LETTER FROM THE CHAIR

I am delighted to report to you on the Woodruff School’s accomplishments over the past year. While this has been a year of transition for the Woodruff School, Georgia Tech entered its own transition as we celebrated Wayne Clough’s remarkable tenure as President and now begin a search process that will result in the naming of the next president of Georgia Tech. Transition, change, and renewal are an integral part of life and provide tremendous opportunities for the Woodruff School to advance our programs to the benefit of our students, faculty, staff, alumni, and friends.

In the past year, two of our senior faculty members who held endowed chairs retired. Ward Winer (faculty member since 1969 and Eugene C. Gwaltney, Jr. Chair of the Woodruff School) and Jerry Ginsberg (faculty member since 1980 and the inaugural Woodruff Chair in Mechanical Systems) made major contributions to the program and we will honor their accomplishments by building upon their excellence. We continue to attract outstanding faculty members. Seven new faculty members joined us in the past year (Alexander Alexeev, Antonia Antoniou, Craig Forest, David Hu, Todd Sulchek, Jun Ueda, and Evan Zamir) and two others will join the Woodruff School in January (Baratunde Cola and Satish Kumar). Gang Bao, the Robert Milton Chair in Biomedical Engineering, has accepted a joint appointment in the Woodruff School. Dr. Bao, an international leader in bionanotechnology and molecular biomechanics, is a tremendous addition to our faculty. The high quality of our faculty and their expertise and enthusiasm for teaching and research bodes well for our future.

The mechanical and nuclear engineering programs continue to attract growing numbers of highly-qualified students. At this time, we have the largest undergraduate mechanical engineering program and the second largest undergraduate nuclear engineering program in the country. The graduates of both programs are in great demand by industry, government, and graduate schools. Graduates of our M.S. and Ph.D. programs obtain multiple job offers from industry and national laboratories, and many of our doctoral graduates become faculty members after doing postdoctoral work.

Our instructional programs are first rate. In the recently-released U.S. News & World Report rankings, our undergraduate mechanical engineering program was ranked 4th (up from 6th) and our nuclear engineering program is in the top ten (ranked 9th). This recognition is richly deserved by our faculty, students, and alumni. This fall, our undergraduate programs will be visited by the Engineering Accreditation Commission of ABET, the national accrediting agency for engineering. Woodruff School faculty have spent many hours preparing for this visit, and we anticipate constructive and positive feedback which we will use to further improve our programs and the undergraduate experience.

We will face several challenges next year. Foremost, we will have to deal with the downturn in the economy and resultant reduced state funding levels. To this end, we will embark on a strategic planning process that will result in several initiatives in support of our students and faculty. Tough budget times provide an opportunity to carefully examine what we are doing and reprioritize our efforts. Other critical goals for the next year include faculty retention, an increased emphasis on interdisciplinary research initiatives, development of a coherent strategy for the Woodruff School’s energy and sustainability activities, and an emphasis on innovation and creativity in all our efforts.

Our ability to succeed is dependent upon many people, but especially our alumni, industry and government representatives, and friends. Although we greatly appreciate the generous support from the State of Georgia, current trends clearly demonstrate that henceforth we will need to function with reduced State funding. We do have facility needs such as an energy research building and a student competition center, however, our most critical need is support for our faculty and students. With your help we can provide the resources needed to improve our competitive position and to provide the best comprehensive education in mechanical engineering, nuclear and radiological engineering, medical physics, and the interdisciplinary areas of bioengineering and paper science and engineering, within an environment that fosters discovery and innovation.

William J. Wepfer
Eugene C. Gwaltney, Jr. School Chair
Atlanta, September 2008

The annual report of the George W. Woodruff School of Mechanical Engineering at Georgia Tech is published in the fall. For more detailed information about Woodruff School undergraduate programs in mechanical engineering and nuclear and radiological engineering and our graduate programs in mechanical engineering, nuclear and radiological engineering, medical physics, bioengineering, paper science and engineering, and robotics, please contact us by any of the following methods:

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BILL WEPFER IS THE NEW SCHOOL CHAIR

Professor William Wepfer became the new Eugene C. Gwaltney Jr. Chair of the School of Mechanical Engineering (ME) effective January 1, 2008. Wepfer replaced the retired Ward Winer, who started as an associate professor at Georgia Tech in 1969.

“The school chair is responsible for creating an outstanding learning environment. Ward did a great job; words cannot express how much I learned from him,” said Wepfer, who worked with Winer from 1989 to 2002 when he served as the Associate Chair for Graduate Studies.

While Wepfer is quick to point out ME’s accolades, he says the School, along with the Institute as a whole, needs to continue creating more opportunities. “While Tech has been a leader, other folks copy what we do, so we can’t stay still.”

Some initial projects on Wepfer’s agenda include growing the graduate programs and focusing on energy initiatives, as well as building a cohesive school identity amid forging new collaborative elements.

“The Woodruff School is doing some great things,” he said. “We’re attracting so many students. We need to focus on quality and not quantity. In the science, engineering and computing arenas, we have to focus on [fostering] a collegial and creative environment.” He says that within the School there is some discussion on more flexibility in the curriculum, allowing for classes outside of the major. “We are supportive of lifelong learning, providing an education that leaves students wanting more.”

With his own research interests consisting of thermal systems, heat transfer and thermodynamics with an emphasis on energy systems, Wepfer seeks to explore how the School can focus on the area of energy research and increase its role in the Institute’s Strategic Energy Initiative.

Another Woodruff School strength Wepfer identifies is one germane to Institute partnerships. Strong collaboration is already prevalent with the Schools of Physics, Chemistry and Biology and the College of Computing. The goal, he says, is for ME to expand on these contributions. “Engineering, science and computing are all starting to blur. [On the research level] we are all starting to ask the same questions.”

Another role he’s prepared to assume is that of fundraiser as the Institute nears the public phase of its capital campaign. “Building and growing the endowments for faculty chairs and students’ scholarships are important. It’s all about relationships and [their] stewardship,” adding that Tech alumni as a whole are loyal and generous. He said, “I look forward to working with graduates I had as students.”

Wepfer’s career at Tech began in 1980 as an assistant professor in mechanical engineering. He became a full professor in 1993. Since 2003, he has served as vice provost of Distance Learning and Professional Education (DLPE). In this capacity, Wepfer was responsible for professional education and distance-delivered programs, the English as a Second Language program and operation of the Global Learning Center.

MEET AND GREET THE NEW SCHOOL CHAIR
A welcome luncheon was held for new School Chair Bill Wepfer to meet faculty and staff of the Woodruff School.

SINCE GEORGIA TECH OPENED ITS DOORS IN 1888 WITH MECHANICAL ENGINEERING AS THE ONLY DEGREE-GRANTING PROGRAM THERE HAVE BEEN SEVEN CHAIRS OR DIRECTORS. THE FIRST THREE CHAIRS OF ME SERVED A TOTAL OF 72 YEARS OUT OF THE 120-YEAR HISTORY OF MECHANICAL ENGINEERING AT GEORGIA TECH.

John S. Coon, 1988-1923 (35 years)
Roy S. King, 1925-1946 (21 years)
Homer S. Weber, 1946-1962 (16 years)
Kenneth G. Picha, 1962-1966 (4 years)
S. Peter Kezios, 1967-1981 (14 years)
John A. Brighton, 1982-1988 (6 years)
Ward O. Winer, 1988-2007 (19 years)
William Wepfer, 2008-

MEPFE R’S PRIORITIES
Dr. Wepfer has outlined the following priorities for the Woodruff School:

- Climate, tone and communication
- Faculty development
- Space utilization and assignment
- Faculty recruiting
- Capital campaign
- Long-term strategic research planning
- ABET preparation
- Policies and structures
The Scientist lists Georgia Tech in the top 15 best places for students to study. A capstone design poster session. ABET accreditation visit this October. The self-study report was finished. Students participated in the program. Elective course credit. During the 2007-2008 academic year, 92 projects are done for credit, which allows the students to receive ME, either do a research project with a professor for credit or for pay. Most students who entered the program as freshmen designated mechanical engineering as their major. The balance consists of freshmen changing their major (27%) and transfers from other schools (18%).

Undergraduate research activities continue to grow. Students may either do a research project with a professor for credit or for pay. Most projects are done for credit, which allows the students to receive ME elective course credit. During the 2007-2008 academic year, 92 students participated in the program.

All programs in the College of Engineering are scheduled for an ABET accreditation visit this October. The self-study report was finished last May, but we have continued our preparation. Our task is to show that the School is meeting its stated Program Educational Objectives (capabilities of our graduates approximately five years after graduation) and our Program Outcomes (capabilities of our students upon graduation). [To view our outcomes and objectives, go to www.me.gatech.edu and click on Accreditation.] In order to provide necessary feedback for this study, capstone design projects are now displayed in poster sessions at the end of each term. Alumni and industry representatives are invited to judge the projects. This event is in addition to the contests and poster sessions that are done in the sophomore design course, Creative Decisions and Design.

Undergraduate Research
Georgia Tech encourages undergraduate students to participate in quality and substantive research. ME/NRE 4699 is the undergraduate research course for juniors and seniors and qualifies as an elective for ME or NRE majors. ME/NRE 4698 is for 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, 92 students did undergraduate research: 70 students took ME/NRE 4699 for credit (69 ME, 1 RME, 4 NRE, 1 Special student), and 22 students took ME/NRE 4698 for pay (20 ME, 2 NRE). In addition, in summer and fall 2008, 59 students (52 ME, 7 NRE) were enrolled in undergraduate research: 10 (9 ME, 1 NRE) in 4698, and 49 (43 ME, 6 NRE) in 4699. [In academic years 2006-2007 and 2005-2006, there were 88 and 78 students, respectively, doing undergraduate research.]

Fifteen Woodruff School students (12 ME, 3 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. Students and their faculty mentors who received PURA funds in the past academic year are: Aleksandr Kerzhner (Chris Paredis, faculty mentor), Robert Adams (Wilfred van Rooijen), Kevin Connolly (NRE, Farzad Rahnema), Assyush Daftari (Bill Singhose), Devin Dannenmiller (NRE, Wilfred van Rooijen), Matthew Fallacara (Richard Neu), Evan Guigou (Daniel Goldman, Physics), Matthew Johnston (Rudy Gleason), Abhishek Kumar (Seung-Kyum Choi), Adrit Lath (Bill Singhose), Aida Seflic (Jonathan Colton), Caroline Stratton (NRE, Sam Shelton), Matthew Storey (Tequila Harris), Lina Tucker (Chris Paredis), and Aika Yano (Bill Singhose).

RANKINGS
Georgia Tech and its programs continue to be highly regarded. For the 10th consecutive year, U.S. News & World Report ranked Georgia Tech as one of the top ten public universities in the nation for undergraduates:

- Georgia Tech is ranked 35th overall among public and private universities in the nation;
- Georgia Tech ranks 7th nationally among public universities for undergraduates;
- Georgia Tech’s College of Engineering, the nation’s largest, is ranked number 4 for its programs;
- The Woodruff School’s graduate program in mechanical engineering is ranked 7th in the nation;
- The Woodruff School’s undergraduate program in mechanical engineering is ranked 4th in the nation (6th last year);
- The undergraduate Nuclear and Radiological Engineering Program is ranked 9th in the nation;
- The internship and senior capstone programs were cited as “Programs to Look For.”
- The co-op and undergraduate research programs are listed as “Programs to Look For.”
- Tech ranked 47th on the “Great School’s Great Prices” list
- The Scientist lists Georgia Tech in the top 15 best places to work.
- Georgia Tech is the top producer of African-American engineering graduates at both the undergraduate and doctoral levels and second in engineering master’s degrees according to Diverse Issues in Higher Education;
- Georgia Tech is one of the top universities in the world for technology transfer (bringing technologies from the lab to market) and a top producer of start-up companies, as listed in Mind to Market.
STUDY-ABROAD PROGRAMS

Georgia Tech strongly believes in the importance of an international experience for both undergraduate and graduate students that would allow them to be globally competent upon graduation.

During the past academic year, 1,114 Georgia Tech students participated in various study-abroad programs; 615 of these were from the College of Engineering. Almost 39 percent of the undergraduate students in the College of Engineering have international experience at the time of graduation.

In the past academic year, 102 (94 ME, 8 NRE) Woodruff School students participated in various study-abroad programs. In summer 2008, 80 Woodruff School students (75 ME, 5 NRE) participated in various summer programs.

The most popular study-abroad programs for Woodruff School students continue to be the: Georgia Tech Lorraine Undergraduate Program (45), with 33 attending the summer program and 12 going for the full academic year. The Oxford Summer Program had 22 students and the Shanghai Summer Program had eight. Other students participated in the: Barcelona Summer Program (1), Chile Semester Program (1), Chinese LBAT (1), French LBAT (1), German LBAT (2), Hong Kong University of Science and Technology Semester Program (3), Leeds Semester Academic Year Program (1), Non-GT Program (6), Pacific Spring Study Abroad Program (4), Sydney Summer Exchange Program (2), Tokyo Tech Semester Exchange Program (1), TU Munich International Study and Internship Program (2), and the Waseda Semester Exchange Program (1).

PROFESSIONAL PRACTICE PROGRAMS

The Division of Professional Practice at Georgia Tech offers four unique programs: the Undergraduate Cooperative Program, the Undergraduate Professional Internship, the Graduate Cooperative Program, and Work-Abroad Programs. More than 3,000 Georgia Tech students currently participate in the four programs.

According to Tom Akins, Executive Director of the Division of Professional Practice, “Our co-op numbers remain pretty steady, and ME has been our strongest major for a while. Our growth is coming in the intern and work abroad programs. We are looking to beef up the numbers in the graduate co-op, targeting more US citizens. Many employers need citizens due to security clearances. Demand is very strong for ME’s and with the energy situation, we are seeing a rebound in demand for NRE’s. It seems that in spite of the economy, employers, including the federal government are really gearing up and hiring a lot of co-ops and interns in anticipation of retiring baby-boomers.”

The Undergraduate 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.

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. Of the 291 Georgia Tech students who graduated from the program in the past academic year, 64 (63 ME, 1 NRE) of them were from the Woodruff School.

In 2007, there were a total of 2789 students in the co-op program with 184 companies placing students. Woodruff School students have traditionally been the largest group in the program. In summer 2007, there were 380 co-ops (367 ME, 13 NRE), in fall 2007, there were 528 co-ops (507 ME, 21 NRE), and in spring 2008, there were 536 co-ops (514 ME, 22 NRE) from the Woodruff School.

The largest employers of ME students are: McKenney’s, Southern Company, GE, and John Deere. The largest employer of NRE students is the Southern Company.

The Graduate Cooperative Program

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. Graduate co-ops can work and attend classes at the same time; they do not get a co-op designation on their degree. Twenty-three mechanical engineering graduate students participated in the program in the past academic year, working for Intel, Jones Day, John Deere, Brasfield & Gorrie, and Georgia Tech. No NRE’s participated.

The Undergraduate Professional Internship Program

The Undergraduate Professional Internship Program is geared toward students who do not participate in the Cooperative Program, but want some career-related experience before graduation, typically juniors and seniors. In the past academic year, 74 (73 ME, 1 NRE) students participated in the program (44 in summer 2007, 15 in fall 2007, and 15 in spring 2008). Students generally work for one semester with an option for more work.


The Work-Abroad Program

The Work-Abroad Program is an immersive academic program designed to complement a student’s formal education with paid practical international work experience directly related to the student’s major. Juniors, seniors, and graduate students are all eligible for this program, which includes co-op, internship, and graduate and undergraduate work experiences. The international work assignments are designed to include practical training, cross-cultural exposure and learning, and acquisition of the skills that will set apart the participating students from their peers.

From fall 2007 through summer 2008, nine students (8 ME, 1 NRE) worked abroad in Costa Rica, France, Germany, Ireland, and South Africa, Africa, and in summer 2007, five students (4 ME, 1 NRE) worked abroad. Mechanical Engineering and Electrical and Computer Engineering were the top majors in the work-abroad program in the past academic year.
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 (Ph.D. in English from Emory University) provides formal instruction to students in four required laboratory and design courses: Creative Decision and Design (ME 2110); Experimental Methodology Lab (ME 3057); Mechanical Systems Lab (ME 4053); and Capstone Design (ME 4182). In support, he trains and oversees teaching assistants as they edit and grade written and oral reports. 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. He also 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, be it a proposal, a journal article, or a conference presentation. Each fall and spring semester, Dr. Donnell and Dr. David Rosen, Associate Chair for Graduate Studies, present a How to Prepare a Fellowship Application Workshop for first-year graduate students and seniors who want to go to graduate school.

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: An undergraduate degree in mechanical engineering or nuclear and radiological engineering and the master’s degree in mechanical engineering, nuclear and radiological engineering, medical physics, bioengineering, or paper science and engineering. Graduate course work begins in the senior year; most master’s students do a course work only program (nonthesis option). According to Dr. Christine Valle, who advises BS/MS students once they have matriculated into the graduate program, “The BS/MS Program is an intensive, rigorous plan of study that allows meritorious students to receive both BS and MS degrees within less time than it would take to apply to these programs separately. Many employers seek such students and consider this combination to be invaluable.”

Currently, there are 79 (67 ME, 10 NRE, 2 MP) undergraduate students who will enter the graduate program in a future term (currently through fall 2011). There are thirty students (21 ME, 4 NRE, 3 MP, 2 BioE) who have completed their bachelor’s degree and are working toward their master’s degree. Fifteen (9 ME, 3 MP, 2 NRE, 1 BioE) of these matriculated into the graduate program in fall 2008. Nine are ME students: Josh Allen, Patrick Chang, William Doolan, Mark Kajdos, Abhishek Kumar, Joel McKoy, Shelly Nation, Cheung Shu Ngoo, and Adnaan Velji. The MP students are Alice Cheung, Sara Rahhena, and Shrutti Vellore, and the NRE students are: Benjamin Good and Jordan Rader. Jeremiah Nyaribo is the BioE student.

Of the 41 graduates from the program since 2002, fourteen received their master’s degree in the past academic year: Waqas Abbasi (ME/ME), Obert Chen (NRE/MP), Christopher Golden (ME/ME), Daniel Hyer (NRE/MP), Perry Johnson (NRE/MP), Brian Lockwood (ME/NRE), Yee Ming Lam (ME/ME), Ricardo Molinos (ME/ME), John Moody (ME/ME), Thomas Newton (ME/ME), Lambros Samouris (ME/ME), Dan Sankar (ME/ME), Sarah (Bashar) Scarboro (NRE/ME), Michael Schmidt (ME/ME), and James Weathers (NRE/ME).

GRADUATE PROGRAM REVIEW

[This information was provided by Dr. David Rosen, Associate Chair for Graduate Studies.]

In the past year, the Woodruff School Graduate Program has continued the momentum built over recent years. The School graduated 50 Ph.D. students and 180 master’s students. With the combined M.S. and Ph.D. enrollment for Fall 2008 of 705, 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 & World Report.

Our graduate programs continue to be in high demand. We had 862 applicants, of which 205 matriculated in Fall 2008. Of these incoming students, 73 received a GRA/GTA offer, indicating that they have outstanding academic records. Regarding specific research areas, we saw a significant increase in student demand for energy related research, reflecting a growing interest in sustainable energy and alternative energy sources in society. Other areas seeing growth included bioengineering and acoustics, with demand remaining strong in most other areas within the School.

Upon graduation, our students enjoy excellent employment prospects. The energy, defense, electronics, and manufacturing sectors have had strong hiring needs, and our students are pursued aggressively by companies in these areas. Our graduates are increasingly being employed by high technology global organizations. Additionally, we continue to place significant numbers of graduates in academia and government laboratories.

Our graduate program has had tremendous growth since 2000 reflecting, we believe, the high value placed on graduate degrees in Mechanical Engineering, in general, and from our program, in particular.
GEORGE W. WOODRUFF SCHOOL OF MECHANICAL ENGINEERING

WOMEN AND MINORITIES IN THE WOODRUFF SCHOOL

The Woodruff School continues to be a leading producer of graduate degrees to women and minorities. Women were admitted to Georgia Tech in 1956 and the first degree granted to a woman in mechanical engineering was in 1958. The first Ph.D. granted to a woman in mechanical engineering was in 1987. At the end of spring semester 2008, 105 (77 ME, 21 NRE, 7 BioE) women have earned a Ph.D. from the Woodruff School. In the 2007-2008 academic year, eight (3 ME, 5 BioE) women earned their doctoral degrees and 19 (11 MSME, 5 MSMP, 2 MSNE, 1 MSBioE) received a master’s degree. Thirty-nine women received bachelor’s degrees (35 ME, 4 NRE).

Georgia Tech voluntarily desegregated its campus in 1962. The Woodruff School granted its first doctoral degree to a minority student in 1978. By the end of spring semester 2008, 88 minority students (75 ME, 10 NE, 3 BioE) had earned a doctoral degree from the Woodruff School. In the past academic year, six minority (U.S. citizens or permanent residents) students earned a Ph.D. (3 ME, 3 BioE) and 28 received master’s degrees (24 MSME, 3 MSMP, 1 BioE). Eighty-eight (83 ME, 5 NRE) minority students received their bachelor’s degrees in the past academic year. The charts below show the degrees awarded to women and minority students at all degree levels for the past five academic years.

OVERVIEW OF THE NUCLEAR AND RADIOLICAL ENGINEERING AND MEDICAL PHYSICS PROGRAMS

[This material was provided by Dr. Farzad Rahnema, Chair of the NRE and MP Programs.]

During the 2007-2008 academic-year, the NRE/MP faculty, including the four new members, were busy enhancing the academic programs. The medical physics curricula was expanded by introducing new courses and creating a new instructional laboratory that will provide students a hands-on learning experience in computational radiation treatment planning. The expanded MS curriculum requires forty credit hours of coursework, clinical experience, and thesis research (optional). The expanded Ph.D. program requires twelve additional hours of coursework as well as the Ph.D. dissertation and the qualifying exams. We began delivery of the new curricula in fall 2008.

The nuclear engineering program introduced new courses in fast reactors and radiation shielding and we revived the nuclear materials course. Also, a series of three undergraduate courses are being revised to expand and further strengthen the coverage of undergraduate reactor physics and related advanced mathematics.

The program successfully proposed and received more than $180,000 from the Institute to expand the AREVA radiation detection laboratory, and purchased new workstations for the new computational radiation treatment planning laboratory. The five-year Department of Energy (DOE) and Industry matching grant program, which was completed in the past academic year, generated 243 undergraduate scholarships and a topping graduate fellowship. It also supported research in thermal hydraulics, laboratory renovation, equipment upgrades, and student travel to technical conferences. Additionally, the program proposed and received $100,000 from the Department of Energy to enhance its capabilities in advanced fuel cycle research and education.

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 admission and course requirements, and the degree received are the same as for on campus students. In fall 2008, 180 students are enrolled (166 ME, 14 MP), and 57 students matriculated into the program (54 ME, 3 MP). Graduate-level courses are available on the Internet, video-on-demand downloads, videoconferencing, and DVD/CD’s. Students receive class handouts and materials electronically or by mail. In the past academic year, the Woodruff School offered 54 courses for the distance program. There were 36 courses in mechanical engineering: four in summer 2007, 15 in fall 2007, and 17 in spring 2008. Also, there were 18 MP/NRE courses: three in summer 2007 including the clinical rotation, seven in fall 2007, and eight in spring 2008. There are a few courses where the enrollment is almost equally divided between on-campus and distance. For example, in fall 2007, ME 6222 (Manufacturing Processes & Systems) had an enrollment of 44 video and 38 on-campus students.

Forty-three master’s (non-thesis) degrees (38 ME, 5 MP) were awarded to distance learning students in the past academic year. Of these, four (3 ME, 1 MP) were females. General Electric and Lockheed-Martin are top employers of these graduates.
GEORGIA TECH LORRAINE

[This material was contributed by Dr. Yves Berthelot, President of Georgia Tech Lorraine.]

The Woodruff School has a strong presence at Georgia Tech Lorraine in Metz, France. Its mission is to enable innovative collaborations with academic, industrial, and funding agencies in France, the European Union, and the United States. The year 2008 was marked by the rapid growth of the GT-CNRS UMI laboratory, a joint laboratory between GT and the largest research organization in Europe, the French Centre National de la Recherche Scientifique. With funding from CNRS, Georgia Tech, and the Region of Lorraine, new laboratories were built with state-of-the-art equipment that enables researchers, faculty, and students to develop partnerships and complementary research with the Atlanta campus in two strategic areas: Secure Networks and Smart Materials.

Research contracts have been obtained from the Agence Nationale de la Recherche, the European Union, and industry (Leach-Esterline, Thalès, and France Telecom). In addition, significant equipment grants from the National Government and the Region of Lorraine have been used to equip the laboratories. Currently, 24 Ph.D. students (11 in ME) and five postdocs (1 in ME) are doing research at GT Lorraine. In the Fall of 2008, CNRS will open the Atlanta UMI laboratory in partnership with MiRC and assign CNRS personnel to the Atlanta campus.

During Summer 2008, GTL offered 26 courses to 132 undergraduate students, including 30 MEs. In Fall 2008, 209 students representing 17 countries are enrolled (71 in ME). Of these, 108 students (14 BS, 70 MS, 24 Ph.Ds) are enrolled in Metz, 42 students are finishing their MS in Atlanta, and the rest are doing internships. GTL students are immersed in a foreign culture, often interacting and taking classes at partner institutions, sharing dorm space, exchanging cultural viewpoints, and doing industrial internships. The new 204 room dormitory residence Lafayette conveniently located near GTL opened its doors in August 2008. A GT alumni event was held in Paris on April 4, 2008, with 151 participants.

WOODRUFF SCHOOL IN SAVANNAH

[This information was provided by Dr. Farrokh Mistree, Associate Chair for Georgia Tech Savannah.]

In Fall 2007 we welcomed our largest undergraduate class to date: 23 students - up from five in 2006. Our faculty introduced three new undergraduate electives: ME4803 - Information Engineering for Systems Realization; ME4813 - Rapid Product Development for the Global Economy; and ME4903 - Engineering Curriculum Design and Display. All three courses were developed to help our students learn about IT-enabled product creation. We plan to offer the courses on information engineering and rapid product development in 2008-2009.

The number of incoming graduate students being supervised by our faculty went up from two in Fall 2007 to 11 in Fall 2008. We graduated five (2 Ph.D., 3 MS) students. Highlights of the year included the inauguration of the first phase for the Product Creation Complex and hosting of the Woodruff School’s Research and Community Building Day in April 2008. Our major focus in 2007-2008 was on preparing the self-study report to get ABET accreditation for our BSME - Regional Engineering Program. The accreditation visit is scheduled for October 24 and 25, 2008.

Visiting Assistant Professors Muhammad Akbar, Jitesh Panchal, and Reza Sadr moved to career enhancing positions in academia. All three made significant contributions to the development of our nascent undergraduate program in Savannah.

Currently, we are focusing on the development of the Product Creation Network. In September 2008, we hosted the principals involved in the network. In addition to Georgia Tech, the education network consists of the Technical University of Eindhoven (Netherlands), the Indian Institute of Technology, Kharagpur (India), Loughborough University, Loughborough (UK) and Washington State University, Pullman (Washington, USA). The industry network consists of HP and MSCSoftware. The twin themes are the creation of an international certificate in product creation and the opportunities afforded by IT-enabled, collaborative product creation for a culturally diverse world. We need to grow the industrial network and look forward hearing from people in industry.
CAREERS

The job market for engineers generally and for Woodruff School students in particular remained strong during the 2007-2008 academic year. The number of employers visiting Georgia Tech to recruit Woodruff School students also remained quite high. This year Mechanical Engineers landed more interviews than any other major on campus with the exception of industrial engineers. A total of 235 employers at this year’s career fair were recruiting ME or NRE students. This is up from the previous year of 212, and represents the fourth year of an upward demand for these students at the fair.

Once again employment rates for Woodruff School students were exceptionally high and bettered prior year performance. At graduation in spring 2008, 79.4 percent of BSME students reported having found employment, substantially exceeding the Institute’s average of 65.8 percent. The median salary for BSME graduates was $57,000 with signing bonuses coming in at $4,850. This represents a jump from the previous year of $55,000 and $4,000, respectively. NRE graduates received a starting salary of $55,000 and a $5000 signing bonus with an 80 percent placement rate. Although the NRE data are based on a small number of respondents, they are in line with the ME numbers.

Many Woodruff School graduates elected to continue on the academic track and seek advanced degrees. This year, 23.6 percent of BSME graduates reported having been accepted into graduate or professional school. This is up from last year’s 22 percent and the prior year average of 20 percent.

According to Ralph Mobley, Director of Career Services at Georgia Tech, “Clearly the job market for Woodruff School students is robust and reflects the continuing need for technical talent and the respect the School enjoys with employers.”

WHERE DO WOODRUFF SCHOOL UNDERGRADUATE STUDENTS WORK: A SAMPLING

A variety of employers representing virtually every industry hire Woodruff School students. These include:

- Babcock & Wilcox
- Bell Helicopter
- BP Exploration (Alaska)
- Caterpillar
- Continental AG
- Eastman Chemical Co.
- Ernst & Young
- ExxonMobil
- Ford
- General Mills
- GE
- General Motors
- Gulfstream Aerospace
- HP
- Honda Manufacturing
- Honeywell
- International Paper
- John Deere
- Kubota Tractor
- Lockheed Martin
- McKenney’s Inc. Mechanical Contractors/Engineers
- Michelin North America
- Milliken & Company
- NASA
- National Instruments
- Norfolk Naval Shipyard
- Northrop Grumman
- Parker Engineering
- Rockwell Automation
- Savannah River Nuclear Solutions
- Schlumberger
- Siemens
- Southern Company
- Trane

DEGREES

In 1888, when Georgia Tech opened, mechanical engineering was the only degree-granting program and remained so for eight years. Today, the Woodruff School offers two undergraduate degrees (BSME, BSNRE) and seven graduate degrees (MS, MSME, MSNE, MSMP, MSBioE, MSPSE, Ph.D.) In addition, the master’s degree can be completed off-campus, through the distance-learning program.

This report details various aspects of the degrees awarded in summer 2007, fall 2007, and spring 2008. During these semesters, we granted 572 degrees: 342 bachelor’s degrees (317 ME, 25 NRE); 180 master’s degrees (147 MSME, 18 MSMP, 7 MSNE, 3 MSBioE, 3 MSPSE, 2 MS); and 50 doctoral degrees (40 ME, 8 BioE, 1 NRE, 1 PSE).

In summer 2007, the Woodruff School awarded 126 degrees: 56 bachelor’s degrees (55 ME, 1 NRE), 54 master’s degrees (40 MSME, 9 MSMP, 2 MSNE, 1 MS, 1 MSBioE, 1 MSPSE), and 16 doctoral degrees (10 ME, 5 BioE, 1 NRE).

In fall 2007, the Woodruff School awarded 193 degrees: 112 bachelor’s degrees (106, 6 NRE), 61 master’s degrees (52 MSME, 5 MSMP, 2 MSNE, 2 MSPSE), and 20 doctoral degrees (19 ME, 1 BioE). In spring 2008, the Woodruff School awarded a total of 253 degrees: 174 bachelor’s degrees (156 ME, 18 NRE), 66 master’s degrees (55 MSME, 4 MSMP, 3 MSNE, 2 MSBioE, 1 MS) and 14 doctoral degrees (11 ME, 2 BioE, 1 PSE).

DEGREES AWARDED BY RESIDENCY

Georgia Tech awarded a total of 4,478 degrees in the past academic year. Of these, 3,442 went to residents of the United States; 2,260 (1814 BS, 401 MS, 45 Ph.D.) went to residents of Georgia. Other states with large representations in descending order are: Florida, Texas, Virginia, New York, North Carolina, South Carolina, Maryland, California, Alabama, Pennsylvania, and Tennessee. The states with the lowest numbers are Alaska and Vermont each with one degree and Hawaii with two degrees. In addition, 1036 degrees were awarded to international students from 78 countries. International students in the Woodruff School come mainly from France, India, and China.

<table>
<thead>
<tr>
<th>College</th>
<th>B.S. Degrees</th>
<th>M.S. Degrees</th>
<th>Ph.D. Degrees</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture</td>
<td>168 (97/71)</td>
<td>104 (59/45)</td>
<td>2 (1/1)</td>
<td>274</td>
</tr>
<tr>
<td>Computing</td>
<td>169 (154/15)</td>
<td>184 (142/42)</td>
<td>32 (26/6)</td>
<td>385</td>
</tr>
<tr>
<td>Engineering</td>
<td>1458 (1176/282)</td>
<td>820 (682/138)</td>
<td>327 (253/74)</td>
<td>2605</td>
</tr>
<tr>
<td>Ivan Allen</td>
<td>195 (104/91)</td>
<td>86 (44/42)</td>
<td>14 (4/10)</td>
<td>295</td>
</tr>
<tr>
<td>Management</td>
<td>340 (206/134)</td>
<td>130 (97/33)</td>
<td>11 (5/6)</td>
<td>481</td>
</tr>
<tr>
<td>Sciences</td>
<td>252 (130/122)</td>
<td>105 (68/37)</td>
<td>81 (51/30)</td>
<td>438</td>
</tr>
<tr>
<td>TOTALS</td>
<td>2582 (1867/715)</td>
<td>1429 (1092/337)</td>
<td>467 (340/127)</td>
<td>4478</td>
</tr>
</tbody>
</table>

Note: The first number in parentheses is for male students and the 2nd is for female students.
Degrees Awarded in the College of Engineering (Summer 2007 through Spring 2008)

<table>
<thead>
<tr>
<th>School</th>
<th>BS</th>
<th>MS</th>
<th>Ph.D.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace Engineering</td>
<td>117</td>
<td>121</td>
<td>39</td>
<td>277</td>
</tr>
<tr>
<td>Biomedical Engineering</td>
<td>122</td>
<td>5</td>
<td>28</td>
<td>155</td>
</tr>
<tr>
<td>Chemical and Biomolecular Engineering</td>
<td>88</td>
<td>5</td>
<td>31</td>
<td>124</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>170</td>
<td>66</td>
<td>27</td>
<td>263</td>
</tr>
<tr>
<td>Electrical &amp; Computer Engineering</td>
<td>335</td>
<td>272</td>
<td>90</td>
<td>697</td>
</tr>
<tr>
<td>Industrial &amp; Systems Engineering</td>
<td>236</td>
<td>155</td>
<td>30</td>
<td>421</td>
</tr>
<tr>
<td>Materials Science &amp; Engineering</td>
<td>36</td>
<td>13</td>
<td>27</td>
<td>76</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>342</td>
<td>180</td>
<td>50</td>
<td>572</td>
</tr>
<tr>
<td>Polymer, Textile, &amp; Fiber Engineering</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Totals</td>
<td>1458</td>
<td>820</td>
<td>327</td>
<td>2605</td>
</tr>
</tbody>
</table>

Degrees Awarded by Georgia Tech (GT) and the College of Engineering (COE) by Ethnicity and Citizenship (Summer 2007 through Spring 2008)

<table>
<thead>
<tr>
<th>Level</th>
<th>Native Am.</th>
<th>Asian</th>
<th>Black</th>
<th>Hispanic</th>
<th>Multiracial</th>
<th>Inter’l.</th>
<th>White</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS COE</td>
<td>2</td>
<td>25</td>
<td>96</td>
<td>60</td>
<td>12</td>
<td>110</td>
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<td>1458</td>
</tr>
<tr>
<td>BS GT</td>
<td>5</td>
<td>39</td>
<td>174</td>
<td>104</td>
<td>22</td>
<td>134</td>
<td>1752</td>
<td>2582</td>
</tr>
<tr>
<td>MS COE</td>
<td>0</td>
<td>70</td>
<td>22</td>
<td>24</td>
<td>11</td>
<td>355</td>
<td>334</td>
<td>820</td>
</tr>
<tr>
<td>MS GT</td>
<td>1</td>
<td>117</td>
<td>67</td>
<td>40</td>
<td>16</td>
<td>580</td>
<td>608</td>
<td>1429</td>
</tr>
<tr>
<td>Ph.D. COE</td>
<td>0</td>
<td>16</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>210</td>
<td>85</td>
<td>327</td>
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<tr>
<td>Ph.D. GT</td>
<td>1</td>
<td>18</td>
<td>14</td>
<td>6</td>
<td>1</td>
<td>289</td>
<td>138</td>
<td>467</td>
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<tr>
<td>Totals</td>
<td>7</td>
<td>526</td>
<td>255</td>
<td>150</td>
<td>39</td>
<td>1003</td>
<td>2498</td>
<td>4478</td>
</tr>
</tbody>
</table>

Degrees Awarded in the Woodruff School by Degree Level and Ethnicity (Summer 2007 through Spring 2008)

<table>
<thead>
<tr>
<th>Level</th>
<th>Asian</th>
<th>Black</th>
<th>Hispanic</th>
<th>Multiracial</th>
<th>White</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s</td>
<td>49</td>
<td>20</td>
<td>16</td>
<td>4</td>
<td>253</td>
<td>342</td>
</tr>
<tr>
<td>Master’s</td>
<td>31</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>132</td>
<td>180</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>20</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>23</td>
<td>50</td>
</tr>
<tr>
<td>Totals</td>
<td>100</td>
<td>31</td>
<td>23</td>
<td>10</td>
<td>408</td>
<td>572</td>
</tr>
</tbody>
</table>

Degrees Awarded in the Woodruff School by Gender (Summer 2007 through Spring 2008)

<table>
<thead>
<tr>
<th>Degree</th>
<th>Females</th>
<th>Males</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s</td>
<td>39</td>
<td>303</td>
<td>342</td>
</tr>
<tr>
<td>Master’s</td>
<td>19</td>
<td>161</td>
<td>180</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>8</td>
<td>42</td>
<td>50</td>
</tr>
<tr>
<td>Totals</td>
<td>66</td>
<td>506</td>
<td>572</td>
</tr>
</tbody>
</table>

Woodruff School Degrees Awarded (Summer 2007 through Spring 2008)

<table>
<thead>
<tr>
<th>Degree</th>
<th>Number Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSME</td>
<td>317</td>
</tr>
<tr>
<td>BSNRE</td>
<td>24</td>
</tr>
<tr>
<td>Total Bachelor’s</td>
<td>342</td>
</tr>
<tr>
<td>MS</td>
<td>2</td>
</tr>
<tr>
<td>MSME</td>
<td>147</td>
</tr>
<tr>
<td>MSMP</td>
<td>18</td>
</tr>
<tr>
<td>MSNE</td>
<td>7</td>
</tr>
<tr>
<td>MSPSE</td>
<td>3</td>
</tr>
<tr>
<td>MSBIOE</td>
<td>3</td>
</tr>
<tr>
<td>Total Master’s</td>
<td>180</td>
</tr>
<tr>
<td>Ph.D. ME</td>
<td>40</td>
</tr>
<tr>
<td>Ph.D. NE</td>
<td>1</td>
</tr>
<tr>
<td>Ph.D. BioE</td>
<td>8</td>
</tr>
<tr>
<td>Ph.D. PSE</td>
<td>1</td>
</tr>
<tr>
<td>Total Ph.D.</td>
<td>50</td>
</tr>
<tr>
<td>Total Undergraduate Degrees</td>
<td>342</td>
</tr>
<tr>
<td>Total Graduate Degrees</td>
<td>230</td>
</tr>
<tr>
<td>School Total</td>
<td>572</td>
</tr>
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</table>
UNDERGRADUATE DEGREES AWARDED

The Woodruff School granted 342 (317 ME, 24 NRE) degrees in the past academic year.

SUMMER 2007

Alan Alemany
David Alvord
Ann Armby
Cassilyn Bair
Mark Berkobin
Henry Bradford
Christopher Childs
Corey Davis
Adam Devoll
Donna Dunbar
Curtis Engsberg
Lindsey Ewing
Kristopher Fausnight
Linh Dinh
Shashank Amburkar
J. Yaeger
Andrew Wissing
Khamisi Walters
George Walters
Lee Tschaepe (NRE)
Khalil Thomas
James Tamashiro
Scott Spencer
Shawn Shields
Timothy Scott
Shawn Shields
Scott Spencer
James Tamashiro
Khali Thomas
Michael Thompson
Lee Tschaepe (NRE)
Drew Vanness
George Walters
Khamisi Walters
Siu Wan
Justin Welborn
Andrew Wissing
J. Yaeger

FALL 2007

Mazin Abuharaz
Thomas Aho
Shashank Amburkar
Robert Angel
Christopher Bair
William Barnes
Toby Bates (NRE)
Micah Beckman
Robert Bemberg
Daniel Blakely
Henri Bokally
Andrew Borgan
Lori Brents
Trevor Bright
Michele Bunn
Philip Carpenter
Nikita Chokshi
David Chong
Achin Chugh
Jeffrey Clark
Stephen Clawson
Gregory Cobb
Austin Cobert
Christopher Collins
Joseph Cooper
Anthony Couler
Brandon Daniel
Katherine Dorrit
Kermit Falck
Alejandro Franco
Donald Gibbons (NRE)
Hirshi Goel
Matthew Gurley
Kathryn Hall
James Ham
Om Hari
Jeffrey Head (NRE)
Matthew Hendricks
Tyler Hill
William Hobbs
Christopher Horner
John Howard
David Hsu
Samuel Huffman
Sonarsh Ham
David Icenogle
Alex Johnson (NRE)
Daniel Jury
Mark Kajdos
Alexandr Kerzhner
Cassandra Kim
Orion King
Carla Koch
Leonard Lamier
Christopher Little
Jonathan Lowrie
Ehsan Maleki
Andrew Marshall
Andrew Martin
Jobi Mathew
Nicholas McCull
Steven McDonald
Nicholas Mejias (NRE)
Zachary Millians
Cantu Montalvo
Stephen Moore
Benjamin Mordecai
Timothy Morin
Thang Nguyen
Marcus Oudums
Kevin O’Grady
Adnan Pandjou
Paski Patel
Walter Payne
Pierre Penda
Bradley Pfaff
Hilary Queen
Thomas Radomski
Shaun Ramkumar
Tyler Randolph
Arjun Reddy
Kyle Reineke
Steven Richman
Hannah Rogers
Travis Rogers
Lynn Sarkone
Alexandros Saris
Anthony Schmitz (NRE)
Michael Schuler
Christopher Sewell
Siddartha Shah
Bruce Shearer
Andrew Shoemaker
Brandon Smith
Laney Sowell
Joshua Spiers
Shannon Spoon
Jeremy Stone
Matthew Storley
Christian Tenassa
Arthur Toal
Allan VanDeventer
Joseph Wach
Robert Waldron
Matthew Waters
Douglas Weaver
Donald Wilson
George Winter
Richard Wujcio
Richard Wood
Rohit Zacharia

SPRING 2008

Peter Adams
Robert Adams (NRE)
Ricardo Aguilar
Josh Allen
John Anderson (NRE)
Ryan Archibald (NRE)
Andrew Balsman
Arjun Banerji
Nathan Barnes
Benjamin Beeler (NRE)
Alberto Bianco
Brandon Birm
Jason Breen (NRE)
John Brooks
Jenna Browning
Matthew Brunsphan
Timothy Buryarly
Julia Bunch (NRE)
Stephen Capacci (NRE)
Stephen Capes (GTREP)
Orlando Carreon
Geoffrey Carter (NRE)
Monica Casali
Dale Cattell
Patrick Chang
Wen Cheah
Alexander Clark
Barry Clark
Jeffrey Clement
Kimberly Coghil (NRE)
James Collins
Brian Cook
James Cook
Brian Cox
Jeffrey Cozine
Michael Culler
Brett Czyzcon (NRE)
Dung Dang
Joanna Davis
Jared Deering
William Doolan
Helmut Drews
Theodore Duffy
# MASTER’S DEGREES (THESIS OPTION) AWARDED

Out of the 180 master’s degrees granted in the past academic year, 136 were coursework only (nonthesis) and 44 were done with a thesis. Ninety-three of the nonthesis master’s degrees were done on-campus; forty-three were distance degrees.

## NAME  SUMMER 2007

<table>
<thead>
<tr>
<th>NAME</th>
<th>DEGREE</th>
<th>ADVISOR</th>
<th>THESIS TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Becht</td>
<td>MSNE</td>
<td>Said Abdel-Khalik</td>
<td>Onset of Flow Instability in Uniformly Heated, Narrow, Rectangular Channels</td>
</tr>
<tr>
<td>Robert Bialobrzeski</td>
<td>MSNE</td>
<td>Sheldon Jeter</td>
<td>Optimization of a SEGS Solar Field for Cost Effective Power Output</td>
</tr>
<tr>
<td>Toufik Yacine Chaffi</td>
<td>MSME</td>
<td>Mostafa Ghaasiaan</td>
<td>Pressure Loss Associated with Flow Area Change in Micro-Channels</td>
</tr>
<tr>
<td>Bummo Chung</td>
<td>MSME</td>
<td>Itzhak Green</td>
<td>Finite-Element Analysis of Physical Phenomena of the Lab-Scale Electromagnetic Launcher</td>
</tr>
<tr>
<td>William Clearman</td>
<td>MSME</td>
<td>Mostafa Ghaasiaan</td>
<td>Optimization of a Medium With a Large Parameter of Nonlinearity and Its Application to the Enhancement of a Compact, Omnidirectional, Parametric Source</td>
</tr>
<tr>
<td>Charles Coggins</td>
<td>MSME</td>
<td>Yogendra Joshi/Andrei Fedrov</td>
<td>Single-and Multiple-Stage Cascaded Vapor Compression Refrigeration for Electronics Cooling</td>
</tr>
<tr>
<td>Carter Dietz</td>
<td>MSME</td>
<td>Yogendra Joshi</td>
<td>Single-Phase Forced Convection in a Microchannel with Carbon Nanotubes for Electronic Cooling Applications</td>
</tr>
<tr>
<td>Zachary Douglas</td>
<td>MSME</td>
<td>Ari Glezer</td>
<td>Acoustically Enhanced Boiling Heat Transfer</td>
</tr>
<tr>
<td>Brian Frank</td>
<td>MSME</td>
<td>Srinivas Garimella</td>
<td>Modeling and Testing of Water-Coupled Microchannel Gas Coolers for Natural Refrigerant</td>
</tr>
<tr>
<td>Fabian Goericke</td>
<td>MSME</td>
<td>William King</td>
<td>Simulation, Fabrication and Characterization of Piezoresistive Bio-/Chemical Sensing Microcantilevers</td>
</tr>
<tr>
<td>Jared Hoover</td>
<td>MSMP</td>
<td>Farzad Rahnema</td>
<td>Monte Carlo Modeling of a Varian 2100C 18 MV Megavoltage Photon Beam and Subsequent Dose Delivery using MCNP5</td>
</tr>
<tr>
<td>Lander Ibarra</td>
<td>MSNE</td>
<td>Mostafa Ghaasiaan</td>
<td>A Quasi One Dimensional Multi-Physics Algorithm to Simulate the Thermal Behavior of Gas-Cooled Reactors</td>
</tr>
<tr>
<td>Brian Lockwood</td>
<td>MSNE</td>
<td>Mostafa Ghaasiaan</td>
<td>A Two Dimensional Fluid Dynamics Solver for Use in Multiphysics Simulations of Gas Cooled Reactors</td>
</tr>
<tr>
<td>Deepak Maini</td>
<td>MSPE</td>
<td>Cyrus Aidun</td>
<td>VOF Based Multiphase Lattice Boltzmann Method Using Explicit Boundary Conditions at the Interface</td>
</tr>
<tr>
<td>Alexander Michaud</td>
<td>MSME</td>
<td>Kenneth Cunefare</td>
<td>Experimental Investigation of Reflection of Airborne Noise at Duct Terminations</td>
</tr>
<tr>
<td>John Moody</td>
<td>MSME</td>
<td>Itzhak Green</td>
<td>An Investigation of 3D Elastic-Plastic Sliding Contact Under Structural and Electromagnetic Loads</td>
</tr>
<tr>
<td>Stephanie Thompson</td>
<td>MSME</td>
<td>Chis Paredis</td>
<td>Material Design vs Material Selection: A Trade-off Between Design Freedom and Design Simplicity</td>
</tr>
<tr>
<td>Matthew Wagner</td>
<td>MSME</td>
<td>Shreyes Melkote</td>
<td>Automation of a Thread Rolling Machine for Use in a Flexible Workcell</td>
</tr>
<tr>
<td>James Weathers</td>
<td>MSME</td>
<td>Said Abdel-Khalik</td>
<td>Thermal Performance of Helium-Cooled Divertors for Magnetic Fusion Applications</td>
</tr>
</tbody>
</table>

## FALL 2007

<table>
<thead>
<tr>
<th>NAME</th>
<th>DEGREE</th>
<th>ADVISOR</th>
<th>THESIS TITLE</th>
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<tbody>
<tr>
<td>Ludovic Burton</td>
<td>MSME</td>
<td>Yogendra Joshi</td>
<td>Multi-Scale Thermal Modeling Methodology for High Power-Electronic Cabinets</td>
</tr>
<tr>
<td>Steven Douglass</td>
<td>MSNE</td>
<td>Farzad Rahnama</td>
<td>Generalized Energy Condensation Theory</td>
</tr>
<tr>
<td>Megan Dukic</td>
<td>MSME</td>
<td>Steven Danylyuk</td>
<td>Vibrating Kelvin Probe Measurements of a Silicon Surface with the Underside Exposed to Light</td>
</tr>
<tr>
<td>Jinwu Fan</td>
<td>MSME</td>
<td>David Ku</td>
<td>Dynamic Strength of Porcine Arteries</td>
</tr>
<tr>
<td>Caesar Garcia</td>
<td>MSME</td>
<td>Levent Degertekin</td>
<td>Packaging and Characterization of MEMS Optical Microphones</td>
</tr>
<tr>
<td>Jose Marquez Damian</td>
<td>MSNE</td>
<td>Weston Stacey</td>
<td>Multi-Level Acceleration of Neutron Transport Calculations</td>
</tr>
<tr>
<td>Ryan Melsert</td>
<td>MSME</td>
<td>Samuel Shelton</td>
<td>Energy Optimization of the Production of Cellulosic Ethanol from Southern Pine</td>
</tr>
<tr>
<td>Graham Nelson</td>
<td>MSME</td>
<td>Yogendra Joshi</td>
<td>Development of an Experimentally-Validated Compact Model of a Server Rack</td>
</tr>
<tr>
<td>Michael Schmidt</td>
<td>MSME</td>
<td>Samuel Shelton</td>
<td>The Economic Optimization of Wind Turbine Design</td>
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<tr>
<td>Arnaud Thabot</td>
<td>MSME</td>
<td>David Orloff</td>
<td>Porosity Analysis in Starch Imbeded Handsheets-Challenges Using Impulse Drying and Methods for Image Analysis</td>
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<td>Brett Warta</td>
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<td>Ari Glezer</td>
<td>Characterization of High Momentum Flux Combustion Powered Fluid Actuators for High Speed Flow Control</td>
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## SPRING 2008

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<tr>
<td>Anandraj Sengupta</td>
<td>MSME</td>
<td>Laurence Jacobs/ Jiamin Qu</td>
<td>Effect of Specimen Geometry On Ultrasound Diffusion in Cement-Based Aggregates</td>
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<td>Eric Burgett</td>
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<td>Nolan Hertel</td>
<td>A Broad Spectrum Neutron Spectrometer Utilizing a High Energy Bonner Sphere Extension</td>
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<td>Kimberly Burns</td>
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<td>Nolan Hertel</td>
<td>Monte Carlo Simulations for Homeland Security Using Anthropomorphic Phantoms</td>
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<td>Victoria Garcia</td>
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<td>Steven Danylyuk</td>
<td>Effect of Dislocation Density on Residual Stress in Edge-Defined Film-Fed Growth Silicon Wafers</td>
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<td>Christopher Golden</td>
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<td>Analysis of Surface Form Errors in Rings of Non-Uniform Cross-Section Due to Workholding and Machining Loads</td>
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<td>Christopher Goodman</td>
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<td>Srinivas Garimella</td>
<td>Modeling, Validation, and Design of Integrated Carbon Dioxide Heat Pumps and Water Heaters</td>
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<td>Sophie Govetto</td>
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<td>Determining the Environmental Impact of Disposal, Recycling and Remanufacturing End-of-Life Strategies</td>
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<td>Sung Min Kim</td>
<td>MSME</td>
<td>Mostafa Ghaasiaan</td>
<td>Numerical Study on Laminar Pulsating Flow Through Porous Media</td>
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<td>Qinghe Li</td>
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<td>Zhumin Zhang</td>
<td>Light Scattering of Semitransparent Media</td>
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<td>Gaurav Nema</td>
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<td>Srinivas Garimella</td>
<td>Flow Regime Transitions During Condensation in Microchannels</td>
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<td>Thomas Newton</td>
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<td>Shreyes Melkote</td>
<td>Investigation of the Effect of Process Parameters on the Formation of Recast Layer in Wire-EDM of Inconel 718</td>
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<td>Sarah Scarboro</td>
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<td>The Use of a Thyroid Uptake System for Assaying Internal Contamination Following a Radioactive Dispersal Event</td>
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<td>Tyler Stevenson</td>
<td>MSME</td>
<td>Sheldon Jeter</td>
<td>Experimental Investigation of Hospital Operating Room Air Distribution</td>
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<td>Mohsin Waqar</td>
<td>MSME</td>
<td>Wayne Book</td>
<td>Robust Non-Linear Observer for Non-Collocated Flexible Motion System</td>
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MASTER'S DEGREES (NOTHESES OPTION) AWARDED

Of the 136 nonthesis master’s degrees, there were 113 in ME, 15 in medical physics, three in bioengineering, two undesignated master’s, and one each in paper science and nuclear engineering.

NAME DEGREE

SUMMER 2007
Robert Bacon MSME
Mark Boudreaux MSMP
Jeremy Carter MSME
Obert Chen MSME
Patrick Cox MSME
Christopher Curry MSBioE
David Dees MSME
Ryan Dickerson MSME
Ritchie Dow MSMP
Gavin Grossman MS
John Groves MSME
Jamie Hasenstab MSME
Mark Honeycutt MSME
Heidi Hurst MSMP
Daniel Hyer MSMP
Mustapha Ismail MSME
Perry Johnson MSMP
Corey Lagunowich MSME
Brett Mauro MSME
Andrew Menges MSME
Douglas Merrell MSME
Benjamin Morrill MSME
Shaya Nematifar MSME
Wei Ng MSME
Isaac Nuss MSME
John Quicksall MSME
Jason Rowell MSMP
Jason Savarese MSMP
Thomas Sokol MSME
Kurien Thomas MSMP
Peter Twarog MSME
Edward Van Der Heijden MSME
Charles Wells MSME
Renee Wensstrup MSME
Adam Whelan MSME

FALL 2007
Waqas Abbasi MSME
Luqman Abdur-Rahman MSMP
Kevin Bourget MSME
Olivier Cabrit MSME
Marco Calcaterra MSMP
Julien Cambron MSME
Thomas Carlin MSME
Bruno Damaso MSME
Boris Dartiguepeyou MSMP
Olivier Darut MSME
Michael Depalma MSME
Julien Deschamp MSME
David Faria MSMP
Pierre Grand MSME
Harjit Hayer MSME
Daniel Hayes MSME
Jonathan Huber MSMP
Wei Jiang MS
Thomas Jung MS
Stephane Kameugne MSMP
Romain Laboret MSMP
Daniel Lai MSMP
Rachel Lai MSMP
Yee Ming Lam MSME

NAME DEGREE

WINTER 2007
Thomas Lavin MSMP
Damien Lim MSME
Anant Mandapaka MSME
Matthew Michael MSME
Romain Monnier MSME
Philip Newton MSMP
Guy Oulany MSMP
Sacha Ouazana MSMP
Shayan Palit MSMP
Nathan Ritz MSME
Konrad Ryckaczewski MSME
Dana Sankar MSME
Kiichi Sasaki MSMP
Nicholas Slater MSME
Guillaume Teller JSMP
Evans Thompson MSME
Laurent Tironi MSME
Emery Ward MSMP
Kelly Wingate MSMP
Justin Wodrich MSMP

SPRING 2008
Robert Amaro MSME
James Armstrong MSME
Kartik Balachandran MSMP
Arlene Bhuiyan-Khan MSMP
Andre Borisenko MSMP
Adam Cardi MSMP
Meng-Sang Chew MSMP
Matthieu Choix MSMP
Jerome Clencar MSMP
Katherine Clarke MSMP
Shawn Cochran MSMP
Benjamin Davis MSMP
Michael Deklenbaugh MSMP
John Dorf MSMP
David Dumbauld MSBioE
Aaron Enes MSMP
Arthur Evans MSMP
Francis Fearon MSMP
Amy Flower MSMP
Alex Geyling MSMP
Brian Gollenberg MSMP
Abraham Greenstein MSMP
Marc Griswold MSMP
Eamonn Harter MSMP
Ludovic Heidmann MSMP
Fred Hernandez MSMP
Jong Han Hu MSMP
Emad Ismail MSMP
Mela Johnson MSBioE
Mohit Kapur MSMP
Lane Keyes MSMP
Markus Koegel MS

NAME DEGREE

WINTER 2008
Thomas Lavin MSMP
Damien Lim MSME
Anant Mandapaka MSME
Matthew Michael MSME
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Philip Newton MSMP
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Sacha Ouazana MSMP
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Ludovic Heidmann MSMP
Fred Hernandez MSMP
Jong Han Hu MSMP
Emad Ismail MSMP
Mela Johnson MSBioE
Mohit Kapur MSMP
Lane Keyes MSMP
Markus Koegel MS

DEGREES AWARDED IN THE WOODRUFF SCHOOL
Academic Years 1978-1979 through 2007-2008

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Notes: The Nuclear Engineering Programs did not become part of the Woodruff School until 1984; those degrees are included beginning in the 1984-1985 academic year.
### DOCTORAL DEGREES AWARDED

<table>
<thead>
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<th>NAME</th>
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<td>Laurent Capolungo</td>
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<td>Jianmin Qu, M. Cherkaoui</td>
<td>Modeling of the Size Effect in the Plastic Behavior of Polycrystalline Materials</td>
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<td>Hydrodynamic Parameters of Micro Porous Media for Steady and Oscillatory Flow: Application to Cryocooler Regenerators</td>
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<td>William King</td>
<td>Topographical and Chemical Patternning of Cell-Surface Interfaces to Influence Cellular Functions</td>
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<td>John Connelly</td>
<td>Ph.D. BioE</td>
<td>Marc Levenston</td>
<td>Regulatory Mechanisms in the Chondrogenesis of Mesenchymal Progenitors: The Roles of Cyclic Tensile Loading and Cell Matrix Interactions</td>
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<td>Yogendra Joshi</td>
<td>Pool Boiling from Enhanced Structures Under Confinement</td>
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<td>Karen Hallow</td>
<td>Ph.D. ME</td>
<td>Raymond Vito</td>
<td>Relationships Between Mechanical Stress and Inflammation in Diseased Human Coronary Arteries</td>
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<td>Steven Keller</td>
<td>Ph.D. NRE</td>
<td>Farzad Rahmema</td>
<td>Flux-Limited Diffusion Coefficient Applied To Reactor Analysis</td>
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<td>Yu-Shin Kim</td>
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<td>Correlation Between MMP-2 and -9 Levels and Local Stresses in Arteries Using a Heterogenous Mechanical Model</td>
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<td>Sangsoo Lee</td>
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<td>Development of Techniques for In-Situ Measurement of Heat and Mass Transfer in Ammonia-Water Absorption Systems</td>
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<td>Distribution of Stress in Three-Dimensional Models of Human Coronary Atherosclerotic Plaque Based on Acrylic Histologic Sections</td>
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<td>Stephen Deweerth, Lena Ting</td>
<td>The Interactions of Stance Width and Feedback Control Gain: A Modeling NStudy of Bipedal Postural Control</td>
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<td>Controlling a Passive Haptic Master During Teleoperation</td>
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<td>Matthew Chamberlain</td>
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<td>Peter Hesketh</td>
<td>A Piezoresistive Microcantilever Array for Chemical Sensing Applications</td>
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<td>Remi Dingreville</td>
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<td>Jianmin Qu</td>
<td>Modeling and Characterization of the Elastic Behavior of Interfaces in Nanostructured Materials: From an Atomicistic Description to a Continuum Approach</td>
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<td>Christopher Green</td>
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<td>Jeffrey Streator</td>
<td>Engineering Residual Stress into the Workpiece Through the Design of Machining Process Parameters</td>
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<td>Carl Hanna</td>
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<td>Modulating the Functional Contributions to C-MYC to the Human Endothelial Cell Cyclic Strain Response</td>
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<td>Nicole Hurley</td>
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<td>Larry McIntire</td>
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<td>Timothy Koehler</td>
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<td>Minami Yoda</td>
<td>Haptic Control of Hydraulic Machinery Using Proportional Valves</td>
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<td>Matthew Kontz</td>
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<td>Wayne Book</td>
<td>Atomistic Characterization and Continuum Modeling of Novel Thermomechanical Behaviors of Zinc Oxide Nanostructures</td>
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<td>Ambarish Kulkarni</td>
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<td>Min Zhou</td>
<td>Predictive Modeling for Ductile Machining of Brittle Materials</td>
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<tr>
<td>Celine Lascar</td>
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<td>Said Abdel-Khalik</td>
<td>Shock Attenuation in Two-Phase (Gas-Liquid) Jets for Inertial Fusion Applications</td>
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<tr>
<td>Bong Jae Lee</td>
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<td>Zhuomin Zhang</td>
<td>Fabrication and Analysis of Multilayer Structures for Coherent Thermal Emission</td>
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<tr>
<td>Ameya Limaye</td>
<td>Ph.D. ME</td>
<td>David Rosen</td>
<td>Multi-Objective Process Planning Method for Mask Projection Stereolithography</td>
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<tr>
<td>Robert Macmccan</td>
<td>Ph.D. ME</td>
<td>Paul Neitzel</td>
<td>Mechanistic Effects of Erythrocytes on Platelet Deposition in Coronary Thrombosis</td>
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<tr>
<td>Patrick Opdenbosch</td>
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<td>Wayne Book</td>
<td>Auto-Calibration and Control Applied to Electro-Hydraulic Valves</td>
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<tr>
<td>Ramesh Singh</td>
<td>Ph.D. ME</td>
<td>Shreyes Melkote</td>
<td>Laser-Assisted Mechanical Micromachining for Hard-to-Machining Materials</td>
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<td>Qiuilin Xie</td>
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<td>Steven Liang</td>
<td>Crystal Plasticity Modeling of Ti-6Al-4V and Its Application in Cyclic and Fretting Fatigue Analysis</td>
</tr>
<tr>
<td>Ming Zhang</td>
<td>Ph.D. ME</td>
<td>David McDowell</td>
<td></td>
</tr>
</tbody>
</table>
SCHOLARSHIPS

Many awards recognize academic achievement, leadership, and outstanding service to the Woodruff 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 completing the first year at Georgia Tech, approximately fifty percent of the freshman class retains their scholarships. Students need to maintain a 3.0 grade point average each term to keep the HOPE scholarship.

PRESIDENT’S SCHOLARS

The President’s Scholars Program identifies 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. Overall, Scholars have a 3.69 grade point average; enrolled Woodruff School President’s Scholars have a 3.73 GPA. Overall, 1283 President’s Scholars have graduated since the program began.

There are 261 President’s Scholars enrolled at Georgia Tech in fall 2008. There are 67 new scholars who started this fall, and one more who deferred until next fall. President’s Scholars in ME are: Joshua Adair, Rachel Andrews, Blake Bernard, Jeff Gee, Drew Hess, Matt Hoffman, Tahuira Hoossainy, Katie Hornbostel, Tyler Jackson, William Jones (new PS), Parul Kapur (new PS), Brandon Kearsie, Kyra Key, Matthew LeBrun, Daniel Murphy, Rob Parrish, Alexander Rudat, Metatro Shoun, Liz Tans, Lina Tucker, Michael Valente, James Waring, Joel Weber, and Emily Woods. Students with an NRE major are: Colin Bowers, Caroline Stratton, and Amy Varallo.

ARCS SCHOLARSHIPS

The ARCS (Achievement Rewards for College Scientists) Foundation helps meet our country’s need for scientists and engineers by providing scholarships to academically outstanding students to help them complete their higher education. The Atlanta Chapter gives scholarships to students from Emory University, Georgia Tech, Morehouse College, and the University of Georgia. At Georgia Tech, recipients come from the Woodruff School, the College of Computing, and the Steward School of Industrial and Systems Engineering. Recipients in the Woodruff School are senior Ph.D. students who have high GPA’s, are making good progress toward their degree, have good recommendations from their faculty advisors, and are U.S. citizens.

Last year’s (2007-2008) recipients were: Donavon Gerty (Ari Glezer, faculty advisor), Shelby Highsmith (Steve Johnson, faculty advisor), Janine Johnson (Jianmin Qu, faculty advisor); Charlotte Kotas (Peter Rogers & Minami Yoda, faculty advisors); and Khalid Sorensen (Bill Singhose, faculty advisor)

This year’s (2008-2009) ARCS scholars are: Scott Kasprzak (Ken Gall, faculty advisor) and Stephanie Thompson (Chris Paredis, faculty advisor). Returning are: Shelby Highsmith and Janine Johnson. To date, twenty-three ARCS recipients in the Woodruff School have received their Ph.D.’s.

WOMEN IN ENGINEERING EXCELLENCE AWARDS

Each year the Women In Engineering (WIE) Program celebrates the academic success and leadership achievements of women engineering students at the Excellence Awards Banquet, which is sponsored through a grant from Kimberly Clark Corporation. This year 576 women, representing 37 percent of the undergraduate female engineering students at Georgia Tech, qualified for this event by earning an overall GPA of 3.35 or higher.

Ninety-five scholarships totaling over $100,000 were awarded to outstanding female engineering students. Sixty-nine Woodruff School female undergraduate students qualified for this event through their sustained academic excellence. Twenty-six, as listed below, received scholarships. In addition, Christine Marie Clayton, and Aida Seific received Outstanding Mentor Awards sponsored by Caterpillar. The names of the winners and the corporate sponsors are:

Alcoa: Lisa Worthington; Boeing: Elisabeth Byrd, Elizabeth Cadogan, Sarah Maddox, Victoria Murawski, Amy Varallo (NRE); General Motors: Christine Clayton; Ford: Sara Downey, Geng, Lin, Yasaman Nemat Bakhsh; Northrop Grumman: Alisah Chantelle, Hester Gaffney, Callie Reis; Schlumberger: Katherine Hornbostel, Christi Nesmith; Rockwell: Kyra Key, Stefanie Presley, Gwendolyn Rodgers, Lina Tucker, Chiheim Way; John Deere: Robin Laverentz, Hibiscus Liaw, Meghan McCandless; Lockheed: Nicole Miller, Melissa Minneci; and Shell: Shelley Nation.
**NATIONAL SCIENCE FOUNDATION GRADUATE RESEARCH FELLOWSHIPS**

In 2008, there were fifty-two National Science Foundation Graduate Research Awards in mechanical engineering. Two Woodruff School graduate students and one undergraduate student were winners. The prestigious awards went to Heather Humphreys (Wayne Book, faculty advisor) and Dooroo Kim (Michael Leamy, faculty advisor). Jeffrey Lloyd (BSME 2008) won the award as an undergraduate student and entered the graduate program in fall 2008. Honorable mentions went to graduate students Ashlie Brown (Srinivas Garimella, faculty advisor) and Kenway Chen (Dirk Schaefer, faculty advisor).

**FELLOWSHIPS**

What follows is a list of the major fellowships held by Woodruff School graduate students from July 1, 2007 to June 30, 2008.

- **ACHIEVEMENT AWARDS FOR COLLEGE SCIENTISTS (ARCS)**
  - Donavon Gerty
  - Shelby Highsmith
  - Charlotte Kotas

- **AMERICAN HEART ASSOCIATION COLLEGE OF ENGINEERING FELLOWSHIP**
  - Todd Bandhauer
  - Laura Raibeck

- **AMERICAN HEART ASSOCIATION COLLEGE OF MANAGEMENT FELLOWSHIP**
  - Christopher Nygren

- **DEPARTMENT OF DEFENSE FELLOWSHIP**
  - Ryan Austin
  - David Damm
  - Daniel Reasor

- **DEPARTMENT OF ENERGY FELLOWSHIP**
  - Justin Pounders
  - Christopher Sommer

- **FACES FELLOWSHIP**
  - Akibi Archer
  - Egbe Eni
  - Prem Midha

- **FULBRIGHT FELLOWSHIP**
  - Michael Budnitzki
  - Gabriel Ramirez
  - Andreas Rauch
  - Muhammad Salman

- **GE FACULTY OF THE FUTURE**
  - JoSette Broiles
  - Egbe Eni
  - Christopher Green
  - Roderick Jackson
  - Bryon Johns
  - Stacey Schulte

- **GEORGIA TECH PRESIDENT’S FELLOWSHIP**
  - Akibi Archer
  - Thomas Beechem
  - Joel Boerckel
  - Jonathan Clausen
  - Ted Conrad
  - Kevin Davies
  - David Dumbauido
  - Kenneth Dupont
  - Nicholas Earnhart
  - Aaron Enes
  - Thomas Forbes
  - Steven Hamilton
  - Cody Hellstern
  - Roderick Jackson
  - Janine Johnson
  - Mela Johnson
  - Robert Kupkovits
  - Robert Matthews
  - Logan McLeod
  - Andrew McNamara
  - Prem Midha
  - Graham Nelson
  - Chen-Chih Peng
  - Craig Przybyla
  - Daniel Reasor
  - Felipe Roman-Morales
  - Adam Vela
  - John VanDer Welde
  - Ryder Winck
  - Jaime Zahorian

- **GRADUATE DEGREES FOR MINORITIES IN ENGINEERING (GEMS)**
  - Akibi Archer
  - Rashid Enahora
  - Christopher Green
  - Byron Johns
  - Trayvon Leslie
  - Prem Midha
  - Travis Nunnally
  - Freddie Wilson

- **GOIZUETA FELLOWSHIP**
  - Justin Fernandez
  - Adam Vela

- **INSTITUTE FELLOWSHIP**
  - Eamonn Harter
  - Robert Kupkovits
  - Lucas McCaslin
  - Andrew McNamara
  - Graham Nelson
  - Chen-Chih Peng
  - Daniel Reasor

- **MEDTRONIC FELLOWSHIP**
  - Abigail Wojtowicz
STUDENT GROUPS

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/studentorganizations.

COMPETITION GROUPS
- **gt motorsports**  
  Dr. Ken Cunefare, advisor
- **GT Off-Road**  
  Dr. Ken Cunefare, advisor
- **GT Robojackets**  
  Dr. Chris Paredis, advisor  
  Dr. Wayne Book, FIRST advisor
- **Wreck Racing**  
  Mr. Sterling Skinner, advisor

GENERAL GROUPS
- **Mechanical Engineering Graduate Students Association (MEGA)**  
  Dr. David Rosen, advisor
- **Nuclear & Radiological Engineering Student Advisory Committee**  
  Dr. Farzad Rahnema, advisor
- **Woodruff School Student Advisory Committee (WSSAC)**  
  Dr. David Sanborn, advisor
- **Woodruff School Graduate Women**

HONOR SOCIETY
- **Pi Tau Sigma (ME honor society)**  
  Dr. Janet Allen, advisor

PROFESSIONAL SOCIETIES
- **Acoustical Society of America (ASA)**  
  Drs. Erica Ryherd & Karim Sabra, advisors
- **American Nuclear Society (ANS)**  
  Dr. W. van Rooijen, advisor
- **American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE)**  
  Dr. Sheldon Jeter, advisor
- **American Society of Mechanical Engineers (ASME)**  
  Dr. William Singhose, advisor
- **Society of Automotive Engineers (SAE)**  
  Dr. Ken Cunefare, advisor
ENROLLMENT

The Woodruff School attracts excellent students, as shown by the class profiles of the new undergraduate and graduate students for fall 2008. Our total enrollment for fall 2008 is 2,511 students. We are the largest School on campus with regard to undergraduate enrollment, which totals 1808 (including coops are work). Of these, 1650 are in mechanical engineering and 158 are in nuclear and radiological engineering. Fifty of the mechanical engineering students are at Georgia Tech Savannah. Almost twelve percent of the undergraduate students are female. By ethnicity, 12.4 percent are Asian, 5.6 percent are African-American, 5.3 percent are Hispanic, 0.3 percent is Native American or Multiracial, almost 72% are White, and 4.4 percent are International students.

The total number of graduate students in the Woodruff School is 705 (580 ME, 44 NE, 25 MP, 37 BioE, 17 PSE, 2 Robotics). By degree, there are 444 master’s degree students (390 ME, 13 NE, 22 MP, 12 BioE, 4 PSE, 2 ROB) and 261 Ph.D. students (190 ME, 31 NE, 25 BioE, 13 PSE). By gender, approximately 15 percent of the graduate students are female. By ethnicity, more than 8 percent are Asian, almost 4 percent are African-American, 2.1% are Hispanic, 0.9 percent is Multiracial, 57.4 percent are White, and 27.4 percent are International students.

Woodruff School Enrollment by Major (Fall 2008)

<table>
<thead>
<tr>
<th>UNDERGRADUATES</th>
<th>GRADUATES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ME (Atlanta)</strong></td>
<td><strong>ME</strong></td>
</tr>
<tr>
<td>Freshmen</td>
<td>289</td>
</tr>
<tr>
<td>Sophomores</td>
<td>382</td>
</tr>
<tr>
<td>Juniors</td>
<td>399</td>
</tr>
<tr>
<td>Seniors</td>
<td>528</td>
</tr>
<tr>
<td>Totals</td>
<td>1598</td>
</tr>
<tr>
<td>Males</td>
<td>1421</td>
</tr>
<tr>
<td>Females</td>
<td>177</td>
</tr>
<tr>
<td><strong>RME (Savannah)</strong></td>
<td><strong>NRE</strong></td>
</tr>
<tr>
<td>Juniors</td>
<td>18</td>
</tr>
<tr>
<td>Seniors</td>
<td>32</td>
</tr>
<tr>
<td>Totals</td>
<td>50</td>
</tr>
<tr>
<td>Males</td>
<td>43</td>
</tr>
<tr>
<td>Females</td>
<td>7</td>
</tr>
<tr>
<td><strong>NRE (Atlanta)</strong></td>
<td><strong>Ph.D.</strong></td>
</tr>
<tr>
<td>Freshmen</td>
<td>41</td>
</tr>
<tr>
<td>Sophomores</td>
<td>41</td>
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<tr>
<td>Juniors</td>
<td>39</td>
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<tr>
<td>Seniors</td>
<td>37</td>
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<tr>
<td>Total</td>
<td>158</td>
</tr>
<tr>
<td>Males</td>
<td>131</td>
</tr>
<tr>
<td>Females</td>
<td>27</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>Total Graduates</strong></td>
</tr>
<tr>
<td>ME</td>
<td>1650</td>
</tr>
<tr>
<td>(1466/184)</td>
<td></td>
</tr>
<tr>
<td>NRE</td>
<td>158</td>
</tr>
<tr>
<td>(131/27)</td>
<td></td>
</tr>
<tr>
<td><strong>Total Undergraduates</strong></td>
<td><strong>705</strong></td>
</tr>
<tr>
<td>(1466/184)</td>
<td></td>
</tr>
</tbody>
</table>

The numbers in parentheses are the male and female students.

Freshman Class Profile (2008)

| Average SAT Score (out of 1600) |
| Mechanical Engineering | 1335 |
| Nuclear Engineering | 1342 |
| Georgia Tech | 1337 |

| High School Grade Point Average |
| Mechanical Engineering | 3.74 |
| Nuclear Engineering | 3.75 |
| Georgia Tech | 3.75 |

| Number of Incoming Freshman (fall and summer) |
| Mechanical Engineering | 236 |
| Nuclear Engineering | 38 |
| Transfers (fall only) (56 ME, 4 NRE) | 60 |
| RME (fall only) | 15 |
| **Georgia Tech** |
| Summer 2008 | 250 |
| Fall 2008 | 2386 |
| Transfers | 664 |

| College of Engineering |
| Freshmen | 1652 |
| Transfers | 269 |

Freshman Demographics

Woodruff School

| Females | 30 |
| Males | 244 |
| Georgia Residents | 142 |
| Out-of-State Residents | 132 |
| Total Freshmen | 274 |

| Georgia Tech |
| Females | 871 |
| Males | 1897 |
| Georgia Residents | 1753 |
| Internationals | 198 |

New Graduate Class Profile (2008)

| Number of Students |
| Applicants | 862 |
| Admitted (38% of applicants) | 370 |
| Matriculated (56% of those accepted) | 205 |

| Average Grade Point Average (GPA) | 3.62 |

| Record Exam |
| Verbal (out of 800) | 527 |
| Quantitative (out of 800) | 745 |
| Writing (out of 6.0) | 4.22 |

| Demographics |
| Males | 171 |
| Females | 34 |
| Minorities (U.S. Citizens) | 13 |
| Internationals | 54 |

| Geographical Breakdown by Undergraduate School |
| East/Northeast | 50 (24%) |
| South/Southeast | 73 (36%) |
| Midwest | 22 (11%) |
| West/Southwest | 6 (3%) |
| Internationals | 54 (26%) |
### Enrollment in the College of Engineering (Fall 2008)

<table>
<thead>
<tr>
<th>Group</th>
<th>Males</th>
<th>Females</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>2557</td>
<td>729</td>
<td>3286</td>
</tr>
<tr>
<td>Black</td>
<td>471</td>
<td>187</td>
<td>658</td>
</tr>
<tr>
<td>Hispanic</td>
<td>475</td>
<td>129</td>
<td>604</td>
</tr>
<tr>
<td>Native American</td>
<td>19</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Multiracial</td>
<td>73</td>
<td>15</td>
<td>88</td>
</tr>
<tr>
<td>White</td>
<td>5048</td>
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<td>6348</td>
</tr>
<tr>
<td>Unknown</td>
<td>57</td>
<td>12</td>
<td>70</td>
</tr>
<tr>
<td>COE Totals</td>
<td>8700</td>
<td>2379</td>
<td>11,079</td>
</tr>
</tbody>
</table>

*The School of Nuclear Engineering became part of the Woodruff School in 1984.*

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### Enrollment at Georgia Tech by Colleges (2007 and 2008)

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Architecture</td>
<td>759</td>
<td>690</td>
<td>449</td>
<td>515</td>
<td>1208</td>
<td>1205</td>
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<td>Computing</td>
<td>816</td>
<td>874</td>
<td>745</td>
<td>775</td>
<td>1561</td>
<td>1649</td>
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<tr>
<td>Engineering</td>
<td>7339</td>
<td>7503</td>
<td>3555</td>
<td>3574</td>
<td>10,894</td>
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<tr>
<td>Ivan Allen</td>
<td>918</td>
<td>962</td>
<td>273</td>
<td>283</td>
<td>1191</td>
<td>1245</td>
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<tr>
<td>Management</td>
<td>1301</td>
<td>1347</td>
<td>363</td>
<td>501</td>
<td>1664</td>
<td>1848</td>
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<tr>
<td>Sciences</td>
<td>1180</td>
<td>1151</td>
<td>779</td>
<td>790</td>
<td>1959</td>
<td>1941</td>
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<td>Registrar</td>
<td>249</td>
<td>439</td>
<td></td>
<td></td>
<td>249</td>
<td>439</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>12,562</strong></td>
<td><strong>12,966</strong></td>
<td><strong>6,164</strong></td>
<td><strong>6,438</strong></td>
<td><strong>18,726</strong></td>
<td><strong>19,404</strong></td>
</tr>
</tbody>
</table>

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### Enrollment in the Woodruff School by Degree Level, Ethnicity and Citizenship (2007 and 2008)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>209</td>
<td>224</td>
<td>57</td>
<td>59</td>
<td>266</td>
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<tr>
<td>Black</td>
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<td>105</td>
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<td>10</td>
<td>6</td>
<td>6</td>
<td>22</td>
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<tr>
<td>Multiracial</td>
<td>73</td>
<td>15</td>
<td>8</td>
<td>8</td>
<td>42</td>
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<tr>
<td>White</td>
<td>1280</td>
<td>1296</td>
<td>407</td>
<td>405</td>
<td>1687</td>
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<td>International</td>
<td>85</td>
<td>80</td>
<td>207</td>
<td>193</td>
<td>292</td>
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<tr>
<td><strong>Totals</strong></td>
<td><strong>1765</strong></td>
<td><strong>1806</strong></td>
<td><strong>723</strong></td>
<td><strong>705</strong></td>
<td><strong>2488</strong></td>
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</tbody>
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### Enrollment in the Woodruff School (Academic Years 1980-1981 through 2008-2009)

<table>
<thead>
<tr>
<th>Years</th>
<th>Undergraduates</th>
<th>Graduates</th>
<th>Totals</th>
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<tr>
<td>1980-1981</td>
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<td>3057</td>
<td>2513</td>
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<tr>
<td>1981-1982</td>
<td>1765</td>
<td>3207</td>
<td>2488</td>
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<tr>
<td>1982-1983</td>
<td>1718</td>
<td>3106</td>
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<td>1983-1984</td>
<td>1564</td>
<td>2887</td>
<td>2251</td>
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<td>1984-1985</td>
<td>1486</td>
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<td>1985-1986</td>
<td>1327</td>
<td>2491</td>
<td>2018</td>
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<tr>
<td>1986-1987</td>
<td>1303</td>
<td>2391</td>
<td>1993</td>
</tr>
<tr>
<td>1987-1988</td>
<td>1217</td>
<td>2141</td>
<td>1831</td>
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<tr>
<td>1988-1989</td>
<td>1262</td>
<td>2035</td>
<td>1757</td>
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<tr>
<td>1989-1990</td>
<td>1160</td>
<td>1945</td>
<td>1665</td>
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<tr>
<td>1990-1991</td>
<td>1095</td>
<td>1895</td>
<td>1594</td>
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<td>1991-1992</td>
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<td>1546</td>
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<tr>
<td>1992-1993</td>
<td>1257</td>
<td>2107</td>
<td>1702</td>
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<tr>
<td>1993-1994</td>
<td>1288</td>
<td>2038</td>
<td>1757</td>
</tr>
<tr>
<td>1994-1995</td>
<td>1328</td>
<td>2108</td>
<td>1747</td>
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<tr>
<td>1995-1996</td>
<td>1333</td>
<td>2133</td>
<td>1770</td>
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<tr>
<td>1996-1997</td>
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<td>1997-1998</td>
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<tr>
<td>2000-2001</td>
<td>1178</td>
<td>1938</td>
<td>1402</td>
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<tr>
<td>2001-2002</td>
<td>1096</td>
<td>1866</td>
<td>1328</td>
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<tr>
<td>2002-2003</td>
<td>990</td>
<td>1780</td>
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<td>2003-2004</td>
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<td>1834</td>
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<td>2004-2005</td>
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<td>2005-2006</td>
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<td>2006-2007</td>
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<td>2125</td>
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<td>2007-2008</td>
<td>1322</td>
<td>2145</td>
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<tr>
<td>2008-2009</td>
<td>1309</td>
<td>2139</td>
<td>1420</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>38,164</strong></td>
<td><strong>12,735</strong></td>
<td><strong>50,899</strong></td>
</tr>
</tbody>
</table>

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### Enrollment in Georgia Tech by Degree Level, Ethnicity, and Citizenship (2007 and 2008)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>2036</td>
<td>2175</td>
<td>413</td>
<td>467</td>
<td>2449</td>
</tr>
<tr>
<td>Black</td>
<td>846</td>
<td>873</td>
<td>274</td>
<td>302</td>
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<tr>
<td>Hispanic</td>
<td>586</td>
<td>615</td>
<td>157</td>
<td>144</td>
<td>733</td>
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<tr>
<td>Native American</td>
<td>34</td>
<td>37</td>
<td>6</td>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td>Multiracial</td>
<td>72</td>
<td>63</td>
<td>63</td>
<td>76</td>
<td>135</td>
</tr>
<tr>
<td>White</td>
<td>8363</td>
<td>8431</td>
<td>2547</td>
<td>2652</td>
<td>10,910</td>
</tr>
<tr>
<td>International</td>
<td>595</td>
<td>668</td>
<td>2737</td>
<td>2791</td>
<td>3332</td>
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<tr>
<td><strong>Totals</strong></td>
<td><strong>12,565</strong></td>
<td><strong>12,966</strong></td>
<td><strong>6,177</strong></td>
<td><strong>6,438</strong></td>
<td><strong>18,726</strong></td>
</tr>
</tbody>
</table>

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### Enrollment in the College of Engineering by Gender and Ethnicity (Fall 2008)

<table>
<thead>
<tr>
<th>Group</th>
<th>Males</th>
<th>Females</th>
<th>Totals</th>
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<tr>
<td>Asian</td>
<td>2557</td>
<td>729</td>
<td>3286</td>
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<tr>
<td>Black</td>
<td>471</td>
<td>187</td>
<td>658</td>
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<tr>
<td>Hispanic</td>
<td>475</td>
<td>129</td>
<td>604</td>
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<tr>
<td>Native American</td>
<td>19</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Multiracial</td>
<td>73</td>
<td>15</td>
<td>88</td>
</tr>
<tr>
<td>White</td>
<td>5048</td>
<td>1300</td>
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<tr>
<td>Unknown</td>
<td>57</td>
<td>12</td>
<td>70</td>
</tr>
<tr>
<td>COE Totals</td>
<td>8700</td>
<td>2379</td>
<td>11,079</td>
</tr>
</tbody>
</table>
FACULTY

Of the 92 academic (tenure-track) faculty members in the Woodruff School, there are 17 endowed or distinguished faculty, 40 full professors, 12 associate professors, and 23 assistant professors. Of these, eleven are (courtesy) joint appointments from other Schools on campus. There are seven female academic faculty members (2 professors, 5 assistant professors). There are also 21 research faculty (19 males, 2 females), six academic professionals (4 males, 2 females), and 18 emeritus faculty (all male). With regard to longevity on the faculty, five faculty members began in the 1970’s, 18 faculty members began in the 1980’s, 23 came to Georgia Tech in the 1990’s, and 32 started at Georgia Tech in this decade (of these two will begin in 2009). All our academic faculty have a Ph.D.

ACoustics and Dynamics

Yves H. Berthelot, Professor and President of Georgia Tech Lorraine
Ph.D., University of Texas at Austin, 1985
• Fellow of ASA
Kenneth A. Cunefare, Professor
Ph.D., Pennsylvania State University, 1990
• Fellow of ASA
Nico F. Declercq, Assistant Professor
Ph.D., Ghent University, Belgium, 2005
Aldo A. Ferri, Associate Professor
Ph.D., Princeton University, 1985
• Fellow of ASME
Jerry H. Ginsberg, George W. Woodruff Chair in Mechanical Systems and Professor
E.Sc.D., Columbia University, 1970
• Fellow of ASA and ASME
Michael J. Leamy, Assistant Professor
Ph.D., University of Michigan, 1998
Peter H. Rogers, Rae and Frank H. Neely Chair in Mechanical Engineering and Professor
Ph.D., Brown University, 1970
• Fellow of ASA
Erica E. Ryherd, Assistant Professor
Ph.D., University of Nebraska, 2006
Karim Sabra, Assistant Professor
Ph.D., University of Michigan, 2003
• Fellow of ASA

Automatic and Mechatronics

Wayne J. Book, HUSCO/Ramirez Distinguished Chair in Fluid Power and Motion Control and Professor
Ph.D., Massachusetts Institute of Technology, 1974
• Fellow of ASME, IEEE, and SME
Ye-Hwa Chen, Professor
Ph.D., University of California, Berkeley, 1985
Kok-Meng Lee, Professor
Ph.D., Massachusetts Institute of Technology, 1985
• Fellow of ASME and IEEE
Harvey Lipkin, Associate Professor
Ph.D., University of Florida, 1985
John G. Papastavridis, Associate Professor
Ph.D., Purdue University, 1976
Nader Sadegh, Associate Professor
Ph.D., University of California, Berkeley, 1987
William E. Singhose, Associate Professor
Ph.D., Massachusetts Institute of Technology, 1997
Jun Ueda, Assistant Professor
Ph.D., Kyoto University, Japan, 2002

BIOEngineering

Gang Bao, Robert A. Milton Chair in Biomedical Engineering (Joint Appointment)
Ph.D., Lehigh University, 1987
• Fellow of ASME
Andres J. Garcia, Professor
Ph.D., University of Pennsylvania, 1996
• Fellow of AIMBE
Rudolph L. Gleason, Assistant Professor
Ph.D., Texas A&M University, 2004
Robert E. Guldborg, Professor
Ph.D., University of Michigan, 1995
• Fellow of AIMBE
David N. Ku, Lawrence P. Huang Endowed Chair in Engineering and Entrepreneurship and Regents’ Professor
Ph.D., Georgia Institute of Technology, 1983
M.D., Emory University, 1984
• Fellow of AIMBE
Robert M. Nerem, Parker H. Petit Distinguished Chair for Engineering in Medicine and Institute Professor
Ph.D., Ohio State University, 1964
• Fellow of AAAS, AIMBE, APS, and ASME
• Member of NAE and IOM
Raymond P. Vito, Vice Provost for Undergraduate and Graduate Studies 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
Evan Zamir, Assistant Professor
D.Sc., Washington University, 2003
Cheng Zhu, Regents’ Professor of Biomedical Engineering (Joint Appointment)
Ph.D., Columbia University, 1988
• Fellow of AIMBE and ASME

Computer-Aided Engineering and Design

Janet Allen, Professor
Ph.D., University of California, Berkeley, 1973
• Fellow of ASME
Bert Bras, Professor
Ph.D., University of Houston, 1992
Seung-Kyum Choi, Assistant Professor
Ph.D., Wright State University, 2006
Roger Jiao, Associate Professor
(Will start at Georgia Tech Savannah in December 2008)
Ph.D., Hong Kong University of Science and Technology, 1998
Farrokh Mistree, Professor and Associate Chair for Georgia Tech Savannah
Ph.D., University of California, Berkeley, 1974
• Fellow of ASME and Associate Fellow of AIAA
Chris Paredes, Associate Professor
Ph.D., Carnegie Mellon University, 1996
David W. Rosen, Associate Chair for Graduate Studies and Professor
Ph.D., University of Massachusetts, 1992
• Fellow of ASME
Dirk Schaefer, Assistant Professor
Ph.D., University of Stuttgart, Germany, 2003
• Fellow of Higher Education Academy (UK)
Suresh Sitaraman, Professor
Ph.D., Ohio State University, 1989
• Fellow of ASME
FLUID MECHANICS

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

Alexander Alexeev, Assistant Professor
Ph.D., Technion-Israel Institute of Technology, 2003

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

David Hu, Assistant Professor
Ph.D., Massachusetts Institute of Technology, 2005

Marc K. Smith, Professor
Ph.D., Johns Hopkins University, 1979
  • Fellow of APS and ASME and Associate Fellow of AIAA

Suman Das, Associate Professor
Ph.D., University of Texas, 1998

Craig Forest, Assistant Professor
Ph.D., Massachusetts Institute of Technology, 2007

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

Kyriaki Kalaitzidou, Assistant Professor
Ph.D., Michigan State University, 2005

Steven Y. Liang, Morris M. Bryan, Jr. Professorship in Mechanical Engineering
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

Antonia Antoniou, Assistant Professor
Ph.D., Iowa State University, 2006

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

Ken Gall, Associate Professor of Materials Science and Engineering
(Joint Appointment)
Ph.D., University of Illinois, 1999

Karl I. Jacob, 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) and Associate Dean for Academic Affairs
Ph.D., Columbia University, 1987

W. Steve Johnson, Professor of Materials Science and Engineering
(Joint Appointment)
Ph.D., Duke University, 1979
  • Fellow of ASME, ASM International, ASTM, and NIA

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

Olivier Pierron, Assistant Professor
Ph.D., Pennsylvania State University, 2005

Jianmin Qu, Associate Chair for Administration and 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 Mining and Technology, 1984
  • Fellow of APS

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

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

MICROELECTROMECHANICAL SYSTEMS

Nazanin Bassiri-Gharb, Assistant Professor
Ph.D., Pennsylvania State University, 2005

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

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

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

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

Todd Sulchek, Assistant Professor
Ph.D., Stanford University, 2002
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
Sang H. Cho, Associate Professor
Ph.D., Texas A&M University, 1997
Chaitanya Suresh Deo, Assistant Professor
Ph.D., University of Michigan, 2003
Nolan E. Hertel, Professor
Ph.D., University of Illinois, 1979
• Fellow of HPS
Bojan Petrovic, Professor
Ph.D., Pennsylvania State University, 1995
Farzad Rahnema, 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
W. F. G. van Rooijen, Assistant Professor
Ph.D., University of Delft, The Netherlands, 2006
C.-K. Chris Wang, Professor
Ph.D., Ohio State University, 1989

ACADEMIC PROFESSIONALS
Jeffrey A. Donnell, Coordinator of the Frank K. Webb Program in Professional Communication and Senior Academic Professional
Ph.D. English, Emory University, 1990
Kristi Mehaffey, Undergraduate Academic Advisor and Academic Professional
M.S., Clemson University, 2000
David Sanborn, Associate Chair for Undergraduate Studies and Senior Academic Professional
Ph.D., University of Michigan, 1969
• Fellow of ASME
Michael D. Stewart, Academic Professional
M.S., Wayne State College, 1983
Wayne Whiteman, Director of the Office of Student Services and Senior Academic Professional
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
Dwayne Blaylock, Research Engineer II and Interim Manager of the NRE/MP Laboratories
M.S.N.E., Georgia Institute of Technology, 1997
John R. Bogle, Research Engineering II
M.S., Georgia Institute of Technology, 1987
Jayme Caspall, Research Engineer II
M.S.M.E., Georgia Institute of Technology, 1988
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 Engineering and Co-Director, Acoustics and Vibrations Research Laboratory
M.S.M.E., Georgia Institute of Technology, 1992
Francois M. Guillot, Senior Research Engineer
Ph.D., Georgia Institute of Technology, 2000
James Huggins, Research Engineer II
M.S.M.E. Georgia Institute of Technology, 1988
Peter A. Kottke, Research Engineer II
Ph.D., Georgia Institute of Technology, 2004
Gregg D. Larson, Senior Research Engineer
Ph.D., Georgia Institute of Technology, 1996
Angela Lin, Research Engineer II
M.S., Georgia Institute of Technology, 2002
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
Dave Trivet, 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
Dingkang Zhang, Research Engineer II
Ph.D., Georgia Institute of Technology, 2005
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
Joseph D. Clement, started in 1965, retired in 1991
Gene T. Colwell, started in 1966, retired in 1995
J. Nari 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 Durbetaki, started in 1964, retired in 1995
Geoffrey G. Eichholz, started in 1963, retired in 1988
Jerry H. Ginsberg, started in 1980, retired in 2008
James G. Hartley, started in 1977, retired in 2004
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
Ward O. Winer, started in 1969, retired in 2007
NEW FACULTY MEMBERS IN THE WOODRUFF SCHOOL

In a continuing effort to improve the student/faculty ratio, which is high because of surging undergraduate enrollment in mechanical engineering, a number of new faculty members have been hired. Unless otherwise indicated, these faculty members came to Georgia Tech for the fall 2008 semester.

Alexander Alexeev came to Georgia Tech in January 2008 as an assistant professor in the area of fluid mechanics. He received his Ph.D. in 2003 from Technion in Israel.

Antonia Antoniou is an assistant professor in the mechanics of materials research area. She received her Ph.D. in 2006 from Iowa State University. Before coming to Georgia Tech, she was a postdoctoral fellow at the University of Massachusetts.

Gang Bao is a new (courtesy) joint appointment in the Woodruff School. He holds the Robert A. Milton Chair in Biomedical Engineering in the School of Biomedical Engineering and is a College of Engineering Distinguished Professor. His areas of research are biomolecular engineering, bionanotechnology, molecular imaging, and molecular biomechanics.

Baratunde Cola will come to Georgia Tech in January 2009 as an Assistant Professor in the area of heat transfer, combustion, and energy systems. He received his Ph.D. from Purdue University in 2008.

Craig Forest, assistant professor, received his Ph.D. in 2007 from MIT and his BSME from Georgia Tech in 2001. His area of research is manufacturing. Prior to returning to Georgia Tech, he completed a postdoctoral fellowship in genetics at Harvard University.

David Hu, assistant professor, works in the area of fluid mechanics. Prior to coming to Georgia Tech, he was an instructor in mathematics and a postdoctoral fellow at the Courant Institute of Mathematical Science at New York University. He received his Ph.D. in mathematics from MIT in 2005. He has a courtesy joint appointment with the School of Biology.

Jianxin (Roger) Jiao will begin at Georgia Tech as an Associate Professor at Georgia Tech Savannah in December 2008. His area is computer-aided engineering and design. He received his Ph.D. in 1998 from Hong Kong University of Science and Technology.

Satish Kumar will come to Georgia Tech as an Assistant Professor in late fall 2008. He received his Ph.D. from Purdue University in 2007. His area of research is heat transfer, combustion, and energy systems, particularly computational heat transfer.

Todd Sulchek began at Georgia Tech as an Assistant Professor in June 2008. He received his Ph.D. in 2002 from Stanford University. His area of research is MEMS.

Jun Ueda, assistant professor, began at Georgia Tech in May 2008. He research area is automation and mechatronics, particularly robotics. He received his Ph.D. in 2002 from Kyoto University in Japan.

Evan Zamir came to Georgia Tech in spring semester 2008 as an assistant professor. His research area is bioengineering. He received his D.Sc. from Washington University in 2003.

PROMOTIONS

Janet Allen, Levent Degertekin, Andrei Fedorov, Andres Garcia, and Chris Wang were promoted to the rank of full Professor. Janet Allen and Mohammed Cherkaooui received tenure.

Samuel Graham and Chris Paredis were promoted to Associate Professor and granted tenure.

Jeff Donnell was promoted to Senior Academic Professional. He is the Coordinator of the Frank K. Webb Program in Professional Communication.

Angela Lin was promoted to Research Engineer II. She works in the bioengineering area.
JERRY H. GINSBERG: THE WOODRUFF CHAIR IN MECHANICAL SYSTEMS RETIRES

Dr. Jerry H. Ginsberg retired in June 2008 after 28 years on the faculty of the Woodruff School. He came to Georgia Tech in 1980 as a Professor, and in 1988 he became the first holder of the George Woodruff Chair in Mechanical Systems. Prior, he was an Assistant and Associate Professor at Purdue University (1969-1980), and during that time, he spent a sabbatical year in Nancy, France at the Ecole Nationale Superieur de Electricité et Mécanique as a Fulbright Scholar. He now adds Emeritus to his titles. He is a graduate of the Bronx High School of Science, and in 1965 received a B.C.E. from The Cooper Union, and the M.S. and the E.Sc.D. in 1966 and 1970, respectively, both from Columbia University.

Dr. Ginsberg’s research areas have been very broad and have changed regularly to suit his interest and observations as to where he and his students might have the greatest impact. His work is generally devoted to finding mathematical and computational solutions that are more efficient, and provide greater insight, than the standard finite element and finite difference techniques. Many experiments have been carried out to support theoretical results he and his students have obtained. His research is in the broad area of Acoustics and Dynamics, including structural vibrations and acoustics; nonlinear wave propagation; modal identification; and turbomachinery diagnostics.

Dr. Ginsberg received several awards during his tenure at Georgia Tech, including: The Per Bruel Gold Medal for Noise Control and Acoustics for significant contributions as a scientist and as an educator from the Society of Rogue Control Engineers (1987); The Trent-Crede Medal from the Acoustical Society of America for outstanding contributions to the science of mechanical vibrations and shock (2005); the Archie Higon Distinguished Educator Award from the American Society for Engineering Education (1998); and the Georgia Tech Distinguished Professor Award, the highest award given by Georgia Tech (1994). He is a Fellow of the Acoustical Society of America and the American Society of Mechanical Engineers.

Dr. Ginsberg is the author or co-author of five widely-used textbooks and two book chapters, including Advanced Engineering Dynamics (1995), Mechanical and Structural Vibrations (2001), and most recently, Engineering Dynamics (2007). He has authored or co-authored 250 journal articles and conference proceedings, and is Associate Editor for the Journal of the Acoustical Society of America. He is a well known teacher and advisor to graduate students, who have been very successful in their own careers.

Reflecting on his recent retirement, Dr. Ginsberg said, “I am indebted to Georgia Tech for allowing me to pursue my wide range of interests in acoustics, dynamics, and vibrations, often in conjunction with extremely talented students and faculty. Being a part of, and contributing to, the ascendency of the Woodruff School certainly is one of the highlights of my career. Although I will miss my former activities, I have also realized that retirement is so good, I should have done it first. My primary technical activity presently is supporting NASA’s SOFIA (Stratospheric Observatory for Infrared Astronomy) project, which is a significantly modified Boeing 747 that will aim a 20-ton telescope at stars through a large door in the fuselage. My responsibility is planning the instrumentation and test program for phenomena associated with acoustical resonances inside the open cavity where the telescope is situated. I am also attending to a number of things I had neglected, like digital photography, home repairs, and repairing some classic speakers. I have not forgotten my commitment to my colleagues at Georgia Tech and elsewhere to write a textbook on acoustics, but I also need to catch up on reading classical literature.”

AU REVOIR AND GOODBYE

Two receptions on two continents were held for Dr. Jerry Ginsberg upon his retirement from Georgia Tech. In July, a reception was held in Paris, France at the meeting of the Acoustical Society. Dr. Ginsberg was given Rayleigh’s Theory of Sound in two volumes, dated 1884 and 1885, and a commemorative turnbuckle (see below) from the Georgia Tech Acoustics and Dynamics research group. A few months later a retirement reception was held at Georgia Tech.

WARD O. WINER: AN UPDATE

Dr. Ward O. Winer retired from Georgia Tech at the end of November 2007, and now has the title of Eugene C. Gwaltney Jr. School Chair Emeritus. When asked what he has been doing since he retired, he provided the following list.

- Working half time in the office of the Dean of Engineering — title “Senior Gopher” — helping out on a variety of special projects for the Dean
- Several service positions outside of GT
- Chair Engineering section of the NRC Associates Program reviewing post-doc applications for government lab positions
- Member of the ASME Foundation Board of Trustees
- Spent a week in Vietnam interviewing students who applied for graduate fellowships in the U.S. from the Vietnam Education Foundation
- Spent a week in The Netherlands on a government appointed committee to evaluate mechanical engineering programs in The Netherlands
- Spent part of a week in Budapest attending a Board meeting of the Taito Kogyo Tribology Research Foundation
- Member of the Technical Advisory Board of Achates Power, a startup company in San Diego
- Developing a new configuration diesel engine
- Member of an external review visitation committee for the Mechanical Engineering Department at the University of Michigan
- Occasionally working as a teaching assistant in cooking classes
- Playing duplicate bridge with Mary Jo
- Frequent wine tastings
- Lots of reading
- Some sailing
- Taking bagpipe lessons
- Enjoying having more control over my time for the time I have left
- Really enjoying not being responsible for anyone but myself and my wife, and my role in the latter is the subject of some discussion.
Staff members work hard to support faculty; others have leadership roles in administration, communications, advising, recruiting, and facilities. Of the 54 staff members, 17 are males and 37 are females.

### Name

- Segried Allen
- Trudy Allen
- Shauna Bennet-Boyd
- Amy Bondurant
- Vladimir Bortkevich
- Barbara Bower
- Kellie Burns
- Robert Cooper
- Phillip R. Coulson
- Andrew G. (Drew) Davis
- Judith E. Diamond
- Dimetra Diggins-Butler
- Kenneth Dollar
- Richard Duplessis
- Dana Foster
- Melody Foster
- Norma L. Frank
- Kyle French
- David Gifford
- Rona A. Ginsberg
- John W. Graham
- Cheryl Griffin
- Camellia Henry
- Damaar Herring
- Angela L. Hicks
- Phyllis Hinton
- Nancy Hutton
- Samantha James
- Wanda Joefield
- Deidra Johnson
- Glenda Johnson
- Vivian Johnson
- Cecelia Jones
- Theresa S. Keita
- Tom Lawley
- Phu Le
- Joyce Lowe
- Dorothy McDuffie-Alexander
- Stephanie Merrick
- Jeffery Murphy
- Michael L. Murphy
- Regina Neequaye
- Cary Ogletree
- Joli Outlaw
- Rekha Patel
- Michael Proctor
- Melissa Raine
- Amina Sadik
- Glenda Skinner
- Sterling Skinner, Jr.
- Valerie Spradling
- David W. Stone
- Sheila Williams
- Melinda A. Wilson

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segried Allen</td>
<td>Administrative Assistant II</td>
</tr>
<tr>
<td>Trudy Allen</td>
<td>Academic Advisor I</td>
</tr>
<tr>
<td>Shauna Bennet-Boyd</td>
<td>Administrative Coordinator</td>
</tr>
<tr>
<td>Amy Bondurant</td>
<td>Director of Human Resources</td>
</tr>
<tr>
<td>Vladimir Bortkevich</td>
<td>Electrical Engineer III</td>
</tr>
<tr>
<td>Barbara Bower</td>
<td>Administrative Assistant I</td>
</tr>
<tr>
<td>Kellie Burns</td>
<td>Research Technician III</td>
</tr>
<tr>
<td>Robert Cooper</td>
<td>Mechanical Technician III</td>
</tr>
<tr>
<td>Phillip R. Coulson</td>
<td>Financial Specialist</td>
</tr>
<tr>
<td>Andrew G. (Drew) Davis</td>
<td>Electronics Specialist</td>
</tr>
<tr>
<td>Judith E. Diamond</td>
<td>Administrative Coordinator</td>
</tr>
<tr>
<td>Dimetra Diggins-Butler</td>
<td>Program Coordinator II</td>
</tr>
<tr>
<td>Kenneth Dollar</td>
<td>Director of Support and Technical Services</td>
</tr>
<tr>
<td>Richard Duplessis</td>
<td>Systems Analyst III</td>
</tr>
<tr>
<td>Dana Foster</td>
<td>Administrative Assistant I</td>
</tr>
<tr>
<td>Melody Foster</td>
<td>Administrative Manager II</td>
</tr>
<tr>
<td>Norma L. Frank</td>
<td>Academic Advisor I</td>
</tr>
<tr>
<td>Kyle French</td>
<td>Electrical Engineer II</td>
</tr>
<tr>
<td>David Gifford</td>
<td>Electronics Specialist</td>
</tr>
<tr>
<td>Rona A. Ginsberg</td>
<td>Director of Communications</td>
</tr>
<tr>
<td>John W. Graham</td>
<td>Administrative Assistant I</td>
</tr>
<tr>
<td>Cheryl Griffin</td>
<td>Academic Assistant I</td>
</tr>
<tr>
<td>Camellia Henry</td>
<td>Facilities Coordinator</td>
</tr>
<tr>
<td>Damaar Herring</td>
<td>Financial Manager I</td>
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<td>Angela L. Hicks</td>
<td>Project Coordinator II</td>
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<tr>
<td>Phyllis Hinton</td>
<td>Accountant III</td>
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<tr>
<td>Nancy Hutton</td>
<td>Administrative Assistant I</td>
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<td>Samantha James</td>
<td>Administrative Coordinator</td>
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<tr>
<td>Wanda Joefield</td>
<td>Administrative Assistant II</td>
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<tr>
<td>Deidra Johnson</td>
<td>Academic Advisor I</td>
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<tr>
<td>Glenda Johnson</td>
<td>Administrative Assistant I</td>
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<tr>
<td>Vivian Johnson</td>
<td>Administrative Assistant I</td>
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<tr>
<td>Cecelia Jones</td>
<td>Administrative Assistant II</td>
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<tr>
<td>Theresa S. Keita</td>
<td>Director of Development</td>
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<tr>
<td>Tom Lawley</td>
<td>Systems Analyst III</td>
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<td>Phu Le</td>
<td>Administrative Assistant II</td>
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<tr>
<td>Joyce Lowe</td>
<td>Program Coordinator II</td>
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<tr>
<td>Dorothy McDuffie-Alexander</td>
<td>Technical Services Manager</td>
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<tr>
<td>Stephanie Merrick</td>
<td>Senior Facilities Manager</td>
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<tr>
<td>Jeffery Murphy</td>
<td>Administrative Assistant II</td>
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<tr>
<td>Michael L. Murphy</td>
<td>Administrative Manager I</td>
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<tr>
<td>Regina Neequaye</td>
<td>Administrative Clerk</td>
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<tr>
<td>Cary Ogletree</td>
<td>Accountant III</td>
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<tr>
<td>Joli Outlaw</td>
<td>Computer Services Specialist II</td>
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<td>Rekha Patel</td>
<td>Administrative Assistant I</td>
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<td>Michael Proctor</td>
<td>Accountant III</td>
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<tr>
<td>Melissa Raine</td>
<td>Project Coordinator I</td>
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<td>Amina Sadik</td>
<td>Director of Instructional Labs</td>
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<td>Glenda Skinner</td>
<td>Administrative Assistant I</td>
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<tr>
<td>Sterling Skinner, Jr.</td>
<td>Director of Finance</td>
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<tr>
<td>Valerie Spradling</td>
<td>Administrative Assistant II</td>
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<tr>
<td>David W. Stone</td>
<td>Administrative Assistant II</td>
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<td>Sheila Williams</td>
<td>Administrative Coordinator</td>
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### LEAVING THE WOODRUFF SCHOOL

- **Mervyn Fathianathan**, Assistant Professor at Georgia Tech Savannah, resigned and returned to Singapore to manage his start-up company.
- **Samuel Heffington**, Research Engineer II, left Georgia Tech.
- **Sherron Lazarus**, Administrative Manager I, retired from Georgia Tech in April 2008 after 18 years in the Woodruff School.
- **Steven Liang**, Morris Bryan Professorship, has taken a one-year leave from Georgia Tech to work in Taiwan.
- **Linda Perry**, Administrative Assistant II, retired from Georgia Tech after 11 years.
- **David Orloff** retired from Georgia Tech in June 2008, but can still be seen around our buildings because he is teaching some courses.

### MEET THE WOODRUFF SCHOOL’S NEW DIRECTOR OF HUMAN RESOURCES

Amy Bondurant came to Georgia Tech in June 2008 as the Director of Human Resources for the Woodruff School. She is responsible for all staff and faculty human resources issues, including recruiting and hiring, immigration, and employee relations. She also handles the hiring of postdoctoral fellows, temporary researchers, prepares the hiring packages for academic and research faculty, and coordinates the visiting scholar process for the School.

Amy has a bachelor’s degree in communication from Northwestern University and a law degree from Vanderbilt University. She practiced law for several years in Ohio and Georgia, specializing in labor and employment law before joining Delta Air Lines in Atlanta. At Delta, she was Human Resources Manager for Technical Operations and, most recently, served as a consultant to Delta. Amy has SPHR (Senior Professional in Human Resources) certifications.

When asked about the differences between her job at Delta Airlines and her new one in academia, Amy said, “Taking on this opportunity at Georgia Tech has allowed me to interact with a much broader spectrum of HR-related issues than I encountered in private industry. The client group at Georgia Tech is much more diverse, presenting many unique challenges and testing my HR expertise daily.”
GEORGIA INSTITUTE OF TECHNOLOGY

RESEARCH

Georgia Tech is a major center for advanced technology in Georgia and the southeast. The Institute conducts research of national significance, provides research services and facilities to faculty, students, industry, and government agencies, and supports the economic and technological growth of the state of Georgia. Research operations are carried out through schools, centers, and laboratories.

In 2007, the Institute received 2,906 proposals valued at almost $1 billion with 2,441 awards for almost $375 million. The College of Engineering received 982 awards, valued at more than $119 million. The major funding sources are the U.S. Air Force, U.S. Army, U.S. Navy, Department of Defense, the National Science Foundation, and NASA.

Woodruff School faculty are responsible for more than $35 million a year in externally funded grants and contracts (new and continuing). In fiscal year 2008 Woodruff School faculty earned 150 new projects or received additional funds for multiple-year projects. These funds total $19,316,662.

Our faculty are divided into self-selected research groups: Acoustics and Dynamics; Automation and Mechatronics; Bioengineering; CAE and Design; Fluid Mechanics; Heat Transfer; Manufacturing; Mechanics of Materials; MEMS; Tribology; and Nuclear and Radiological Engineering/Medical Physics. In addition, the faculty participate in more than a dozen interdisciplinary and Institute-wide centers on campus, many of which are led by Woodruff School faculty.

Technology licensing activities are a result of research. In 2007, this resulted in 323 inventions, software and copyright disclosures, 107 patent applications, and 49 patents issued. Current Woodruff School faculty hold more than 195 U.S. patents. First-page patent plaques of each invention are prominently displayed in the lobby of the MRDC Building. The display is supported by the Harold Gegenheimer (class of 1933) Endowment on Innovation and is meant to inspire students to invent and innovate.

FACILITIES

Georgia Tech has 229 buildings totaling 14,228,028 square feet. Of this, more than five million square feet or 36.6 percent are academic instruction and research buildings and 438,532 square feet or 3.7 percent are dedicated to academic support. The remaining buildings are for athletics, campus support, parking, residential, Georgia Tech Research Institute, and student support. The Woodruff School has the use of the following buildings:

J. Erskine Love Manufacturing Building
- 153,664 sq. ft.
- Opened in 2000
- Building is shared with Materials Science and Engineering
- Underwater acoustics tank, wind tunnel, and MEMS clean room are special facilities
- Acoustics, Fluid Mechanics, and Heat Transfer, Combustion and Energy Systems are research groups in this building

Manufacturing Related Disciplines Complex
- 121,976 sq. ft.
- Opened in 1995
- Building is shared with Polymer, Textile, and Fiber Engineering
- Undergraduate laboratories are among the special facilities
- Tribology and Mechanics of Materials are research groups in this building

Fuller E. Callaway, Jr. Manufacturing Research Center
- 118,380 sq. ft.
- Opened in 1991 (interdisciplinary space)
- Integrated Acoustics Laboratory (anechoic chamber) and high-bay area are special facilities
- Manufacturing, CAE/Design, and Automation/Mechatronics faculty research groups are housed here

Frank H. Neely Research Center
- 41,432 sq. ft.
- Opened in 1963
- Nuclear and Radiological Engineering/Medical Physics program is housed here

Parker H. Petit Biotechnology Building
- 156,749 sq. ft.
- Opened in 1999 (interdisciplinary space)
- Bioengineering research group is located here

IPST Centennial Engineering Building
- Opened in 1997
- Faculty members in Paper Science and Engineering are housed here

Student Competition Center
- Opened in 1941
- Officially the Mechanical Engineering Research Building
- Houses various student competition groups, including gt motorsports, GT Off-Road, Robojackets, and Wreck Racing
FINANCES

For fiscal year 2008 (July 1, 2007 to June 30, 2008), 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): 477
- Number of proposals submitted to external agencies: 216
- Number of proposals awarded from external agencies: 150
- Number of externally funded grants, contracts, and endowments receiving new funds: 218
- Number of internally funded grants receiving new funds: 14

Endowments (as of July 1, 2007), k$

- Total Woodruff School endowments (market value principal): $107,425
- Endowment-generated revenue available for expenditure: $3,768

As of July 2007 the total market value principal of the Woodruff School endowments is $103,222,578 and the endowment-generated revenue available for expenditure is $4,098,433.

Fiscal Year 2008 Expenditures and Sources ( Millions)

- State: $18,938,461 (48%)
- Grants & Contracts: $15,678,558 (39%)
- Ga. Tech Foundation: $4,932,736 (12%)
- Ga. Tech Research Corp.: $396,496 (1%)

THE WOODRUFF ENDOWMENT

Funds from the George W. Woodruff Trust continue to provide for the enhancement of the School of Mechanical Engineering. George Woodruff (class of 1917) 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 that are an ongoing source of unrestricted support for the Institute.

The market value of the Mechanical Engineering Woodruff Endowment on July 1, 2007 was $74,678,463. The endowment generated $2,603,203 that was available to the Woodruff School to update and enrich our programs during fiscal year 2008. The expenditures fall into these categories:

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, held the Mechanical Systems Chair from 1989 until his retirement in June 2008. 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. Andres Garcia, Srinivas Garimella, Robert Guldberg, Shreyes Melkote, Minami Yoda, and Min Zhou are faculty fellows.
- 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.
- Provides development funds for five Woodruff School Associate Chairs.
- Partially supports the Joseph H. Anderer Faculty Fellow, currently Sam Graham.
STUDENTS
• The largest single category of support is for students ($1,033,955) in the form of teaching assistantships, research assistantships, fellowships, and fees impacting 253 graduate students.
• Provides funds, including travel, to recruit new ME, NRE, and MP graduate students to the Woodruff School. This includes three 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 Zeigler Outstanding Educator.
• Partially funds student organizations such as the ASME Student Chapter, gt motorsports, GT Off-Road, GT RoboJackets, and the Woodruff School Student Advisory Committee.
• Provides partial financial support for student participants in the Georgia Tech Lorraine program.
• Provides funds for the Annual 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 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.
• Provides 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.

FACILITIES
• Helps fund the operation of the Student Competition Center.
• Provides funds to improve and furnish School facilities, including computer clusters and networking equipment.
• Provides funds to upgrade Woodruff School security equipment.

LECTURES AND SEMINARS
• Underwrites 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.

OTHER ENDOWMENTS
In addition to the Woodruff Endowment, the Woodruff School has a number of other endowments that total more than $32 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
• Arnold Goldberg Endowment Fund
• Augustin A. Ramirez/HUSCO International Distinguished Chair Fund
• Carter N. Paden, Jr. Distinguished Chair Fund
• Centennial-Mechanical Engineering Fund
• Dean Lennard Endowment Fund
• Edward A. Eppinger Endowment
• Eugene C. Gwaltney, Jr. Chair in Manufacturing Fund
• Frank K. Webb, Jr. Endowment Fund
• Harold W. Gegenheimer Fund
• Ike Murray Endowment Fund
• J. Erskine Love, Jr. Family Endowment Fund
• Jack M. Zeigler Endowment Fund
• Jack M. Zeigler Outstanding Educator in the School of Mechanical Engineering Award Endowment Fund
• James Charles Leathers Endowment Fund
• John G. Johnson Mechanical Engineering Fund
• John M. McKenney & Warren D. Shiver Distinguished Chair in Building Mechanical Systems Fund
• Joseph H. Anderer Faculty Fellow Endowment Fund
• Mary B. and Henry L. Pruitt Endowment Fund
• ME-BioEngineering Research and Education Fund
• Morris M. Bryan, Jr. Chair in Advanced Manufacturing Systems Fund
• Neely Professorship Fund
• Parker H. Petit Chair Fund
• Phillip F. L’Engle and Williams B. Hardin Endowment Fund
• Ward O. Winer Professional Development Fund
• Warren K. Wells Endowment for Mechanical Engineering Fund
• William B. Crane, Sr. Endowment Fund

SCHOLARSHIPS
• Alan F. Sides Scholarship Endowment Fund
• Arthur Dean Brook Scholarship Fund
• Carl F. Phillips Endowment Fund
• Danylyuk ME Scholarship Endowment Fund
• David V. Carswell Memorial Scholarship Fund
• Francis R. Hammack Scholarship Endowment Fund
• James C. Leathers Scholarship Endowment Fund
• John S. Webb and Julian C. Stanley, Sr. Scholarship Endowment Fund
• Joseph H. Dean Memorial Endowment Fund
• Louis B. Long Endowment Fund
• Paden-Cheves Scholarship Fund
• Procter & Gamble Technical Scholarship Fund
• Richard A. Trotter Memorial Scholarship Fund
• Richard K. Whitehead, Jr. Fund

FELLOWSHIPS
• James E. Pruitt, Jr. Fellowship
• John Harris Maddox Fellowship Endowment Fund
• Paul R. Yopp Memorial Fellowship Fund
• William H. Glenn Fellowship Fund
• Henry Fisher Jr. Fellowship Endowment (NRE)
The list includes donors who have designated gifts to the George W. Woodruff School of Mechanical Engineering between July 1, 2007 and June 30, 2008. To contribute to the School or if you have questions about establishing an endowment, contact Tom Lawley, director of development, at (404) 385-8345 or by e-mail to tom.lawley@me.gatech.edu.

Contributors

Alumni, Friends, and Students
Robert Dale Atkins, IMG, 1984
John Balsam, Past Parent
Mary A. Banks, MGT, 1988
Teresa Booth, Friend
Michael W. Burnette, EE, 1998
Debra J. Brook, Friend
Harold A. Clayton, Friend
Thomas A. Coleman, PHY, 1971
Chaz Cone, IM, 1961
Steven C. Dang, EE, 1961
Anthony Docal, Friend
James R. Downing, IM, 1966
John F. Engquist, Friend
Ben E. Entrekin, ME, 2002
Paul A. Flexner, Friend
Sharon P. Galloway, Friend
John F. Glenn, Jr., IM, 1959
Arnold I. Goldberg, ME, 1950
Douglas M. Grimm, IM, 1963
Roy P. Herring III, IM, 1964
Harry F. Jenkins, TEXT, 1973
Sheldon M. Jeter, ME, 1979
Bruce A. Jones, CE, 1974
Scott A. Keith, PHYS, 1982
Helen E. Kilgore, Friend
Deborah Kilpatrick, ESM, 1989
John J. Kluber, ME, 1984
Charlie J. Lail, Friend
James C. Leathers, ME, 1955
Isaac E. Murray, Jr., ME, 1949
Stephanie Parker, Friend
James Pernikoff, Friend
James E. (Jack) Pruitt, Jr. 1956
Richard D. Radford, Jr., Friend
Alan F. Sides, ME, 1983
Weston M. Stacey, PHYS, 1959
Preston S. Stevens, Jr., ARCH, 1952
Paul Strickland, Friend
David L. Sullivan, ARCH, 1976
Phillip J. Sullivan, AE, 1955
Stephen J. Taylor, CHE, 1980
William L. Thacker, Jr., ME, 1967
Henry B. Ward III, ME, 1993
James O. Watson, In Honor Of
John V. Watson, Student
Frank K. Webb, ME, 1938
Jeremy Webber, Parent

Corporations, Foundations, and Organizations
Wendell M. Williams, Jr., ME, 1955
Charles H. Willis, Friend
Jamal O. Wilson, ME, 2002
Richard C. Woroniecki, Friend
Jack M. Zeigler, ME, 1948

Air Products Foundation
Air Products and Chemicals, Inc.
American Nuclear Society
ARCS Foundation, Inc.
AREVA NP, Inc
Arpeggio Acoustic Consulting LLC
Association for Manufactured Technology
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Bose Corporation
BP America, Inc.
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Caterpillar, Inc
Georgia Power Company
CH2M Hill Companies, Ltd
Citgo Petroleum Corporation
Citi Global Impact Funding Trust, Inc.
Collaborative Product Development Associates, LLC
ConocoPhillips Corporation
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Cummins Business Services
Dana Corporation
Deere & Company
The Dow Chemical Company Foundation
Duke Energy Foundation
Eaton Charitable Fund
Epps Aviation
Eric Johnson, Inc.
ExxonMobil Company
The Fluor Foundation
Ford Motor Company
Gay M. Love Charitable Trust
General Electric Company
GE Foundation
General Motors Foundation
Georgia Power Company
Greater Houston Community Fdn.
Gulfstream Aerospace Corporation
Henry Taylor & Son
Hewlett Packard Company
Hubert and Marian Haley Foundation
IIT Foundation
Ingersoll-Rand Company
Intel Corporation
Inviro Medical Devices, Inc
Jeffrey’s Manufacturing Solutions
John Deere Commercial Products
John Deere Foundation
Johnson Controls Foundation
Juvenile Diabetes Research Foundation International
Kimberly-Clark
Korean Institute of Manufacturing and Materials
Koski Family Foundation
Levenson Foundation, Inc.
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Phoenix Biotechnology, Inc
Pipeline Communications and Technology
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RHD Services
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Rolls-Royce North American Tech, Inc.
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Shell Oil Company
Siemens Energy & Automation, Inc.
Southern Company Services, Inc
Springer-Verlag Berlin-Heidelberg
TRW Automotive
Union Pacific Corporation
United Technologies Corporation
United Technologies Research Center
USEC
Vintage Motorcar Restorations, Inc.
William L. Bonnell Company
Zyvex Corporation

Faculty and Staff
Cyrus K. Aidun
William J. Book
Steven Danylik
Royal F. Dawkins
Stephen L. Dickerson,
Honorary Faculty
Kenneth Dollar
David L. McDowell
Bernd Kahn, Retired Faculty
Alan Larson, Retired Faculty
Linda Perry
Farrokh Mistree
Robert M. Nerem
Jianmin Qu
Richard F. Salant
Suresh K. Sitaraman
William J. Wepfer
Ward O. Winer, Retired
Faculty
Caroline G. Wood
Zhuomin Zhang
THE ADVISORY BOARD

The role of the Advisory Board is to recommend strategic directions for the Woodruff School, suggest broad-based curriculum changes; and consult with the School Chair and the faculty on important issues. Dr. Deborah Kilpatrick chaired the fall advisory board meeting on November 2, 2007 and Mr. Henry Ward chaired the spring meeting on May 9, 2008.

At the fall meeting, Dr. Ward Winer gave his last state-of-the-Woodruff School report before his retirement. The remainder of the agenda was a discussion of the Georgia Tech capital campaign; an overview of the School’s preparation for an ABET evaluation; and reports on the status of Georgia Tech Lorraine and Georgia Tech Savannah. After a lunch with new faculty, the board split into ME and NRE sections. The afternoon session included a discussion of the school chair search, a meeting with female students, and feedback from the board.

The spring meeting was held in the Global Learning Center as a chance for the new School Chair, Dr. William Wepfer, to meet with and hear from the board. This meeting consisted of a state of the school report by Dr. Wepfer; a report on the COE Budget allocation process by John Leonard, the associate dean for finance and administration; an update on ABET preparations in the Woodruff School; a report on faculty recruiting, hiring, retention, and development; and a discussion about a new Woodruff School strategic plan. In the afternoon, there were breakout sessions and reports on ABET, faculty, and strategic planning.

Dr. Dennis Assanis
Jon R. and Beverly S. Holt Professor of Engineering
University of Michigan
Ann Arbor, Michigan

Mr. Jeffrey A. Benjamin
Senior Vice President for Commercial and International Nuclear Projects
CH2M Hill
Englewood, Colorado

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

Mr. Lou Cerone
General Electric Energy Systems
Greenville, South Carolina

Dr. Dana Christensen
Associate Laboratory Director
Nuclear Programs
ORNL
Oak Ridge, Tennessee

Mr. Thomas A. Coleman
(BSPhys 1971, MSNE 1973)
Vice President of Federal Services
Framatome-ANP
Lynchburg, Virginia

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

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

Mr. Jeffrey Gasser
(BME 1983)
Executive Vice President/Chief Nuclear Officer
Southern Nuclear Operating Company
Birmingham, Alabama

Mr. Manuel Junco, Jr.
(BME 1975)
Chief Executive Officer
Brinderson Engineers & Constructors
Costa Mesa, California

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

Mr. Thomas Kopanski
Siemens
Norcross, Georgia

Mr. Bryan LaBrecque
Atlanta, Georgia

Dr. James A. Lake
(MSNE 1969, Ph.D. NE 1972)
Retired from Idaho National Laboratory
Idaho Falls, Idaho

Dr. William R. McCollum Jr.
Chief Operating Office
Tennessee Valley Authority
Chattanooga, Tennessee

Mr. Mark D. Morelli
(BME 1987)
President and CEO
Energy Conversion Devices
Rochester Hills, Michigan

Dr. Johne’ M. Parker
Associate Professor
University of Kentucky
Lexington, Kentucky

Mr. Jim E. Reeb
Director, Manufacturing R&D Production System Division
Caterpillar Inc.
Peoria, Illinois

Ms. Lisa A. Schott
President & Principal Acoustical Consultant
Quietly Making Noise, LLC
Oviedo, Florida

Mr. Randy Sheffield
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Schlumberger
Beaumont, Alberta, Canada

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Senior Professor of Mechanical Engineering
Massachusetts Institute of Technology
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(MSEE 1991)
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Ford Automotive
Ford Motor Company
Dearborn, Michigan

Dr. Kyle H. Turner
(BSEE 1968, MSNE 1969, Ph.D. NE 1971)
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McCallum-Turner, Inc.
Evergreen, Colorado

Mr. Henry B. Ward III
(BME 1993)
Partner
Moore & Van Allen
Charlotte, North Carolina

Dr. Lawrence J. Ybarrondo
(Ph.D. ME 1964)
Jackson Hole, Wyoming

Dr. James A. Lake
(MSNE 1969, Ph.D. NE 1972)
Retired from Idaho National Laboratory
Idaho Falls, Idaho
HONORS AND AWARDS

FACULTY

Chaitanya Deo received a Faculty Development Grant from the Nuclear Regulatory Commission.

Andrei Fedorov won the Georgia Tech Class of 1934 Outstanding Interdisciplinary Activities Award for 2008 and the Outstanding Paper Award in Thermal Management from the ASME/IEEE IThermal Conference. He also received U.S. Patent 7,411,182, dated August 12, 2008, for Reverse-Taylor-Cone Ionization Systems and Methods of Use Thereof.

Nico Declercq received a Sigma Xi (Georgia Tech Chapter) Young Faculty Award.

Andres Garcia and William Singhose received ten-year service awards at the 2008 Faculty/Staff Honors Luncheon.

James Gole won the Georgia Tech Outstanding Undergraduate Research Mentor Award for 2008.

Srinivas Garimella was the recipient of the 2008 Thomas French Achievement Award of the Department of Mechanical Engineering at Ohio State University. This award is given to an alumnus who has distinguished himself as an educator. He was also appointed Associate Editor of the ASME Journal of Heat Transfer, beginning in 2009.

Sam Graham and Adam Christensen (graduate student) received the 2008 Educational Partnership Award from the Center for the Enhancement of Teaching and Learning for their work on a project in Tanzania.

Nolan Hertel was appointed as one of the 29 delegates from the Health Physics Society to the 12th International Congress of the International Radiation Protection Association in Buenos Aires, Argentina.

Larry Jacobs was appointed the Associate Dean for Academic Affairs in the College of Engineering. He replaced Ray Vito, professor, who was appointed the Vice Provost for Undergraduate and Graduate Studies.

David Ku received the Sigma Xi (Georgia Tech Chapter) Best MS Thesis Advisor Award for graduate student Laura Lee Farrell.

J. Rhett Mayor won the 2009 Society of Manufacturing Engineers John G. Bollinger Outstanding Young Manufacturing Engineer Award.

David McDowell was named Co-Editor, Americas of the International Journal of Fatigue, a leading journal on the subject of fatigue of engineering materials. McDowell and Peter Rogers received Georgia Institute of Technology twenty-five year service awards.

Shreyes Melkote was appointed Associate Director of the Manufacturing Research Center. He will help steward the Manufacturing Education Program and play a continuing leadership role in the Precision Machining Research Center.

Bob Nerem received the Founders Award from the National Academy of Engineering. The award was established in 1965 to honor an NAE member who has upheld the ideals and principles of the NAE through professional, educational, and personal achievement and accomplishment.

Chris Paredis won a Royal Academy of Engineering (United Kingdom) Distinguished Visiting Fellowship.

Jianmin Qu won the 2008 Outstanding Sustained Technical Contribution Award from the IEEE Components, Packaging & Manufacturing Technology (CPMT) Society for his “impact to the electronic packaging industry for his 15 years of research and development in micro-electronic packaging, focusing primarily on reliability modeling and analysis of various aspects of electronic packages.” In addition, he was chosen to participate in the 2008-2009 University Leadership Program, whose purpose is to ensure the effectiveness of Georgia Tech’s faculty leaders.

Erica Ryherd was one of five engineers nominated by ASHRAE to receive a New Faces of Engineering Award from the National Engineer Week Foundation. This award recognizes engineers under 30 years of age who have shown outstanding abilities and leadership.

Suresh Sitaraman received a Sigma Xi (Georgia Tech Chapter) Sustained Research Award.

Cheng Zhu received a Sigma Xi (Georgia Tech Chapter) Faculty Best Paper Award.

FELLOWS
During the past academic year a number of faculty members were elected to the grade of Fellow in a professional society. The largest number of fellows is from the American Society of Mechanical Engineers (ASME). Election as a Fellow is a honor accorded to a select group of individuals in academia and industry that recognizes that person’s unique contribution to the discipline.

Dennis Balou, part-time faculty, was elected to the grade of Fellow in the ASME.

Wayne Book, HUSCO/Ramirez Chair, was elected to the grade of Fellow in the Society of Manufacturing Engineers.

Al Ferri, associate professor, was elected to the grade of Fellow in the ASME.

Dave McDowell, Carter Paden Chair, was elected to the grade of Fellow in ASM International.

Dirk Schaefer, assistant professor, was named a Fellow of the Higher Education Academy in the United Kingdom.

Naresh Thadhani, professor, was named a Fellow of the American Physical Society.

Minami Yoda, professor, was elected to the grade of Fellow in the ASME.

Cheng Zhu, Regent’s professor, was elected to the grade of Fellow in The American Institute for Medical and Biological Engineering.
STUDENT HONORS DAY AWARDS

Each April awards are announced at the annual Student Honors Day luncheon. The winners are selected by the Associate Chair for Undergraduate Studies and the Undergraduate Academic Advisor with the approval of the School Chair. The recipients this year were:

Tony Argote, Huan Du, Drew Hess, Nancy McCauley, Nathan Sumner, and Lina Tucker each won a James G. and Mary G. Wohlford Scholarship. These scholarships are named in honor of the late director emeritus of the Cooperative Division and are sponsored by the Co-op Club. They 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.


Jonathan Buck and Matthew Hoffman each won the Pi Tau Sigma Outstanding Sophomore Award. This award goes to sophomore students in mechanical engineering who demonstrate outstanding scholarship and service to the School and student activities.

Jeffrey Clement and Kyle Schwing each won a Pi Tau Sigma Outstanding Senior Award, which is presented to graduating seniors on the basis of outstanding scholastic achievements and service to the School, to the Institute, and to student activities.

Huan Du won the Pi Tau Sigma Outstanding Junior Award, which is presented to the junior student in mechanical engineering who demonstrates outstanding scholarship and service to the School and student activities.

Matthew Eicholtz won a Henry Ford II Scholar Award. These awards, from a restricted endowment fund grant provided by the Ford Motor Company Fund, are made to the engineering students with the best academic records at the end of the third year of undergraduate study. One student from each of the schools in the College of Engineering wins the award.

Kyle Reno won the Woodruff School of Mechanical Engineering Outstanding Scholar Award. This award recognizes a graduating senior who has achieved an exceptional scholastic record in the mechanical engineering program.

Alison Skala received the School Chair’s Award, which is given on the basis of outstanding scholarship and contributions to the School, especially to its programs and external representation. This award honors the graduating senior in mechanical engineering who best fulfills these standards.

Adnaan Velji won the 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.

ALUMNI

John C. Cerny (BME 1951) was inducted into the Engineering Hall of Fame of the College of Engineering. He is Retired President and Board Chairman of Cerny and Ivey Engineers, Inc. He is also a member of the Academy of Distinguished Engineering Alumni.

Jarrett Datcher (MSME 2002) was inducted into the Council of Outstanding Engineering Alumni in the College of Engineering. He is a Specialist Engineer at Phantom Works Systems/Subsystems Technology Team, The Boeing Company. In 2007 he was named Black Engineer of the Year in Modern Day Technology Leadership.

J. Kurt Jacobs (BME 1993), President and Chief Executive Officer of MedShape Solutions, Inc., was inducted into the College of Engineering’s Council of Outstanding Young Engineering Alumni.
UNDERGRADUATE ICE CREAM SOCIAL
The Woodruff School held an inaugural ice cream social for undergraduate mechanical engineering and nuclear and radiological engineering students on Burdell Plaza at the end of the first week of classes in fall semester 2007. Three flavors of Mayfield ice cream, sundae fixings, and water were available. Almost thirty Woodruff School faculty members, many of them new to the School, scooped ice cream. The heat did not prevent Dr. Dr. Mr. MD, a band headed by Professor G. Paul Neitzel, from providing the entertainment; a special tee-shirt of Drawing the Best was handed out to welcome new and returning students. Students groups, including gt motorsports, GT Off-Road, RoboJackets, and Wreck Racing displayed their cars and robots. Other student organizations in the School, such as WSSAC and the ASME, had information tables. More than 1000 people attended the event.

STAFF
Trudy Allen, J.C. Murphy, and Glenda Skinner each received a Georgia Tech ten-year service award.

Stephanie Merrick received her Master of Science in Human Resources Management from Troy State University. She received the 2007 Woodruff School Outstanding Achievement Award for Classified Employees in the Woodruff School. She won the award in summer semester 2007.

Michael Proctor received the Outstanding Achievement Award for Classified Employees in the Woodruff School for spring semester 2008.

Glenda Skinner received the Outstanding Achievement Award for Classified Employees in the Woodruff School for fall 2007.

SPECIAL EVENTS
ANNUAL GRADUATE COOKOUT
The Annual Cookout for Woodruff School graduate (new and returning) students, faculty, and staff was held in September at the end of the third week of classes of the fall 2007 semester. Three flavors of Mayfield ice cream, sundae fixings, and water were available. Almost thirty Woodruff School faculty members, many of them new to the School, scooped ice cream. The heat did not prevent Dr. Dr. Mr. MD, a band headed by Professor G. Paul Neitzel, from providing the entertainment; a special tee-shirt of Drawing the Best was handed out to welcome new and returning students. Students groups, including gt motorsports, GT Off-Road, RoboJackets, and Wreck Racing displayed their cars and robots. Other student organizations in the School, such as WSSAC and the ASME, had information tables. More than 1000 people attended the event.

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SENIORS HONORED AT DINNER
One-hundred and twenty-four (112 ME, 12 NRE students) undergraduate students were invited to attend the annual senior honors dinner in September 2007. The purpose of this dinner is to honor graduating 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. After the buffet dinner, faculty members told short stories or anecdotes about graduate school. The event was also an opportunity for the undergraduate students to interact with some current graduate students and to learn about the different options for study and research at Georgia Tech.

FAMILY WEEKEND
Each year, Georgia Tech’s Family Weekend attracts large crowds to campus. In conjunction with the activities planned by the Alumni Association, the Woodruff School holds an open house for the families of our undergraduate students. Dr. Dave Sanborn, Associate Chair for Undergraduate Studies, led two information sessions about what the students were being taught in the Woodruff School. A question-and-answer session followed. There were opportunities to talk with the undergraduate academic advisors; the students conducted tours of some of the undergraduate laboratories; the student competition groups in the Woodruff School displayed their vehicles and robots; and the student chapters of professional societies, such as the ASME, handed out information.

The 22nd ANNUAL SPRING BANQUET
Almost 250 people attended the 22nd Woodruff School Spring Banquet, organized by members of the Woodruff School Student Advisory Committee and sponsored by the Woodruff School. It was an opportunity to listen to our Distinguished Alumnus, Mr. Bill Collins (see the related story). We played Clue, based on some mechanical engineering clues. This year’s WSSAC Awards went to:

- **Monopoly Award**: It just gets more and more complicated: Dr. Ya-Hwa Chen
- **War**: It never ends: Dr. Wayne Whiteman
- **Clue**: In the end, it’s just a guessing game: Dr. John Papastavridis
- **Chess**: For geniuses only: Dr. Peter Hesketh
- **Life**: You’ve only just begun (for new professors): Dr. Tequila Harris

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Mr. Bill Collins gave an inspiring speech about the value of a Georgia Tech degree. He said, “We weren’t as prepared as you are. We didn’t have the same opportunities all of you have. We had no other places to go to; we had no electives. Your opportunities are endless. We spent 32-35 hours in class. We were taught to ask questions and to think. The tuition when I was at Georgia Tech was $67 a quarter; when it went up to $72 a quarter, people complained. In mechanical engineering, you learn how to think and ask questions early on. This is an important point: Your Georgia Tech degree will be much more important to you in ten, twenty, thirty years after you graduate than it is now.”

THE WOODRUFF SCHOOL DISTINGUISHED ALUMNUS
The Woodruff School Distinguished Alumnus Award was inaugurated in 1989 to recognize an outstanding alumnus of the Woodruff School. Mr. Bill Collins (BME 1957, MSIM 1963) was named the Woodruff School Distinguished Alumnus for 2008. He is CEO of Collins and Arnold Construction, LLC, a company specializing in the building of retail and commercial facilities throughout the South. Its Atlanta projects include the Buckhead Station retail and residential complex at the Buckhead Loop.

Born and raised in Atlanta, Collins served a stint in the U.S. Army before going to work for the Pinkerton and Laws Company for 32 years. He was president and chairman when he left in 1992 to start his own construction company. He currently spends most of his time working on his own investments and real estate transactions, including storage facilities in Georgia and Florida.
Because some of his earliest memories revolve around going to Yellow Jackets football games with his father, Collins says he never considered going to school anywhere else but Georgia Tech. He has remained an enthusiastic supporter of the Institute over the years, currently serving on the Georgia Tech Foundation’s board of trustees, the Hill Society, the Georgia Tech Campaign Steering Committee, and the Board of Directors for the Bobby Dodd Coach of the Year Award. In addition, he is a member of the College of Engineering’s Academy of Distinguished Engineering Alumni and the College of Management Hall of Fame, and was co-chairman of this 50th anniversary class reunion. He has served on the C&S Bank Advisory Board and the Governor’s Board of Community Affairs.

AN INSPIRING WOODRUFF DISTINGUISHED LECTURE

The Annual Woodruff Distinguished Lecture was established in 1990 to honor an engineer who has made a significant contribution to society and to provide a forum for that person to interact with the Georgia Tech community. The 2008 lecture, originally scheduled for April 2008, but cancelled due to the speaker’s illness, was given by Dr. Bernard Amadei, Founder of Engineers Without Borders USA, Co-Founder of Engineers Without Borders, and Professor of Civil Engineering at the University of Colorado. He spoke to a very large audience in the Ferst Center for the Arts on The Role of Engineers in Poverty Reduction: Challenges and Opportunities.

Dr. Amadei talked about the need for engineers to work in developing or underdeveloped countries and the importance of integrating engineering with nonengineering disciplines to meet the needs in those countries. Growth in underdeveloped countries will create unprecedented demands for energy, food, land, water, transportation, materials, waste disposal, earth moving, health care, environmental cleanup, telecommunications, and infrastructure. Dr. Amadei believes that engineers should play a critical role in meeting those demands.

Dr. Amadei is the recipient of several awards, including the 2005 Hassib J. Sabbagh Award for Excellence in Engineering Construction (with EWB-USA); and the co-recipient of the 2007 Heinz Foundation Award for the Environment. He was elected to the National Academy of Engineering in 2008. If you want to listen to Dr. Amadei’s lecture, go to www.me.gatech.edu and click on the George Woodruff logo.

AN ANIMATED GEGENHEIMER LECTURE ON INNOVATION

Chris Miller, Director of DreamWorks Animation, gave the annual Harold W. Gegenheimer Lecture on Innovation in December 2007 in Georgia Tech’s Ferst Center for the Arts. More than 800 people attended the event. In An Orge’s Tale: How to Make An Animated Feature in 1000 Easy Steps, Miller took the audience through all the phases of creating a story and filming it: from preproduction (story and editorial) to the work of the art and layout departments, to production (animation and actors; voices), and finally, to the lighting department, all working to create the world of Shrek.

Chris Miller’s directing debut was on Shrek The Third. He joined DreamWorks Animation in 1998 as a story artist on the studio’s first animated comedy, Antz. Subsequently, he worked as a story artist on the Academy Award winning film, Shrek and he was Head of Story on Shrek 2, the highest grossing animated film of all time. Chris is a graduate of the California Institute of the Arts’ Animation/Film Department. His commercial work includes spots for Coca-Cola, Canon, The Comedy Channel, and FILA, for which he won a Clio Award for best animated commercial.

An endowment given to the Woodruff School in 1995 by Mr. Harold Gegenheimer (class of 1933) established the Lecture Series on Innovation. His endowment supports students 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.

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