching and Learning, the STEP program, and the Woodruff School sponsored the event. Dr. Imme Ebert-Uphoff is faculty advisor to the Robojackets.
Once again the Woodruff School held a very successful open house for parents of Woodruff School undergraduates. Student organizations were represented: gt motorsports, GT Off-Road, Solar Jackets, Odyssey of the Mind, Robojackets (FIRST), ANS, ASHRAE, ASME, MEGA, Pi Tau Sigma, and WSSAC. The design studio, the engineering graphics lab, and the mechatronics lab were open for inspection. School Chair Dr. Ward Winer welcomed parents and other visitors, and then Dr. David Sanborn, Associate Chair for Undergraduate Studies, hosted an information session about the Woodruff School.

The Nuclear and Radiological Engineering Program sponsored two picnics for NRE/HP students, faculty, and staff, one in the spring and one in the fall, at the Neely Research Center. It was an opportunity to meet the folks in the Woodruff School's Academic and Finance Offices. In addition, a reception was held to honor those undergraduate students in nuclear engineering who had received scholarships and to recognize the sponsors: Duke Energy Corporation, American Nuclear Society, MGP Instruments, McCallum-Turner, Institute of Nuclear Power Operations, CH2M-Hill, Department of Energy, Framatome-ANP, and the Woodruff School of Mechanical Engineering. Scholarship winners are listed under Student Honors.

General Motors returned to campus with its next generation of cars. Representatives from General Motors talked about how vehicles are transformed from a concept to the cars we drive. They brought the AUTOnomy, the first vehicle designed around a fuel cell propulsion system; the GMC Envoy XUV, the first convertible sports utility vehicle; the Pontiac Solstice; and the Cadillac Cien. Paul Allen (BME 1987), one of the founders of our very successful gt motorsports team, talked about these cars in the outdoor classroom.

In October, General Motors returned to campus. Randy Thayer (GM's executive for Georgia Tech) visited the Student Competition Center in the Tin Building and presented checks to various student competition teams housed there.

The Woodruff School's Academic Office was refurbished and reorganized and is now called the Office of Student Services. The majority of student needs are addressed by the Academic Office Staff (Trudy Allen, Norma Frank, Glenda Johnson, and Cosetta Williams).

Dr. David Sanborn is the Associate Chair for Undergraduate Studies. He also serves as an undergraduate advisor and handles the more technical issues in regard to the program, including transfer credit issues and career advisement. Ms. Kimberly Blue serves as the primary undergraduate advisor.

Dr. Yogendra Joshi is the new Associate Chair for Graduate Studies. He advises and oversees current graduate student issues, including programs of study, degree petitions, and graduate committee issues.

Dr. Wayne Whiteman is the Director of the Office of Student Services. He manages the Academic Office and staff, and assists the associate chairs. Dr. Whiteman assists Dr. Joshi with the recruitment and admission of graduate students, and he oversees and serves as the advisor of the Woodruff School's distance-learning program.
program.
STUDENT HONORS

Martin Aguilera received a Georgia Tech CETL/BP Outstanding Teaching Assistant Excellence Award for 2003, given for outstanding service and the positive impact made toward the instructional mission of the Institute.

Anne-Marie Albanese won the student paper award at the spring 2003 meeting of the Acoustical Society of America. She also received an ARCS (Achievement Reward for College Scientists) Fellowship. Dr. Ken Cunefare is her advisor.

Ashante Allen received a Facilitating Academic Careers in Engineering and Sciences Fellowship. Dr. Sam Graham is her advisor.

Matt Allen received an ARCS Fellowship. Dr. Jerry Ginsberg is his advisor.

Jay Birdwell received the Pi Tau Sigma Outstanding Junior Award for demonstrating outstanding scholarship and service to the School and to student activities.

Scott Bondi was awarded a fellowship from the Intel Corporation. Dr. Jack Lackey is his advisor.

Christopher Fong, a Five-Year BS/MS(NE) student, won a 2003 Westinghouse Savannah River Co. Robert Maher Memorial Scholarship.

Carl Hanna, Jennifer Muncy, and Sathyan Subbiah received Manufacturing Education Program (MEP) Fellowships. MEP is the educational arm of Georgia Tech's Manufacturing Research Center. Drs. Suresh Sitaraman, Daniel Baldwin, and Shreyes Melkote are their respective advisors.

Paul Hatcher received the Pi Tau Sigma Outstanding Sophomore Award for demonstrating outstanding scholarship and service to the School and to student activities.

Nicole Hurley received a Predoctoral Award from the Southeast Affiliate Research Committee of the American Heart Association. Dr. Andres Garcia is her advisor.

Jeffrey McLean won the Best Student Paper Award in Transducers at the 2003 IEEE International Ultrasonics Symposium. In addition, Jeff won one of the five Research Partnership to Secure Energy for America fellowships given for 2004. Dr. Levent Degertekin is his advisor.

Omar Roberto Mireles received the NASA Harriett G. Jenkins Predoctoral Fellowship for 2003-2004. Dr. S. Mostafa Ghiaasiaan is his advisor.

Greg Mocko received a National Science Foundation IGERT Fellowship. Dr. Bob Fulton was his advisor.

Bill Oates received an award in the Georgia Tech Student Paper Competition sponsored by Science Applications International Corporation. His advisor is Dr. Chris Lynch.

Shawn O'Connor received the Rank William & Dorothy Given Miller Auxiliary Scholarship from the Board on Engineering Education from the American Society of Mechanical Engineers. He also received the Georgia Tech Robert Engineering Award presented on an annual rotation to an outstanding rising senior in CE, ECE, ISyE, and ME.

Jack Palmer and Anne-Marie Albanese are graduate fellows in Georgia Tech's STEP (Student and Teacher Enhancement Partnership) program. They work with students at Rockdale Magnet School, teaching and enhancing the research classes at the accelerated high school.

Andrew Perkins received the 2003 Hutchins Grant from the Surface Mount Technology Association International. Dr. Suresh Sitaraman is his advisor.

Frank Pyrtle received a 2003 Grant-in-Aid of Research Award from Sigma Xi. Dr. Bill Black is his advisor.

Thom Sokol, who is interning at Siemens in Germany, received a scholarship from the German Academic Exchange given to the School of Modern Languages under the German American Initiative in Science and Technology.

Norman C. Trammell received an award in the Georgia Tech Student Paper Competition sponsored by Science Applications International Corporation. His advisor is Dr. Kok-Meng Lee.

Phil Vogelwede accepted a position as Assistant Professor of Mechanical Engineering at the University of South Carolina to begin in fall 2004. Dr. Imme Ebert-Uphoff is his advisor.

Markus Wegner received a German Academic Exchange Grant. He is interning at Siemens and taking courses at the Technical University of Munich.

Sebastien Wolff received a National Science Foundation IGERT fellowship. Dr. Imme Ebert-Uphoff is his advisor.

Macfield Young, an intern at Siemens in Germany won a German Academic Exchange Grant awarded to the School of Modern Languages for the German-American Initiative in Science and Technology.

Sai Zeng received a fellowship to work at an IBM research lab. Dr. Bob Fulton was her advisor.

Qi Angela Zhu received a Best Ph.D. Thesis Award from the Georgia Tech Chapter of Sigma Xi. Dr. Tom Kurfess is her advisor.

NRE Scholarship Winners

Scholarship winners in Nuclear and Radiological Engineering are: Brantley Beaird, Troy Bethune, Eric
Branch, Sarah Brashear, Kevin Brenner, Ashby Bridges, Amanda Bryson, Kimberly Burns, Maslin Chen, Sherard Chiu, Steven Collins, Larissa Ann Cottrill, Jeremiah Couvillion, Hillary Davis, Lindsey Ewing, Norman Facas, John Floyd, Christopher Fong, James Ganong, Donald Gibbs, Nicholas Giglio, Jimmy Jang, Perry Johnson, Brian Kern, Ryan Lorio, Brittany Meriwether, Joshua Parker, Justin Pounders, Kevin Riggs, Brian Rotolo, Christopher Sommer, Ian Spivack, Tyler Sumner, Matthew Robert Terry, Pamela Thompson, Sara Jane Wagner, James Weathers, Frederick Willis, Darren Wooten, and Brandon Ylvisaker.

NSF Winners

Once again, Woodruff School students did very well in the National Science Foundation Graduate Research Fellowship Competition. Out of 45 awards given in mechanical engineering, we won eight awards. Jason Aughenbaugh (Imme Ebert-Uphoff, advisor), Galen Robertson (Robert Guldberg, advisor), Megan Sumpter (Jens Karlsson, advisor), Andrew Schnell (Peter Hesketh and Farrokh Mistree, advisors), Felipe Roman (Bert Bras, advisor), Juan-Carlos Jakaboski (Yogendra Joshi, advisor), and John Connelly (Marc Levenston, advisor). Larissa Cottrill, an NRE undergraduate, won one of the three awards given in nuclear engineering; she now attends UC Berkeley.

Honorable mentions were: Joseph Charest (Bill King, advisor), Jason Cook (Yogendra Joshi, advisor), James Ford (undergraduate), Omar Mireles (M. Ghiaasian, advisor), Brent Nelson (Bill King, advisor), Matt Reed (Wayne Book, advisor), and Tanya Wright (William King, advisor). Since 1990, Woodruff School students have won 113 NSF awards, which is a tremendous showing in this prestigious competition.
Bradford Range was selected for the 2003-2004 Boy Scouts of America Antarctic Scientific Program, a joint program between the National Science Foundation and the Boy Scouts. Qualifications for the biennial expedition include being an Eagle Scout between the ages of 17 and 21. (Another Georgia Tech student, Mark Lienmiller, participated in the program in 1978; there have been 11 participants in the program's history.) Brad is the first engineering student to win this award.

The program goes from August 2003 to April 2004. To prepare for the trip, Brad spent part of last summer at the University of Wyoming and at the National Science Foundation in Arlington, Virginia. His first research experience was on the ozone hole. He joined teams of scientists conducting research during expeditions scheduled for the Antarctic summer season. In Antarctica, he assists the scientists in the daily activities at the three U.S. bases: McMurdo Station, South Pole Station, and Palmer Station.

According to Brad, "Being that I'm only a sophomore at Tech, I don't have much formal classroom training yet in engineering. As is the overall aim of the Coop Program, however, I am picking up a whole lot of practical experience by jumping with both feet into a real-world environment (and a harsh one at that!). I have used engineering skills in the field testing two webcams, one underwater and one placed on an iceberg. I have aided in building large container sleds that were used on the South Pole Traverse. I have repaired and serviced snowmobiles, heavy equipment, and generators. I have helped install and repair wind power and solar generator arrays. I've learned the workings of the town powerplants, water plant, and heating systems of the buildings."

When he returns to Tech, Brad will be a sophomore in mechanical engineering. He is a member of Georgia Tech's a cappella club and the marching band. For more details on this exciting adventure, view his web page at www.scouting.org/boyscouts/antarctic.

John Marshall Groves is a distance-learning, master's degree student; he is stationed in Iraq. The 30-year old Air Force pilot manages to keep up with his studies, filing coursework via e-mail back to Georgia Tech, where he is working on a master's degree in mechanical engineering.

Captain Groves has completed all his coursework online, and is about halfway to his degree. He works on a laptop in his tent, in between piloting a Sikorsky MH-653M Pave Low, which is used for special operations and combat search and rescue. "Being deployed as a pilot means a lot of down time, sitting on alert for contingencies that seldom happen," Groves says. "Pilots are also required to have twelve hours of rest prior to flying, which leaves only a couple of hours to study even when things are hectic. It is possible to sit in my tent, put in earplugs, and complete my coursework. There is no library, of course, and it is difficult to conduct any kind of research. Whenever I use e-mail I have to wait in line and I'm usually limited to 15 minutes, so even surfing the Internet is difficult. Many sites are restricted."

Because web access is limited, he made a binder with all the reading materials for the class. He is taking a second class with Dr. Farrokh Mistree; he receives CD's in the desert with the actual classroom video. "Flexibility" he says, "has been essential because I am still working on the class from fall semester." He uses e-mail to receive and send assignments. "The best thing that I have gotten out of my experience through distance learning is using work projects for class projects. I have been able to go into depth on a lot of flying issues and integrate them with engineering design."

Groves returned to the United States last June and some months later he was sent back to Iraq, making for his third deployment in the last twelve months. When he returns home again in April, he will be stationed at Hurlburt Field, Florida.

STAFF NEWS
Kimberly Blue, Ken Dollar, Claudine Henkel, Lisa Manning, and John McCullough participated in the 2003 Georgia Tech Mentor Tech program.

Drew Davis was promoted to Electronics Specialist; he tests, repairs, and maintains the School's printers and other electronic equipment.

Dimitra Diggs-Butler is an Administrative Assistant I in the Administrative Office. She supports Dr. Chris Lynch with various activities and helps the Finance Office, in addition to greeting people who come to the office.

Nancy Hutton received the Woodruff School Outstanding Achievement Award for Classified Employees for summer semester 2003.

Michael Murphy was promoted to Facilities and Laboratory Coordinator. He has overseeing for the School's capital assets program, manages building access, and assists in managing safety programs.

Cary Ogletree was hired as an Administrative Coordinator. He works in facilities and capital assets. Prior to becoming a permanent employee he was a Tech Temp in the Woodruff School. Cary was also selected as the winner of the Woodruff School's Outstanding Achievement Award for Classified Employees for fall semester 2003.

Linda Perry joined the Woodruff School as an Administrative Assistant II, working for the Acoustics and Dynamics group. Previously, she was in the School of Chemical Engineering.
With the incorporation of the Institute of Paper Science and Technology into Georgia Tech, the Woodruff School now offers two additional degrees: The master's (M.S.P.S.) and Ph.D. degrees in Paper Science and Engineering (PSE) provide an education in the science and engineering involved in the production of paper, tissue, and other products from natural fiber. PSE students enroll in a participating school and, upon completion of the degree requirements, the home school recommends the award of a degree. Currently, Mechanical Engineering, Chemical Engineering, and Chemistry offer paper science degrees. Four people from IPST are now faculty members in the Woodruff School: **Professor Fred Ahrens** (Heat Transfer, Combustion, and Energy Systems), **Professor Cyrus Aidun** (Fluid Mechanics), **Professor David Orloff** (Heat Transfer, Combustion, and Energy Systems), and **Assistant Professor Tim Patterson** (Manufacturing).

The Woodruff School is pleased to announce that the Board of Regents has approved a master's degree program in Medical Physics (M.S.M.P.) to be offered by the Nuclear and Radiological Engineering Program in cooperation with Emory University School of Medicine. There are currently about five thousand practicing medical physicists in the United States. Due to the increased complexity of equipment and the patient population, there is a steady increase in the demand for appropriately trained medical physicists. Employment prospects are excellent and salaries for these positions are very high.

The program will begin in fall 2004. Students will be registered at Georgia Tech and take the courses offered by Emory University. On-campus students in this program will intern at Emory University's hospitals and clinic to gain the required four hundred hours of clinical experience in radiation therapy, nuclear medicine, and diagnostic imaging.

The curriculum has both a thesis and nontesis option. Both options include seven required courses and a clinical rotation. The program is designed to be completed in one and one-half years by well-motivated, full-time students. The degree program is also available to distance-learning students at Georgia Tech. More details about this new program can be found at www.nre.gatech.edu. We are developing a special site for this program at www.mp.gatech.edu that will be available soon.

**FACULTY RECOGNITIONS**


**John Bogle** was promoted to Senior Research Engineer.

**Bert Bras** was promoted to the rank of Professor.

**Jonathan Colton** was elected a Fellow in the Society of Plastic Engineers. Out of 25,000 members, only 211 members, counting the 2003 inductees, have been elected to this prestigious status since it was established in 1984.

**Ken Cunefare** was elected to the grade of Fellow in the Acoustical Society of America.

**Levent Degertekin** received a National Science Foundation Faculty Early Career Development Award for
Quantitative Ultrasonic Atomic Force Microscopy of Thin Films and Subsurface Interfaces. The award is for five years and is funded at $400,000. Levent is the 24th faculty member in the Woodruff School to receive an NSF career or young investigator award. Twelve Ph.D. alumni of the Woodruff School who hold faculty positions in other institutions have also received awards. In addition, Levent and Tom Kurfess (with B. Kim and A. Razavi) received U.S. Patent 6,643,025 for Microinterferometer for Distance Measurements on November 4, 2003.

Andre Fedorov won the Young Faculty Award from the Georgia Tech Chapter of Sigma Xi. Andres Garcia received the Society of Biomatlerials 2004 Young Investigator Award. Ari Giezer received U.S. Patent 6,554,607 for Combustion-Driven Jet Actuator, with others, on April 29, 2003.

Sam Graham is one of three Georgia Tech graduates who received a grant to help new Ph.D. graduates jump start their academic careers. The grants were awarded by FACES, a Georgia Tech program supported by the National Science Foundation that is designed to groom minority students for careers in academia. Sam also received the 2004 M. Eugene Merchant Outstanding Young Manufacturing Engineer Award from SME International.

Iztzhak Green received the Frank P. Busick Award from the Society of Tribologists and Lubrication Engineers for the best paper in sealing technology for 2003.

Nolan Hertel was appointed to the U.S. Scientific Review Group of the Russian Health Studies Program. Two Georgia Tech alumni, John Poston (Ph.D. NE/HP 1971) and Mike Ryan (Ph.D. NE/HP 1982) also serve on the committee.

Andre Fedorov won the Young Faculty Award from the Georgia Tech Chapter of Sigma Xi. Andres Garcia received the Society of Biomatlerials 2004 Young Investigator Award. Ari Giezer received U.S. Patent 6,554,607 for Combustion-Driven Jet Actuator, with others, on April 29, 2003.

Sam Graham is one of three Georgia Tech graduates who received a grant to help new Ph.D. graduates jump start their academic careers. The grants were awarded by FACES, a Georgia Tech program supported by the National Science Foundation that is designed to groom minority students for careers in academia. Sam also received the 2004 M. Eugene Merchant Outstanding Young Manufacturing Engineer Award from SME International.

Iztzhak Green received the Frank P. Busick Award from the Society of Tribologists and Lubrication Engineers for the best paper in sealing technology for 2003.

Nolan Hertel was appointed to the U.S. Scientific Review Group of the Russian Health Studies Program. Two Georgia Tech alumni, John Poston (Ph.D. NE/HP 1971) and Mike Ryan (Ph.D. NE/HP 1982) also serve on the committee.

Iwona Jasiuk was elected to the grade of Fellow in the ASME. W. Steven Johnson was elected a Fellow of the ASME. Yogendra Joshi was elected to the grade of Fellow in the American Association for the Advancement of Science.

Tom Kurfess was elected a Fellow of the ASME. Kok-Meng Lee was issued U.S. Patent 6,623,346 for Automated Transfer of Live Objects to Shacke Line Method and Apparatus on September 23, 2003.

Marc Levenston was one of two recipients at Georgia Tech of the Lockheed Martin Corporation Dean's Award for Teaching Excellence.

Farzad Rahnema was elected to the grade of Fellow in the American Nuclear Society. John Papastavridis's book, Analytical Mechanics, was named an outstanding professional and scholarly title by the Association of American Publishers.

Richard Salant received the 2003 ASME Machine Design Award.

Suresh Sitaraman was elected a Fellow of the American Society of Mechanical Engineers. I. Charles Ume was elected to the grade of Fellow in the Institute of Electrical and Electronics Engineers. In addition, he was one of three recipients of the Nigerian National Order of Merit for 2003. Fewer than 20 awards have been given since the award was established in 1979. Charles is the first recipient living and working outside Nigeria. He also received U.S. Patent 6,564,166B1 for Projection Moire Method and Apparatus for Dynamic Measuring of Thermal Induced Warpage, with Gregory James Petriccione, dated May 13, 2003.

William Wepfer was named a member of the Pennsylvania State University (Mechanical and Nuclear Engineering Department) Industrial and Professional Advisory Committee. Also, in the summer of 2004 he will become a member of the Engineering Accreditation Commission.

Min Zhou received a 2nd place award for Best Faculty Paper from the Georgia Tech Chapter of Sigma Xi. Cheng Zhu received the Best Faculty Paper Award from the Georgia Tech Chapter of Sigma Xi.

Ben Zinn was chosen as the 2005 International Gas Turbine Institute Scholar.
ASSOCIATE CHAIRS MOVE ON

Ray Vito, Associate Chair for Undergraduate Studies, and Bill Wepfer, Associate Chair for Graduate Studies, each stepped down from their respective positions to assume some new responsibilities. Both remain professors of mechanical engineering. Ray assumed duties as the Associate Dean for Academic Affairs, and Bill became the Vice Provost for Distance Learning and Continuing Education at the Global Learning and Conference Center in the new Technology Square complex. A reception for them was very well attended, particularly by the students, to thank them for their years of hard work for the Woodruff School. Bill had been on the job for 13 years, while Ray did his for seven years.

ALUMNI NEWS

Mario Araya (BSME 2001) works with Schlumberger, Ltd. and still finds time to assist the Georgia Tech chapter of Pi Tau Sigma. He has returned to campus for the past two years to serve as a judge for the Mechanical Challenge, sponsored by Pi Tau Sigma. The event is sponsored by Schlumberger. Saniya Ahsan (BME 2003) won the Woodruff School Outstanding Scholar Award, which recognizes a graduating senior who has achieved an exceptional scholastic record in the mechanical engineering program. Saniya is studying at Cambridge University on a Churchill Fellowship. Sherri Bealkowski (BME 1980), General Manager of the Microsoft Corporation's Education Solutions Group, was admitted to the Georgia Tech Academy of Distinguished Engineering Alumni. Eric Barth (Ph.D. ME 2002) is an assistant professor in the Department of Mechanical Engineering at Vanderbilt University.

Brett E. Battles (BME 1984, MSME 1987), General Partner in Aberdare Ventures, was admitted to the Georgia Tech Council of Outstanding Young Engineering Alumni. Nancy Edinger Campbell (BSNE 1978) became a member of The Heritage Club, National Society Daughters of the American Revolution. The Heritage Club promotes the programs of the national society. She is a member of numerous organizations including, the United States Capitol Historical Society, The Association for the Preservation of Virginia Antiquities, and the Colonial Williamsburg Foundation.

Jorge Gabriel Cham (BSME 1997) received a Ph.D. in mechanical engineering from Stanford University in 2002 and is currently doing postdoctoral work at the California Institute of Technology. Jack Clearman (BME 1946) was elected to the College of Engineering's Hall of Fame. He is the retired Director of Advanced Development at Whirlpool Corporation.

Jimmy Collins (BME 1984) has been a commissioned officer in the Public Health Service since graduating in 1984. He conducts injury prevention research for the Centers for Disease Control. He completed an MSME from West Virginia University in 1989 and his Ph.D. from Johns Hopkins University in 1998. He recently received a Unit Commendation Medal and the Crisis Response Ribbon for anthrax-related work.

Robert T. Coneybeer (MSME 1992), Venture Partner in New Enterprise Associates, was elected to the Georgia Tech Council of Young Engineering Alumni.

Melvin R. Corley (Ph.D. ME 1979) was selected as the 2003 Tau Beta Pi National Outstanding Advisor. He helped the Louisiana Gamma Chapter of the national honorary society rise to prominence in its community. Dr. Corley is a professor of mechanical engineering at Louisiana Tech University. He focuses on computer-based systems for engineering design, manufacturing, and education.

Brian Ehrich (BME 2003) and Brad Schafer (BME 2003) won James G. and Mary G. Wohlford Scholarships, which recognize outstanding senior co-ops who have excelled academically and on their co-op jobs and who made contributions to the community.

Anna Fincher (BME 2003) won the Samuel P. Eschenbach (class of 1933) Memorial Award in Mechanical Engineering based on academic performance, leadership capabilities in the campus community, and promise as a mechanical engineer.

Seth Garner (BME 2003) received the Pi Tau Sigma Outstanding Senior Award for outstanding scholarship
achievement and service to the School, the Institute, and to student activities.

Harold W. Gegenheimer (BME 1933) was given the Falk Award from Chi Psi Fraternity. The award is given for outstanding accomplishment in a chosen career field.

Robert V. Geiger (Ph.D. ME 1991), Chief Information Officer of nuBridges, was admitted to the Georgia Tech Academy of Distinguished Engineering Alumni.

Mardi Hastings (Ph.D. ME 1987) is now the Marine Mammal Program Manager at the Office of Naval Research in Arlington, Virginia. Prior, she was an associate professor at the Ohio State University.

Yong Huang (Ph.D. ME 2003) joined the Clemson University faculty as an assistant professor of mechanical engineering. Dr. Steven Liang was his advisor.

Benjamin Johnson (BME 2003) won the Woodruff School Chair's Award, given for outstanding scholarship and contributions to the School, especially to its programs, by a graduating senior.

William Judd (BME 19990) works at Kennedy Space Center for Boeing, the subcontractor for the orbiter, in Handling and Ground Support Equipment. Handling operations entail any activity that moves the orbiter on the earth when it is not under its own power. He has worked on the investigation of the Columbia tragedy, setting up an Engineering Action Center so that the Boeing Launch Support Services group could take calls about debris recovery.

Fred Kelly (MSNE 1992, Ph.D. NE 2001) is a visiting scientist in the Institut fur Plasmaphysik at Forschungszentrum Juelich, Germany. The Dynamic Ergodic Divertor recently became operational on their Textor tokamak. He says it is an exciting place to be with many scientific puzzles and paradoxes to unravel.

Deborah Kilpatrick (Ph.D. ME 1996) was promoted to Fellow, New Ventures at the Guidant Corporation in California. She is responsible for research and collaboration related to vulnerable plaque activities.

Dean Lennard (BME 1953) was chosen for the College of Engineering's Hall of Fame. He is the retired General Manager of the CF6 Engine Projects Department at GE Aircraft Engines.

Frank Davis Lewis Sr. (BAE 1943, MSME 1959) was elected to the College of Engineering's Hall of Fame. He is the retired Functional Subsystem Design Specialist at Lockheed Georgia Company.

Tim Lieuwen (Ph.D. ME 1999) received a Young Faculty Award from the Georgia Tech Chapter of Sigma Xi. Tim is an assistant professor of Aeronautical Engineering at Georgia Tech.

Francis Loth (MSME 1990, Ph.D. ME 1993) was promoted in 2002 to Associate Professor in the Department of Mechanical and Industrial Engineering at the University of Illinois at Chicago. He is currently the Undergraduate Director for the department.

James Gregory McDaniel (MSME 1990, Ph.D. ME 1992) was promoted to Associate Professor in the Department of Mechanical Engineering at Boston University.

Karel Minnaar (MSME 2003) received the Luther S. Long, III Memorial Award in Engineering Mechanics given to a graduate student doing research in engineering mechanics, who has excelled in academics, research, leadership, and service.

James E. (J Jimmy) Moore Jr. (BME 1967, MSME 1968, Ph.D. ME 1991) has accepted a faculty position in the Biomedical Engineering Department at Texas A&M University. His research is in cardiovascular mechanics, and is funded by NIH, NSF, American Heart Association, and the biomedical industry. He holds a patent on a vascular stent, and has founded two start-up companies.

Jenelle Piepmeier (Ph.D. ME 1999) was promoted to Associate Professor and granted tenure at the U.S. Naval Academy.

Laura Schaefer (Ph.D. ME 2000) won a National Science Foundation Faculty Early Career Award. She is Assistant Professor of Mechanical Engineering at the University of Pittsburgh.

Edward Siahaan (ME 2003) and Tord Dennis (M.S.M.E. 2001) were part of a team that won an award at the Georgia Product Development Management Association for their entry, Trashers, an innovative trash can. They worked with four other management students. The judges evaluated the quality of the process analysis as well as the working prototype tests. They did the work in the Collaborative Product Development course as the best student project. This showed how Tech works best with the integration of management and engineering skills. This was the first year the award was presented.

Timothy Simpson (Ph.D. ME 1999) was promoted to Associate Professor of Mechanical and Industrial Engineering at Pennsylvania State University.

Jesus M. Sosa (BME 1955) was awarded the Ernst & Young Entrepreneur of the Year Award for Manufacturing in Puerto Rico for 2003. Wally Cruz (BME 1983) was honored with the same award in 2002.

Earl B. Smith (BME 1988) has accepted a faculty position in the College of Engineering at Prairie View A&M University in Prairie View, Texas. He is involved with outreach programs and is on the faculty advisory council at his university. His areas of research are fuzzy logic, robotics, and intelligent control.

Anikja Stone (BME 2000) is an Engineer Designer Analyst for the V-Engine Engineering Program at Ford Motor Company. Anikja was back on campus in May for the Ford building dedication.

Ben Waldrep (BME 1988) was promoted to Plant General Manager of Progress Energy's Sheavroh Harris nuclear plant located near Raleigh, North Carolina.

Samuel R. Williams (BME 1965) recently retired Chief Engineer of Global Rail Bearing Business at The Timken Co., received the Arnold Stucki Award for eminent achievement in advancing the field of rail transportation at the ASME Railroad Conference in Chicago. Nearly all of the 45 1/2 years that Sam worked for the Timken Co. was spent in Railroad Engineering, where he helped develop the internationally accepted Timken AP bearing. He has authored many technical papers on railroad bearings and has been recognized as a corporate inventor by the American Society of Patent Holders. Sam has been involved with the ASME since his student days at Georgia Tech.
Craig Woolsey (BME 1995, Ph.D. 2001 Princeton) is an assistant professor in the Department of Aerospace and Ocean Engineering at Virginia Polytechnic Institute and State University. While an undergraduate at GT he was a coop student with the CIA. His current research is in the design of advanced controls and control mechanisms for unmanned underwater, air, and space vehicles.

Nicole Zirkleback (Ph.D. ME 2001) was one of four Lockheed Martin Aeronautics employees honored with national technical awards. Nicole, an engineer on the C-5 Avionics Modernization Program in Marietta, Georgia, was named Most Promising Engineer in the Advanced Degree category of the Hispanic Engineer National Achievement Awards.

Min Zou (Ph.D. ME 1999) joined the faculty in the Department of Mechanical Engineering at the University of Arkansas.
Robert Fulton, Professor of Mechanical Engineering and Fulton County Commissioner, died on February 24, 2004 in his home. Dr. Fulton came to Georgia Tech in fall 1985 as a professor; prior he was a senior staff scientist at George Washington University. His research at Georgia Tech included the development of methods and tools associated with the application of new and evolving information technology concepts to improve the analysis, design, manufacture, and life-cycle support of complex engineering products.

Dr. Fulton was the 2002 recipient of the Jack M. Zeigler (BME 1948) Outstanding Educator Award, where he was recognized for nurturing the Woodruff School research and education program in computer-aided engineering and design; the initiation and development of the undergraduate program in computer-aided design and the graduate program in computer-aided engineering and information technology; and leadership in the expansion of information technology education within the College of Engineering.

Dr. Fulton was a Fellow of the ASME, an Associate Fellow of the AIAA, and a registered Professional Engineer in Illinois. In 2003 he was named the Engineers of Greater Atlanta Engineer of the Year in Education.

Dr. Fulton was elected to the Fulton County Commission in 1994, representing upper Sandy Springs to the northern end of the county. He served on the Alpharetta Zoning Board of Appeals, was a member of the Atlanta-Fulton Water Resources Commission, and the Atlanta-Fulton Public Library Board of Trustees. He was interested in parks, greenspace, and the arts. The new northwest Fulton County library will be named after him.

Jim Brazell, who passed away in December 2003, taught senior design in the Woodruff School from 1971 until 1996. He held 14 patents and often served as an expert witness in product liability cases. In 1995 his design class won NASA's national competition for the design of a moon buggy. His outside interests were blacksmithing and wood working.

Virgil McConnell, retired machinist in the Woodruff School, passed away in November. He joined the Woodruff School in January 1978 and retired in December 1991 after working in the machine shop in the Coon Building at Georgia Tech. One of his projects, a prototype for Dr. Kok-Meng Lee, has been modified, but is still used today in research. Mr. McConnell served during the Korean conflict (1951-1953), and retired from Scripto after 22 years.

Ralph W. Pries (BME 1940), the Woodruff School's Distinguished Alumnus in 2002, passed away in November. He was 84. Mr. Pries was the retired chief executive of a food company and a medical supply company.

Mr. Pries grew up in Atlanta. After earning his B.M.E. he worked in San Francisco for National Theatre Supply Co. Mr. Pries was on the board of a number of hospitals. He raised thousands of dollars for handicapped children through the Variety Clubs. He was president of the Georgia Tech Club of Philadelphia.

NOTICE TO FORMER GRADUATE STUDENTS
Due to severe space limitations, the Woodruff School has to discard our collection of master's and doctoral theses. The theses take up valuable space that the Woodruff School can use for students and faculty. If you would like a copy of your thesis, write us a note by June 15, 2004, give us your exact mailing address, and we will get the thesis to you. After the deadline, we will offer any remaining copies to the faculty advisors; anything remaining after that will be discarded.

The Georgia Tech Library has two copies of each thesis: one for circulation and one for the archives. Also, copies of all Ph.D. theses can be purchased from University Microfilms, Inc. The copies in the Woodruff School are rarely used and are redundant when one is aware of these other sources. We accumulate theses at the rate of about 35 Ph.D.'s and more than 75 master's per year. Please, let us hear from you.
Kris Kozac (BME 1999, MSME 2001, Ph.D. ME 2003) is spending two years at Tsinghua University in Beijing, China, a high-quality school of technology. Kris went to China because the job market was relatively weak when he graduated, so he and his wife decided this would be the perfect opportunity for them to gain some international experience and learn a new language. The people at Tsinghua were helpful in arranging his postdoctoral position.

Kris's research at Tsinghua focuses on developing a receiver (feed) positioning system for what will be the world's largest radio telescope. The challenge of the project is to actively position the telescope's receiver, which is supported by cables that span the 500 meter diameter reflector to within five millimeters of the desired position. This must be done in wind and other elements.

One reason Kris went to China was to learn the language. When asked about his progress, he said, "I speak a little Chinese and I'm trying very hard to become fluent, but this is no easy task. Hopefully, when I finish with my work here in a year-and-a-half, I will be able to speak Chinese very well, but at this point I can only hope."

Kris spends part of his time recruiting the very best Tsinghua students for the Wooduff School's graduate programs. He is interviewing potential graduate candidates and working to develop research collaborations between Tsinghua and Georgia Tech. He may be contacted at kris@mail.tsinghua.edu.cn.

Let us hear from you! If you've received an award, changed jobs, or have other professional news you'd like to share, please complete this form and submit it, or send an email to rona.ginsberg@me.gatech.edu.