LETTER FROM THE CHAIR

Academic year 2006 was a very good year for the Woodruff School. Our budgets are somewhat higher; student enrollment at the graduate level is at an all-time high, and enrollment at the undergraduate level is the largest in more than twenty years. Our faculty and staff continue to do an outstanding job.

As you will see in this report, our graduate student enrollment is now more than 700 and the undergraduate enrollment, which is also high, has increased by almost fifty percent in the past five years. We are about the same size, or possibly larger, in terms of student enrollment than Electrical and Computer Engineering (ECE).

Recently, I told the new Provost that as he walks around campus, he should realize that approximately one out of every seven students he will see is enrolled in the Woodruff School of Mechanical Engineering and one out of every four students is either enrolled in ME or ECE. The quality of our student body and the demographics are very good. The only problem is that the size of the student body is beginning to strain the workload of our faculty, particularly in terms of classroom teaching and graduate student thesis advisement obligations.

The Nuclear and Radiological Engineering and Medical Physics programs have also grown substantially in the past few years, with approximately 225 students enrolled this fall. This is the highest enrollment since the early 1970s and may possibly be the largest nuclear engineering program in the country. The enrollment in Mechanical Engineering is certainly the largest in the country.

During the past year, we modified the undergraduate curriculum, introduced the international degree plan, expanded our program in Savannah, and increased the number of faculty at Georgia Tech Lorraine.

We started serious preparations for the ABET evaluation in academic year 2008. In early 2007, we will undergo an Academic Program Review, as required by the Board of Regents of Georgia. We are confident that we will receive very positive evaluations on both of these external reviews.

As can be expected with the high enrollments of the past few years, we hit a record high in the total number of degrees granted through the Woodruff School. Only Penn State might grant more undergraduate degrees. At the graduate level, both master’s and doctoral, we grant the largest number of mechanical engineering degrees in the country.

We are very fortunate to have strong leadership at our two programs in Savannah, Georgia and Metz, France. In Metz, Yves Berthelot became the director of Georgia Tech Lorraine and president of the Board for Georgia Tech Lorraine as of January 1, 2007. At Georgia Tech Lorraine, the number of faculty in both ME and ECE increased; undergraduate students can now do their junior year abroad at GTL; and a computer science program was introduced at the graduate level. Overall, the Georgia Tech Lorraine operation is doing well and student enrollment continues to increase.

During the past year, we had an excellent Gegenheimer Lecture on Innovation by Professor James DeLaurier from Canada. He has spent much of his career developing a flapping wing aircraft that will carry one or two passengers. It has been an unusual and excellent design challenge for his students over the years.

Now in its third year is the rapidly growing Georgia Tech Auto Show. This weekend show was started by Sterling Skinner, our director of undergraduate laboratories and alumnus of the School, who is very interested in automotive issues. The attendance and the number of autos on exhibition were outstanding. Franco Cimatti, from Ferrari and an alumnus of our program, came from Italy to speak. This was clearly an excellent attraction to Auto Show attendees.

Regrettably, just as we were going to press, we learned that Harold Gegenheimer (class of 1933) passed away on October 4, 2006 at the age of 95. Throughout his life, he was a strong supporter and benefactor of Georgia Tech. The Woodruff School was particularly fortunate to receive his support, which has made a strong impact on our design programs and helped emphasize innovation to our students. Because of Harold’s foresight, his impact on Woodruff School students will continue far into the future.

In summary, we introduced a number of innovations in our undergraduate program; our graduate program grew in number and stature; and our faculty and support staff did an excellent job. We look forward to another good year in 2007.

Ward O. Winer, Ph.D.
Eugene C. Gwaltney, Jr. School Chair
Atlanta, Georgia
October 2006
GEGENHEIMER LECTURE ON INNOVATION
Dr. James DeLaurier, Professor of Aerospace Studies at the University of Toronto Institute for Aerospace Studies, gave the annual Harold W. Gegenheimer Lecture on Innovation to a packed house in the Van Leer Auditorium on the Georgia Tech campus on November 3, 2005. His talk, complete with slides and videos, was on the Development of a Full-Scale Flapping-Wing Aircraft. He described his quest since 1975 to build and test a full-scale engine-powered ornithopter. The first accomplishment was a hand-launched 1/4-scale remotely-piloted model in 1991; the original research on that project led to the full-scale design, built in 1996. Now they faced new challenges such as the ground takeoff of a flapping-wing aircraft. To date, the ornithopter has accelerated to over 50 mph and has achieved brief liftoffs. To listen to Dr. DeLaurier’s lecture, go to www.me.gatech.edu and click on the 2005 Gegenheimer Lecture icon.

Dr. DeLaurier did his undergraduate studies at the University of Illinois, and received a Ph.D. in Aeronautics and Astronautics from Stanford University in 1970. He did postdoctoral research at the von Karman Institute in Belgium. This expertise provided employment at the G. T. Schjeldahl Corporation, which led to a DARPA contract to develop large, stable, tethered aerostats. Thus began his interest in light-than-air technology.

Dr. DeLaurier has been at the University of Toronto since 1974. In addition to fundamental research on the aerodynamic modeling and the flight-dynamic performance of aerostats and airships, he worked on a project to develop the Stationary High-Altitude Remotely-Piloted Platform airplane; a low-altitude demonstration was achieved in 1987.

Dr. DeLaurier had a growing interest in flapping-wing flight and, in partnership with a friend at Battelle Memorial Institute, theoretical and experimental research was performed on the flight performance of ornithopters. This work led to the successful flight of a proof-of-concept ornithopter, which was documented in the IMAX film, Momentum. Since Dr. DeLaurier gave his lecture last November, the Chronicle of Higher Education reported that he succeeded in a flight that was two seconds longer than the Wright Brothers first flight. You can check his web site at www.ornithopter.net/index_e.html to see videos of the flight.

GEGENHEIMER LECTURE ON INNOVATION

ACADEMIC YEAR IN REVIEW
SPECIAL EVENTS

HAROLD W. GEGENHEIMER (1911-2006)
Harold W. Gegenheimer, a generous supporter of the Woodruff School, passed away on October 4, 2006. We reprint here the biographical sketch that we updated and used each year for the Gegenheimer Lecture program.

Harold W. Gegenheimer was associated with the printing industry all his life: As a machinist, machine design engineer, inventor, product development manager, and corporate chief executive. He was the Chairman Emeritus of the Baldwin Technology Company, an international manufacturer of material handling, press accessory, and prepress equipment for offset printing.

His father, William, started the Baldwin Company in 1918 in a small building next to their house in Baldwin (Long Island), New York. He invented the Baldwin Press Washer and the company emerged as a manufacturer of printing press accessories and controls.

Harold always took an interest in things mechanical, so it was natural that he came to Georgia Tech, where he received his bachelor’s degree in mechanical engineering in 1933. Later, he invented the Convertible Offset Perfecting Press, a feature used by most press manufacturers that allows for one or more colors to be printed on both sides of the paper with just one pass through the press. His inventions, for which many United States and foreign patents have been obtained, were keys to the great growth of the offset printing process after World War II.

Mr. Gegenheimer was President of the National Printing Equipment and Supply Association from 1977 to 1979. He was an officer or director of other industry associations and the recipient of numerous technical and educational awards. In 1983 he was elected Graphic Arts Man of the Year. In 2003, he received the Harold Falk Distinguished Alumnus Award from Chi Psi fraternity for outstanding accomplishments.

Mr. Gegenheimer was a long-time contributor to Georgia Tech’s Thousand Club, served as co-chair of his 50th Reunion Committee, and was the recipient of the 1996 Woodruff School Distinguished Alumnus Award.

An endowment given to the Woodruff School in 1995 by Mr. Gegenheimer established the Harold W. Gegenheimer Lecture Series on Innovation. His endowment supports student programs that encourage creativity, innovation, and design. Through the lecture series and support of capstone design projects, students are exposed to processes that stimulate creativity and lead to inventions and patents. As an inventor, Mr. Gegenheimer always expressed an interest in the great advances made at his alma mater through innovative programs that link industry with graduate and undergraduate studies. His endowment supports the School’s display, Patents of the Woodruff School Faculty, which features Mr. Gegenheimer’s twenty patents and 204 U.S. patents of current Woodruff School faculty.
GEORGE WOODRUFF DAY CELEBRATION

Sprinertime usually brings the annual Woodruff Distinguished Lecture, but in 2006 our speaker was forced to cancel because of medical reasons. Since the School was ready for an event, we held the first-ever George W. Woodruff Day, a celebration of the life and generosity of George W. Woodruff. Students receiving scholarships and fellowships from the Woodruff Endowment were invited as well as the holders of the two endowed chairs and the faculty fellows. Mrs. Missie Pierce, granddaughter of George Woodruff, introduced her grandfather to an audience who had never met him. We showed the remastered video taken on the day in 1985 when the School of Mechanical Engineering was named for him, and we listened to George Woodruff in his own words.

Missie Pierce

Mrs. Pierce told us that “when George Woodruff was born in 1895, the Cotton States and International Exposition drew thousands of visitors from around the world to Piedmont Park to witness the latest advances in technology. From then on, the Woodruff family did their part through the development of industries and business ventures to help transform the South. George’s daddy, Ernest, became president of the Trust Co. of Georgia (now SunTrust Bank) in 1904. The Woodruff family had traditionally worked with the development of mills for the region’s crops and to increase the size of the lumber industry. George’s mother’s family — the Winships — developed one of the most important iron foundries in the deep south. George would combine both heritages to become an engineer and astute businessman. He went to high school at Tech High in Atlanta. War broke out and his junior year at Georgia Tech was interrupted. He joined the Emory Medical Corps.

He then worked in a Savannah shipyard as a mechanic and draftsman. He married Irene King in 1918. He had met her in 1915, and it was love at first sight; he told her on their first date he would marry her. After a honeymoon in New York City the couple returned to Savannah. At the end of the war, they moved back to Atlanta, and he got a job with Atlantic Steel Company, where he drafted plans for new equipment designs and machine overhauls. Then he worked at the Atlantic Ice Co.

In 1919, Ernest Woodruff put together one of the largest corporate acquisitions at the time. George’s father bought the Coca Cola Co. from Asa Chandler’s family for $25 million. The company’s staggering growth worldwide and success increased the wealth of the family and thus provided the philanthropic capital which later improved the entire region educationally, medically, and culturally.

As a civic leader, George Woodruff was involved with the Board of Directors of the Coca-Cola Co. (for 41 years), West Point Pepperell, Atlantic Steel Co., and Trust Co. of Georgia. Both Emory and Mercer Universities awarded him honorary doctorate degrees.

He adored watching football and had a seat on the fifty yard line at Tech for every home game for most of his life. He loved the game of golf. He was a real softy with regards to his family.

Even though he never returned to college to formally graduate because of the war, George Woodruff believed that education was the key to an individual’s success. He thought that education was the one thing that you can give someone that no one can ever take away. George and his older brother, Robert, combined their parents assets to form a large charitable foundation. Woodruff philanthropic money continues to help schools, universities, cultural centers, and hospitals across the state of Georgia. We continue to benefit from his generosity and wisdom to incorporate his strong values into the importance of education.”

SPRING BANQUET

The Woodruff School Student Advisory Committee (WSSAC) did a great job of making the 20th annual spring banquet a success. The event is planned and organized by WSSAC and is sponsored by the Woodruff Endowment. The event honors graduating seniors and other undergraduates who have received honors during the academic year; graduate fellowship winners were also recognized. More than 220 people attended the banquet, which moved back to the Student Center Ballroom; this was one of the largest turnouts we have ever had and the caterer kept cooking food until there wasn’t anything left. Those seated at each table competed in a Woodruff School trivia contest. After the buffet dinner, School Chair Dr. Ward Winer introduced Pat Epps (BME 1956), the Outstanding Alumnus. After an inspiring speech from Epps, Dr. Robert Nerem, the Zeigler Outstanding Educator, was recognized. There are accompanying articles about both these recognitions.

Once again the students voted on awards to faculty and staff in the School. This year’s recipients were: Kudzu Award (for the professor whose demands keep growing as the semester progresses) to Paul Neitzel; Atlas Award (for the person who takes care of everything, who bears up the world) to John Papastavridis; Passport Award (for the most culturally in the international sense, aware professor) to Ye-Hwa Chen; Captain Planet Award (for the most environmentally conscious professor) to Bert Bras; Jeopardy Award (for the professor who seems to know everything without...
having to look up anything) to Al Ferri; The Simpson's Award (for the most consistently dressed) to Jeff Donnell; the Fonzie Award (for the professor with the best hair) to Andrei Fedorov; the Twilight Award (for the person who seems to be everywhere at once or is always there) to Sterling Skinner; the Easy Button Award (for the professor who skips the most steps) to Peter Hesketh; the Vanna White Award (for the best use of power point) to Jeff Donnell; and the Cheers Award (when everyone knows your name) to Wayne Whiteman.

**THE WOODRUFF SCHOOL OUTSTANDING ALUMNUS**

The Woodruff School Distinguished Alumnus Award was inaugurated in 1989 to recognize an outstanding alumnus of the School. Mr. Pat Epps was selected for this honor in 2006. He was recognized at the Annual Spring Banquet, where he gave an interesting and amusing talk to the gathered students about his life in flying. And he brought along a slide show.

Pat Epps graduated from Georgia Tech in 1956 with a degree in mechanical engineering. After graduation, he headed west to work as a flight test engineer for Boeing in Seattle on the prototype of the 707, America’s first jet airliner.

He entered the U.S. Air Force in 1957 and began flight training. As a distinguished graduate of Class 58, he became the fifth of Ben Epps’s sons to become a military pilot. Assigned to transports, he first was a Co-Pilot with MATS in the Pacific on the Boeing C-97 Stratofighter and later an Instructor Pilot in the Fairchild C-123. Epps has more than 9,000 flying hours as a commercial pilot with type ratings in the North American B-25 Mitchell, Douglas DC-3, Learjet, and Cessna Citation.

In June 1994, Mr. Epps piloted a friend's DC-3 to France. As he flew over Normandy, veteran World War II paratroopers jumped to commemorate the 50th anniversary of the D-Day landings. Epps has been in Rotary more than 30 years and on the Board of the Georgia Aviation Hall of Fame since its inception. For fun, he flies his acrobatic Beechcraft Bonanza in local air shows and tells tales of his adventures during an 11-year quest to recover the “Lost Squadron,” the spectacular recovery of a WWII Lockheed P-38 buried beneath 265 feet of the Greenland ice cap.

Mr. Epps started Epps Aviation at Peachtree DeKalb Airport in Atlanta in 1965, growing it from nineteen to almost two hundred employees. He said, “I've worked for forty years with no promotion.”

**THE ZEIGLIER OUTSTANDING EDUCATOR**

The Jack M. Zeigler Outstanding Educator Award was created in 1999 to honor members of the School’s academic faculty who epitomize outstanding educators. Professor Robert M. Nerem was selected as the 2006 recipient in recognition of his pioneering achievements in establishing the discipline of biomedical engineering at Georgia Tech and for having a profound influence on its development in the United States.

In his acceptance of the award, Professor Nerem inspired the audience with his *Rules of Life: The Planet Earth School*. A selection of the rules of this school are: “There are no such things as mistakes, only lessons; If you encounter a closed door, simply look for another door that might be open; never worry about something over which you have no control; and, if someday, why not now; but remember, the impossible may take a while.”

Dr. Nerem, who earned his Ph.D. in 1964 from the Ohio State University, spent the initial part of his career involved in research and education in aerospace engineering. He anticipated the coming tide of biomedical education, studied molecular biology in the mid-1980’s, and was hired in 1987 as the Parker H. Petit Distinguished Chair for Engineering in Medicine within the Woodruff School. Since 1995 he has served as Director of the Parker H. Petit Institute for Bioengineering and Bioscience at Georgia Tech, and since 1998 as Director of the Georgia Tech/Emory Center for the Engineering of Tissues, where he established an Undergraduate Research Scholars Program. Also, he paved the way for graduate students to interact directly with industry partners, which lead to the establishment of the course called LIFE, Learning about Industry From Experts.

Dr. Nerem is a member of the National Academy of Engineering, an elected Fellow of the American Academy of Arts and Sciences, a recipient of the ASEE Theo Pilkingston Outstanding Educator Award in Biomedical Engineering, and a recipient of an honorary doctorate from the University of Paris, among other awards.

**ANNUAL COOKOUT**

The Annual Woodruff School Cookout was held at the end of the first week of classes for the fall 2005 semester. More than 500 people attended the lunchtime cookout for graduate students (new and returning), faculty, and staff. Our new tee-shirt was given out. The year’s emphasis was on two quotations: *Engineering is common sense first, mathematics second*, from J. S. Coon, the first head of mechanical engineering and: *There is nothing more practical than a good theory* by Ludwig Boltzmann, he of the famous equation. This event is always a good opportunity for new graduated students to meet returning students and to talk with faculty and staff in an informal, though very hot, setting.
SENIORS HONORED AT DINNER
About one-hundred Woodruff School students qualified to attend the annual dinner to honor outstanding seniors and to encourage them to attend graduate school. An invitation to the dinner is based on academic record, a grade point average of 3.5 or above. Faculty members told short stories about why going to graduate school was a good choice. The dinner was also an opportunity for the students to meet some current graduate students and to learn about the different options for study and research at Georgia Tech. Information was provided on admissions, fellowships, financial aid, and the Georgia Tech Lorraine program for study in France.

THE WOODRUFF SCHOOL IN FLORIDA
After a one-year absence, the Woodruff School returned to the R&D Expo that is part of the ASME’s International Congress and Exposition. In 2005, the meeting was held in Orlando, Florida. This was the ninth year we have sponsored a booth at the Expo. We speak with potential graduate students, meet with alumni, and discuss engineering education with conference attendees from industry and academia. Many people stopped by to pick up a resume CD of our graduate students looking for jobs in academia or industry, a graduate application packet, or brochures about the Woodruff School.

The Expo was a smaller event than in previous years, but we had a fairly constant stream of visitors to the booth. Numerous Woodruff School faculty members presented papers and chaired sessions at the conference; many took time out of their schedules to join us at the booth. It was a successful outing for the Woodruff School.

SCHOOL WINS AGAIN AT COE EVENT
The Woodruff School’s performance at the College of Engineering (COE) Staff Appreciation Event landed another first place award. The theme of this year’s annual event was GTv Land. The Woodruff School’s skit was loosely based on the program Happy Days with the theme being Richie leaves for college. The members of the winning cast and their roles were: Robert Cooper as Richie; Ward Winer as Fonzie; Angela Hicks as Joanie; Kristi Lewis as Mrs. Cunningham; Wilson Rice as Mr. C; Dimetra Diggs-Butler as Laverne; Glenda Johnson as Shirley; Ken Dollar as George Jefferson; Cecelia Jones as Weezie; Matt Crowe as Archie Bunker; Sherron Lazarus as Edith Bunker; and Terri Keita as JJ.

GEORGIA TECH AUTO SHOW
The 3rd Annual Georgia Tech Auto Show, sponsored by the Woodruff School of Mechanical Engineering and the Industrial Design Program in the School of Architecture, was held at the beginning of April 2006. Motor vehicles of all types owned by students, former students, faculty, staff, alumni, fans, and corporate sponsors of Georgia Tech were on display. Classic antique cars, late model modified cars, 4x4 off-road trucks, hot rods, cars modified with alternative power delivery (electric, fuel cell), daily-driven transportation, kit cars, race cars, concept cars, prototype cars, and all kinds of motorcycles were entered for viewing and judging.

Prizes were awarded to the best cars and motorcycles in the various categories. Winners in the Woodruff School and their category were: Mark Sisk (BME 1999) won 2nd place in the race car category with his Monte Carlo drag race car; Robin Fernandez (undergraduate student) tied for first place in the student beater category with his BMW 2002; John Gerber (undergraduate student) won 1st place in the motorcycle category with his modified Yamaha; Tom Groshans (ME graduate student) won 3rd place in the post-1975 category with his Ford GT; and Mark Zoller (undergraduate student) won the Design Award for his 1968 DeTomaso Mangusta. Finally, Paul Allen (BME 1987) won the Angel Award for all his help and support.

Ford designers Huibert Mees (MSME 1989) and Jim Wallace (BME 1994) showed the exotic Ford GT for which Mees designed the chassis, brakes, steering, and suspension.

Franco Cimatti (BME 1981), engineering concept manager at Italian automaker Ferrari and featured speaker, brought examples of his work — a red Enzo, a 355, a P-40, and the new 612 Scaglietti.

Norm Garrett (BME 1981) was a member of the Georgia Tech sports car club and helped to organize auto cross events in the Architecture parking lot where he raced his Porsche 914 against other students in the club. He was the first American product engineer hired by Mazda to work at their new southern California design center. He was the concept engineer for the Mazda Miata, which is the best selling sports car. He now lives in Atlanta, and recently taught the internal combustion engines class in the Woodruff School. He is vice president in charge of research for C3 International, LLC in Alpharetta.
PROGRAMS

ACCREDITATION

Georgia Tech has institutional accreditation from the Southern Association of Colleges and Schools. The College of Engineering and its schools are accredited by the Accreditation Board for Engineering and Technology (ABET). Preparations are well underway for the ABET evaluation in fall 2008. The Co-op Program is accredited by the Accreditation Council for Cooperative Education.

RANKINGS

Georgia Tech and its programs continue to be highly regarded. For the 8th consecutive year and the ninth time in the past decade, U.S. News & World Report ranked Georgia Tech as one of the top ten public universities in the nation. The rankings for 2007 are:
- Georgia Tech's undergraduate programs are ranked 8th among public universities;
- Georgia Tech is ranked 38th among public and private universities;
- The undergraduate program in mechanical engineering is ranked 6th in the nation;
- The graduate program in mechanical engineering is ranked 7th in the nation;
- The College of Engineering, the nation's largest, is ranked 6th in the nation;
- The undergraduate nuclear engineering program is ranked 11th in the nation.
- Georgia Tech's Internships and Cooperative Education Program were ranked as one of 12 Academic Programs to Look For under internships and coops.
- Georgia Tech's Undergraduate Research was selected as one of 35 outstanding examples of Programs to Look For under undergraduate research/creative projects. Programs to look for are leaders in contributing to student success.

President Clough said, "Our desire to excel has consistently placed Georgia Tech among the top national universities over the last decade. This recognition reflects the high quality of our programs, faculty and students. Our engineering programs continue to be recognized as the best. The consistency of the rankings of the individual engineering programs bodes well for our continued success."

THE NEW HOME PAGE AT WWW.ME.GATECH.EDU

For the first time since 1996, when the www.me.gatech.edu was first implemented, the Woodruff School's web site was completely revamped with a new, modern design, many new features, and, as with the old site, user friendly pages created especially for audiences outside of Georgia Tech. The main purpose of the site, to present lots of information about the School, is maintained. Visit www.me.gatech.edu to see the results; it is a work in progress with many of the sections still incomplete or being modified.

The masthead design gives prominence to both Georgia Tech and the Woodruff School and provides a common framework for our three sites. The site is eye catching, easy to navigate, with all pages designed for low maintenance. The two-level navigation bar leads to information About the School, Undergraduate Programs, Graduate Programs, Faculty & Staff, Research, News & Events, Employment, Alumni, and Giving to Tech. In addition, the entire site is searchable and archived files have a site-specific search capability, so that a search can be restricted to a very small range. There is left-side text navigation and users can return to the home page from anywhere on the site.

The two other major sites that we maintain: www.nre.gatech.edu for the nuclear and radiological engineering program and www.mp.gatech.edu for the medical physics program will be updated soon.

UNDERGRADUATE PROGRAM REVIEW

The review of the undergraduate programs in the Woodruff School was prepared by Dr. David Sanborn, Associate Chair for Undergraduate Studies. Undergraduate enrollments continue to increase. The total school enrollment for 2006-2007 is 1721 (up 3%). This breaks down to 1547 students in mechanical engineering in Atlanta (up 1%), 151 students in nuclear and radiological engineering (up 3%), five students in the joint ME/NRE program, and 18 mechanical engineering students in Savannah. We continue to get a large share of both the transfer and undecided engineering students.

The Woodruff School currently has 17 students participating in the new International Plan. Two of these students have completed most of the requirements and are currently participating in a capstone design project with a German company. They will work directly with an engineer in Germany and must design to their standards. They will be receiving the B.S.M.E - International Plan degree in December.

During the past few years the Institute has promoted research experiences for undergraduates. The students in both ME and NRE may receive either credit or pay for individual research supervised by a faculty member. For the past two years, the Woodruff School has had more than one-hundred students participate in the program each year.

The transition to the new ME curriculum has gone well. The primary change was to add six hours of free elective and to require that the technical electives be mechanical engineering electives. Because of this, the number of ME elective topics has increased significantly. Since many of these are application courses, the students get to see additional relevance in their previous course work.

TECH INTRODUCES HONORS PROGRAM

The Georgia Tech Honors Program greeted its initial class of 108 first-year students in fall semester. Six are ME students and one is an NRE student. Students do not apply to the Honors Program, but a selection committee reviewed admissions applications. There is no scholarship associated with the program, although many of the students selected are President’s Scholars. Three-credit seminars will introduce a select group of intellectually active first-year students to innovative and inquiry-based topics in a particular academic discipline or in an area of interdisciplinary investigation. The seminars will be taught individually or by a combination of instructors. The goal is to engage and challenge the students to explore questions rather than to expect answers from the instructors. To promote this spirit of active engagement and inquiry between students and faculty, enrollment in the Honors Program seminars will be limited to a maximum of twenty students. In addition, other unique opportunities will be given to honors students in the first two years of their studies at Georgia Tech, including an Honors Program Residence; a small section of introductory courses; a sequence of small, topical seminars; and a program of well-coordinated advising. Students will move into their chosen undergraduate majors in the third and fourth years. In the Woodruff School there will be a section of Honors Capstone Design. More information on this new program may be found at www.honorsprogram.gatech.edu.
PROFESSIONAL PRACTICE

The Division of Professional Practice at Georgia Tech offers the Undergraduate Cooperative Program of education as well as Undergraduate Professional Internships and the Graduate Cooperative Program.

Since 1912, Georgia Tech has offered a five-year Undergraduate Cooperative Program to those students who wish to combine career-related experience with classroom studies. The program is the fourth oldest of its kind in the world and the largest optional co-op program in the country. Students alternate between industrial assignments and classroom studies until they complete four or five semesters of work. They complete the same course work on campus that is completed by regular four-year students.

Students who participate in the program have the opportunity to develop career interests, become more confident in their career choices, and develop human relation skills through their work experience. Graduates of the program receive a bachelor’s degree with a Cooperative Plan designation.

Woodruff School students have traditionally been the largest group participating in the program. This tradition continues. In summer 2005, there were 362 coops (356 ME, 6 NRE), in fall 2005, there were 581 coops at work (556 ME, 25 NRE), and in spring 2006 there were 569 coops at work (543 ME, 26 NRE). The largest employers of ME students are McKenney’s, General Motors, General Electric, Southern Company (Georgia Power), Gulfstream, and Kimberly-Clark.

The Georgia Tech Graduate Cooperative Program was established in December 1983 and is the largest such program in the United States for science and engineering. Ten mechanical engineering graduate students participated in the program in the past academic year, working for such employers as Intel and Respironics. Graduate co-ops can be at work or work and attend classes at the same time.

Students can complete work assignments in a foreign country as part of the International Cooperative Program. This program is a great opportunity to utilize foreign language skills, gain a global perspective, and experience a diverse culture. Proficiency in a foreign language is necessary to earn the International Cooperative Plan degree designation. During the past academic year, three mechanical engineering students worked abroad: two in Japan (one undergraduate and one graduate student) and one undergraduate worked in China. The employers were Sun Yang Bio-Tech Limited, NC Network, and Mitsui Kinzoku.

The Undergraduate Professional Internship Program is geared toward those students who do not participate in the Cooperative Program, but want some career-related experience before graduation. In the past academic year, 35 mechanical engineering students participated in the program (27 in summer 2005 and 8 in spring 2006). Students generally work for one semester with an option for more work. They must have completed at least thirty hours of academic course work at Georgia Tech before they can participate in the program.

Mechanical engineering students have worked at John Deere, Milliken, UGA, Honeywell, Duke Energy, Air Products & Chemicals, NCR, Robert Bosch, in addition to those companies listed as employers of co-op students.

According to Tom Akins, Executive Director of the Division of Professional Practice, “the market for students, especially for ME’s is excellent. There are many jobs we just can’t fill because students are seemingly reluctant to leave the Atlanta area. However, if a student is progressing well in school, and has a genuine interest in obtaining valuable experience, he or she should definitely come to the Division of Professional Practice; students can find many opportunities. As we approach the 100th anniversary (in 2012) of the Co-op Program at Georgia Tech, the future is extremely bright. Demand is good, opportunities are diverse, and we have the greatest engineering students and faculty around!”

UNDERGRADUATE RESEARCH

Georgia Tech encourages undergraduate students to participate in quality and substantive research. There are several options in the Woodruff School for a Special Problems Course or an Undergraduate Research Course. ME/NRE 4903 is a non-research special problem. It is usually a design course and may be combined with the capstone design class for a two-semester design problem. ME/NRE 4699 and ME/NRE 2699 are undergraduate research courses. ME/NRE 4699 is for juniors and seniors and qualifies as an elective for ME or NRE majors. ME/NRE 4698 and ME/NRE 2698 are research internships, where students are paid for working on a project either part-time or full-time. Each course requires a written final report and that the student work with a faculty member.

In the past academic year, 83 students did undergraduate research special problems: 61 students took ME/NRE 4699 for credit (47 ME, 14 NRE) and 17 students took ME/NRE 4698 for pay (16 ME, 1 NRE). Five students took ME 4903. In fall 2006, there are 18 students in ME 4699 and two in ME 4698.

Sixteen Woodruff School students (14 ME, 2 NRE) received President’s Undergraduate Research Awards (PURA). PURA funds requests by a student/faculty team to support undergraduate student involvement in faculty research. The awards are for student salaries and travel expenses for the student to attend professional meetings to give presentations. The following mechanical engineering students (and their faculty advisor) received PURA funds in the past academic year: Geoffrey Berguij (Dr. Andres Garcia); Robert Cross (Dr. Sam Graham); John Danielson (Dr. Bill Singhose); Eric Deutsch (Dr. Robert Guldberg); Kim Dooroo (Dr. Bill Singhose); Travis Gibson (Dr. Rick Neu); Brian Lockwood (Dr. Sheldon Jeter); Scott Meader (Dr. Muhammad Akbar); James Nishimuta (Dr. Marc Levenston); Jennifer Robinson (Dr. Ajit Yoganathan); Michael Schmidt (Dr. Sam Shelton); Robert Taylor (Dr. Muhammad Akbar); Andrew Timm (Dr. Bill Singhose); and Markus Wegner (Dr. Krish Ahuja). Jason Breen (Dr. Darzad Rahnema) and Amanda Bryson (Dr. Zhuomin Zhang) are NRE students with PURA funding.

STUDY-ABROAD PROGRAMS

Georgia Tech strongly believes in the importance of an international experience for students. Overall student participation and the number of programs from which to choose continues to increase. During the past academic year, 99 Woodruff School students participated in various study-abroad programs, compared with 107 and 77 in the two previous academic years. Across the Institute, 916 undergraduate students participated in international programs: 470 of these were engineering students. In the College of Engineering, 32.7% of those graduating with a bachelor’s degree had experience in an international program.

The most popular study-abroad programs for Woodruff School students continue to be the Georgia Tech Lorraine Undergraduate Summer Program (29 students), Shanghai Summer Program
(18 students), and the Oxford Summer Program (13 students). Other students participated in the Pacific-Spring Study Abroad Program (6 students), Non-Georgia Tech Programs (5 students), Work Abroad Program (5 students), Spanish Language for Business and Technology (LABT) (3 students), Japanese LABT (3 students), German LABT (3 students), International Academic Project (2 students), Sydney Summer Program (2 students), and one each in the Argentina-Brazil Summer Program, LCC Summer Program in Italian Film, Brussels Summer Program, Hong Kong Semester Program, Sheffield Semester Program, New Zealand Semester Program, and International Co-op Program. Of the Woodruff School participants, 92 were mechanical engineering students and seven were nuclear and radiological engineering students.

THE INTERNATIONAL DEGREE PLAN
The Undergraduate International Plan is a new degree designation, similar to the Cooperative Plan. Mechanical engineering students can spend two or more semesters (a minimum of 26 weeks) abroad, gaining valuable international experience. This is especially important in today’s global economy, where more companies are looking for graduates with international experience in their major area. Mechanical engineering students can spend a year at Georgia Tech Lorraine in Metz, France, at the Technical University in Munich, Germany, or at other approved locations.

In order to receive the BSME-International Plan degree, students must meet several requirements. The first is to show proficiency in a language through at least the second year of study. Second is specific coursework: international relations, global economy, and a region/country elective. The third requirement is to spend 26 weeks abroad. This can be done either in residence at a university or one semester in residence plus one as an engineering intern, or both semesters as an intern. Finally, the student’s capstone design experience must meet certain requirements. This is usually a project proposed by a company in the country where the student is serving as an intern. The Woodruff School has seventeen students participating in the program. For more information, view www.oie.gatech.edu.

THE FIVE-YEAR BS/MS PROGRAM
Outstanding sophomores and early juniors in the Woodruff School are invited to apply to the Five-Year BS/MS Degree Program. Students can earn two degrees in a five-year period, which provides a tremendous advantage when entering the job market. Students can earn undergraduate degrees in ME or NRE and the graduate degree in ME, NRE, Bioengineering, and Paper Science Engineering. The program is individualized with numerous opportunities for faculty and students to interact, including mentoring and undergraduate research. The majority of the master’s students do not prepare a thesis and do a course work only option. Graduate course work begins in the senior year. Dr. Wayne Whitman serves as faculty mentor and director of the program.

Forty-nine undergraduate students have been accepted into the graduate program in a future term (currently through fall 2009), upon receipt of their bachelor’s degree. Currently, there are 24 students in the program; fourteen of these matriculated into the graduate program in fall 2006: Waqas Abassi, Obert Chen, Christopher Clarke, Patrick Cross, Phuc Dao, Scachui Foong, Christopher Golden, Daniel Hyer, Perry Johnson, Brian Lockwood, Soungghan Lyu, Ricardo Molinos, Alexey Podust, and Rohit Vardhan.

Of the twenty graduates from the program since 2002, six received their master’s degree in the past academic year: Ashby Bridges (NRE/NRE), Jared Dervan (ME/ME), Brian Fatkin (ME/ME), Elliott Jernigan (ME/ME), Brian Kern (NRE/ME), and Pete Manglogiannis (ME/ME).

FRANK K. WEBB PROGRAM IN PROFESSIONAL COMMUNICATION
The Frank K. Webb Program in Professional Communication was established in 1990 to teach students verbal and written communication skills. The Woodruff School has made the teaching of these skills an integral part of the undergraduate engineering curriculum. Program Coordinator Dr. Jeffrey Donnell provides formal instruction to students in three required laboratory and design courses: Creative Decisions and Design (ME 2110), Experimental Methodology Lab (ME 3057), and Mechanical Systems Lab (ME 4053). Donnell instructs the students on how to prepare reports and presentations, reviews project reports, and provides written feedback to the students on their projects, reports, and presentations. In addition, he provides guides to writing skills, sample reports, and lectures on communications skills specific to engineers.

Graduate students receive help with graduate school and fellowship applications. In addition, they receive instruction in communications early in their graduate careers when they are preparing their first manuscript, either a proposal, a journal article, or a conference presentation.

GRADUATE PROGRAM REVIEW
This update on the graduate program in the Woodruff School was provided by Dr. Yogendra Joshi, Associate Chair for Graduate Studies.

The past year has been marked with a number of significant milestones. The School graduated 51 Ph.Ds., which is an all-time record. The combined M.S. and Ph.D. enrollment for Fall 2006 is 722, which is the highest ever. Our graduate program continues to be the largest in the country. At the same time, the quality of our program is consistently very strong, as evident from the 7th place ranking by U.S. News and World Report. After an extensive benchmarking study, the stipends for incoming Graduate Research Assistants and Graduate Teaching Assistants have been increased significantly, so that the Woodruff School will stay competitive with its peer institutions. During the past academic year, the Woodruff School’s Graduate Committee undertook a review of the Doctoral Teaching Practicum, a unique and integral part of our Ph.D. program and provided recommendations that would further strengthen it. The recruitment activities during the past year resulted in an incoming class of 201 students in Fall 2006. Due to the consistent support from the Woodruff School and the Institute in the form of topping fellowships, we have been able to attract very strong students. The recent phase of the automation project in the Office of Student Services has resulted in additional simplifications in helping our current students reach degree milestones.

The employment market for our graduate students has been excellent during the past year. The energy, defense, electronics, and manufacturing sectors have had strong hiring needs, and our students have been highly sought after by companies. Our graduates are increasingly being employed by high technology global organizations. To produce technical leaders of the future, teamwork and development of presentation skills are being promoted within a number of graduate courses. The School also financially supports travel for all graduate students wishing to present technical papers at conferences.
THE WOODRUFF SCHOOL IN SAVANNAH

This review was provided by Dr. Farrokh Mistree, Associate Director of GT Savannah.

In 1998, Georgia Tech established the Georgia Tech Regional Engineering Program (GTREP) to afford students in Southeast Georgia the opportunity to earn a Georgia Tech engineering degree outside of Atlanta, using local faculty, local facilities, and distance-learning connections to bring Georgia Tech directly to the region. In 2003, the Woodruff School expanded its academic program to the Georgia Tech Savannah Campus. In 2005-2006 six undergraduates received their degrees, one with honors.

Information technology is pervasive today, influencing almost every aspect of our everyday lives. Developments in computing and communication hardware have given people around the world access to powerful computers and network systems. The result of these developments is the next wave of globalization where opportunities for knowledge-based engineering have been expanded to the entire world, allowing anyone in the world to compete for it. Accordingly, the Woodruff School decided to establish the interdisciplinary area of Information Engineering for Complex Engineered Systems in response to the challenges that the engineering profession faces today. This program is anchored in the Woodruff School in Savannah. In Fall 2006, Drs. Allen and Mistree were joined by Drs. Seung-Kyum Choi, Mervyn Fathianathan, and Dirk Schaefer, who will focus on researching and developing IT-enabled engineering in the context of complex engineered systems. This new academic program complements the Mechanical Engineering program at Georgia Tech Atlanta to educate the next generation of engineers to be leaders in the engineering profession.

In his address to rising high school seniors at the weeklong Savannah Engineering Academy, Dr. Mistree observed that much of manufacturing that was done in the United States has moved to China with engineering analysis and synthesis moving to India. “If the preceding is true, why should you consider engineering as a career?” he asked the students. After a silence, he continued: “Those elements of engineering that have been commoditized are being done at places with lower labor costs like China and India. Outsourcing in a world of commoditized engineering works because the outsourced problems are well structured. That brings us to the Woodruff School in Savannah. We are focused on educating engineers who are keen to learn how to grapple with the ill-structured world of product creation. Those who are good at product creation will find industry coming to them instead of outsourcing it to others.” In keeping with the preceding, the Woodruff School is set to establish leadership in the high-impact, interdisciplinary area of Product Creation by implementing a “cluster hire” strategy to jump-start this program at Georgia Tech Savannah beginning Fall 2007.

WOMEN AND MINORITIES IN THE GRADUATE PROGRAM

The Woodruff School continues to be a leading producer of graduate degrees to women and minorities. In the 2005-2006 academic year, seven women (the same as in the previous year) earned their doctoral degrees (all in ME) and 27 women earned the master’s degree (21 ME, 6 NRE/MP). The first Ph.D. in the Woodruff School given to a woman was awarded to Denise Noonan in Health Physics in 1984. In 1987, Mardi Hastings was the first woman to earn a Ph.D. in mechanical engineering. To date, 95 women have earned the Ph.D. from the Woodruff School (74 ME, 21 NE). The chart shows the degrees at all levels awarded to women in the past ten years.

The Woodruff School granted its first doctoral degree to a minority student in 1978. Since then, 76 minority students have received the Ph.D. (66 ME, 10 NE). Nine minority students earned a Ph.D. in the past academic year (8 ME, 1 NE). In addition, 27 master’s degrees were awarded to minority students (U.S. citizens/permanent residents). The chart shows the degrees awarded to minority students at all levels for the past six years.

DEGREES AWARDED TO WOMEN IN THE WOODRUFF SCHOOL

<table>
<thead>
<tr>
<th>Year</th>
<th>Bachelor’s</th>
<th>Master’s</th>
<th>Ph.D.’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996-1997</td>
<td>29 (248)*</td>
<td>12 (91)</td>
<td>7 (28)</td>
</tr>
<tr>
<td>1997-1998</td>
<td>48 (283)</td>
<td>21 (113)</td>
<td>17%</td>
</tr>
<tr>
<td>1998-1999</td>
<td>40 (201)</td>
<td>23 (140)</td>
<td>16%</td>
</tr>
<tr>
<td>1999-2000</td>
<td>55 (274)</td>
<td>24 (83)</td>
<td>29%</td>
</tr>
<tr>
<td>2000-2001</td>
<td>41 (236)</td>
<td>34 (137)</td>
<td>25%</td>
</tr>
<tr>
<td>2001-2002</td>
<td>44 (250)</td>
<td>22 (152)</td>
<td>15%</td>
</tr>
<tr>
<td>2002-2003</td>
<td>56 (276)</td>
<td>24 (166)</td>
<td>15%</td>
</tr>
<tr>
<td>2003-2004</td>
<td>41 (302)</td>
<td>17 (165)</td>
<td>10%</td>
</tr>
<tr>
<td>2004-2005</td>
<td>50 (273)</td>
<td>33 (171)</td>
<td>19%</td>
</tr>
<tr>
<td>2005-2006</td>
<td>31 (295)</td>
<td>27 (182)</td>
<td>15%</td>
</tr>
<tr>
<td>Totals</td>
<td>435 (2638)</td>
<td>237 (1400)</td>
<td>17%</td>
</tr>
</tbody>
</table>

DEGREES AWARDED TO MINORITIES IN THE WOODRUFF SCHOOL

<table>
<thead>
<tr>
<th>Year</th>
<th>Bachelor’s</th>
<th>Master’s</th>
<th>Ph.D.’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2001</td>
<td>62 (233)</td>
<td>20 (137)</td>
<td>7 (42)</td>
</tr>
<tr>
<td>2001-2002</td>
<td>68 (250)</td>
<td>19 (152)</td>
<td>2 (23)</td>
</tr>
<tr>
<td>2002-2003</td>
<td>60 (276)</td>
<td>14 (266)</td>
<td>5 (38)</td>
</tr>
<tr>
<td>2003-2004</td>
<td>64 (302)</td>
<td>23 (165)</td>
<td>4 (30)</td>
</tr>
<tr>
<td>2004-2005</td>
<td>67 (273)</td>
<td>23 (171)</td>
<td>14%</td>
</tr>
<tr>
<td>2005-2006</td>
<td>61 (295)</td>
<td>27 (182)</td>
<td>15%</td>
</tr>
<tr>
<td>Totals</td>
<td>382 (1629)</td>
<td>126 (1073)</td>
<td>12%</td>
</tr>
</tbody>
</table>

* The number in parentheses is the total number of degrees in each category granted by the Woodruff School.
GEORGE W. WOODRUFF SCHOOL OF MECHANICAL ENGINEERING

NRE/MP PROGRAM OVERVIEW
This material was prepared by Dr. Farzad Rahnema, Associate Chair of the Woodruff School and Chair of the NRE/MP Programs.

In fall 2006, the NRE/MP enrollments are 151 undergraduate and 74 graduate students. This corresponds to enrollment increases of 74 percent and 69 percent, respectively, since fall 2002, which is when the NRE program was reorganized. We believe that two factors contributing to the enrollment trend are the increased student recruiting effort by the faculty and the nuclear renaissance. The undergraduate scholarship program funded by our industry sponsors and the Department of Energy matching grant program has been a key factor in attracting top students into the program.

Under a new three-year Department of Energy grant, Georgia Tech has partnered with Clark Atlanta University (CAU) to create new opportunities in nuclear science and engineering for students at CAU. The overall objective of this project is to provide a unique educational opportunity for students while they pursue a BS in Engineering at CAU and a graduate degree in the NRE Program at Georgia Tech. We expect this partnership to provide a steady flow of well-prepared prospective employees for DOE research and development facilities and for the nuclear power industry.

The medical physics program started its third academic year in fall 2006. Since the program began 12 students have received the MSMP. The current enrollment in the master’s degree program is 34, including 18 new graduate students this fall. Four of these students plan to pursue a doctoral degree as an option in the nuclear engineering program. This cooperative on-campus and distance-learning graduate program was further solidified by a formal agreement (Memorandum of Understanding) between Georgia Tech and Emory University. Through this agreement, three Emory faculty members in the Department of Radiation Oncology will teach MP courses in radiation therapy and diagnostic imaging physics. Also, they may engage in student and faculty interactions including co-advisement of thesis students. Emory University will provide appropriate radiation oncology faculty to supervise clinical rotation internships at The Emory Clinic, the VA Medical Center, and Grady Memorial Hospital. Up to ten students in Georgia Tech’s NRE/MP program will receive clinical experience for a ten-week period during Georgia Tech’s summer session.

LEARNING FROM A DISTANCE
The Woodruff School offers two graduate degrees as part of its distance-learning program: the master’s degree in mechanical engineering and the master’s degree in medical physics. The Woodruff School was the first of the top mechanical engineering graduate programs in the country to offer an entire MSME program online. The admission requirements, courses, and the degree received are the same as for on-campus students. We offer approximately 16 mechanical engineering courses each in fall and spring semester; one course was offered during the summer. Five courses for the medical physics degree were offered in fall and spring terms; three were offered in the summer term. Current enrollment in distance learning classes is 200 (180 ME, 20 MP). Forty-one students completed the requirements for the master’s degree (nonthesis option) through the distance program in the past academic year: Four students finished their health physics degree (the program that preceded the medical physics program) and 37 students completed their MSME. The top employers of these graduates are General Electric, Lockheed-Martin, and Knowles Atomic Power Laboratory.

GEORGIA TECH LORRAINE (GTL)
The Woodruff School’s program at Georgia Tech Lorraine in Metz, France expanded in the past academic year and now has a number of components. In addition to the MSME there is also a doctoral program, which has grown as a result of major funding from CNRS and GT; a new fall/spring undergraduate program; and the undergraduate summer program. Most graduate students focus on the M.S.M.E. French students from partner institutions, such as ENSAM and the Ecole des Mines, take courses at GTL, typically for two semesters, before coming to the Atlanta campus to finish their master’s degree. U.S. students take classes at GTL as well as at ENSAM for three semesters and receive both the M.S.M.E. and the Maitre Professionale of ENSAM. They also must complete an internship in France during the summer.

Recently, President Clough nominated Professor Yves Berthelot to be the next President of Georgia Tech Lorraine. In addition, Dr. Nico Declercq joined the faculty as an Assistant Professor. He will be based primarily at GTL; his area of expertise is ultrasonics. Dr. M. Cherkaoui, a Professor at GTL since 2005, was instrumental in establishing the first industrial research contract at GTL.

A major achievement in 2006 was the creation of the Unite Mixte Internationale, UMI 2956, a joint laboratory between Georgia Tech and CNRS, the largest research organization in France. The UMI is the first of its kind in France. The only other UMI in Engineering is located in Japan. Research will focus on advanced materials and secure networks.

In summer 2006 GTL hosted 153 Georgia Tech undergraduate students (27 ME’s). This fall, GTL launched the fall/spring undergraduate program; nine juniors in ME are attending GTL. This program should grow substantially in the next few years thanks to the newly created International Plan for GTL’s undergraduates.

In fall 2006, the enrollment was 191 students: 148 students are at GTL, while 43 are in Atlanta finishing their MS degrees. They represent 19 countries, with most students being from the U.S. or France. There are 181 graduate students in France, including 76 M.S. and 9 Ph.D. in ME, 67 MS and 7 Ph.D. in ECE, and 20 MS and 2 Ph.D. in CS. There are 10 undergraduate students (9 ME, 1 ECE) for the fall/spring program. There are fifty-three new MSME students at GTL this fall, including 12 U.S. students.
STUDENTS

PROFILES OF INCOMING STUDENTS

This fall, Georgia Tech has more incoming freshmen on campus than anytime in its history. Approximately, 2,607 students entered Tech this fall, while another 250 began this past summer as part of Tech’s first summer admissions program. Last year, Tech has 2,487 entering students. The unplanned growth in enrollment was a result of increased interest in Tech; more students accepted admission offers than ever before. More than 9,000 students applied for admission to the freshman class, a four percent increase over last fall. The class has a higher percentage of women than ever before, approximately 31 percent.

The Woodruff School continues to get excellent students, as shown by the class profiles of the new undergraduate and graduate students in fall 2006. Our total enrollment as of October 1, 2006 is 2,441 students. We are now the largest School on campus with regard to undergraduate enrollment, which totals 1718. Of these, 1567 are in mechanical engineering and 151 are in nuclear and radiological engineering. Eighteen of the mechanical engineering students are at GT Savannah. Approximately 12 percent of the students are female. By ethnicity, approximately 11 percent are Asian, seven percent are African-American, five percent are Hispanic, one percent is Native American or Multiracial, 73 percent are White, and four percent are international students.

The total number of graduate students is at an all-time high of 723 (612 ME, 74 NRE/MP, 24 BioE, 13 PSE). By degree, there are 459 master’s degree students (397 ME, 18 NRE, 35 MP, 6 BioE, 3 PSE) and 264 doctoral students (215 ME, 21 NRE, 18 BioE, 10 PSE). By gender, approximately 15 percent of the graduate students are female. By ethnicity, approximately seven percent are Asians, five percent are Black, three percent are Hispanic, one percent is Native American or Multiracial, and 30 percent are international students.

[Note that sometimes there are two different numbers representing the same item. Each number is correct as of the time the data were collected.]

ENROLLMENT IN THE COLLEGE OF ENGINEERING (2005 and 2006)

<table>
<thead>
<tr>
<th>School</th>
<th>Undergraduates</th>
<th>Graduates</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace Engineering</td>
<td>735</td>
<td>732</td>
<td>413</td>
</tr>
<tr>
<td>Biomedical Engineering</td>
<td>652</td>
<td>787</td>
<td>205</td>
</tr>
<tr>
<td>Chemical &amp; Biomedical Engineering</td>
<td>493</td>
<td>505</td>
<td>177</td>
</tr>
<tr>
<td>Civil &amp; Environmental Engineering</td>
<td>615</td>
<td>688</td>
<td>283</td>
</tr>
<tr>
<td>Electrical &amp; Computer Engineering</td>
<td>1427</td>
<td>1349</td>
<td>928</td>
</tr>
<tr>
<td>Industrial &amp; Systems Engineering</td>
<td>941</td>
<td>939</td>
<td>342</td>
</tr>
<tr>
<td>Materials Science &amp; Engineering</td>
<td>118</td>
<td>137</td>
<td>108</td>
</tr>
<tr>
<td>Mechanical Engineering (NRE/MP)</td>
<td>1564</td>
<td>1571</td>
<td>687</td>
</tr>
<tr>
<td>Polymer, Textile &amp; Fiber Engineering</td>
<td>98</td>
<td>123</td>
<td>46</td>
</tr>
<tr>
<td>Undeclared</td>
<td>346</td>
<td>370</td>
<td>0</td>
</tr>
<tr>
<td>COE Totals</td>
<td>6,989</td>
<td>7,201</td>
<td>3,189</td>
</tr>
</tbody>
</table>

WOODRUFF SCHOOL ENROLLMENT BY DEGREE AND ETHNICITY IN FALL 2005

<table>
<thead>
<tr>
<th></th>
<th>Asians</th>
<th>Blacks</th>
<th>Hispanics</th>
<th>Nat. Ams</th>
<th>Whites</th>
<th>Multiracials</th>
<th>Totals</th>
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</thead>
<tbody>
<tr>
<td>UNDERGRADUATES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>186</td>
<td>99</td>
<td>65</td>
<td>4</td>
<td>1062</td>
<td>7</td>
<td>1423</td>
</tr>
<tr>
<td>Nuclear and Radiological Engineering</td>
<td>14</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>113</td>
<td>2</td>
<td>141</td>
</tr>
<tr>
<td>GRADUATES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Mechanical Engineering</td>
<td>131</td>
<td>35</td>
<td>18</td>
<td>0</td>
<td>390</td>
<td>3</td>
<td>582</td>
</tr>
<tr>
<td>Nuclear and Radiological Engineering</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>0</td>
<td>33</td>
</tr>
<tr>
<td>Health Physics</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Medical Physics</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>26</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>Paper Science and Engineering</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Bioengineering</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>367</td>
<td>148</td>
<td>87</td>
<td>6</td>
<td>1626</td>
<td>17</td>
<td>2251</td>
</tr>
</tbody>
</table>
The average grade point average (GPA) of all mechanical engineering undergraduates is 2.96 and 3.08 for nuclear and radiological engineering students, with an average of 2.97 for all Woodruff School undergraduate students in Atlanta. By class, the average GPA's are:

<table>
<thead>
<tr>
<th>Class</th>
<th>ME</th>
<th>NRE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>2.70</td>
<td>2.85</td>
<td>2.72</td>
</tr>
<tr>
<td>Sophomores</td>
<td>2.96</td>
<td>3.22</td>
<td>2.99</td>
</tr>
<tr>
<td>Juniors</td>
<td>2.96</td>
<td>3.11</td>
<td>2.98</td>
</tr>
<tr>
<td>Seniors</td>
<td>2.99</td>
<td>2.99</td>
<td>2.99</td>
</tr>
</tbody>
</table>

The average for all undergraduate students at GT Savannah is 2.50. There are no freshmen and sophomore students; juniors have a 2.64 average and seniors have a 2.49 average GPA.

SCHOLARSHIPS
Many awards recognize academic achievement and outstanding service to the School, the College of Engineering, and the Institute. Many undergraduate students in the Woodruff School receive some type of scholarship.

HOPE SCHOLARSHIPS
Almost all of our incoming, in-state students receive HOPE scholarships, the tuition program financed through the Georgia State Lottery. After the first year at Georgia Tech, approximately fifty percent of the freshman class retains their scholarship. Students need to maintain a 3.0 graduate point average each term to keep the HOPE scholarship.

PRESIDENT'S SCHOLARS
The President’s Scholars Program began in 1981 to identify students who have excelled in academia and leadership in high school. Financial awards are for four academic years, and students are expected to maintain honors-level academic performance and be involved in campus or community activities. The program is funded entirely by endowments and annual contributions from Georgia Tech’s alumni, industry supporters, and other friends through the Institute’s Roll Call annual giving program.

Fifty-five new President’s Scholars enrolled in fall 2006. There are a total of 239 scholars enrolled. To date, 1179 President’s Scholars have graduated. Thirty Woodruff School students hold a President’s Scholarship. This group has an average Georgia Tech graduate point average of 3.61, not including the three new freshmen. The trend is that 62 percent of the non-freshmen are on track to graduate with highest honors. Half of these students participate in the Co-op Program and have spent at least one term in an industry position.

The new scholars, all in mechanical engineering, are: Blake Bernard, Matt Hoffman, and Tyler Jackson. Other Woodruff School mechanical engineering students currently enrolled as President’s Scholars are: Kevin Bell, Annie Davis, Ryan DeMars, Eric Deutsch, Josh Figuered, Jeff Gee, Krista Guzelian, David Harman, Bradley Hermann, Drew Hess, Taulhia Hoossainy, Alex Johnson (NRE), Brandon Kearse, Joey Kenny, Scott Kerklo, Rahul Kirtikar, Chris Madsen, Matt Madsen, Kyle Schwing, Caroline Stratton (NRE), Cielle Thibodeaux, Lina Tucker, Carla Uribe, James Waring, Joel Weber, and Emily Woods.
**WOMEN IN ENGINEERING SCHOLARSHIPS**

In 2006, a group of talented Woodruff School students received scholarships from the Women in Engineering Program at Georgia Tech. Each year their success and achievements is celebrated in an awards banquet, which is sponsored through a grant from Kimberly Clark Corporation. According to Dr. Mimi Philibos, Director of the Women in Engineering Program and Professor in the School of Civil and Environmental Engineering, “In addition to Kimberly Clark, many companies sponsor and participate in this banquet, motivated by their interest in meeting and interacting with the best and the brightest engineering students at Georgia Tech.” Five hundred people attended the banquet; eighty-five scholarships were presented to female engineering students with a value of more than $90,000. A GPA of 3.35 (graduating with high honor) is needed to qualify for the banquet.

Winners in the Woodruff School were: Ashley Anchors (Kimberly Clark), Amanda Bennett (Atlanta Gas Light), Sarah Brashear (NRE student) (Boeing), Elisabeth Byrd (Boeing), Annemarie Cardell (Boeing), Lin Geng (John Deere), Alisha Hester (John Deere), Tannah Hoossainy (Shell), Kendra Kofler (Boeing), Caitlin Murphy (Ford), Stefanie Presley (Ford), Christine Primmer (Boeing), Carly Queen (Shell), Lynn Sarcione (Ford), Alison Skala (General Motors), Shannon Spoon (General Motors), Lina Tucker (Michelin), Shruti Vellore (NRE student) (Michelin), Karen Warren (United Technologies), Chiheem Cassey Wey (Alcoa), and Emily Woods (Atlanta Gas Light).

The Woodruff School has 21 out of the 85 winners of the Women in Engineering Scholarships. We had the largest number of winners; the remaining awards breakdown as follows: 15 in ECE, 14 in AE, 12 in CHBE, 9 in CE, 8 in IE, 7 in BMED, 1 each in MSE, PFE, and CMPE.

**NUCLEAR ENGINEERING UNDERGRADUATE SCHOLARSHIPS**

Unique scholarship opportunities exist for Georgia Tech undergraduate students in nuclear and radiological engineering. Most scholarships begin in the freshman year and are based on academic achievement. Sponsoring organizations and the freshman recipients are Department of Energy/Industry Matching Grant NRE Scholarships (Alexander Chao, Nathan Jackson, Albert Yu, Christian Merrill, Alexander Lynn); Duke Energy Scholarship (Emily Flora, Lisandro Vazquez, Naathaniel Aligood, Jackson Renegar, Devon Thompson); AREVA Scholarship (Emily Freibert, Nicholas Wellkamp); McCallum-Turner Scholarship (Kenae Brooks); Exelon Scholarship (Robert Hinesley, William Shannon, Aaron Tubb); and Southern Nuclear Scholarship (Travis Zipperer).

Other sponsoring organizations for undergraduate scholarships are American Nuclear Society, MWH Americas, and The Woodruff School. In the past academic year, 48 students were awarded scholarships in the nuclear and radiological engineering program.

**ARCS FOUNDATION SCHOLARSHIPS**

The Atlanta Chapter of the ARCS (Achievement Rewards for College Scientists) Foundation provides scholarships to academically outstanding U.S. citizens studying to complete their doctoral degrees in science, medicine, and engineering in order to contribute to the worldwide advancement of science and technology. At Georgia Tech, scholarships are given to students in the Woodruff School, the School of Industrial and Systems Engineering, and the College of Computing. Scholars in the Woodruff School are: Brian English, Charlotte Kotas, Annemarie Lerner, Jeffrey Rambo, James Shepherd, Eric Vanderploeg, and Annica Wayman. The Woodruff School has fifteen alumni scholars.

**STUDENT HONORS DAY AWARDS**

Awards were announced at the annual Student Honors Day held in April. The winners are chosen by the Associate Chair for Undergraduate Studies and the Undergraduate Academic Advisor with approval by the School Chair, Dr. Ward Winer. The recipients were:

- **Raul Fernandez, Christine Primmer, and MacField Young** each received James G. and Mary G. Wohlford Scholarships. These scholarships recognize outstanding senior co-op students who have excelled both academically and on their co-op jobs, and who have made significant contributions to the community. The award is named in honor of the late director emeritus of the Professional Practice Division and sponsored by the Co-op Club.

- **Gregory Freisinger, Brian Lockwood, and Logan Williams** each received a Samuel P. Eschenbach Memorial Award in Mechanical Engineering. This award is given by the family of Samuel P. Eschenbach (BME 1933) and is based on academic performance, leadership capabilities as demonstrated through involvement in the campus community, and promise as a mechanical engineer.

- **Alfred Frith and Ryan Kane** received Henry Ford II Scholar Awards from the College of Engineering. These awards come from the income from a restricted endowment fund provided by the Ford Motor Company Fund and are given annually to the engineering students with the best academic record at the end of the third year of undergraduate study.

- **Christopher Golden, Steven Larsen, and Tyler Warnock** each received a Richard K. Whitehead Jr. Memorial Award. The Georgia Scientific and Technical Research Foundation established this award in memory of its first president, Richard K. Whitehead Jr. (BME 1957). The award goes to an outstanding mechanical engineering senior who exemplifies high standard of scholarship and service.

- **Christopher Hannemann** received the Woodruff School of Mechanical Engineering School Chair’s Award. This award is granted on the basis of outstanding scholarship and contributions to the School, especially to its programs and external representation. The award honors the graduating senior in mechanical engineering who best fulfills these standards.

- **Lisa Hightower** received the Pi Tau Sigma Outstanding Senior Award. This award goes to a graduating senior who has demonstrated outstanding scholarly achievements in addition to service to the School, to the Institute, and to student activities.

- **Douglas Hinckley** received the Woodruff School Outstanding Scholar Award. This award recognizes a graduating senior who has achieved an exceptional scholastic record in mechanical engineering.

- **Drew Owen** received the Pi Tau Sigma Outstanding Junior Award for outstanding scholarship, and service to the School and to student activities.

- **Alison Skala** received the Pi Tau Sigma Outstanding Sophomore Award. This award is for outstanding scholarship, and service to the School and to student activities.

**Chris Hannemann**
**PI TAU SIGMA INITIATES NEW MEMBERS**

The Georgia Tech Nu Chapter of Pi Tau Sigma, the national mechanical engineering honor society, initiated 38 students at the Georgia Tech Hotel in November 2005. This is the largest group of initiates in several years.

Membership is based on scholastic standing and faculty rating. The new members of Pi Tau Sigma are: Robert Amaro, Geoffrey Berguig, Corrie Bukle, Brandon Chaffins, Stephen Clawson, Austin Cobert, Raul Fernandez, Alfred Frith, Daichi Fujioka, Michael Galvin, Drew Glaser, Patrick Goldrick, Om Hari, Sanjeev Heda, William Hobbs, Ryan Kane, Jeffrey Kerr, Owen McGarity, Yu Nagai, Jonathan Olander, Drew Owen, Anthony Pergola, Hannah Pitts, Shane Poland, Jason Pollan, Richard Rogers, Dan Sankar, Lynn Sarcione, Chad Smith, Jin Song, Brandon Terrell, Joshua Thalheimer, Damien Valenti, and Christopher Weir.

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**STUDENT ORGANIZATIONS**

There are a number of groups for Woodruff School students to join. These organizations offer a unique opportunity to learn about the many facets of mechanical or nuclear engineering, provide an opportunity to meet practicing professionals, and provide valuable service to the School. More information may be found at www.me.gatech.edu/me/students/organizations.

**PROFESSIONAL SOCIETIES**

- American Nuclear Society (ANS)
- American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
- American Society of Mechanical Engineers (ASME)
- SAE International
- Society of Manufacturing Engineers (SME)

**HONOR SOCIETY**

- Pi Tau Sigma (mechanical engineering honor society)

**STUDENT COMPETITION GROUPS**

- GT Motorsports
- GT Off-Road
- GT Robojackets
- Wreck Racing

**UMBRELLA GROUPS**

- Mechanical Engineering Graduate Students Association
- Nuclear and Radiological Engineering Program Student Advisory Committee
- Woodruff School Student Advisory Committee
- Woodruff School Graduate Women

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**CAREERS**

Pacing the overall market for engineers, the job market for graduates of the Woodruff School continued to be quite strong during the past academic year. The number of employers visiting Georgia Tech to recruit Woodruff School students was exceptionally high this year with Mechanical Engineers garnering more interviews than any other single major at Georgia Tech. Additionally, at the campus-wide career fair held in fall 2005, more than 135 employers expressed interest in recruiting ME and/or NRE students.

Reflecting this strength, employment rates and reported salaries for all levels of students was quite healthy and equaled or bettered previous years. At graduation in spring 2006, 64 percent of BSME and nearly 67 percent of BSNRE students reported having found employment. The median salary for BSME graduates was $53,000 with a high of $63,000. Signing bonuses ranged from $1,500 to $10,000 with an average of $2,800. For BSNRE graduates the median salary was $50,500 with a signing bonus of $1,500.

Master’s graduates reported a median salary of $64,750 and a signing bonus of $3,750. Ph.D. recipients reported a median salary and signing bonus of $80,000 and more than $6,600, respectively.

Many Woodruff School bachelor degree graduates continue on to graduate schools in fields ranging from engineering to management to medicine and law. Nearly 20 percent of BSME students reported acceptance to graduate or professional school.

A variety of employers hired Woodruff School students including ExxonMobil, GE, Lockheed Martin, Michelin, Siemens, Toyota. In addition, students were hired by many other companies, reflecting broad interest across multiple industries.

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**WRECK RACING**

Wreck Racing has been at Georgia Tech for three years. In their first competition in 2003 the club raced a 1985 Volkswagen GTI which they purchased for $600. In 2005, the club faced new challenges to build a 1984 BMW 325e. At the competition, they placed 40th out of 70 participants. George Carstens, president of the club, says, “This might not seem like a great accomplishment, but considering that we successfully built from scratch our own engine management system, we were all very pleased with the results.”

The event is sponsored by Grassroots Motorsports magazine. Teams have to buy, build, and prepare a car for the automotive triathlon: autocross (speed and handling), drag racing (speed in a straight line), and concours (cosmetics) judging while facing a strict budget cap. The budget is based on the year; for 2006, the budget will be $2006. Drive trains, suspensions, brakes, exteriors, interiors, electrical and fuel systems may be modified. Wheels and tires can be replaced. Only roadworthy passenger cars can be used.

The team moved into the Student Competition Center, which provides a place for the team to work on the car. Sterling Skinner is the faculty advisor to the club.
DEGREES

In 1888 when Georgia Tech opened, mechanical engineering was the only degree-granting program. Today, the Woodruff School offers two undergraduate degrees and seven graduate degrees. In addition, the master’s degree can be completed off-campus through the distance-learning program. This report details the degrees awarded from summer 2005 through spring 2006.

Degrees Awarded in the College of Engineering (Summer 2005 to Spring 2006)

<table>
<thead>
<tr>
<th>Aerospace Engineering</th>
<th>136 Bachelor's Degrees</th>
<th>100 Master's Degrees</th>
<th>25 Doctoral Degrees</th>
<th>261 School Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical Engineering</td>
<td>77</td>
<td>8</td>
<td>11</td>
<td>96</td>
</tr>
<tr>
<td>Chemical and Biomolecular Engineering</td>
<td>169</td>
<td>25</td>
<td>26</td>
<td>220</td>
</tr>
<tr>
<td>Civil and Environmental Engineering</td>
<td>156</td>
<td>88</td>
<td>36</td>
<td>280</td>
</tr>
<tr>
<td>Electrical and Computer Engineering</td>
<td>358</td>
<td>208</td>
<td>82</td>
<td>648</td>
</tr>
<tr>
<td>Industrial and Systems Engineering</td>
<td>265</td>
<td>125</td>
<td>28</td>
<td>418</td>
</tr>
<tr>
<td>Materials Science Engineering</td>
<td>17</td>
<td>13</td>
<td>14</td>
<td>44</td>
</tr>
<tr>
<td>Mechanical Engineering (and NRE/MP)</td>
<td>295</td>
<td>182</td>
<td>51</td>
<td>528</td>
</tr>
<tr>
<td>Polymer, Textile and Fiber Engineering</td>
<td>13</td>
<td>2</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>1486 Bachelor's Degrees</strong></td>
<td><strong>751 Master's Degrees</strong></td>
<td><strong>276 Doctoral Degrees</strong></td>
<td><strong>2513 School Totals</strong></td>
</tr>
</tbody>
</table>

WOODRUFF SCHOOL UNDERGRADUATE DEGREES AWARDED BY GENDER AND ETHNICITY/CITIZENSHIP, SUMMER 2005-SPRING 2006

<table>
<thead>
<tr>
<th>ME</th>
<th>NRE</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>243</td>
<td>21</td>
</tr>
<tr>
<td>Females</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>273</strong></td>
<td><strong>22</strong></td>
</tr>
<tr>
<td>Asians</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>Blacks</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>Hispanics</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Multiracial</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Whites</td>
<td>211</td>
<td>17</td>
</tr>
<tr>
<td>Internationals</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

WOODRUFF SCHOOL DEGREES AWARDED FROM SUMMER 2005 TO SPRING 2006

UNDERGRADUATE DEGREES

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.S.</td>
<td>4</td>
</tr>
<tr>
<td>MSHP</td>
<td>5</td>
</tr>
<tr>
<td>MSME</td>
<td>158</td>
</tr>
<tr>
<td>MSNE</td>
<td>4</td>
</tr>
<tr>
<td>MSMP</td>
<td>9</td>
</tr>
<tr>
<td>MSBioE</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL MS DEGREES</strong></td>
<td><strong>182</strong></td>
</tr>
<tr>
<td>Ph.D. (47 ME, 1 NE, 3 BioE)</td>
<td>51</td>
</tr>
<tr>
<td><strong>TOTAL DEGREES</strong></td>
<td><strong>233</strong></td>
</tr>
</tbody>
</table>

WOODRUFF SCHOOL MASTER’S DEGREES AWARDED BY GENDER AND ETHNICITY/CITIZENSHIP, SUMMER 2005-SPRING 2006

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS</td>
<td>4</td>
</tr>
<tr>
<td>BIOE</td>
<td>1</td>
</tr>
<tr>
<td>MSHP</td>
<td>4</td>
</tr>
<tr>
<td>MSME</td>
<td>158</td>
</tr>
<tr>
<td>MSMP</td>
<td>9</td>
</tr>
<tr>
<td>MSNE</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL MS DEGREES</strong></td>
<td><strong>182</strong></td>
</tr>
<tr>
<td>Ph.D. (47 ME, 1 NE, 3 BioE)</td>
<td>51</td>
</tr>
<tr>
<td><strong>TOTAL DEGREES</strong></td>
<td><strong>233</strong></td>
</tr>
</tbody>
</table>

DOCTORAL DEGREES AWARDED BY GENDER AND ETHNICITY/CITIZENSHIP, SUMMER 2005-SPRING 2006

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME</td>
<td>42</td>
</tr>
<tr>
<td>NE</td>
<td>1</td>
</tr>
<tr>
<td>BioE</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>44</strong></td>
</tr>
<tr>
<td>Blacks</td>
<td>5</td>
</tr>
<tr>
<td>Hispanics</td>
<td>1</td>
</tr>
<tr>
<td>Whites</td>
<td>17</td>
</tr>
<tr>
<td>Internationals</td>
<td>14</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>51</strong></td>
</tr>
</tbody>
</table>
UNDERGRADUATE DEGREES AWARDED

A total of 295 degrees (273 ME, 22 NRE) were awarded from the Woodruff School in the past academic year; this is one of the largest numbers of B.S. degrees we have ever awarded and puts the Woodruff School in first or second place in the country. In summer 2005, 52 bachelor's degrees were awarded (51 ME, 5 NRE); in fall 2005, 81 bachelor's degrees were awarded (77 ME, 4 NRE); and in spring 2006, 162 degrees were granted (145 ME, 17 NRE). By gender, 264 were males and 31 were females.

Summer 2005
Katherine Adams
Scott Baker
Andre Bass
Bizuayehu Bekele
Christopher Bentley
Brian Bonner
Jason Bowlin
Elizabeth Carter
Charles DeLee
Daniel Denney
Justin Edwards
Joshua Emrich
Joseph Fulton
Perry Haman
Lindsey Heine
James Hill
Christopher Houston
Jeffrey Huntebrinker
Justin Jackson
Christine Jacob
Robert Jaeger
Adam Jones
Nicolai Jones
Michael Kaar
Benjamin Kingsley
Holly Kingsley
Michael Levins
Lee Macke
Pete Manglodiannis
William Murphy (NRE)
James Nelson
Jodie Netttles
Thang Nguyen
Minhyun Noh
John Pendley
Jonathan Pollak
Corey Pope
William Pryse
Ari Robbins
Nicholas Sabogal
Dapinder Sandhu
Christopher Siegel
Philip Smith
Frank Tran
Nicholas Treadwell
Emilie Tuilis
Christopher Vale
Yura Vinitsky
Michael Walliser
Jillian Walter
Philip Warren

Robert Murray
Japheth Nelson
Duy-Vy Nguyen
Thai Nguyen
Vi-Vi Nguyen
Michael Pang
Justin Pounders (NRE)
Matthew Powell
David Reid
Jonathan Ruby
Adam Ruh
Kenneth Sanderson
Sadat Shalik
Austin Shoemaker
Jason Snooks
Michael Starobin
Michael Upchurch
Jonathan Warshaw
Markus Wegner
Brian Williams
Bryan Wilmot
Anthony Wingo

Spring 2006
Seyed Aarabi-Taft
Michael Alexander
Larry Baldree
Zachary Barbre
Drew Bartlett
Ariene Bhuinya-Khan
Jonathan Iack
Lamar Blackman
Kennedy Boakye (NRE)
Nicholas Bolvin
Adam Boyd
Christopher Boyd (NRE)
David Brandenburg
David Broady
Altman Buch
Richard Burge
Kimberly Burns (NRE)
Marc Cameron
Joshua Carter
Eric Jay Chang
Justin Chastang
Obert Chen (NRE)
Sherad Chiu (NRE)
Christopher Clarke
William Coleman
Stacy Cook
Jeremiah Couvillion
Leland Curtis
Jon Danielson
Phuc Dao
Jean Davis
Kenjie Davis
Daniel Dillard
William English (RME)
Brian Etheridge
Francis Fearan
Jesse Foley
Christopher Fong (NRE)
Blake Forbes
Michael Fritts
John Fuller
Stephen Geyer
Travis Gibson
Elliott Glazer

Adam Glover
Christopher Golden
William Greene
William Hagler
Terry Hall
Steven Hamilton (NRE)
Sarah Han
Christopher Hannemann
James Hardie (RME)
John Harper
Joseph Harper
Michael Harrison
Andrew Henderson
Lisa Heightower
Christopher Humfries
Lee Huyhn
Daniel Hyer
Chaka Johnson
Douglas Johnson
Perry Johnson (NRE)
Adam Jones (NRE)
Walker Jones
Philip June
Christopher Kaiser
Michael Lubwama
Adam Kan
Christopher Kantus
Towney Kennard
Dale Kim
Paul Kitchens
Sean Paul Kline
Jeffrey Michael Kuntz
Stephen Lee Lafloon
Wooseup Lee
Brian Lockwood
William Ludwig
Kirsten Lundstrom
Aaron Lunt
Shelby Lux
Brett MacLaren (NRE)
David Malphurs
Ryan Manger (NRE)
Daniel Martyn
Gavin McDonald
Kenneth McKay
Manuel McMillan
Benjamin McWhorter
Scott Meader (RME)
Elisha Mellitz
Brent Miller
Charbak Mitra (NRE)
Ricardo Molinos
Caleb Monk
Jared Monroe
Hunter Moore
Rhonda Moore
William Moore
Thomas Newton
James Nishimuta
John Norris
Jinesh Patel
Manish Patel
Isaac Penny
Clintot Perry
Hai Pho
Alexey Podust
Matthew Prohaska
Adam Quareses
Matthew Rachford

Kevin Ray
Michael Reno
Kevin Riggs (NRE)
Barnyce Riley
Nicholas Roberts
Jennifer Robinson
Jeremy Rodgers
Steven Rogers
Joseph Sanchez
David Sauer
Jason Savarese
Joseph Schulz (NRE)
Charles Settles (RME)
Pranav Shah
Yael Shimoni
Jesse Short
Brock Shrader
Andrew Simrell
Michelle Siverd
Noelle Smith
Paul Socha
Christopher Sommer (NRE)
David Spitz
Tyler Sumner (NRE)
Eng Taing
Joshua Thalheimer
Gregory Thibeaux
Robert Thiets
Evans Thompson
Andrew Timm
Antoine Townes
Jason Turner
Rohit Vardhan
Javier Villa
Jill Vukmanic
Tyler Warnock
Daniel Waugh
Kerry Webster
Charles Wells (NRE)
Andrew Wernette
Andrew Whitehouse
Jason Wise
Eunice Yoon
Michael Zagars
Michael Zanca

Note: A few names were omitted from this list because the students requested that a confidentiality flag be placed on their record.
GRADUATE DEGREES AWARDED

In the past academic year, summer 2005 through spring 2006, the Woodruff School granted 233 graduate degrees (182 M.S, 51 Ph.D's), which is a record for the school. By gender, of the 51 Ph.D's, 44 went to males and seven to females. Of the 182 master's degrees, 155 went to males (143 ME, 12 NE) and 27 to females (21 ME, 6 NE). Additional information may be found in the charts on accompanying pages of this report.

SUMMER 2005 GRADUATES

NAME    DEGREE    ADVISOR    THESIS TITLE
See note*  MSME  Samuel Graham  Thermal Metrology of Polysilicon MEMS using Raman Spectroscopy
Jamil Ahmad  MSME  Suresh Sitaranam  Nonthesis
Ryan Austin  MSME  David McDowell  Numerical Simulation of the Shock Compression of Microscale Reactive Particle Systems
Jeff Badertscher  MSME  Kenneth Cunefare  Experimental Investigation of Dither Control On Effective Braking Torque
Theodore Baun  MSME  Wayne Whiteman  Nonthesis
Gerrit Bedier  MSME  Wayne Whiteman  Nonthesis
See note  MSME  J. R. Mahan  Nonthesis
See note  MSME  Fotis Sotropoulos  Nonthesis
Jason Bower  MSME  Wayne Whiteman  Nonthesis
Russell Burkey  MSME  Wayne Whiteman  Nonthesis
Barton Carter  MSME  David Orloff  Effect of Pore Size and Thickness on Critical Pressure of Elastic Systems
Scott Chesla  Ph.D.  Cheng Zhu  Two Dimensional (Solid Phase) Kinetic Analysis of FC Gamma Receptor III (CD16 Interaction with IgG
Lorenzo Consatti  MSME  J.R. Mahan  Nonthesis
Gary Daves  MSME  Wayne Whiteman  Nonthesis
Jared Dervan  MSME  Wayne Whiteman  Nonthesis
Matthew Determan  MSME  Srinivas Garimella  Experimental and Analytical Investigation of Ammonia-Water Desorption in Microchannel Geometries
Nguyễn Phước  MSME  Aldo Ferri  Modeling of Frictional Contact Conditions in Structures
Scott Driscoll  MSME  Wayne Book  The Design and Qualification of a Hydraulic Hardware-in-the-Loop Simulator
Marietta Edje  MSME  J. R. Mahan  Nonthesis
Zhiliang Fan  MSME  Peter Rogers  Nonthesis
Brandon Fisher  MSME  Wayne Whiteman  Nonthesis
Zachary Frady  MSME  Wayne Whiteman  Nonthesis
Darren Franch  MSME  Wayne Whiteman  Nonthesis
Jason Fuller  MSME  Wayne Whiteman  Nonthesis
See note  MSME  David Orloff  Smart Water Receiver for Use in Wet Press Section of a Paper Machine
Giangiacomo Groppi  MSME  J. R. Mahan  Nonthesis
Benjamin Hanson  MSMP  Farzad Rahmna  Nonthesis
Daniel Hays  MSME  Sheldon Jeter  Testing of an Axial Flow Moisture Separator in a Turbocharger System for Polymer Electrolyte Membrane Fuel Cells
Thomas Holst  MSME  Thomas Kurfess  Analysis of Spatial Filtering in Phase-Based Microwave Measurements of Turbine Blade Tips
Stacy Imler  Ph.D.  Marc Lebensten  In Vitro Modulation of Meniscus Biosynthesis: A Basis for Understanding Cellular Response to Physiologically Relevant Stimuli
John Iretton  MSME  Wayne Whiteman  Nonthesis
David Johnson  MSME  Wayne Whiteman  Nonthesis
Ali Kita  Ph.D.  I. Charles Ume  Measurement of Weld Penetration Depth Using Non-Contact Ultrasonic Methods
See note  MSME  Aldo Ferri  Experimental Investigation of Stick Slip Vibration Suppression using High-Frequency Dither
Boris Jean Kujawa  MSME  Wayne Whiteman  Nonthesis
Martin Kumadi  MSME  Shreyes Melkote  Workholding Optimization for Turning of Ring Shaped Parts
Cyril Labidi  MSME  Srinivas Garimella  The Design and Implementation of a Magnetorheological Silicone Composite State-Switched Absorber
Stacy Imler  Ph.D.  Marc Lebensten  In Vitro Modulation of Meniscus Biosynthesis: A Basis for Understanding Cellular Response to Physiologically Relevant Stimuli
John Iretton  MSME  Wayne Whiteman  Nonthesis
David Johnson  MSME  Wayne Whiteman  Nonthesis
Ali Kita  Ph.D.  I. Charles Ume  Measurement of Weld Penetration Depth Using Non-Contact Ultrasonic Methods
See note  MSME  Aldo Ferri  Experimental Investigation of Stick Slip Vibration Suppression using High-Frequency Dither
Boris Jean Kujawa  MSME  Wayne Whiteman  Nonthesis
Martin Kumadi  MSME  Shreyes Melkote  Workholding Optimization for Turning of Ring Shaped Parts
Cyril Labidi  MSME  Wayne Whiteman  Nonthesis
Chao-Chieh Lan  MSME  Kok Meng Lee  Nonthesis
Allen Lang  MSME  Andrei Fedrov  Nonthesis
Michael Lazarakis  MSME  Wayne Whiteman  Nonthesis
Bong Jae Lee  MSME  Zuhorn Xiang  Nonthesis
Anne Marie Lerner  MSME  Kenneth Cunefare  The Design and Implementation of a Magnetorheological Silicone Composite State-Switched Absorber
Daniel Lockhart  MSME  Lena Ting  Prediction of Muscle Activation Patterns for Postural Control Using a Feedback Control Model
Margaret Lowder  MSME  Raymond Vito  Nonthesis
Sakethranam Mahalingam  Ph.D.  Suresh Sitaranam  Study of Interfacial Crack Propagation In Flip Chip Assemblies With Nano-Filled Underfill Materials
Michael Michaux  Ph.D.  Kenneth Cunefare  Supression of Friction-Induced Oscillations Through Use of High-Frequency Dither Signals
See note  Ph.D.  Srinivas Garimella  Supercritical Gas Cooling and Condensation of Refrigerant R410A at Near-Critical Pressures
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See note  MSME  Steven Liang  Empirical Analysis of Cutting Constants in Micro End Milling Operations
Nurudeen Oluyole  MSME  S. M. Ghiaasian  Boiling Heat Transfer in Mini and Micro Channels
Maria Otero  MSME  Wayne Whiteman  Nonthesis
Andrew Palmiotto  MSMP  Farzad Rahmna  Nonthesis
Ivan Parra  MSME  Wayne Whiteman  Nonthesis
Steven Penn  MSME  Wayne Whiteman  Nonthesis
Caleb Price  MSMP  Farzad Rahmna  Nonthesis
Steven Rekuc  MSMP  Chris Paredis  Eliminating Design Alternatives under Interval-Based Uncertainty
Chad Ryther  MSME  Wayne Whiteman  Nonthesis

PREVIOUS SCHOOL
See note  University of Missouri
Jamil Ahmad  Louisiana State
Ryan Austin  Johns Hopkins
Jeff Badertscher  University of Cincinnati
Theodore Baun  Penn State
Gerrit Bedier  Technische Universitat
See note  University of Arkansas
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NOTE: The names of these students have been removed because they have placed a confidentiality flag on their file.
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<td>Measurement and Mapping of Pulse Combustion Impingement Heat Transfer Rates</td>
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<td>Handheld Gamma-ray Spectrometry as a Means of Assaying Radioactive Levels in Lungs</td>
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<td>Jerald Thompson</td>
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<td>Vikas Tomar</td>
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<td>Min Zhou</td>
<td>Atomistic Modeling of the AL and FE203 Material System Using Classical Molecular Dynamics</td>
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<td>Hongqing Wang</td>
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<td>David W. Rosen</td>
<td>A Unit Cell Approach for Lightweight Structure and Compliant Mechanism</td>
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### SPRING 2006 GRADUATES

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<tr>
<th>NAME</th>
<th>DEGREE</th>
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<td>Amine Abid</td>
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<td>W. Steven Johnson</td>
<td>A Finite Element and Experimental Investigation on the Fatigue of Riveted Lap Joints in Aircraft Applications</td>
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<td>Propagation of Imprecise Probabilities Through Black Box Models</td>
<td>University of Texas</td>
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<td>Vacuum-Assisted Wet Shaping of Paper</td>
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<td>Integrated Inspection for Precision Part Production</td>
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<td>Kanakishore Dasari</td>
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<td>Marnico Deladisma</td>
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<td>Marc Smith</td>
<td>Accuracy and Enhancement of the Lattice Boltzmann Method for Application to a Cell-Polymer</td>
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<td>Jeremy Dobkins</td>
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<td>Chris Wang</td>
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<td>Joel Fortgang</td>
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<td>William Singhose</td>
<td>Combined Mechanical and Command Design for Micro-Milling Machines</td>
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<td>Ali Gordon</td>
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<td>David McDowell</td>
<td>Crack Initiation Modeling of a Directionally-Solidified Ni-Base Superalloy</td>
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<td>Carmen Greene</td>
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<td>Nolan Hertel</td>
<td>Experience Using a Small Field of View Gamma Camera for Intraoperative Sentinel Lymph Node Procedures</td>
<td>Morgan State</td>
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<td>Cloilde Grimault</td>
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<td>Universite de Technologie</td>
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<td>Siva Gurrum</td>
<td>Ph.D.</td>
<td>Yogendra Joshi and</td>
<td>Thermal Modeling and Characterization of Nanoscale Metallic Interconnects</td>
<td>University of Maryland</td>
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<td>Sangil Han</td>
<td>Ph.D.</td>
<td>Shreyes Melkote</td>
<td>Mechanisms and Modeling of White Layer Formation in Orthogonal Machining of Steels</td>
<td>Seoul National University</td>
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<td>Clifford Johnson</td>
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<td>Ben Zinn</td>
<td>Adaptive Control of Combustion Instabilities Using Real- Time Modes Observation</td>
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<td>James Maddox</td>
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<td>Weston Stacey</td>
<td>Fuel Cycle Optimization of a Helium-Cooled, Sub-Critical, Fast, Transmutation of Waste Reactor with a Fusion Neutron Source</td>
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<td>Virginia Manquis</td>
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<td>Monte Carlo Dose Verification of an X-ray Beam in a Virtual Water Phantom</td>
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<td>Llary McCarthy</td>
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<td>Steady and Pulsed Performance Trends of High Concentration DMFC</td>
<td>University of Pittsburgh</td>
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<td>Kevin McFall</td>
<td>Ph.D.</td>
<td>J. Robert Mahan</td>
<td>Artificial Neural Network Method for Solving Boundary Value Problems with Arbitrary Irregular Boundaries</td>
<td>MIT</td>
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<td>Michael Mears</td>
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<td>Thomas Kuress</td>
<td>Geometry Estimation and Adaptive Actuation for Centering Preprocessing and Precision Measurement</td>
<td>Virginia Tech</td>
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<td>Francis Mess</td>
<td>Ph.D.</td>
<td>Steven Danyuk</td>
<td>A Novel Sensor to Monitor Surface Charge Interactions: The Optically Stimulated Contact Potential Difference Probe</td>
<td>Georgia Tech</td>
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<td>Jian Mi</td>
<td>Ph.D.</td>
<td>Jack Lackey</td>
<td>SIC Growth by Laser CVD and Process Analysis</td>
<td>Tsinghua University</td>
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<td>Gregory Mocko</td>
<td>Ph.D.</td>
<td>Farokh Flexre and</td>
<td>A Knowledge Framework for Integrating Multiple Perspectives in Decision-Centric Design</td>
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<td>Said Abdel-Khalik</td>
<td>Experimental and Numerical Studies of Mist Cooling with Thin Evaporating Subcooled Liquid Films</td>
<td>University of Belgrade</td>
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<td>Development of Dynamic Seating System for High-Tenex Extensor Thrusts</td>
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<td>Shannon Pine</td>
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<td>Manufacturing Structurally Integrated Three Dimensional Phased Array Antennas</td>
<td>Penn State</td>
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<td>Reinhard Powell</td>
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<td>I. Charles Ume</td>
<td>Development of Convective Solder Relflow and Projection Moire System and FEA Model for PWBA Warpage Prediction</td>
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<td>Jeffrey Rambo</td>
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<td>Reduced-Order Modeling of Multiscale Turbulent Convection: Application to Data Center Thermal Management</td>
<td>Bucknell University</td>
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<td>Stereolithography Characterization for Surface Finish Improvement: Inverse Design Methods for Process Planning</td>
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<td>Rahul Sathe</td>
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<td>Design and Development of a Novel Implantable Prosthetic Vein Valve</td>
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<td>Multiscale Modeling of the Deformation of Semi-Crystalline Polymers</td>
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<td>Katherine Shilling</td>
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<td>Thomas Kitchen</td>
<td>Mesoscale Edge Characterization</td>
<td>Rose Hulman Institute</td>
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<td>Heungoo Shin</td>
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<td>Peter Heesketh</td>
<td>Fabrication of Atomic Force Microscope Probes Integrated with Electrodes for Micro Four- Point Probe and SECM-APM</td>
<td>Seoul National University</td>
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<td>Dmitry Shlyubsky</td>
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<td>Ari Glezer</td>
<td>Flow Control in an Annuar-Return Flow UsingCombustion Driven Actuators</td>
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<td>Investigation of Wet Paper Viscoelastic Structural Properties</td>
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<td>Si Su</td>
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<td>Jianmin Qu</td>
<td>Electrical, Thermomechanical and Reliability Modeling of Electrically Conductive Adhesives</td>
<td>Dalian Institute of Technology</td>
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<td>Selection for Rapid Manufacturing Under Epistemic Uncertainty</td>
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</table>
FELLOWSHIPS

What follows is a list of the major fellowships held by Woodruff School graduate students from July 1, 2005 to June 30, 2006.

AMERICAN HEART ASSOCIATION
Rihma Coleman
Sundiatu Jangha

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN
Shannon Stott

ARCS
Ashante Allen
Charlotte Kotas
Ryan Krauss
Anne-Marie Lerner
Jeffrey Rambo
James Shepherd
Eric Vanderploeg
Annica Wayman

ASME TEACHING FELLOWSHIP
Anne-Marie Lerner

DEPARTMENT OF DEFENSE FELLOWSHIP
David Damm
Brent Nelson
Graham Nelson
Donald Rhymer
Bobby Watkins

DEPARTMENT OF ENERGY FELLOWSHIP
Justin Pounders

DEPARTMENT OF HOMELAND SECURITY FELLOWSHIP
Logan McLeod

FACES
Byron Johns

FORD FOUNDATION FELLOWSHIP
Ashante Allen

FULBRIGHT FELLOWSHIP
Fabian Goericke

GEORGIA TECH FELLOWSHIP
JoSette Broiles
Sharon Chandler
Christopher Green
Sarah Herbison
John Huey
Roderick Jackson
Bryan Johns
Andrew Schnell
Jevin Scrivens
Bobby Watkins
Annica Wayman
Freddie Wilson

INPO FELLOWSHIP
Sharon Chandler

INTEL FELLOWSHIP
Katharine Shilling
Thomas Smith

MANUFACTURING EDUCATION PROGRAM
Michael Mears
Sivaramakris Venkatachalam
John VanDer Welde

MICHELIN GTL FELLOWSHIP
Shaya Nematfar

NASA FELLOWSHIP
Nathan Masters
Thomas Smith

NASA HARRIET FELLOWSHIP
Christopher Green
Byron Johns
Janine Johnson
Timothy Koehler
Russell Marzette

NANT FELLOWSHIP
Charles Becht
Jonathan Clausen
Heather Hubble

NATIONAL INSTITUTES OF HEALTH FELLOWSHIP
Kenneth Dupont

NATIONAL SCIENCE FOUNDATION GRADUATE RESEARCH FELLOWSHIP
Jason Aughenbaugh
JoSette Broiles
Joseph Charest
John Connelly
Mary Douglas
Jay Ling
Hannah Muchnik
David Murphy
Jennifer Phillips
Felipe Roman-Morales
Megan Satterfield
Andrew Schnell
Stephanie Thompson

OFFICE OF NAVAL RESEARCH FELLOWSHIP
Janine Johnson

PACKARD FELLOWSHIP
James Ford
Christopher Green
Freddie Wilson
Jamal Wilson

SAINTS FELLOW
Jeffrey Callioca
Danny Carpenter
Jeanne Dion
Harry Rowland
Wendy Siemens

STEP FELLOWSHIP
Khalid Sorensen

UNITED NEGRO COLLEGE FUND FELLOWSHIP
James Ford
Christopher Green
Byron Johns
Brandy Rogers
Freddie Wilson
Jamal Wilson

WHITAKER FELLOWSHIP
Rhiima Coleman
Catherine Reyes

WOODRUFF FELLOWSHIP
Ashante Allen
Ulfi Andresen
Jeff Badertscher
Douglas Bakkum
Jonathan Barletta
Thomas Beechem
David Blackburn
Maria-Isabel Carnasciali
Jonathan Clausen
Ted Conrad
Michael DeSalvo
Jeanne Dion
Gerty Donavon
Zachary Douglas
Steven Douglass
David Dumbould
Aaron Enes
Benoit Forget
Christopher Goodman
Michael Haberman
Karen Hallow
John Huey
Roderick Jackson
Byron Johns
Janine Johnson
Jesse Killion
Timothy Koehler
Logan McLeod
Brent Nelson
Graham Nelson
Patrick Opdenbosch
Gregory Ostrowicki
Andrew Perkins
Jeffrey Rambo
Jessica Remmert
Christopher Rinehart
Konrad Rykaczewski
Benay Sager
Megan Satterfield
Katharine Shilling
Thomas Smith
Jiann-Cherng Su
Sathyan Subbiah
John VanDer Welde
Lin Wan
Jie Yang

WOODRUFF SCHOOL GRA FELLOWSHIP
Matthew Determan
Ning Jiang
Brian Kern
John Reap

WOODRUFF SCHOOL GTL FELLOWSHIP
Angelo Caruso
Stephen Gredler
Nathan Lunetta
Douglas Merrell
John VanDer Welde
FACULTY

ACOUSTICS AND DYNAMICS
Yves H. Berthelot, Director of GT Lorraine and Professor
Ph.D., University of Texas at Austin, 1985
Fellow of ASA

Gary W. Caille, Head, GTRI Systems Program Office (Joint Appointment)
Ph.D., Georgia Institute of Technology, 1988

Kenneth A. Cunefare, Professor
Ph.D., Pennsylvania State University, 1990
Fellow of ASA

Marc E. Levenston
Ph.D., Stanford University, 1995

Jens O. M. Karlsson
Ph.D., University of Michigan, 1995

Raymond P. Vito, Associate Dean for Academic Affairs and Professor
Ph.D., Cornell University, 1971
Fellow of AIMBE and ASME

Ajit P. Yoganathan, The Wallace H. Coulter Distinguished Faculty Chair in Engineering and Regents' Professor (Joint Appointment)
Ph.D., California Institute of Technology, 1978
Fellow of AIMBE

Cheng Zhu, Professor of Biomedical Engineering (Joint Appointment)
Ph.D., Columbia University, 1988

COMPUTER-AIDED ENGINEERING AND DESIGN
Janet K. Allen, Associate Professor at GT Savannah
Ph.D., University of California, Berkeley, 1973
Fellow of ASME

Bert Bras, Professor
Ph.D., University of Houston, 1992

Seung-Kyum Choi, Assistant Professor at GT Savannah
Ph.D., Wright State University, 2006

Mervyn Fathianathan, Assistant Professor at GT Savannah
Ph.D., National University of Singapore, 2004

Farrokh Mistree, Professor and Associate Chair of the Savannah Campus
Ph.D., University of California, Berkeley, 1974

Chris Paredis, Assistant Professor
Ph.D., Carnegie Mellon University, 1996

David W. Rosen, Professor
Ph.D., University of Massachusetts, 1992
Fellow of ASME

Dirk Schaefer, Assistant Professor at GT Savannah
Ph.D., University of Stuttgart, Germany, 2003

Suresh Sitaraman, Professor
Ph.D., Ohio State University, 1989
Fellow of ASME

FLUID MECHANICS
Cyrus Aidun, Professor
Ph.D., Clarkson University, 1985

Ari Glezer, George W. Woodruff Chair in Thermal Systems and Professor
Ph.D., California Institute of Technology, 1981
Associate Fellow of AIAA

G. Paul Neitzel, Professor
Ph.D., Johns Hopkins University, 1979
Fellow of APS and ASME, and Associate Fellow of AIAA

David Parekh, Deputy Director of GTRI and Associate Vice Provost for Research (Joint Appointment)
Ph.D., Stanford University, 1989

Marc K. Smith, Professor
Ph.D., Northwestern University, 1982

Minami Yoda, Professor
Ph.D., University of Houston, 1992

Bert Bras, Professor
Ph.D., University of California, Berkeley, 1973

Andrei G. Fedorov, Associate Professor
Ph.D., Purdue University, 1997

Andrei G. Fedorov, Associate Professor
Ph.D., Purdue University, 1997

Srinivas Garimella, Professor
Ph.D., Ohio State University, 1990
Fellow of ASME

S. Mostafa Ghiaasiaan, Professor
Ph.D., University of California, Los Angeles, 1983
Fellow of ASME

HEAT TRANSFER, COMBUSTION, AND ENERGY SYSTEMS
Frederick W. Ahrens, Professor, (retired from GT in June 2006)
Ph.D., University of Wisconsin, 1971

J. Nari Davidson, Associate Dean of Engineering and Professor, (retired from GT in April 2006)
Ph.D., University of Michigan, 1969

Andrei G. Fedorov, Associate Professor
Ph.D., Purdue University, 1997

Srinivas Garimella, Professor
Ph.D., Ohio State University, 1990
Fellow of ASME

S. Mostafa Ghiaasiaan, Professor
Ph.D., University of California, Los Angeles, 1983
Fellow of ASME

J. Nari Davidson, Associate Dean of Engineering and Professor, (retired from GT in April 2006)
Ph.D., University of Michigan, 1969

Andrei G. Fedorov, Associate Professor
Ph.D., Purdue University, 1997

Srinivas Garimella, Professor
Ph.D., Ohio State University, 1990
Fellow of ASME

S. Mostafa Ghiaasiaan, Professor
Ph.D., University of California, Los Angeles, 1983
Fellow of ASME
Sheldon M. Jeter, Associate Professor
Ph.D., Georgia Institute of Technology, 1979

Yogendra K. Joshi, Associate Chair for Graduate Studies and John M. McKenney and Warren D. Shiver Distinguished Chair in Building Mechanical Systems
Ph.D., University of Pennsylvania, 1984
Fellow of AAAS and ASME

David Orloff, Professor
Ph.D., Drexel University, 1974

William J. Wepfer, Vice Provost for Distance Learning and Professional Education and Professor
Ph.D., University of Wisconsin, 1979
Fellow of ASHRAE and ASME

Zhuomin Zhang, Associate Professor
Ph.D., Massachusetts Institute of Technology, 1992
Fellow of ASME

Ben T. Zinn, David S. Lewis Chair of Aerospace Engineering and Regents’ Professor (Joint Appointment)
Ph.D., Princeton University, 1965
Fellow of AIAA and ASME
Member of NAE

MANUFACTURING

Daniel F. Baldwin, Associate Professor
Ph.D., Massachusetts Institute of Technology, 1994

Jonathan S. Colton, Professor
Ph.D., Massachusetts Institute of Technology, 1986
Fellow of ASME and SPE

Steven Danylyuk, Morris M. Bryan, Jr. Chair in Mechanical Engineering for Advanced Manufacturing Systems and Professor
Ph.D., Cornell University, 1974
Fellow of ASME, ASMI, and STLE

Tequila A. L. Harris, Assistant Professor
Ph.D., Rensselaer Polytechnic Institute, 2006

Steven Y. Liang, Morris M. Bryan, Jr. Professorship in Mechanical Engineering for Advanced Manufacturing Systems
Ph.D., University of California, Berkeley, 1987
Fellow of ASME

J. Rhett Mayor, Assistant Professor
Ph.D., University of Natal, Durban, South Africa, 2001

Shreyes N. Melkote, Professor
Ph.D., Michigan Technological University, 1993

Timothy Patterson, Assistant Professor
Ph.D., Georgia Institute of Technology, 1999

I. Charles Ume, Professor
Ph.D., University of South Carolina, 1985
Fellow of ASME and IEEE

MECHANICS OF MATERIALS

Mohammed Cherkaoui, Professor at GT Lorraine
Ph.D., University of Metz (France), 1995

Ken Gall, Associate Professor of Materials Science and Engineering (Joint Appointment)
Ph.D., University of Illinois, 1998

Karl I. Jacob, Associate Professor of Polymer, Textile and Fiber Engineering (Joint Appointment)
Ph.D., Ohio State University, 1985

Laurence J. Jacobs, Professor of Civil and Environmental Engineering (Joint Appointment)
Ph.D., Columbia University, 1987

W. Steven Johnson, Professor of Materials Science and Engineering (Joint Appointment)
Ph.D., Duke University, 1979
Fellow of ACS, ASME, ASTM, and NIA

Christopher S. Lynch, Associate Chair for Administration and Professor
Ph.D., University of California, Santa Barbara, 1992
Fellow of ASME

David L. McDowell, Carter N. Paden Distinguished Chair in Metals Processing and Regents’ Professor
Ph.D., University of Illinois, 1983
Fellow of ASME

Richard W. Neu, Associate Professor
Ph.D., University of Illinois, 1991

Jianmin Qu, Professor
Ph.D., Northwestern University, 1987
Fellow of ASME

Naresh N. Thadani, Professor of Materials Science and Engineering (Joint Appointment)
Ph.D., New Mexico Institute of Technology, 1984
Fellow of ASM International

Min Zhou, Assistant Professor
Ph.D., Brown University, 1993
Fellow of ASME

Ting Zhu, Assistant Professor
Ph.D., Massachusetts Institute of Technology, 2004

MICROELECTROMECHANICAL SYSTEMS

F. Levent Degertekin, Associate Professor
Ph.D., Stanford University, 1997

James Gole, Professor of Physics (Joint Appointment)
Ph.D., Rice University, 1971
Fellow of AAAS

Samuel Graham, Assistant Professor
Ph.D., Georgia Institute of Technology, 1999

Peter J. Hesketh, Professor
Ph.D., University of Pennsylvania, 1987
Fellow of AAAS

William King, Assistant Professor
Ph.D., Stanford University, 2002

Wenjing Ye, Assistant Professor
Ph.D., Cornell University, 1998

TRIBOLOGY

Itzhak Green, Professor
Sc.D., Technion-Israel Institute of Technology, 1984
Fellow of ASME and STLE

Richard F. Salant, Georgia Power Distinguished Professor in Mechanical Engineering
Sc.D., Massachusetts Institute of Technology, 1967
Fellow of ASME and STLE

Jeffrey L. Streator, Associate Professor
Ph.D., University of California, Berkeley, 1990

Ward O. Winer, Eugene C. Gwaltney, Jr. Chair of the Woodruff School and Regents’ Professor
Ph.D., Cambridge University, 1964
Ph.D., The University of Michigan, 1961
Fellow of AAAS, ASEE, ASME, and STLE
Member of NAE

NUCLEAR AND RADIOLOGICAL ENGINEERING/MEDICAL PHYSICS

Said I. Abdel-Khalik, Southern Nuclear Distinguished Professor
Ph.D., University of Wisconsin, 1973
Fellow of ANS and ASME

Cassiano de Oliveira, Professor
Ph.D., University of London, 1964

Nolan E. Hertel, Professor
Ph.D., University of Illinois, 1979
Fellow of HPS
Farzad Rahnema, Associate Chair of the Woodruff School, Chair of the Nuclear and Radiological Engineering/Medical Physics Programs, and Professor
Ph.D., University of California, Los Angeles, 1981
Fellow of ANS
Weston M. Stacey, Jr., Fuller E. Callaway Professor in Nuclear Engineering and Regents' Professor
Ph.D., Massachusetts Institute of Technology, 1966
Fellow of ANS and APS
C.-K. Chris Wang, Associate Professor
Ph.D., Ohio State University, 1989

ACADEMIC PROFESSIONALS
Jeffrey A. Donnell, Coordinator of the Frank K. Webb Program in Professional Communication
Ph.D. English, Emory University, 1990
Kristi Lewis, Undergraduate Academic Advisor
M.S., Clemson University, 2000
David Sanborn, Associate Chair for Undergraduate Studies
Ph.D., University of Michigan, 1969
Fellow of ASME
Michael D. Stewart
M.S., Wayne State College, 1983
Wayne Whiteman, Director of the Office of Student Services
Ph.D., Georgia Institute of Technology, 1996

RESEARCH FACULTY
Scott S. Bair, Principal Research Engineer
Ph.D., Georgia Institute of Technology, 1990
Fellow of ASME
Van B. Biesel, Research Engineer II
M.S., Georgia Institute of Technology, 1993
John R. Bogle, Research Engineer II
M.S., Georgia Institute of Technology, 1987
Jayme Caspall, Research Engineer II
Tom Crittenden, Research Engineer II
Ph.D., Georgia Institute of Technology, 2003
John Culp, Research Engineer II
B.S.M.E., Georgia Institute of Technology, 2000
John Doane, Research Engineer II
M.S.M.E., Georgia Institute of Technology, 2001
Michael Gray, Senior Research Engineer
M.S.M.E., Georgia Institute of Technology, 1992
Francois M. Guillot, Research Engineer II
Ph.D., Georgia Institute of Technology, 2000
Steven R. Hahn, Research Engineer II
M.S., Georgia Institute of Technology, 1988
Sam Heffington, Research Engineer II
Ph.D., Georgia Institute of Technology, 2001
James Huggins, Research Engineer II
M.S.M.E., Georgia Institute of Technology, 1988
James Larsen, Senior Research Scientist
Gregg D. Larson, Senior Research Scientist
Ph.D., Georgia Institute of Technology, 1996
Angela Lin, Research Engineer I
M.S., Georgia Institute of Technology, 2002
John Mandrekas, Senior Research Scientist
Ph.D., University of Illinois at Urbana-Champaign, 1987
James S. Martin, Senior Research Engineer
M.S., Georgia Institute of Technology, 1994
Raghuram V. Pucha, Senior Research Engineer
Ph.D., Indian Institute of Science, 1995
Dennis L. Sadowski, Research Engineer II
M.S., University of Illinois at Chicago, 1986
Reza Sadr, Research Engineer II
Ph.D., University of Utah, 2002

Dave Trivett, Principal Research Scientist
M.S., University of Wisconsin, 1976
Bojan Vukasinovic, Research Engineer II
Ph.D., Georgia Institute of Technology, 2002
Jelena Vukasinovic, Research Engineer II
M.S., Georgia Institute of Technology, 2000
Xuezhen Zhang, Research Scientist II
Nanjing University Department of Physics, 1958-1963
Ji-Xun Zhou, Principal Research Scientist
Chinese Academy of Sciences Graduate School
(Ocean Acoustics), 1963-1967
Fellow of ASA

EMERITUS FACULTY
Samuel C. Barnett, started in 1946, retired in 1980
William Z. Black, started in 1967, retired in 2000
Melvin W. Carter, started in 1972, retired in 1988
Joseph D. Clement, started in 1965, retired in 1991
Gene T. Colwell, started in 1966, retired in 1995
J. Narl Davidson, started in 1973, retired in 2006
Monte V. Davis, started in 1973, retired in 1987
Prateen V. Desai, started in 1966, retired in 2002
Stephen L. Dickerson, started in 1965, retired in 1996
Pandeli Durbetalik, started in 1964, retired in 1995
Geoffrey G. Eichholz, started in 1963, retired in 1988
James G. Hartley, started in 1977, retired in 2004
Jacek Jarzynski, started in 1986, retired in 2001
Bernd Kahn, started in 1974, retired in 1996
Ratib Karam, started in 1972, retired in 1997
Jack Lackey, started in 1986, retired in 2005
Alfred Schneider, started in 1975, retired in 1990

WHAT A RETIRED PROFESSOR CAN DO
Georgia Tech Emeritus Professor of Mechanical Engineering Stephen Dickerson and his wife, Jane, provided $1.5 million to crate the first endowed chair in the School of Civil and Environmental Engineering. It will be named the Frederick R. Dickerson Chair in honor of his late father.

The Dickerson Chair is intended to serve as the foundation for major research and education efforts in urban transportation systems. Research will help alleviate traffic and air pollution through real-time communications and data processing that enhances public transit, ride-sharing systems, and car rentals.

Dickerson’s research as a professor in the Woodruff School was in manufacturing automation, but he has experience in the field of transportation. He served a year with the office of the Secretary for the U.S. Department of Transportation, started a successful bus and vanpool service in metro Atlanta in 1975, and once taught the graduate urban transportation course in civil engineering.

Dickerson also has a long list of philanthropy and service to Georgia Tech. He serves as an Alumni Association trustee. He is a member of the Phoenix Club, the President’s Council, and the Hill Society, and also regularly contributes to the Machine Vision Fund in the Woodruff School. In December 2004, he was named an honorary alumnus by the Alumni Association for his work as a non-alumnus on behalf of the great good of Georgia Tech. He holds several patents that have been the basis for Georgia Tech spin-off companies in robots and machine vision for manufacturing applications.
PATENTS AWARDED
The following U.S. Patents were awarded to Woodruff School academic and research faculty in the past academic year. This will bring to 204 the total number of first-page patent plaques that are on display in the MRDC Building.


Suresh Sitaraman, Multi-Axis Compliance Spring, with Lunyu Ma and Qi Zhu, U.S. Patent 7,011,530, March 14, 2006.

FELLOWS
The following faculty members were elected or appointed to the grade of Fellow in a professional society in the past academic year. Fifty-three current Woodruff School academic and research faculty members hold the grade of Fellow in the American Society of Mechanical Engineers (ASME), the largest number of representatives in that organization. To see which faculty members are fellows, please refer to the Faculty listing in this annual report.

James Gole was elected a Fellow of the American Association for the Advancement of Science.

Steve Johnson was elected to the grade of Fellow in the American Society for Composites.

Ray Vito was elected a Fellow of the American Institute of Medical and Biological Engineering.

Ward Winer was named an honorary member of the American Society for Mechanical Engineers.

PROMOTIONS
The following faculty members were promoted to the rank of full professor: Ken Cunefare, Srinivas Garimella, Shreyes Melkote, and Minami Yoda. Dr. Garimella was granted tenure.

NEW WOODRUFF FACULTY FELLOWS NAMED
Dr. Ward O. Winer, Eugene C. Gwaltney, Jr. Chair of the Woodruff School, announced the appointment of three associate professors as new Woodruff Faculty Fellows: Andres Garcia, Shreyes Melkote, and Minami Yoda. The new appointments go from January 1, 2006 to December 31, 2010.

Andres Garcia received his Ph.D. from the University of Pennsylvania in 1996 and began his career at Georgia Tech as an assistant professor in fall 1998. His research includes cellular and tissue engineering, cell adhesion, and biomaterials. Shreyes Melkote received his Ph.D. in 1993 from Michigan Technological University and began his career as an assistant professor in 1995. His research includes precision machining, laser-assisted micromachining, surfaces, flexible fixturing, and CAM/CAPP. Minami Yoda received her Ph.D. from Stanford University in 1993 and began her career at Georgia Tech as an assistant professor in 1995. Her research includes experimental fluid mechanics, suspension flows, nano- and microfluids, and optical diagnostics.

The Woodruff Faculty Fellows program began in June 1991 to retain and recruit outstanding mid-career faculty. The aim of the program is to give the Fellows an incentive to continue to advance their careers and to remain at Georgia Tech, thereby advancing the quality of our program in the future. Fellows receive $12,000 a year in discretionary support for each of the five years of the appointment. The total number of faculty fellows is limited to no more than one-third of the current associate professors on the faculty.

Current Woodruff Faculty Fellows are Bert Bras and David Rosen (2002-2007), and Srinivas Garimella, Robert Goldberg, and Min Zhou (2004-2008). In addition to the Woodruff Faculty Fellows program the Woodruff School has the Anderer Family Fellow Endowment with the same objectives. Ken Cunefare is the Anderer Faculty Fellow (2002-2007). For more details about faculty fellows in the Woodruff School view their detailed faculty pages at www.me.gatech.edu (click on Faculty/Staff) or see their pages in the Woodruff School’s Research Brochure.

In naming the new faculty fellows, Dr. Winer pointed out that there are a number of recognitions that new faculty might receive, such as a Career Award, and there are special recognitions for senior faculty, such as the appointment to an endowed or distinguished chair in the School, but there are few honors that provide mid-career faculty members with the visibility and recognition they deserve.

If you are interested in helping us recognize additional mid-career associate professors in the Woodruff School and helping us retain our outstanding faculty, please contact Dr. Winer at (404) 894-3200 or ward.winer@me.gatech.edu to discuss your interest.
FACULTY HONORS

Andrei Fedorov received the 2006 Branimir F. von Turkovich Outstanding Young Manufacturing Engineer Award from the Society of Manufacturing Engineers.

Izhak Green received the 2006 Machine Design Award from the American Society of Mechanical Engineers.

Nolan Hertel was selected Faculty of the Year by the Georgia Tech Graduate Student Government Association.

William King received the 2006 Outstanding Young Manufacturing Engineer Award from the Society of Manufacturing Engineers.

Jack Lackey, who retired in summer 2005, was named Professor Emeritus.

Marc Levenston received a Docteur Honoris Causa Degree from Universite Henri Poincare in France.

Suresh Sitaraman received the Georgia Tech Award for Outstanding Faculty Leadership for the Development of Graduate Research Assistants.

Wayne Whiteman was named Most Interactive Faculty by the Georgia Tech Ambassadors. The award was presented at the Dean Griffin Day Reception.

Ben Zinn received the 2006 George Westinghouse Gold Medal from the ASME for outstanding contributions to low-emissions combustor development and improved understanding of unsteady combustion phenomena in power generating combustion devices for a collaborative approach to fundamental research that has lead to practical solutions.

TECH NAMES LAB FOR PROFESSOR ZINN

David S. Lewis Jr. Chair and Regents’ Professor Ben T. Zinn had the unusual honor of having the combustion laboratory in the School of Aerospace Engineering named in his honor. Zinn is in the School of Aerospace Engineering with a joint appointment in the Woodruff School. He is an expert in the dynamics of flow, combustion, propulsion, and energy conversion systems. Zinn is also director of the NASA University Research Education Technology Institute Center for Aeropropulsion and Power based at Georgia Tech. Its research is aimed at improving aircraft engine technologies.

“The contributions of Ben Zinn over a four-decade career in combustion and propulsion research are internationally recognized for their influence on the field of aerospace propulsion. It’s entirely appropriate that this unusual and highly capable facility bear his name,” said Robert Loewy, chair of the School of Aerospace Engineering.

Zinn’s current research focuses on low emission combustors, improving the performance of liquid rockets and investigating the control of combustion processes in power-generating gas turbines and jet engines. Zinn started his career at Georgia Tech in 1965 as an assistant professor. A co-holder of nine patents, he has published extensively and lectured throughout the world. He earned his doctoral and master’s degrees in aerospace and mechanical engineering from Princeton University and his master’s degree in mechanical engineering from Stanford University. Zinn is a member of the National Academy of Engineering and a fellow of the America Society of Mechanical Engineers and the American Institute of Aeronautics and Astronautics.

NEW FACULTY MEMBERS

Erica Bowden will join the faculty in fall 2007 as an assistant professor after she completes a year-long Hunt Postdoctoral Fellowship in Finland. Her research area is acoustics and dynamics.

Gary Caille, from GTRI, has received a joint appointment in the Woodruff School as a Professor. His area is acoustics and dynamics.

Sang H. Cho will join the Medical Physics faculty in January 2007 as an Associate Professor.

Seung-Kyum Choi began in summer 2006 as an Assistant Professor at Georgia Tech Savannah. His specialty is computer-aided engineering and design.

Nico Declercq began at GTL in fall 2006 as an Assistant Professor. Her area is manufacturing.

Rhett Mayor joined the faculty in summer 2006 as an Assistant Professor. His specialty in manufacturing.

Dirk Schaefer was hired as an Assistant Professor of Mechanical Engineering at GT Savannah. His area of interest is computer-aided engineering and design.

Naresh Thadhani, Professor and Associate Chair of Materials Science and Engineering, has received a joint appointment in the Woodruff School. His area of interest is mechanics of materials.

Wilfred F. G. van Rooijen will join the faculty in spring semester 2007 as an Assistant Professor of Nuclear and Radiological Engineering.

RETIREMENTS AND CHANGES

Frederick Ahrens retired at the end of the summer semester.

Narl Davidson retired in April 2006 as Professor in the Woodruff School and Associate Dean in the College of Engineering (see related article).

Imme Ebert-Uphoff left her position as Associate Professor of Mechanical Engineering to become an Adjunct Professor in the Woodruff School and in the College of Computing.

Sam Shelton retired at the end of spring semester 2006.
DAVIDSON RETIRES FROM GT

A special reception was held in March 2006 to honor and bid farewell to J. Narl Davidson. Davidson came to Georgia Tech in 1973 as an associate professor of nuclear engineering; he ended his thirty-three year career at Georgia Tech as a Professor in the Woodruff School and the Associate Dean for Finance and Administration in the College of Engineering. Some of his other career achievements at Georgia Tech include: the 1977 Outstanding Teaching Award; in 1983 he became the associate director of mechanical engineering; named the 1988 Engineer of the Year in Education by the Atlanta Section of the ASME; and in 1990 he became Associate Dean in the College of Engineering. He received the ANAK Award and Omicron Delta Kappa Friend of the Student Award in 1992, and the Good Guy in Education Award from the Georgia and Atlanta Women’s Political Caucuses in 1997.

Dr. Davidson received his bachelor’s degree in 1963 from Cornell University, and his M.S. and Ph.D. in 1964 and 1969, respectively, both from the University of Michigan. In 1970 he began his long career in academia, as an assistant professor at Texas A&M University.

In his honor, Dean of Engineering Don Giddens announced that the conference room in the College of Engineering would be named in his honor. A few months after his retirement, the Board of Regents named him a Professor Emeritus.

STAFF

Of the 47 current staff members listed below, 30 are females and 17 are males.

Name  Title
Segried Allen  Administrative Assistant II
Trudy Allen  Academic Advisor I
Samantha Bellard  Administrative Assistant I
Shauna Bennett-Boyd  Administrative Coordinator
Vladimir Bortkevich  Electrical Engineer III
Kellie Burns  Research Technician III
Robert Cooper  Mechanical Technician III
Phillip R. Coulson  Financial Specialist
Andrew G. (Drew) Davis  Electronics Specialist
Judith E. Diamond  Administrative Coordinator
Dimetra Diggs-Butler  Program Coordinator
Kenneth Dollar  Director of Support and Technical Services
Richard Duplessis  Computer Services Specialist IV
Melody Foster  Administrative Manager I
Norma L. Frank  Academic Advisor I
Kyle French  Electrical Engineer II
David Gifford  Electronics Specialist
Rona A. Ginsberg  Administrative Coordinator
John W. Graham  Program Coordinator
Cheryl Griffin  Director of Support and Technical Services
Angela L. Hicks  Computer Services Specialist IV
Phyllis Hinton  Administrative Manager I
Nancy Hutton  Academic Advisor I
Wanda Joefield  Administrative Coordinator
Rona A. Ginsberg  Program Coordinator
John W. Graham  Director of Support and Technical Services
Cheryl Griffin  Computer Services Specialist IV
Angela L. Hicks  Administrative Manager I
Phyllis Hinton  Academic Advisor I
Nancy Hutton  Electrical Engineer II
Wanda Joefield  Electronics Specialist
Glenda Johnson  Machine Shop Manager
John W. Graham  Administrative Assistant I
Cheryl Griffin  Financial Manager I
Angela L. Hicks  Project Coordinator II
Phyllis Hinton  Accountant III
Nancy Hutton  Administrative Coordinator
Melinda A. Wilson  Academic Advisor I
Richard Duplessis  Computer Services Specialist IV
Norma L. Frank  Administrative Manager I
Kyle French  Academic Advisor I
David Gifford  Electrical Engineer II
Rona A. Ginsberg  Electronics Specialist
John W. Graham  Director of Communications
Cheryl Griffin  Machine Shop Manager
Angela L. Hicks  Administrative Assistant I
Phyllis Hinton  Financial Manager I
Nancy Hutton  Project Coordinator II
Melinda A. Wilson  Accountant III
Richard Duplessis  Administrative Coordinator
Norma L. Frank  Academic Advisor I
Kyle French  Electrical Engineer II
Rona A. Ginsberg  Electronics Specialist
John W. Graham  Director of Communications
Cheryl Griffin  Machine Shop Manager
Angela L. Hicks  Administrative Assistant I
Phyllis Hinton  Financial Manager I
Nancy Hutton  Project Coordinator II
Melinda A. Wilson  Accountant III

PROMOTIONS

The following staff members were promoted during the past academic year:

- Judy Diamond was promoted to Administrative Coordinator in the Love Building.
- Richard Duplessis was promoted to Computer Services Specialist IV.
- Nancy Hutton was promoted to Accountant III.
- Wanda Joefield was promoted to Administrative Coordinator in the MARC Building.

HONORS

- Ken Dollar and Rona Ginsberg received ten-year Georgia Tech service awards at the annual faculty/staff honors luncheon.
- Wanda Joefield received the Woodruff School Outstanding Achievement Award for summer semester 2005. She also won the 2005 Overall Award.
- Cecilia Jones received the Woodruff School Outstanding Achievement Award for fall semester 2005.
- Melinda Wilson received the Woodruff School Outstanding Achievement Award for spring semester 2006.

CHANGES

Caroline Wood, Director of Development in the Woodruff School for the past eight years, accepted a promotion as Associate Director of Corporate Development. She moved to the Wardlaw Building.
THE REACTOR CONTAINMENT BUILDING IS TORN DOWN

Site preparation has begun for the planned Marcus Nanotechnology Building on the northwest corner of Ferst and Atlantic Drives. First specialists had to clear asbestos from two campus structures. In addition to the abatement for the Electronics Research Building (ERB), the more complicated part was the removal of the containment building that is part of the Neely Nuclear Research Center. The containment building that housed Tech's nuclear reactor until 1999 was part of the abatement and containment project. The instructional building will remain in use. Disassembling the building was no easy task. Workers first cut through the seventeen inches of concrete that encased a one-half welded steel envelope.

The Neely Nuclear Research Center was built in the 1963; the reactor was decommissioned in 1995 as a security measure prior to the Summer Olympic Games. In 1997, citing the cost to upgrade and operate such a facility, the Georgia Tech administration opted to initiate the site's permanent decommission. Two years later, with help from the U.S. Nuclear Regulatory Commission and the Environmental Protection Agency, the reactor and support equipment were removed and transported to landfills. Since then, the NRC has officially released the containment building for general use, but it has remained unoccupied for the past seven years. The law requires the removal of any sources of asbestos before demolition can occur.
ALUMNI

COLLEGE OF ENGINEERING AWARDS

Dwight Alford (BME 1962, MSME 1964), president of Alford Leasing Company in Raleigh, North Carolina, was inducted into the Academy of Distinguished Engineering Alumni. He is a member of the George Tech President’s Council and chair of the College of Engineering Advisory Board.

Alfredo Arias (BME 1969, MSEE 1974) was inducted into the Academy of Distinguished Engineering Alumni. He is the retired Executive Vice President of Cerveceria Nacional in El Dorado, Panama.

Lisa Beeson (BME 1990) was inducted as a member of the College of Engineering Young Engineering Alumni. She is the President of Quietly Making Noise, LLC in Oviedo, Florida.

Thomas A. Christopher (MS ESM 1968) was inducted into the Academy of Distinguished Engineering Alumni. He is president and CEO of Framatome ANP and vice chairman and CEO of AREVA Enterprises.

Leo J. Drum, Jr. (BME 1935) was inducted into the Hall of Fame. He is the retired founder of Capital Refrigeration Company in Montgomery, Alabama.

E. Al Eppinger (BME 1960) was inducted into the Hall of Fame. He is the retired senior vice president of Buckeye Technologies and retired plant manager of Procter and Gamble.

Jeffrey T. Gasser (BME 1983) was inducted into the Academy of Distinguished Engineering Alumni. He is the Executive Vice President and Chief Nuclear Officer of Southern Nuclear Operating Company in Birmingham, Alabama.

Manuel Junco, Jr. (BME 1975) was inducted into the Academy of Distinguished Engineering Alumni. He is Senior Vice President, Downstream Operations, Energy and Chemicals Division of Fluor Corporation in Corona del Mar, California.

TECH ALUMNA NAMED UNIVERSITY PRESIDENT

Dr. Carolyn Meyers (MSME 1979, Ph.D. ChE 1984) was named president of Norfolk State University in Norfolk, Virginia, a position she assumed in July 2006. Prior, she was provost and vice chancellor for academic affairs at North Carolina A&T State University.

Meyers has had a long academic career. She began at Georgia Tech in 1979 as an instructor of Mechanical Engineering. Soon after completing her doctoral degree, she became an assistant professor of Mechanical Engineering. She was promoted to Associate Professor in 1990, was the first Associate Dean of Research for the College of Engineering, and Left Georgia Tech at the end of 1995. She then went to North Carolina A&T State University as Professor and Dean of Engineering, and then to the National Science Foundation, where she served as a program officer for the Divisions of Undergraduate Education and Human Resource Development. She then returned to North Carolina A&T as interim provost and vice chancellor.

Meyers received the NSF Presidential Young Investigator Award, the National Society of Black Engineers’ Golden Torch Award, and the Society of Automotive Engineers Ralph A. Teetor Award. She was inducted into the Georgia Tech College of Engineering Academy of Distinguished Engineering Alumni.

A VISITOR FROM ITALY

Franco Cimatti (BME 1981) was the featured speaker at the 2006 Annual Georgia Tech Auto Show. Cimatti was born in Modena, Italy, the original headquarters of renowned automaker, Ferrari. As a young boy Franco liked motorcycles. “Around junior high, I began to read motorcycle magazines,” he says, “and I found drawings that showed how engines work. Later I learned mechanical engineers did that and I said, ‘That’s what I want to do.’”

Because of his father’s job, his family moved often. “I was a student at the American School in Mexico when I first heard of Georgia Tech,” Cimatti said. “Even though we moved again to Miami, I remembered that a friend’s brother said Georgia Tech was one of the best engineering schools in the country. After I graduated from Palmetto High in 1977, I applied and was accepted into the mechanical engineering program.”

Cimatti received his master’s degree from MIT one year after his graduation from Georgia Tech. He then joined his parents in England and searched for an engineering job. He became a substitute teacher and continued to search for a job. After a compulsory one-year tour in the Italian military, Cimatti landed a job with Ferrari. He was offered a position in the testing department working with a complete car. He quickly rose in the company. He was assigned to test shock absorber dampers on a 412, one of the few high-performance sedans ever made by Ferrari. Next, he was assigned to evaluate the Testarossa. In 1989, he was named chief testing coordinator for the 348 Spider and the Mondial. In 1994, Cimatti was named concept design manager at Ferrari and given the task of creating the 612 Scaglietti, a four-seat, high-speed touring coupe. He was given complete control of the design. “This may be the best job in the world,” he said. “Working at Ferrari is so exciting. People ask me what is my favorite project and I have to say ‘the next one’ because doing something new excites me. I’m able to work alone or in small teams rather than as part of a big committee.”

PAUL ALLEN APPRECIATION DAY

The Woodruff School celebrated Paul Allen Appreciation Day at the Student Competition Center in May 2006. For ten years, Paul Allen was the General Motors University Relations Team Leader for Georgia Tech. The reception recognized Paul for his many accomplishments in promoting the General Motors-Georgia Tech relationship. Paul graduated with a bachelor’s degree in mechanical engineering in 1987. He is one of the founding members of gt motorsports, the student competition group, and he continues to support the team years after his graduation from Georgia Tech.
SPECIAL BIRTHDAY WISH

Randy Whitfield (BME 1932) got a surprise ride around the Georgia Tech campus to the football stadium in the Ramblin' Reck, two months before his 97th birthday in February 2006. Along with his daughter Croom Coward and grandson Randy McDow, who is the Director of the President's Scholarship Program at Georgia Tech, they visited the monument by the Tech Tower, which was the class of 1932's graduation gift to Georgia Tech. The car was made in 1930 while Randy Whitfield was an undergraduate at Tech (1927-1932).

CONTRIBUTORS

This list includes contributors who have designated gifts to the Woodruff School of Mechanical Engineering between July 1, 2005 and June 30, 2006.

Alumni, Friends, Parents and Students

Philip S. Armstrong, Jr., IE, 1965
G. Bingham Bache, ME, 1961
Jeanne H. Balsam, ICS, 1977
Keith L. Bernhardt, EE, 1997
Milind A. Borkar, EE, 2002
Debra J. Brook, Friend
Henry C. Burtby, ME, 1945
Geoffrey Carter, Student
Jayme Caspall, ME, 1988
Chaz Cone, Jr., IM, 1961
Henry P. Cotton, ME, 1968
William B. Crane, ME, 1950
Stephen L. Dickerson, Honorary Alumnus
Michael B. Drake, Friend
David R. Fenton, EE, 1976
George W. Fleming, Jr., ME, 1947
Jan E. Fridrichsen, ME, 1979
Frank E. Genovese, Parent
Bradley D. Geving, ME, 1998
Arnold I. Goldberg, ME, 1950
Jose I. Gonzalez, ME, 1944
M. Fred Hale, ME, 1963
Eric P. Igol, Student
Sheldon M. Jeter, ME, 1979
Javid L. Kelley, NRE, 2005
Kenneth B. Kimble, ME, 2001
Arlene Kurtis, Friend
Dean J. Lennard, ME, 1953
Jackson D. Leits, Friend
Gay M. Lowe, Honorary Alumna
David F. Lynn, Friend
Luzia Reggio Melli, Friend
Andrew W. Mobley, Friend
Isaacs E. Murray, Jr., ME, 1949
Jerome Pentaleri, Friend
James E. (Jack) Pruitt, Jr., ME, 1956
William Roby, Student
Elizabeth T. Sandelskys, Friend
Roshan Shetty, Friend
Alan F. Sides, ME, 1983
A. Chester Skinner, Jr., ME, 1943
Sterling E. Skinner, EE, 1967
Weston M. Stacey, PHYS, 1959
David L. Sullivan, ARCH, 1976
Phillip J. Sullivan, AE, 1955
Dean C. Sutter, Friend
Christopher Tanaka, CHE, 1998
Frank K. Webb, ME, 1938
Wayne White, ME, 1997
Albert Whiteside, IV, Student
Wendell M. Williams, Jr., ME, 1955
Charles H. Willis, Friend
Robert R. Winchester, ME, 1960
Ward O. Winer, Honorary Alumna
Joel A. Wright, CE, 1978
Jack M. Zeitler, ME, 1948

Corporations, Foundations and Organizations

Air Preheater Company
Air Products and Chemicals, Inc.
American Society of Mechanical Engineers
American Standard Foundation
ARCS Foundation, Inc.
Arpeggio Acoustic Consulting LLC
Ashtian, Inc.
Bache Enterprises
Bank of America Foundation
BP Foundation, Inc.
Capitol Engineering, Inc.
Caterpillar Foundation
Caterpillar Inc.
CH2M HILL Foundation
Char-Broil
Chevron Oil Company
ChevronTexaco Corporation
Cito Petroleum Corporation
The Corox Company
Community Foundation for Greater Atlanta
Crown Products Company Inc.
Cummins Business Services
Deere & Company
EVPACO, Inc.
Exxon Mobil Corporation
Festo Corporation
Flowserve Corporation
The Fluor Foundation
FMC Technologies
The Ford Motor Company
Framatome ANP, Inc.
Gay M. Love Charitable Trust
GE Appliances
General Electric Company
GE Foundation
General Motors Foundation
Greater Houston Community Foundation
Guidant Foundation
Gulf Power Foundation
Gulfstream Aerospace Corporation
Herbert and Marian Haley Foundation
Intel Corporation
Intel Foundation
Jacquet Micro Devices, Inc.
John Brown Associates
John Deeere Foundation
Johnson Research & Development Inc.
Kimberly-Clark Corporation
Levenson Foundation Inc.
Lockheed Martin Corporation
Lockheed Martin Corporate Foundation
Loeith Cook Company
Lyondell Chemical Company
Mabel's Prototyping and Coffeehouse, Inc.
Merck & Co., Inc.
Merrick Industries, Inc.
Michelin North America
Milliken & Company, Inc.
Mingledorff's Incorporated
National Fluid Power Association
National Instruments
PACE
Parametric Technology Corporation
The Parsons Corporation
Pi Tau Sigma
Procter & Gamble Company
Procter & Gamble Foundation
Qept Technologies, Inc.
Raytheon Company
Roche Palo Alto, LLC
Rolls-Royce Allison
Saab Cars USA, Inc.
SaluMedica, LLC
Schlumberger
Schwab Fund for Charitable Giving
Scientific-Atlanta Foundation, Inc.
Sealed Air Corporation
Shell Oil Company
Siemens AG
Siemens Corporation
Society of Automotive Engineers, Inc.
Society for Cryobiology
Southern Nuclear Operating Co.
SprayGlo Refinishing & Body Repair
Springer-Verlag Berlin-Heidelberg
Thermoseal, Inc.
The Timken Company
Tom Barrow Company
Tredagar Industries Inc.

Faculty and Staff

Janet K. Allen
Gene T. Colwell
Jonathan S. Colton
Steven Danyluk
Royal F. Dawkins
Stephan L. Dickerson, Honorary Alumnus
Aldo A. Ferri
Thomas K. Gaylord
Robert E. Guldberg
Mark Hay
Nolan E. Hertel
Sheldon M. Jeter, ME, 1979
Alan V. Larson
Leland T. Long
Christopher S. Lynch
Lora L. Magnuson
David L. McDowell
Bill Miller
Farrakh Mistree
Robert M. Merem
Jianmin Qu
Farzad Rahnema
Robert M. Nerem
Jianmin Qu
Farshad Rahmema
Richard F. Salant
Suresh K. Sitarman
Weston M. Stacey, PHYS, 1959
William J. Wepfer
Wayne White, ME, 1997
Wendell M. Williams, Jr., ME, 1955
Caroline G. Wood
Ward O. Winer, Honorary Alumnus
FINANCES

For fiscal year 2006 (July 1, 2005 to June 30, 2006), the Woodruff School’s finances were reflected in the number of grants and contracts received from external sources, the budget of the School (state support), and the revenue generated from the Woodruff Endowment. Detailed information on any of these categories is available from the Woodruff School’s Director of Finance, David Stone, at (404) 894-7400.

Number of Grants, Contracts, and Proposals

Total number of active (external/internal) grants and contracts (includes endowment accounts) 474
Number of proposals submitted to external agencies 166
Number of proposals awarded from external agencies 116
Number of externally funded grants, contracts, and endowments receiving new funds 195
Number of internally funded grants receiving new funds 13

Endowments (as of July 1, 2005), $k$

Total Woodruff School endowments (market value principal) $86,575
Endowment-generated revenue available for expenditure $3,192

As of July 1, 2006 the total market value principal of the Woodruff School endowments is $96,736,000 and the endowment-generated revenue available for expenditure is $3,452,000.

THE WOODRUFF ENDOWMENT

Funds from the George W. Woodruff Trust continue to provide for the enhancement of the School of Mechanical Engineering. George W. Woodruff served as a trustee and trustee emeritus of the Georgia Tech Foundation from 1941 until his death at the age of 91 in 1987, and he received the Alumni Distinguished Service Award in 1963. In addition to providing a significant endowment for the School of Mechanical Engineering, his contributions to Georgia Tech provide National Merit Scholarships and scholarships for student athletes in nonrevenue producing sports and are an ongoing source of unrestricted support for the Institute.

The market value of the Mechanical Engineering Woodruff Endowment on July 1, 2005 was $62,192,258. The endowment generated $2,241,527 that was available to the Woodruff School to update and enrich our programs during fiscal year 2006. The expenditures fall into these categories: faculty, students, facilities, lectures and seminars, staff, publications, and general projects and supplies.

FACULTY

- Funds from the Woodruff Trust are used to endow the George W. Woodruff Chair in Mechanical Systems and the George W. Woodruff Chair in Thermal Systems. Dr. Jerry H. Ginsberg, Professor of Mechanical Engineering, has held the Mechanical Systems Chair since 1989. Dr. Ari Glezer, Professor of Mechanical Engineering, was appointed to the Thermal Systems Chair in 2002.

- Funds travel and equipment purchases for faculty.
- Funds the Woodruff Faculty Fellows Program, which encourages young professors to build their careers at Georgia Tech by providing seed money for research projects and other discretionary activities. The award is given for a five-year period. Drs. Bert Bras, Andres Garcia, Srinivas Garimella, Robert Guldberg, Shreyes Melkote, David Rosen, Minami Yoda, and Min Zhou are faculty fellows.
- Partially supports the School’s participation in the Georgia Tech Lorraine Program in Metz, France.
- Partially supports the Frank K. Webb Program in Professional Communication and the hiring of academic professionals and part-time faculty to supplement the course offerings of the School.
- Funds faculty recruiting and a faculty retreat.
- Provides nuclear and radiological engineering students with graduate research assistantships to support teaching.
STUDENTS
- The largest single category of support is for students ($921,529) in the form of teaching assistantships, research assistantships, fellowships, and fees impacting 299 graduate students.
- Provides funds, including travel, to recruit new ME, NRE, and MP graduate students to the Woodruff School. This includes four recruiting weekends in which potential graduate students are brought to campus for a weekend of activities.
- Funds the Annual Spring Banquet, a yearly gathering of students, faculty, and staff to recognize the accomplishments of Woodruff School students and to honor the Woodruff School’s Annual Distinguished Alumnus and the Outstanding Educator.
- Partially funds student organizations such as the ASME Student Chapter, gt motorsports, GT Off-Road, GT Robojackets, and WSSAC.
- Provides partial financial support for student participants in the Georgia Tech Lorraine program.
- Provides funds for the Outstanding Seniors Dinner. The purpose of this annual dinner is to encourage Woodruff School seniors with a grade point average of 3.5 and above to go to graduate school.
- Funds luncheon meetings between the Woodruff School administration and graduate students at which graduating students are asked to assess our programs.
- Funds an Open House and other activities in the Woodruff School during Family Weekend.
- Supports the Woodruff School Annual Cookout, held at the beginning of the fall semester, where new graduate students can meet Woodruff School faculty, staff, and returning graduate students.
- Provides plaques and funds for students who receive an award at the annual Student Honor’s Day Luncheon.
- Partial support for the Pi Tau Sigma National Office, the honorary mechanical engineering society that the School hosts.
- Helps fund recruiting efforts for undergraduate students in nuclear and radiological engineering.

OTHER ENDOWMENTS
In addition to the Woodruff Endowment, the Woodruff School has a number of other endowments with a total value of more than $26,423 million. Most of these endowments are designated funds and can be categorized into mechanical engineering endowments, endowed scholarship programs for undergraduate students, and endowed fellowships for graduate students.

MECHANICAL ENGINEERING ENDOWMENTS
- The Arnold Goldberg Endowment Fund
- The Augustin A. Ramirez/HUSCO International Distinguished Chair Fund
- The Carter N. Paden, Jr. Distinguished Chair Fund
- The Centennial-Mechanical Engineering Fund
- The Dean Lennard Endowment Fund
- The Eugene C. Gwaltney, Jr. Chair in Manufacturing Fund
- The Frank K. Webb, Jr. Endowment Fund
- The Harold W. Gegenheimer Fund
- The Ike Murray Endowment Fund
- The J. Erskine Love, Jr. Family Endowment Fund
- The Jack M. Zeigler Endowment Fund
- The Jack M. Zeigler Outstanding Educator in the School of Mechanical Engineering Award Endowment Fund
- The James Charles Leathers Endowment Fund
- The John G. Johnson Mechanical Engineering Fund
- The John M. McKenney & Warren D. Shiver Distinguished Chair in Building Mechanical Systems Fund
- The Joseph H. Anderer Faculty Fellow Endowment Fund
- The Mary B. and Henry L. Pruitt Endowment Fund
- The ME-BioEngineering Research and Education Fund
- The Morris M. Bryan, Jr. Chair in Advanced Manufacturing Systems Fund
- The Neely Professorship Fund
- The Parker H. Petit Chair Fund
- The Phillip F. L’Engle and Williams B. Hardin Endowment Fund
- The Warren K. Wells Endowment for Mechanical Engineering Fund
- The William B. Crane, Sr. Endowment Fund

SCHOLARSHIPS FOR UNDERGRADUATE STUDENTS
- The Alan F. Sides Scholarship Endowment Fund
- The Arthur Dean Brook Scholarship Fund
- The Carl F. Phillips Endowment Fund
- The Danyluk ME Scholarship Endowment Fund
- The David V. Carswell Memorial Scholarship Fund
- The Francis R. Hammack Scholarship Endowment Fund
- The John S. Webb and Julian C. Stanley, Sr. Scholarship Endowment Fund
- The Joseph H. Dean Memorial Endowment Fund
- The Leslie U. Hammack and Ola Ryle Hammack Memorial Fund
- The Paden-Cheves Scholarship Fund
- The Procter & Gamble Technical Scholarship Fund
- The Richard A. Trotter Memorial Scholarship Fund
- The Richard K. Whitehead, Jr. Fund

FELLOWSHIPS FOR GRADUATE STUDENTS
- The James E. Pruitt, Jr. Fellowship
- The John Harris Maddox Fellowship Endowment Fund
- The Paul R. Yopp Memorial Fellowship Fund
- The William H. Glenn Fellowship Fund

FACILITIES
- Helps fund the operation of the Student Competition Center (the Tin Building).
- Provides funds to improve and furnish School facilities, including computer cluster and networking equipment.
- Provides funds to upgrade Woodruff School security equipment.

LECTURES AND SEMINARS
- Underwrits the Woodruff Distinguished Lecture.
- Provides support for the Woodruff Colloquium Series. These funds allow the Woodruff School to bring in well-known scholars to present a seminar and interact with the faculty in small groups.

PUBLICATIONS AND PUBLIC RELATIONS
- Funds the design, production, and distribution of all Woodruff School publications.
THE ADVISORY BOARD

Members of the Woodruff School’s advisory board gathered for dinner at the Globe Restaurant the night before the annual meeting. At the meeting on Friday, November 4, 2005, School Chair Dr. Ward O. Winer gave his annual State of the School presentation for the past academic year. There were discussions on the need for Board assessment of undergraduate programs for the 2008 ABET review; how the Board can assist the Woodruff School in achieving the goals set in the School’s Strategic Plan; and how the board can assist the Woodruff School with Campaign 2010 goals. There were video conference calls with the folks from Georgia Tech Lorraine and GT Savannah. Afternoon group sessions included discussions with untenured Woodruff School faculty; the Faculty Advisory Committee; and some graduate students. The role of the advisory board is to recommend strategic directions for the Woodruff School; suggest broad-based curriculum changes; and consult with the Chair and faculty on important issues. Dr. Deborah Kilpatrick served as chair of the meeting.

Mr. Dennis Assanis  
Chairman, School of Mechanical Engineering  
University of Michigan  
Ann Arbor, Michigan

Mr. Thomas A. Barrow  
(BME 1948)  
Atlanta, Georgia

Ms. Lisa A. Beeson  
(BME 1992)  
Atlanta, Georgia

Mr. Jeffrey A. Benjamin  
Vice President, Licensing & Regulation  
Exelon Corporation  
Warrenville, Illinois

Mr. Michael J. Bly  
(BME 1990)  
Director, Hybrid Vehicle Integration  
General Motors Corporation  
Pleasant Ridge, Michigan

Mr. Lou Cerone  
General Electric Energy Systems  
Atlanta, Georgia

Mr. David A. Christian  
Senior Vice President & Chief Nuclear Officer  
Dominion Energy  
Glenn Allen, Virginia

Mr. Thomas A. Coleman  
(BSPhys 1971, MSNE 1973)  
Vice President  
Framatome ANP  
Lyndhurst, Virginia

Mr. William W. Dean  
(BME 1977)  
Newcomb & Boyd  
Atlanta, Georgia

Mr. Joseph P. DeRoy  
Vice President  
Operations Support  
Entergy  
Jackson, Michigan

Dr. James J. Duderstadt  
President Emeritus and University Professor of Science and Engineering  
The University of Michigan  
Ann Arbor, Michigan

Mr. Ken S. Folk  
Manager, Core Analysis  
Southern Nuclear Operating Company  
Birmingham, Alabama

Dr. Gregory Foster  
(BME 1995)  
Atlanta, Georgia

Dr. Deborah L. Kilpatrick  
(BME 1989, MSME 1994, Ph.D. ME 1997)  
Southern Nuclear Operating Company  
Birmingham, Alabama

Dr. James A. Lake  
(MSNE 1969, Ph.D. NE 1972)  
Associate Lab Director, Nuclear & Energy Systems  
Idaho National Engineering & Environmental Laboratory  
Idaho Falls, Idaho

Mr. Louis B. Long  
(BSPhys 1966, MSNE 1967)  
Vice President, Technical Support  
Southern Nuclear Operating Company  
Birmingham, Alabama

Dr. William R. McCollum Jr.  
Senior Vice President, Nuclear Support  
Duke Power Company  
Charlotte, North Carolina

Mr. Mark Morelli  
(ME 1987)  
Vice President and General Manager  
Carrier Transicold  
Farmington, Connecticut

Dr. Joseph L. Smith Jr  
(BME 1952, MSME 1953)  
Senior Professor of Mechanical Engineering  
Massachusetts Institute of Technology  
Cambridge, Massachusetts

Mr. Michael Tinskey  
(MSME 1991)  
Director, Business Dev.  
Ford Automotive  
Ford Motor Company  
Dearborn, Michigan

Mr. Charles M. Tolly  
Logistics Development Director  
Caterpillar Logistics Services, Inc.

Dr. Kyle H. Turner  
(BSE 1969, MSNE 1969, Ph.D. NE 1971)  
Chief Executive Officer  
McCallum-Turner, Inc.

Mr. Henry B. Ward III  
(BME 1953)  
Associate  
Alston & Bird  
Charlotte, North Carolina

Mr. J. Gregory Foster  
(BME 1989, MSME 1994, Ph.D. ME 1997)  
Los Altos, California

Mr. John Kluber  
Vice President  
Kluber Skahan & Associates  
Batavia, Illinois

Mr. Thomas Kopanski  
Siemens  
Norcross, Georgia

Mr. Robert E. Koski  
Highlands, North Carolina

Mr. J. Gregory Foster  
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Los Altos, California

Mr. John Kluber  
Vice President  
Kluber Skahan & Associates  
Batavia, Illinois

Mr. Thomas Kopanski  
Siemens  
Norcross, Georgia

Mr. Robert E. Koski  
Highlands, North Carolina

Acknowledgment: This report is written and edited by Rona Ginsberg, Director of Communications for the Woodruff School. Craig Moonshower designed the document. The photographs were taken by Gary Meek, Rob Felt, Rona Ginsberg, and Melinda Wilson. Additional photos are from the Georgia Tech or the Woodruff School Archives. Noah McKeely designed the cookout tee-shirt. Thanks to Tom Akins, Janet Allen, Trudy Allen, Yves Berthelot, Demetra Diggs-Butler, Melody Foster, Norma Frank, Ingrid Hayes, Glenda Johnson, Yolendra Joshu, Kristi Lewis, Randy McDow, Megan McRainey, Farzad Rahnema, David Sanborn, Florence Stoia, David Stone, Sterling Skinner, Candace Wade, Bill Wepfer, Wayne Whiteman, Melinda Wilson, Ward Winer and Caroline Wood for providing information for this report. We gratefully acknowledge the financial support of the Woodruff Endowment to the George W. Woodruff School of Mechanical Engineering.

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THROUGH THE YEARS:
A Brief History of Georgia Tech and The Woodruff School

1889 • By January, 129 students were registered for the first degree offered, the Bachelor of Science in Mechanical Engineering.
1890 • Tech graduated its first two students with degrees in mechanical engineering: G. C. Crawford and H. L. Smith. Smith was the winner of a coin toss to determine who had the honor of receiving the first degree.
• Tech’s first official seal was made in the foundry by mechanical engineering students.
1892 • The shop building burned.
• The first four-year class graduated.
1896 • J. S. Coon became the Superintendent of Shops (wood shop, machine shop, blacksmith).
• The contract system of commercial production of goods for the public was phased out. Items produced in the shops were now used for experimentation, laboratory, testing and design work throughout Georgia Tech.
• For eight years, mechanical engineering was the only degree offered. Degrees in civil engineering and electrical engineering were added.
1901 • The senior class defied the Administration by refusing to return to campus on December 31st; they returned on January 2nd and were forever known as the Insubordinate Seniors.
1902 • The new curriculum described a mechanical engineering program that emphasized design, mathematics, and problem solving.
• The senior thesis was introduced, which was an experimental laboratory project emphasizing design and testing. Students wrote an academic paper, drew a blueprint for the design of their work, and then produced it in the shop or laboratory.
1905 • The 80 H.D. Corless Engine was installed in the experimental laboratory.
1906 • Class names were changed to apprentice, freshman, sophomore, junior, and senior from sub-apprentice, apprentice, middler, junior, and senior.
1907 • The Carnegie Library opened.
1910 • A bill passed the Georgia Legislature giving Georgia Tech $35,000 provided the school could raise an additional $15,000 for a new mechanical engineering building (a new shop building).
1912 • The Cooperative Education Department was established to coordinate work-study programs.
• The first three units of the Mechanical Engineering building were constructed.
1915 • The Georgia Tech student chapter of the ASME received a charter.
• The Power Plant was completed, supplying energy needs for the five-acre campus, but was also important to the early mechanical engineering curriculum as a teaching tool.
1920 • George P. Burdell, Tech’s long-lived mythical student, began “attending” class.
1921 • The first M.S.M.E. was authorized.
1922 • J. S. Coon, the first Head of the Department of Mechanical Engineering, retired after 35 years at Georgia Tech.
1925 • Tech awarded its first Master of Science degrees.
1928 • Brittain Dining Hall opened. The Department of Mechanical Engineering made wrought iron for the light fixtures.
1931 • The Georgia Legislature created the University System of Georgia.
1932 • The Board of Regents of the University System assumed control of all state public schools, including Georgia Tech.
• The Georgia Tech Nu chapter of Pi Tau Sigma (the mechanical engineering honorary society) was established.
1941 • The Mechanical Engineering Research Building opened.
1945 • Tech became the first institution to provide low-cost married housing to GI Bill students.
1946 • The doctoral program in mechanical engineering was established.
• Georgia Tech adopted the quarter system of classes.
1948 • The Board of Regents authorized the Georgia School of Technology to be renamed the Georgia Institute of Technology.
• The College of Engineering and the General College were created.
1949 • The Department of Mechanical Engineering became the School of Mechanical Engineering.
1950 • Georgia Tech awarded its first Doctor of Philosophy degree.
1952 • The Board of Regents voted to make Georgia Tech coeducational; the first two women students enrolled in the fall quarter.
1952 • The Board of Regents voted to make Georgia Tech coeducational; the first two women students enrolled in the fall quarter.
1956 • Georgia Tech’s first two women students received their degrees.
1957 • The legislature granted Georgia Tech $2.5 million for its nuclear reactor project.
1961 • Georgia Tech was the first major state university in the Deep South to desegregate without a court order.
1962 • The School of Nuclear Engineering was established, offering only graduate degrees.
1963 • The Frank H. Neely Nuclear Research Center building opened.
1969 • The Space Science and Technology Complex was completed and mechanical engineering moved in.
1972 • The bachelor’s degree in nuclear engineering was added.
1978 • The Woodruff School granted its first doctoral degree to a minority student.
1984 • The School of Nuclear Engineering merged with the School of Mechanical Engineering.
1985 • The School of Mechanical Engineering was named for its benefactor, George W. Woodruff.
1986 • The first Master of Science degree in nuclear engineering was awarded, but a Ph.D. in mechanical engineering was given to a woman.
1989 • The Woodruff School Distinguished Alumnus Award was established.
1990 • The Frank K. Webb Program in Professional Communication was established in the Woodruff School.
1991 • The first Woodruff Distinguished Lecture was given.
1995 • The first Woodruff Distinguished Lecture was given.
1997 • The campus in Metz, France opened. The Georgia Tech Lorraine program expanded to include course work in mechanical engineering.
• The first fall freshman class that was required to own a personal computer entered Tech.
• The Nuclear Engineering program was renamed the Nuclear and Radiological Engineering Program.
1999 • The Institute switched from the quarter system to semesters.
• The Bachelor of Mechanical Engineering (BME) degree became the Bachelor of Science in Mechanical Engineering (BSME) degree.
• Tech became the first university in the nation to offer a master’s degree in mechanical engineering entirely on the Internet.
1999-2000 • GT Off-Road (the SAe mini-baja team) was organized.
1995 • The Woodruff School moved into the MRDC building.
1997 • The campus in Metz, France opened. The Georgia Tech Lorraine program expanded to include course work in mechanical engineering.
• The first fall freshman class was required to own a personal computer entered Tech.
• The Nuclear Engineering program was renamed the Nuclear and Radiological Engineering Program.
2001 • The Five-Year BS/MS Degree Program began.
• A display of the Patents of the Woodruff School Faculty was dedicated.
• The Woodruff School was the first educational institution to be named a Mechanical Engineering Heritage Site by the American Society of Mechanical Engineers.
• GT Robojaxots was organized at Georgia Tech.
• The NRE/HP program became an autonomous unit in the Woodruff School.
2007 • The Neil S. Blomfield (*) was named Head of Woodruff School.
• The Woodruff School began its participation in the Undergraduate International Degree Plan.
• The Institute began an Honors Program for all degrees offered on campus.
• The last master’s degrees in health physics were granted.