

FROM OUR ALUMNI



WEI CHEN

Ph.D. ME 1995

CAE and Design

Associate Professor, Department of Mechanical Engineering, Northwestern University, Evanston, Illinois

What I gained from the graduate program was enormous.

When I first started at the Woodruff School, I never thought that I could become a faculty member. That was a dream that is now a reality. In addition to the constant encouragement from my advisors (Drs. Mistree and Janet Allen), I was very touched by the personal attention given by the Graduate Program Coordinator (at that time, Professor Bill Wepfer) to each graduate student. I received a Woodruff Teaching Fellowship, which gave me the opportunity to practice my teaching skills while I was a graduate student. I felt I was surrounded by many brilliant people; I like the intellectual challenges they created. The friendships I built at the Woodruff School have kept to the present. Since graduation, I have kept working on research projects and other professional activities with my former teammates at SRL.

The major strengths of the program are top-notch faculty members, a challenging degree program, good financial resources, top-rated graduate student body, a nice, friendly environment, and good support to those wishing to pursue an academic career. I would rate the Woodruff School in the top five in the nation.



ANH DANG

MSME 1999, Ph.D. ME 2002

Automation and Mechatronics

Project Manager, China Outsourcing Initiatives, GE Energy Systems

Exposure to industry was one of the best experiences that I received at Tech. You learn quickly that pure research, no matter how ingenious or spectacular, may not make a great impact if it

cannot be transformed into something that is useful and practical. This type of exposure can guide your research toward a meaningful path.

The Ph.D. process is tremendous in preparing an individual for dealing with high stress environments of the corporate world. Nothing can compare to the stress that one has to endure from the grueling line of questioning by the Ph.D. Qualifying Examination Committee members. In addition, no one digs deeper and scrutinizes your work like you Ph.D. Dissertation Committee members. These experiences teach you to understand the concepts that are important to convey and the details in which you convey them. They also help you to perform gracefully under pressure.

The facilities at Tech make it one of the best in the nation. It provides a haven for one to research and engage in life-time learning.



CARL KIRKCONNELL

Ph.D. ME 1995

Heat Transfer

Raytheon Systems Company, El Segundo, California

By virtue of the fact that my doctoral thesis topic was developed with consultation from scientists at Hughes Aircraft (now Raytheon) and the Mechanical Engineering faculty at Georgia Tech,

I was able to work on a project of fundamental academic interest with practical implications. Therefore, by the time I completed my graduate work, I was prepared to work full time with Hughes as an expert in one of their core technology areas, cryogenic refrigerator design.

The major strength of the Georgia Tech graduate program is the faculty. I was impressed with the amount of help I received from the faculty, whether or not they were on my thesis committee. The reputation of the program is also a significant strength, especially in obtaining employment.

The overall quality of the program is excellent, the faculty is knowledgeable and dedicated, and the student body is competitive and diverse. Due to the huge amount of outside research funds the School receives each year, the facilities are constantly improving. Those that aren't excellent today likely will be tomorrow.



PETER KOTTKE

MSME 2002, Ph.D. ME 2004

Tribology

Postdoctoral Fellow, Woodruff School of Mechanical Engineering Georgia Institute of Technology

I am currently involved in postdoctoral research and my goal is to obtain a faculty position. Obviously, the skills and knowledge that I obtained through doctoral research and graduate classes are prerequisites for such a career. As a result, I have seen many different styles of research. In particular, I have learned that the most successful and excited researchers usually are those who aren't satisfied with becoming experts in a small area and exhaustively developing their niche. Instead, they are at the boundaries of several disciplines, and always willing to enter new fields.

It would be a mistake to think that faculty members are the only people who make the Woodruff school as good as it is. Discussions, study groups, and joint research with my fellow students were some of my most valuable experiences. The number of graduate students who started in mechanical engineering at Tech at the same time as I did was more than the number of mechanical engineers that graduated with me from Duke. The diversity and size of the graduate school is a big reason that I was able to have so many positive interactions with other students. In addition to the faculty and students, a third important group is the support staff, and the facilities and resources they make possible.

**JACK LEMMON***MSME 1993, Ph.D. ME 1998***Bioengineering***Senior Mechanical Development Engineer, Medtronic Heart Valve Division, Minneapolis, Minnesota*

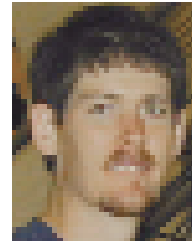
My graduate experience at the Woodruff School prepared me very well for my career in Product Development in the Medtronic Heart Valves Division. There was freedom within the Woodruff program to tailor my academic education to meet the challenges that I felt I would face once in industry. This freedom allowed me to gain a traditional education in the core competencies of Mechanical Engineering while pursuing research in my chosen field of bioengineering. This has helped tremendously in an industry where there must be an interface between research, development and manufacturing to bring products to market, while still understanding the specifications of the device that help bring patient back to full-health.

**JOSEPH LEVERT***Ph.D. ME 1997***Manufacturing***Assistant Professor of Engineering, State University of New York, Maritime College, Throggs Neck, New York*

GT had great funding and great laboratories as well as a large and excellent faculty which offered a breadth and depth of possibilities for research and learning. Being a top-flight engineering school, these attributes were expected. The attributes which really made GT a great program were the human qualities of the faculty, students and staff.

The faculty were the best that I've ever worked with. Their technical excellence was overshadowed by their dynamic people skills and true concern for the students. My advisor, Dr. Danyluk, guided me through the academic flaming hoops and helped me to achieve in ways that I had never expected.

The facilities were if not excellent, then very good. The funding was adequate for me to complete my studies, but I was very encouraged that the large majority of the students have funding, which permits the time to focus on their studies with few distractions. The faculty were the best that I've had the opportunity to work with. The student body were also the best group of people that I've ever worked with. In addition, the students were truly diverse by every measure, which further enriched the graduate experience. They were focused and hard working, yet at the same time, relaxed and creative. The graduate programs at the Woodruff School were rated top notch, and I have no reason to doubt it.

**BRAD LIBBEY***MSME 1998, Ph.D. ME 2003***Acoustics and Dynamics***Senior Scientist, U.S. Army Night Vision and Electronic Sensors Directorate, Ft. Belvoir, Virginia*

Not all research experiences are equal. While many graduate students feel bound to their thesis work, my experience was much more open with respect to topics I investigated. This diversity of education broadened my experience and opened up opportunities after graduation.

Georgia Tech's strength lies in the knowledge of those who study, teach, work, and interact academically at the university. Creative thinking is the most important skill to develop as a student, and Georgia Tech motivated me through constant exposure to fresh ideas of colleagues. While no alum of Tech will ever say it was easy to "get out," they will all admit that they are far better off for their efforts.

**CALVIN MACKIE***BME 1990, MSME 1992, Ph.D. 1996***Fluid Mechanics***Associate Professor, Department of Mechanical Engineering, Tulane University, New Orleans*

My graduate research experience at Tech definitely prepared for the multiple challenges of academia. Exposure to teaching and research as a graduate student has presented me with a strong background to function as a faculty member.

One of the major strengths of Georgia Tech is the strong, diverse research faculty which affords graduate students exposure to a variety of subjects as well as research interests. You can see how everything fits together in a research lab and better understand the roles of the principal investigator and the graduate research assistant. Also, Georgia Tech attracts strong students from around the world and such exposure elevates your graduate experience. Most of your learning is obtained interacting with other graduate students at 2:00 a.m. any given day. Furthermore, the faculty is truly concerned with preparing graduate students to lead, teach and research in cutting edge and innovative areas of technology.

I can now really appreciate all the Woodruff School had to offer. It is definitely one of the top notch programs in the nation. The concern of the administrators, accomplishments of the faculty, strength of the student body coupled with technologically advanced facilities, located in a vibrant metropolitan city like Atlanta creates an environment which cannot be matched in this country.

FROM OUR ALUMNI



MICHAEL SCOTT MCKINLEY

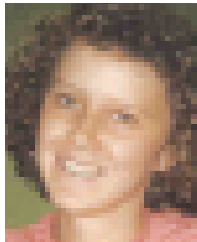
BSNE 1995, MSHP 1998, MSNE 1999, Ph.D. NE 2001

Nuclear Engineering

Computational Physicist, Physics and Advanced Technologies Directorate, Lawrence Livermore National Laboratory

I completed my undergraduate degree at Georgia Tech. That exposure led me to realize the excellence in education I could expect from the graduate program. After enrolling in graduate school, I was able to work in groups as well as individually. In addition, I could set my pace and study areas that were of interest to me. This kind of educational experience translates very well into good practices while developing a career. I feel very indebted to my advisor for not only helping me with my research and education but also for his guidance and assistance that prepared me for life after school.

Personally, my experience with computers as part of my graduate work has resulted in being my greatest asset. Not only have I learned numerical techniques, but I also have been exposed to many operating systems programming languages and applications. This diversity of knowledge makes me more marketable as well as gives me confidence in tackling new assignments and job opportunities.



PAMELA NORRIS

MSME 1989, Ph.D. ME 1992

Heat Transfer

Professor, Department of Mechanical Engineering and Aerospace Engineering, University of Virginia

While at Georgia Tech my research involved an analysis of the heat transfer in the cooling passages of a diesel engine cylinder head. This research project helped prepare me for my career in academia in several ways. First, I interacted with the project sponsor, Cummins Engine Co., a lot during the course of my research. I helped write proposals, I visited the plant and performed experiments, I gave research presentations at the company, and I co-authored papers with Cummins Engineers. These experiences helped me learn how industry sponsored research is conducted in an academic environment. In addition, this project offered me a unique opportunity in that I was able to see it from its inception to completion. This was very exciting for me because I was able to clearly see the problem, assess a solution, and see the impact of my research.

The Woodruff Teaching Intern Program is truly one of the great strengths of the program. As a graduate student at the Georgia Institute of Technology, I participated in the Woodruff Teaching Intern Program. This unique and highly competitive program pairs a faculty member with a graduate student who is near completion of his/her Ph.D.

and is seriously considering a career in academia. The faculty and student team-teach a course with total responsibility shared equally between the two. I found participation in this program to be very beneficial. It enabled me to try out my skills as an instructor while providing me with a safety net. Participation in this program helped me to become more comfortable with my communication and teaching skills. The experiences I had at Georgia Tech laid a firm foundation for my career as an effective classroom teacher, and they helped convince me I was making the correct career decision.

The Woodruff School rates very highly on all fronts. The facilities are wonderful, due largely to the generous Woodruff endowment. The faculty are superb. The course selection is outstanding. And the students are the best in the nation due largely to the School's unmatched recruiting efforts.



JOHNÉ PARKER

BME 1985, MSME 1992, Ph.D. ME 1996

Automation and Mechatronics

Associate Professor, Department of Mechanical Engineering, University of Kentucky, Lexington

The quality of the Woodruff School graduate program is excellent. I enjoyed the benefits of this excellence as a graduate student, but can even more fully appreciate just how wonderfully the program is run from my current perspective as an Associate Professor. The program is extremely well-organized, with all the attributes and infrastructure of a big, top-ten program, and all the niceties of a smaller program. The Woodruff faculty is simply phenomenal. My professors challenged me to think critically in the classroom and my advisors encouraged me to push the boundaries in the lab.

My time as a TA helped me learn to balance the demands of teaching and research in a supportive environment and several of my faculty mentors, both officially recognized and informal, continue to set (and frequently raise) the bar for concurrent excellence in research and teaching. The staff is equally incredible (they often know your name before you've told them and, generally, what you need before you've asked for it). It takes a lot to make a program run this seamlessly, yet it looks almost effortless.

The Woodruff School is a wonderful place to learn and conduct research - the students matriculating here have very diverse backgrounds and opinions. However, students and alumni also share several traits; we're all extremely competitive, yet we work well in teams and find commonality in a love of learning and a respect for the power of technology. The program challenges you (many times past the point of frustration and to the brink of quitting) yet, after you've persevered, you know that you're capable of accomplishing just about anything.



PATRICIA WILLICE SELCHER

Ph.D. ME 2001

Mechanics of Materials

*Organizational Development and Change Management Team,
Booz Allen Hamilton, Virginia*

Engineering taught me to think in an organized and disciplined fashion. My graduate experience taught me to ask not just what, but how and why. Georgia Tech taught me to reach for the skies while keeping my feet grounded in reality. That analytical thinking is valued in every industry -- engineering, business, law, medicine, etc. A Ph.D. from Georgia Tech carries a lot of weight and opens a lot of doors.

The more I see and hear about Georgia Tech's programs, I am amazed they let me in! The faculty are top notch. Today's student body are the leaders of tomorrow's industry. The facilities are always improving and expanding. Every time I come back to campus, there is a new building. Engineering is the focus of Georgia Tech. Everything else is there to support the engineering department.



DANA R. SWALLA

MSME 1999, Ph.D. ME 2003

Mechanics of Materials

*Lead Mechanical Engineer, Energy and Propulsion Technologies,
General Electric, Niskayuna, New York*

I was accepted by a number of other top tier schools besides Georgia Tech. The primary factor in my decision to attend the Woodruff School was the extent of collaborative research between faculty in the same department and different departments. The fact that I was able to receive full-funding for my graduate work was also an important factor because I was leaving a well paying job to attend school full-time. I found that Georgia Tech and the Woodruff School have important contacts in industry and government that make full funding possible for many students.

My advisor, Richard Neu, set aside adequate funding so that I could present my work at conferences and seminars, which prepared me very well for professional life. This also provided the opportunity to make important contacts early in my career. Cross-department coursework and an open curriculum provided a very well-rounded education.

Extensive collaboration; contacts with industry and government friendly, engaging faculty; state-of-the-art equipment and facilities are the major strengths of the graduate program at Georgia Tech. I work with graduates of many top tier schools, and am very proud of the training I've received at Georgia Tech. The training and opportunities I've received there are the best available anywhere.

I want to emphasize the importance of maintaining an open environment in which collaboration is encouraged. There are many other schools that have more of a dog-eat-dog culture where technical excellence is likely insured, but do little to teach students how to team with others and, in my opinion, can lead to an environment where ethics are less important than short-term results. Georgia Tech has proved to me that you can have a culture of both technical excellence and respect for the individual and their learning experience. In my opinion, success after graduation depends on having so-called "soft" skills as much or more than technical skills. Georgia Tech does an excellent job at balancing the need for training in both of these areas.



PHILIP VOGLEWEIDE

Ph.D. ME 2004

Automation and Mechatronics

*Assistant Professor, Department of Mechanical Engineering
University of South Carolina, Columbia, South Carolina*

My graduate experience prepared me very well for my current position as an assistant professor. As an assistant professor my duties lie in three major areas: research, teaching, and service. Obviously, my research abilities were honed by the entire dissertation process, as is the case at any major research university. However, the Woodruff School gave me much more. My advisor allowed me to assist her on writing proposals - a large part of my current position. I managed purchasing for my laboratory and understood how the budgets work. Through the teaching practicum, I was able learn how to manage a classroom and teach. After taking the qualifying exams, I can truly say that I am thoroughly versed in the fundamentals of my field which makes me a much better teacher. While any major research university can show you how to do research, the great ones, like Georgia Tech, teach you much more.

It is easy to see why Georgia Tech is one of the top ranked graduate programs in the country. They have the facilities, the funding, the vision, the size, and the reputation. However, Georgia Tech's greatest strength is the people, "making it happen."

The Woodruff School graduate programs are top notch. While most schools have a floor dedicated to mechanical engineering, the Woodruff school has three separate buildings. These buildings are filled with the equipment needed to perform nearly any engineering analysis. The faculty are leaders in their fields. You also have an opportunity to interact with superb students from around the world. I was involved in numerous thought filled discussions in fields outside my own. I attended lectures from the brightest minds in all aspects of science. Pursuing my Ph.D. at Georgia Tech was a great mind opening experience.

FROM OUR ALUMNI



MICKEY WADE

MSNE 1987, Ph.D. NE 1991

Nuclear Engineering

Senior Research Scientist, Fusion Energy Division, Oak Ridge National Laboratory, Tennessee

My graduate experience at Georgia Tech has served as the underpinning for all that I have accomplished in my career. The fusion energy curriculum provided me with a quality education in both plasma physics and fusion engineering. This broad education provided me with a perspective on fusion energy development that is distinct from others who have attended universities that have either a physics or an engineering based curriculum. This broader perspective has served me well through the years, allowing me to discern subtle details from truly "show-stopping" ones. In addition, the research opportunities made available to me through the Graduate Research Assistant position and then through my PhD. thesis research were of high caliber, putting me in day-to-day contact with the research staff at Oak Ridge National Lab (ORNL). I eventually ended up spending two years at ORNL performing my thesis research on a large fusion project. This eventually led to a Post Doctoral fellowship with ORNL and then a research staff position. Without the original research project through Georgia Tech, I doubt if any of this would have been possible.

The major strengths of the graduate program at Georgia Tech are the faculty and the commitment of the university and the Woodruff School to a quality education for each student. The ongoing research program administered by the faculty at Georgia Tech is impressive, allowing the graduate student a wide range of choices in choosing a research topic. Many of these research programs are with national labs or industry, providing opportunities for the student to work closely with experts in specific areas.

The quality of Woodruff School's graduate programs, faculty, and facilities are top notch and highly regarded within industry and the national lab system. From a personal perspective, of the students that were in fusion energy graduate program when I attended Georgia Tech, four are still in the fusion energy field with three of those individuals leading research projects in the U.S., Germany, and Korea. This points to another strength in the Georgia Tech graduate program: the diversity of its students. The wide range of nationalities and cultures represented by the student body provide a unique opportunity for a student to learn about other cultures and global issues directly.



SEAN F. WU

MSME 1984, Ph.D. ME 1987

Acoustics and Dynamics

Charles DeVlieg Professor of Mechanical Engineering, Department of Mechanical Engineering, Wayne State University, Detroit, Michigan

My graduate experience at Georgia Tech played a pivotal role in preparing me for a challenging career in academia. As it turned out, I not only stood up to all sorts of challenges, but flourished. This would not be possible without the rigorous training I received at Georgia Tech.

Faculty is the key. When I was going through my training at Georgia Tech, I had tough professors on my M.S. and Ph.D. theses committees: Drs. Allan D. Pierce, Jerry H. Ginsberg, Peter H. Rogers, and Michael P. Stallybrass (Mathematics Department). They threw all kinds of tough questions at me once they spotted a hole in my mathematics background. They kept pounding on me and made me really look awful. Needless to say, I did not do well on my MS thesis defense, even though I passed the test. This forced me to study hard. By the time of my Ph.D. dissertation defense, I had prepared so well that no one (the same committee members as those in my MS Thesis committee) was able to give me a hard time. In the end, I not only sailed through my defense, but also received the Outstanding Ph.D. Thesis Presentation Award from Georgia Tech. So highly demanding faculty and hard work by students can yield wonders.



MIN ZOU

MSME 1996, Ph.D. ME 1999

Tribology

Assistant Professor, Department of Mechanical Engineering, University of Arkansas

My research at the Woodruff School significantly enhanced my problem-solving skills through systematic experimental design and data analysis. The research activities I participated in inspired me to think creatively. These skills significantly benefited me in both industry and academia.

The major strength of the graduate program at Georgia Tech is the professional and approachable faculty members and graduate students who conduct competitive, cutting-edge research. Through classroom activities and informal interactions with faculty members and my fellow students, I significantly enhanced my knowledge, creativity, and problem-solving skills.

The quality of the Woodruff School's graduate programs is among the best in the nation. The faculty members are professional, approachable, and well known in their respective research fields. The student body is the best I have ever seen, and the research facilities are excellent.