Maghsoodloo To Retire

After more than 40 years at Auburn University, Saeed Maghsoodloo, professor of industrial and systems engineering (ISE), has announced that he will retire in June of 2007. But, don’t worry – he has pledged to continue to teach for ISE and we already have him scheduled for summer and fall classes!

RETROSPECTIVE
by Saeed Maghsoodloo

My teaching career at Auburn University started in the fall of 1963, while working toward a doctoral degree in mathematics. I had an assistantship with the Mathematics Department and was teaching courses in Algebra and Calculus. During the spring quarter of 1966, the Industrial Engineering (IE) Department announced that they were looking for someone to teach two sections of IE211 (Introduction to Probability and Statistics). Grady Cox, the department head at that time, contacted the Mathematics Department looking for a doctoral student with some background in this area. I was recommended and got the job. At the end of the summer, Cox asked if I would consider a temporary instructorship in the AU IE Department. My answer was a resounding yes!

For the next two years, I taught IE211 and 212 at Auburn. In August of 1968, I graduated and accepted an assistant professorship with East Tennessee State University. The following spring I received a letter from Cox, now dean of the College of Engineering, inquiring if I would consider returning to Auburn as an assistant professor in the Department of Industrial Engineering. The answer again was a resounding yes!

To the best of my recollection, our present ISE department was an industrial management school during the early 1960’s. Dean Fred Pumphrey had the vision of changing the focus from management to engineering. That change occurred shortly before I began teaching in the department.

During the mid to late 1960s, Auburn IE was strictly an undergraduate program: we offered nearly every course every quarter. The department head at the time, Richard Brooks, shared that vision and worked very hard to see the launch of master’s of science and master’s of industrial engineering programs in the early 1970s. Faculty members were now expected to do research and publish as well as instruct, and in 1979 we launched our doctoral program. Clearly, Brooks made outstanding contributions to the department by transforming it from an instructional program to a full-fledged IE program. During this time, the University’s name was also changed from API (Alabama Polytechnic Institute) to Auburn University.

In 1970, Brooks turned over the reins of the department to Ed Unger. During Unger’s 19 years in this position, IE graduate programs grew steadily, with increases in both the number of publications and research funding. To
make this happen, Unger reduced the frequency of core IE course offerings –
cutting the teaching load. For example, from 1969 to 1979 I taught
four three-hour courses every quarter. Unger reduced that load to six
or seven courses over three quarters – giving all of us more time to do
scholarly research, publish and write proposals to seek research funding.

Further enhancements came with the 1999 hiring of Alice Smith as
department head. An infusion of new faculty into the department energized
us all, as did her encouragement and support for faculty participation in
professional activities. Under her guidance, undergraduate and graduate
enrollments have grown; so has the department’s reputation at the
national and international level.

I have enjoyed working for and with each of these four department heads
and all of my colleagues over the years, and I will cherish the memories
for the rest of my life.

This note would be quite incomplete if I did not mention all the great
students that I have worked with over the past 40 years. In fact, I have
a student this semester in my STAT3600 class whose parents were my
students in the late 1970s and early ’80s. I have taken great pleasure
from watching our department grow and our students contribute to
society. I look forward to a continued association with this department
and its people.

Saeed Maghsoodloo

Maghsoodloo’s
Students Remember

I recall taking Dr. M’s statistics class in the summer quarter of 1979. It was
a small class of good students, and Dr. M told us that if we all made A’s in
his class, he would throw us a keg party at his house – if we promised not to
throw up on his Persian rugs! I remember thinking, “We ARE going to have
this party!” I know that I made an A in that class and so did several of my
friends. Now I want to know from Dr. M – when and where is this party? I
want a keg party! Since I’m old and have Persian rugs in my own house, I can
promise that I won’t throw up on his!

Karen Hanson Laszcz
Marietta, Ga.
Class of 1980

Dr. Maghsoodloo was always one of my favorite professors. Hearing his
name just makes me smile. In addition to being an excellent instructor, he
always brought a good bit of himself to the classroom and shared freely. I’ve
got a few tales to share with you but, I have to admit, I’m unsure if any of
them will be appropriate for publication.

Back then, my name was Kathy Chaplin; now it’s Kathy Vogel and I
live in Houston, Texas. The first tale took place in either ’72 or ’73.
I had already taken the intro statistics course from Dr. Zaloom and
was in my first statistics class with Dr. Maghsoodloo. There were
only, I think, six of us in the class and due to the fact that women
were few and far between in engineering courses back then, I was
the only female.

One day, soon before our first exam, Dr. Maghsoodloo and I happened
to be walking out of the shop building making casual conversation.
Then, the talk turned more serious and he turned to me and said very
slowly and clearly, “Do you think you understand everything I’m teaching
in there?” It took me a minute to realize that here was a man from a
Middle Eastern country who hadn’t had much experience with educated
females so I just responded with a breezy “Yes, I think so.”
Well, we had the test and I got an A. Most, if not all the guys failed. To say he was surprised is an understatement. Dr. Maghsoodloo took the time to reteach what he’d already taught so the whole class would get it and never talked to me like that again!

In fact, he was a little embarrassed about the whole thing. I still laugh just sitting here thinking about it. I feel he became one of my biggest supporters and advisors, and we became great friends. In fact, he hosted a lovely party for me when I graduated. I wasn’t the only one who loved Dr. Maghsoodloo… a lot of us felt warmly towards him. I could tell all sorts of tales about how hard he worked to help people understand the confusing topics in statistics, but I think this anecdote says a little bit more about the man who loves life; loves sharing his life and his knowledge; and, most importantly, loves his students.

Kathy Chaplin Vogel  
Houston, Texas  
Class of 1976

Dr. Maghsoodloo was not only my statistics professor, but also my advisor in the IE Department. He was a great teacher and a great advisor. He didn’t always understand shortcuts and counted off on one of my classmate’s papers because she used the abbreviation w/ meaning with. He didn’t understand what she meant! His tests were so hard, you needed every point. He will be sorely missed by everyone. I actually can’t believe he’s still there. I graduated in 1982 and I don’t think I was at the beginning of his career at that time.

Amy Sparks Epps  
Huntsville, Ala.  
Class of 1982

Drake Nunn, an IE student from Huntsville, once called Dr. Maghsoodloo “Dr. Mag” during class. Dr. Maghsoodloo said “Mr. Nunn, if you continue to truncate my name, I will truncate your grade.”

Scott Hofacker  
Athens, Ala.  
Class of 1987

I was an IE student from 1972 to 1977. Dr. Maghsoodloo was my favorite teacher while I was at Auburn and one of my favorite ever. I completed my master’s at the University of Memphis in 1985. The one thing that I always remember about Dr. Maghsoodloo was his practice of working backwards in order to answer a student’s question. When a student asked a question about some statistical concept, Dr. Maghsoodloo would begin by testing the student’s understanding of the concept presently under consideration and then begin to back up to prerequisite concepts to find out where the student had gotten confused. If we were studying in chapter 7, Dr. Maghsoodloo would back up into chapter 6 concepts and, if necessary, into chapter 5. In fact, he would go all the way back to the beginning of the book if he had to in order to find the root cause of the misunderstanding. He was a very good teacher – genuinely interested in students actually learning something.

Robert (Buddy) Jones  
Memphis, Tenn.  
Class of 1977

It’s wonderful that Dr. Maghsoodloo is retiring, but also sad. He is one of the professors who has been in the IE department forever and will be greatly missed. I have so many great memories of my time at Auburn. I had taken several classes under Dr. Maghsoodloo, but the most memorable were the statistics classes and reliability classes. Dr. Maghsoodloo was one of the hardest teachers, but only because he expected you to learn. He also had
a personal interest in his students. Every time I see him at the college (even now), he will take time out to say hello and ask how I am doing. He is greatly loved by his students and alumni.

Tamela Hall, P.E.
Auburn, Ala.
Classes of 1984 and 1988

Having received my master’s in industrial and systems engineering in 1987 and my doctorate in 2006, I have many fond memories of Dr. Maghsoodloo. First, I’ll say that he is one of the finest teachers of applied statistics that I have ever had. I learned a lot from him and owe much of my career in consulting and subsequently in academia to him. When I completed my coursework for my master’s and moved away, it was his challenge that “no one moves away before starting their thesis and finishes” that made me work (by snail mail at that time) to complete the degree. Years later, when I pursued the coursework for my doctorate, I found that I had completed all but one course when my youngest daughter was born. Dr. Maghsoodloo was wonderful to let me bring her to class with me. She was the only student who actually had permission to sleep through his reliability class!

Victoria Spooner Jordan
Auburn, Ala.
Classes of 1987 and 2006

I really cannot believe he is still teaching. I had Dr. Maghsoodloo for several statistics classes, as I assume everyone coming through IE did at that time. When I first began taking classes under Dr. Maghsoodloo, he was fashion challenged to say the least. Plaids and stripes on the same outfit were no big deal to him. Then he went back home between quarters and got married. When he returned, he could have made the cover of GQ. Apparently, his bride took him to task on his wardrobe. Another memory that comes to mind was the winter of 1973. There was a major snowstorm, with Auburn receiving almost a foot. Dr. Maghsoodloo was all excited and having a ball. Everyone remembers Dr. Hool from those days and how he always dressed like the perfect English gentleman. Well, he came walking along to the IE building that morning and Dr. Maghsoodloo nailed him with a snow ball. I wished I had had a camera. Dr. Hool was not amused at all.

Milton Murphy
Birmingham, Ala.
Class of 1973

I am deeply grateful to Dr. Maghsoodloo. During my senior year, he approached me and proactively encouraged me to remain at Auburn beyond graduation to obtain my master’s. I did so. Since then, I have often reflected back that Dr. Maghsoodloo’s advice and personal encouragement to me has had a very profound impact on my career and outlook on the continual pursuit of education and fully developing one’s capabilities.

Gary Hallen
Kingsport, Tenn.
Class of 1975 and 1976

A first memory of Dr. Maghsoodloo is his aversion to the casual dress of students such as flip flops (shower shoes in his vernacular) and his discussion of how he used to dress to attend classes. A second memory is of a warm day in one of the old Guonset huts. Dr. Maghsoodloo asked me to open a window. These were the old windows that pivoted out from the top. The window was stuck and I made the mistake of pushing on the glass, instead of the frame. The glass shattered and I put my right hand through it, slicing the tip of my index finger. I went to the infirmary and they put five stitches
in, but informed me that the tip of my finger might not heal well. While I was there, Dr. Magshoodloo came over to be sure that I was okay. His concern for students is one of the memories I have of him. I can add that I still have that finger tip, albeit with the scars from opening that window.

Roger Dial  
Columbia, S.C.  
Class of 1980

Moving Simulation to the Control of Factory Floors

ISE faculty member Jeff Smith is working on a new project sponsored by Rockwell Software (a division of Rockwell Automation). The project “Simulation-Based Commissioning of Factory Control Systems” is related to Smith’s original dissertation work and research that began in the late ’80s looking at the use of discrete-event simulation in the control system commissioning process to reduce overall commissioning time and cost.

Commissioning is the final testing process that leads to sign-off on project development. It involves proving/demonstrating that a control system works as designed, intended and contracted. For complex factory control systems, commissioning is a time-consuming and expensive process, however it is critical for ensuring contractual performance and safety.

Arena, a Rockwell Software product, is the market-leading commercial simulation package and is used by academic institutions world-wide – including Auburn University. The new project is an exploratory investigation that will involve developing a detailed understanding of current control system development and commissioning processes, and identifying areas in which discrete-event simulation technology, such as that offered by Rockwell, could be applied to improve these processes.

It is expected that the investigation will focus on all aspects of a control system’s life cycle, with emphasis on how simulation technology can be incorporated to speed the commissioning process. During the course of the project, Smith will travel to several Rockwell facilities, as well as Rockwell customer and partner facilities, to meet with individuals and groups that can provide information and/or insight into the current processes.

In addition, a factory control systems commissioning lab will be set up at Auburn with equipment and software donated by Rockwell Software and Rockwell Automation that will include industrial control system components and software, along with the complete suite of Rockwell simulation-related products. The initial goals of this lab will be to train graduate and undergraduate students in control system design, development and implementation, and the factory control system commissioning processes.

With over $5 billion in annual sales, approximately 21,000 employees and customers in more than 80 countries, Rockwell Automation is one of the world’s leading automation companies. The Rockwell Automation family of brands includes Allen-Bradley controllers, Reliance Electric motors and drives, Dodge power transmission equipment, as well as Rockwell Software information management software.
Gue: Improving Warehouse Design

ISE faculty member Kevin Gue and colleague Russ Meller from the University of Arkansas were awarded a $400,000 grant from the National Science Foundation to investigate new designs for warehouses. What might seem to be a fairly staid topic has already caused quite a bit of buzz: their work has been featured on a number of logistics industry web sites and they have given several interviews to trade publications. The team is currently working with a major U.S. retailer on a possible implementation of their designs.

By a simple rearrangement of picking and cross aisles, Gue and Meller identified ways to reduce the distance traveled by forklift operators by more than 20 percent. The new designs allow workers to travel more directly to picking locations, thus reducing labor costs.

ISE Faculty Hit the Road

This summer, Bob Bulfin was invited to give a presentation on U.S. post-graduate education at the Global Educational Technology Symposium, held in July at the University of Algarve in Faro, Portugal. It was co-sponsored by the U.S. Department of Education and the Directorate General for Education and Culture of the European Union. One focus of the symposium was a common framework for graduate programs in all EU countries. Bulfin was invited to explain the U.S. system and discuss how some parts of it might be incorporated into the EU’s proposed framework for graduate studies.

Alice Smith visited Turkey for two weeks sponsored by the National Science Foundation. The visit was to make contacts with universities and scout locales for a planned 2008 workshop on women in industrial engineering academia – the U.S. and the Middle East. While there, Smith visited AU ISE alumni Yelin Sengor and Gulbakin Ozdemir. She also met with faculty at the following Turkish universities – Baskent University and Bilkent University in Ankara, Galatarsaray University and Kultur University in Istanbul, and Suleyman Demirel University in Isparta.
Chan Park and Jorge Valenzuela recently traveled to Brazil to attend the International Symposium in Math Programming 2006 in Rio de Janeiro. The symposium took place at the Federal University of Rio de Janeiro campus at Praia Vermelha. More than 750 people from around the world presented papers on theoretical, computational and practical aspects of mathematical programming. Park and Valenzuela presented the results of their NSF research grant on electric power systems. The titles of their respective talks were “Transmission Expansion Planning for Restructured Power Markets” and “Transmission Congestion and Competition on Power Generation Expansion.”

Jorge Valenzuela spent two weeks at the Algarve University as an exchange faculty member. The Algarve University is located in the city of Faro in the southern part of Portugal. The visit was sponsored by a grant from the Fund for the Improvement of Postsecondary Education (FIPSE).

Valenzuela Wins Walker Teaching Award

In March, the Samuel Ginn College of Engineering awarded industrial and systems engineering faculty member Jorge Valenzuela the prestigious William Walker Teaching Award. He was also voted, by our undergraduate students, the department’s outstanding faculty member.
New NSF Project in
Memory of Brian Carnahan’s
Research

When Emmett Lodree Jr. and Brian Carnahan, faculty members in the Department of Industrial and Systems Engineering, first met in January 2004, Carnahan said that he was the world’s best evolutionary ergonomist. Lodree developed an appreciation for Brian’s sense of humor as Carnahan went on to say that he was also the world’s only evolutionary ergonomist, which also made him the world’s worst evolutionary ergonomist.

Some of Carnahan’s research involved applying operations research techniques (in particular, evolutionary computation) to problems encountered in ergonomics (most notably, job rotation scheduling). An intriguing and unique aspect of this research is the integration of operations research (OR) and human factors engineering (HFE).

Lodree and fellow faculty members Jerry Davis and Robert Bulfin were recently awarded a National Science Foundation grant to explore unique interactions between OR and HFE that arise in warehousing systems. More specifically, they will study manual and semi-automated order picking activities and attempt to mathematically characterize the ergonomic aspects of order picking processes. They will then incorporate these human characteristics into optimization models, leading to optimal ergonomic pick sequences and break schedules. The three-year project began in September, 2006.

Park Publishes New Edition of Popular Textbook

“Contemporary Engineering Economics” by Chan Park is intended for undergraduate engineering students taking an introductory engineering economics course at the university level. This fourth edition, published in 2007 by Prentice Hall, has been thoroughly revised and updated, while continuing to adopt a contemporary approach to the subject and teaching of engineering economics. The text aims not only to build a sound and comprehensive coverage of engineering economics, but also to address key educational challenges, such as student difficulty in developing the analytical skills required to make informed financial decisions. A chapter on real options analysis provides a new perspective on how engineers should manage risk in their strategic economic decisions. Another, on economic analysis in the service sector, provides economic analysis unique to businesses such as healthcare and logistics, as well as to governments.
Korean Military Chooses Auburn

We are proud to have six full-time graduate students sponsored by the Korean military currently studying with us. These include five Army officers and one Navy officer – four working towards their doctorates and two towards their master’s degrees. One is the first female to graduate from the Korean Military Academy.

Name: Major Hyun Jin Han, Republic of Korea Army
Branch: Quartermaster
Specialty: Management and Analysis for Defense Affairs

I earned a bachelor’s degree in Chinese from Korea Military Academy and was appointed Second Lieutenant in 1992, working mainly in the supply control field. Realizing that a lot of optimization background is required in this field, I decided to pursue my master’s in operations research (OR) at Korea National Defense University (KNU). While at KNU, I had a chance to participate in a project for the Ministry of National Defense (MND) that involved estimating a proper procurement price of a weapon system. The project was a success, with MND paying $20M less than the asking price. After graduating from KNU in 2001, I worked as a cost analysis officer for the Army HQ Force Development Management Group.

In August 2003 I came to Auburn, with my wife and son, to work on my doctorate. My daughter was born in November 2005. Chan Park is my advisor. Since my work experience has been in cost analysis, I chose to work in the area of engineering economics – specifically in decision analysis and real option valuations.

I really love sports, especially cheering on the Auburn football team with my son.

Name: Captain Hyun Ho Kim, Republic of Korea Army
Branch: Infantry
Specialty: Management for Weapon System Development

I came to Auburn in July 2005, with my wife and son, to study. This is my second year in Auburn and I am currently trying to finish coursework. My
interest area is warehouse design and operation. Logistics is very important – both in times of peace and of war. Through my research, I’d like to help to solve the ROK Army’s logistics problems.

I graduated from the Korea Military Academy in 1995 and was commissioned as an Army infantry officer. Life in the KMA gave me an affirmative way of thinking, strong mental power, high morality and the love for my motherland. The dangerous and strenuous field training built self-confidence and courage.

Over the past ten years, I’ve served as a platoon leader, staff of battalion and company commander. My desire, to become a policy maker in the Army, led me to earn my master’s degree at Yonsei University in Seoul and to come to Auburn to earn my doctoral degree.

Name: Captain Hwansik Lee, Republic of Korea Army
Branch: Armor
Specialty: Planning military strategy and policy

I graduated from the Korea Military Academy in 1995 with a bachelor’s degree in military strategy. After graduation, I became an armor officer and served as a tank platoon leader in the 26th Mechanized Infantry Division. I love tanks and worked as a tank company commander before coming to Auburn.

I got a master’s degree in business administration from Seoul National University in 2004. During that time I decided to specialize in the planning of military strategies and policy.

I came to Auburn with my wife and two children (one son, one daughter) in the fall of 2005 to earn my doctoral degree. My research is in the area of logistics, including inventory control and optimization.

I like to play tennis and enjoy swimming to stay in shape and stay healthy. I recently took up the sport of golf.

Name: Lieutenant Commander Younchol Cho, Republic of Korea Navy
Branch: Line officer
Specialty: National defense strategy and acquisition

I came to Auburn with my family, a wife and two children, in 2005 to participate in an overseas study program for line officers in the ROK Navy. My rank is Lieutenant Commander [LTCD O-4]. After graduation from the ROK Naval Academy in 1993 with a degree in ship building engineering I was commissioned as a Navy ensign and held positions on board vessels such as DD (destroyer), FF (frigate), ARS, ATS (rescue ship) and AOE (replenishment ship). I also participated in many combined exercises and personnel exchange training programs between South Korea and the U.S. Navy.

Beginning in 2000, I studied defense management for my master’s degree in business administration at the Korea National Defense University. My thesis topic was “A study on the wartime sealift operation by using simulation.” I enjoyed the simulation aspect of this project and, as a result, decided to come to Auburn to earn my doctorate in the area of simulation-based control systems under Jeffrey Smith. I have also decided to specialize in national defense strategy and acquisition.

Name: Captain Kyongsun Kim, Republic of Korea Army
Branch: Ordinance
Specialty: Military affairs

I earned my bachelor’s degree in statistical information analysis from Korea Military Academy in 2002. After my appointment to Second Lieutenant, I served as an infantry platoon leader. I learned how to lead and manage a large group. It was an excellent experience that I know will benefit me throughout my life.

In 2003, I was promoted to Lieutenant and changed my branch to ordinance. I started to work as a manager of supply and repair for army equipment. The mission of ordinance corps is maintaining military equipment in good
condition, which has a critical role in military affairs. So, I decided to study more about that area and came to Auburn, which has an outstanding program in industrial engineering.

Name: Lieutenant Chang Hoon Song, Republic of Korea Army
Branch: Infantry
Speciality: Personnel affairs

I earned a bachelor’s degree in management from the Korea Military Academy and was commissioned Second Lieutenant in 2003. After serving as a platoon leader, I came to Auburn for my master’s in 2005.

I found it was not easy to study in this new environment and sometimes I find myself worrying about many things. However I believe that everything that I go through will be useful to me and ROK Army.

**Auburn Students Win Material Handling Student Design Competition**

A team from the Auburn University Department of Industrial and Systems Engineering recently won first place at the 2005-2006 Material Handling Student Design Competition, sponsored by the College Industry Council on Material Handling Education (CICMHE) and “Modern Materials Handling” magazine. This was the first time an Auburn team entered the competition.

“I am very proud of this special accomplishment,” said Alice Smith, chair of the industrial and systems engineering department. “This is a highly competitive national competition, and we were blessed to have four outstanding students on our team.”

The team was comprised of four ISE seniors: Ryan Briley, Emily Curtis, Jessica Davis and Amy Zeh. Faculty member Kevin Gue served as the team’s primary advisor.

The group received a $2000 award in the competition, which challenged teams to develop solutions based on an actual design project. Five independent judges from industry and academia evaluated the submissions. Pennsylvania State University and the University of Oklahoma received second and third places, respectively, while California Polytechnic State University, Rochester Institute of Technology and Virginia Polytechnic Institute and State University were named as honorable mentions.

**Fulbright Scholar Pursues Graduate Studies at Auburn Engineering**

Fulbright scholar Rula Allaf has chosen to join the Samuel Ginn College of Engineering as she pursues a doctorate in industrial and systems engineering.

“We are glad to have Rula as a part of our doctorate program,” said Alice Smith, chair of the Department of Industrial and Systems Engineering. “She
is an excellent student and it is a privilege to have her in our department.”

Allaf is originally from Amman, Jordan, where she attended private schools and received her International Baccalaureate high school diploma. After being awarded an undergraduate degree in mechanical engineering from the Jordan University of Science and Technology, Allaf was appointed to the mechanical design unit of the Royal Scientific Society. Following five years as an internal auditor, Allaf went on to receive a master’s degree in industrial engineering and management from Jordan University.

In 2004, Allaf became a full time lecturer in the Industrial Engineering Department at Jordan University. Knowing that it would take more study to become a specialized instructor, researcher or consultant, she applied to Fulbright for a scholarship. After a year of tests and interviews, Allaf was named one of 15 Fulbright grantees from Jordan.

“We chose Auburn University as the best place for me to pursue my doctorate,” Allaf said. “I look forward to sharing the knowledge and experience gained here to future engineering students and to providing consultancy and guidance to the industries and organizations in Jordan.”

Sponsored by the Bureau of Educational and Cultural Affairs of the United States Department of State, governments in other countries and the private sector, the Fulbright Program provides funds for students, scholars and professionals to undertake graduate study, advanced research, and teaching abroad. The program was established to increase mutual understanding between the peoples of the United States and other countries through the exchange of students, knowledge and skills. In the 60 years since it was created, over 250,000 individuals have received Fulbright grants – more than 100,000 Americans and 150,000 citizens from around the world.

**IIE Student Chapter Starts the Year**

The IIE student chapter kicked off the new school year with an open house on September 11, providing students with free pizza and drinks. It was an opportunity for students to meet and interact with one another, as well as with the faculty.

The icebreaker this year was an egg drop contest in which the students and faculty broke into groups to create the most ergo-friendly, cost-efficient, aesthetically pleasing, or just practical encasement to protect the egg. Supplies included bubble wrap, rubber bands, stockings, and anything else the teams could find in the room! Only one team’s egg survived the drop from the fire escape in the rear of Dunstan Hall, but everyone enjoyed the challenge.

Our chapter welcomes our first industry advisor, David Jones of American Cast Iron Company (ACIPCO). We are looking forward to working with him this year and are excited about his upcoming participation with our organization.

This year’s meetings will include speakers from industry and career services. We also plan to hold our annual golf tournament benefiting the Dr. Carnahan Fund, as well as social outings, such as dinner or movie nights, to allow students to interact outside the classroom.
Student memberships in IIE are only $30. You can obtain an application from the IIE bulletin board in Dunstan Hall outside the student lounge. Or you can join on-line by going to www.iienet2.org/details.aspx?d=560 and clicking “Join as a Student Member”.

IIE officers for 2006-2007 are Jessica McCauley, president; Melanie Kern, vice president; Cindy Kirk, secretary; Richard Ivey, treasurer; Brian Johnson, E-council; Kelly Kovach, social chair; and Heather Layne, web master.

ISE Student Highlighted Activities and Leadership

Undergraduate Students

Bradley J. Easterwood: recording secretary, Delta Tau Delta Social Fraternity
Brian Johnson: fourth-year member, Auburn University Marching Band (Mellophone); freshman advisor, Auburn University Marching Band; Sunday school leader, Lakeview Baptist Church College Ministry
Katie Jones: worked last summer in Warner Robins, Georgia as a licensed realtor
Ethan Knight: Fiji pledge
Brian Krogseng: member, Farm House Fraternity; College of Engineering student senate representative, SGA; student recruiter, College of Engineering
Heather Layne: member, Cupola Engineering Society; member, AU Board of Elections; vice president, Chi Omega sorority; member, Cater Society (top 15 AU women – based on leadership and advancement of women)
Kyle MacDonald: member, Cupola Engineering Society; co-op, Great Dane Trailers (Savannah, Ga.); member, Auburn Ultimate Frisbee Club Team
Jessica McCauley: member, Cupola Engineering Society; social chair; Society of Women Engineers
Brian Mattinson: president, Pi Kappa Phi
Max Mitchell: member, BET program; president, Alpha Pi Mu; member of intramural soccer team (undefeated and winner of Campus and Men’s Championships for past four years)
Katie Spinks: director of blood drives, SGA; assistant director Greek Week, Pan-Hellenic Council; student recruiter; Omicron Delta Kappa (ODK) Honor Society, Cardinal Key, and Kappa Delta Sorority
Morgan Tang: member, AU table tennis team; assistant, U.S. Paralympics Ping Pong Team; league director, college ping pong clubs around the southeast
Peter Thompson: member and leader of pledge bible study, Sigma Nu Fraternity
Brian Wilson: member, Sigma Nu fraternity; treasurer, IFC Executive Council; assistant treasurer, SGA Cabinet; member, Consulting Club; member, Cupola Engineering Society
Matthew Williamson: member, NROTC (four years); close to picking up a flight contract to be an aviator; vice president, Naval Aviation Society of Auburn (NASA)

Graduate Students

Adam Piper: assistant campus minister, AU campus (3 years); leads outreach ministry for graduate students and recent graduates in the Auburn community
Selda Taskin: senator and member, Teaching Effectiveness Committee, Graduate School Council

TIGERs

(Teams and Individuals Guided by Engineering Resources)

Auburn University Department of Industrial and Systems Engineering Occupational Safety and Ergonomics (ISE) and Occupational Injury Prevention (OIPRT) graduate students John Lesh, Adam Piper, Rani Muhdi, Eric Cho, and Rahi Movassagh spent an afternoon this summer demonstrating the importance of human factors engineering to a group of TIGERs campers visiting Auburn University. TIGERs campers are middle school-age students.

Muhdi discussed the importance of evacuating people from various structures and events, and how such factors need to be accounted for in the design of facilities and manufacturing environments. Piper and Movassagh introduced the students to human performance measurement techniques via Adam Piper balance testing a TIGER!
an interactive session with the department’s Balance Master. Lesh and Cho led a paper airplane making and flight exercise that exposed the students to design issues, basic data collection and analysis, and teamwork. All three activities were well received by the TIGERs Campers. Thanks to all of these students for volunteering their time and energy to support this annual event, and special thanks to Lesh for coordinating all of the activities!

ISE Hosts Speakers from Across the Nation

Each year our department, with the help of financial support from the Donaldson Foundation, brings in a variety of speakers from across the U.S. These individuals broaden our perspective and expose students to the academic world beyond the AU campus. Special thanks to Donaldson for making this seminar series possible. To learn more about seminars at the Samuel Ginn College of Engineering: www.eng.auburn.edu/seminars.

Tom Saaty, University of Pittsburgh, National Academy of Engineering Member

Joe Hartman, Lehigh University
Cerry Klein, University of Missouri
Royce Bowden, Mississippi State University
Jose Zayas-Castro, University of South Florida
Cole Smith, University of Florida
Don Bloswick, University of Utah
Thom Hodgson, North Carolina State University, National Academy of Engineering Member, Ginn Distinguished Speaker
Don Taylor, Virginia Tech University
John Usher, University of Louisville
Tapas Das, University of South Florida
James Moore, University of Southern California
Woojin Park, University of Cincinnati

Tom Saaty speaks on decision making.
New Automotive Manufacturing Systems Engineering Minor Planned

The Departments of Industrial and Systems Engineering and Mechanical Engineering at Auburn University are developing a new minor in Automotive Manufacturing Systems Engineering. This program will integrate topics in automotive design and future vehicle technology with high-volume automotive manufacturing processes. Students will learn how automobiles are designed and how automotive sub-systems (such as powertrain, chassis, body, brake, and electrical systems) are incorporated into the design. They will also discuss how new technologies (such as mechatronics and MEMS) and manufacturing concepts (such as lean manufacturing and six sigma) are changing the design and manufacture of future automobiles.

An overview of the automotive industry, including the evolution of industrial automation, the growth and challenges of management/union relations, the expansion of industrial globalization, and the challenges of managing a global supply base, will build an understanding in vehicle design and the issues facing global automotive manufacturing, producing a well-educated employee for the automotive industry.

We will keep you posted on the evolution of this exciting new program.

Scholarship Highlights

The Industrial and Systems Engineering Department is proud to congratulate our students who are receiving departmental scholarships for Fall 2006. The recipients are being awarded nearly $40,000 worth of tuition and fees. If you would like more general information about how to apply/obtain scholarships, please visit www.eng.auburn.edu/scholarships and click on the link “Department Scholarships”. Congratulations to all these students:

Meet Richard Ivey: CSEMS Scholar

Richard Ivey, a senior industrial and systems engineering from Huntsville, Ala., received a National Science Foundation Computer Science Engineering and Mathematics Scholarship (CSEMS) scholarship. Richard participated in undergraduate research programs at Texas A&M University, as well as its football foe, the University of Oklahoma, and recently completed an internship for Elmco, Inc., an aerospace and defense engineering company located in Huntsville.

Richard is a classic industrial engineer. Every day of his life is planned for the next three to six months and he makes his financial decisions by doing decision trees, which he learned in Stochastic Operations Research class. The things Richard learns in the classroom do not go in one ear and out the other; he takes IE strategies and applies them to everyday life, including his hobbies which include officiating baseball and sacred harp singing (a traditional form of shape note hymn vocalizing). He graduated from Harry Wendelstedt School for Umpires in February of 2004 and was a background singer in the Hollywood film Cold Mountain.

After completing his undergraduate degree in May of 2007, Richard plans to attend graduate school in the field of industrial engineering, and is considering Texas A&M, Michigan, or Penn State, to name a few. The Industrial and Systems Engineering Department is proud to have such a goal-oriented and talented young man represent us wherever he chooses to attend graduate school.
Meet Jessica McCauley: SWE Scholar

Jessica McCauley is a senior in industrial and systems engineering from Oxford, Ala. She recently won the Society of Women Engineers (SWE) Chevron scholarship, thanks to her excellent GPA and engineering work experience. This past summer she was an intern for General Electric’s Oil and Gas Quality Team in Houston, Texas.

Throughout her time at Auburn University McCauley has been a student recruiter for our department. Through her charming spirit and convincing words, she has influenced many students to consider pursuing a degree in industrial engineering. In addition, Jessica is also a member of many elite student societies, including our Cupola Engineering Society. She is president of the Institute of Industrial Engineers, social chair for the Society of Wome nEngineers, and a member of Alpha Pi Mu, the industrial engineering honor society. During her vacations from school and work, Jessica has traveled to London, England and the Bahamas, as well as Acapulco. She plans a career in technical sales or in quality assurance upon graduation this spring.

Meet Andy Dillon: Comer Scholar and Carnahan Scholar

Andy Dillon is an industrial engineering student from Gardendale, Ala., who has chosen to focus and specialize in safety engineering. To improve his marketability he also chose to participate in the co-op program for three semesters with Honda Manufacturing of Alabama.

Andy received the Comer Fund Scholarship as well as the Dr. Brian Carnahan Scholarship. He is a very hard working student, but also enjoys hanging out with his friends and playing video games. This past summer, he traveled to Vera Beach, Fla., and attended a few Nine Inch Nails concerts. Andy plans to attend graduate school after graduates. The Industrial Engineering Department congratulates Andy on all of his work and scholarships.

Safety and Ergonomics Update

There was a lot of action in our Occupational Safety and Ergonomics (OSE) and Occupational Injury Prevention (OIPRT) program this past spring and summer terms.

A record number (24) of graduate students selected the OSE/OIPRT options in spring and the program graduated three masters students.

Participation in professional conferences was high, with faculty and students attending and making presentations at four. Doctoral student Rani Mudhi was awarded the Dr. John Beno Memorial Scholarship by the Public Risk Management Association (PRIMA) at the 2006 PRIMA conference in Las Vegas, Nevada in June.

Our department was recognized by the 2005-6 president of the American Society of Safety Engineers, Jack Dobson, in the February edition of “Professional Safety.” Dobson commented, “In October, I had an opportunity to witness the work of the Occupational Safety and Ergonomics Program at Auburn University. The depth of involvement of the students in their research is phenomenal. Moreover, their enthusiasm is contagious.”

Our students and faculty also benefited from a visit, in March, by Donald Bloswick, a professor in the Department of Mechanical Engineering, University of Utah, and Director of The Ergonomics and Safety Program at The Rocky Mountain Center for Occupational and Environmental Health.

On the academic side, we continued to strengthen our interdisciplinary
activities with the University of Alabama-Birmingham (UAB) programs (in industrial hygiene, nursing and medicine) which, along with Auburn OSE/OIPRT, comprise the CDC/NIOSH Deep South Center for Occupational Health and Safety. Activities included teaching a comprehensive course in occupational safety and ergonomics to UAB students, as well as student and faculty participation in interdisciplinary student teams that addressed practical workplace problems at five different industrial facilities in Alabama during the spring. During summer semester, UAB faculty supported a comprehensive course in research methods for OSE and OIPRT doctoral students. Our research facilities continued to be upgraded, particularly in the biomechanics and motion capture areas, as one of our students prepared to conduct his doctoral research on the effects of restricted spaces on patient handling by nurses and medical personnel.

**ISE Offers Six Sigma Course to Students**

Through a new elective offered to seniors and graduate students, Auburn’s industrial and systems engineering students now have an opportunity to gain the training necessary to become certified Six Sigma Green Belts. “Data Based Decision Making Using Six Sigma” was offered for the first time last spring and will be offered every spring as a follow-up to the Statistical Quality Control course. This year, approximately 25 students (seniors, graduate students, and students participating in the graduate outreach program) took advantage of this opportunity to learn the DMAIC (Define, Measure, Analyze, Improve, Control) process and statistical tools, such as failure modes and effects analysis (FMEA), fault-tree analysis, correlation and regression analysis, analysis of measurement systems, and a review of control charts and hypothesis testing.

Statistical tools form the basis of knowledge for the American Society for Quality’s (ASQ) Six Sigma Green Belt certification. Once students complete a project using these skills and have three years experience, they are eligible to sit for the ASQ exam which is offered twice a year. ASQ reports that potential employees with a Green Belt receive higher average starting salaries from those in similar positions without the certification, making it an attractive option for our graduating seniors. Many companies are offering their own certifications (waiving the experience requirement) and this course prepares students for these internal certifications, making them more attractive as new hires.

The course was developed and is taught by faculty member Victoria Jordan, a Six Sigma master black belt with over fifteen years experience in industry. Jordan is certified as a Black Belt through ASQ and BMGI and received her doctorate from AU in May. She is currently an assistant professor in the Mathematics and Statistics Department, but also serves on the ISE faculty.
David Jones Joins Auburn University ISE Alumni Council

The Auburn University Department of Industrial and Systems Engineering (ISE) is pleased to announce that David R. Jones has joined the ISE Alumni Council. Jones, who received his bachelor's in industrial engineering in 1991, is currently employed with American Cast Iron Pipe Company (ACIPCO) in Birmingham, Ala. His manufacturing career began with the Lee Apparel Company in 1992.

He has experience in many areas, having worked originally as an industrial engineer doing traditional time studies involving costing and equipment justifications, then spending several years working as a project manager implementing a closed-loop business system and re-engineering processes for ACIPCO at the Birmingham location, as well as several subsidiary companies.

In 1999, Jones was selected to the position of continuous improvement coordinator and charged with becoming the champion for continuous improvement (CI) at ACIPCO. Since this time, teams have dominated the ACIPCO culture as a way to involve employees in problem solving, training, and making the company more efficient. Over the past few years, the CI team, which includes additional Auburn ISE graduates, has worked with the Auburn University Alabama Technology Network (ATN) to introduce lean manufacturing concepts such as 5S, Quick Changeover, Value Stream Mapping and Kaizen events. Projects using these concepts have resulted in great success and substantial savings for the company.

Jones is a past president of the Birmingham Chapter of the Institute for Industrial Engineers (IIE). He earned his master's in business administration from the University of Alabama at Birmingham in 1997 and is certified in production in management by the Association of Operations Management. Born in Cullman, Ala., he and his wife Kathy, another Auburn ISE alum, live in Hoover, Ala.

The ISE Alumni Council is a 12 member group led by Coby Frampton (BIE 1970) that assists the department with many aspects of continuously improving its educational, research and outreach activities. The council meets on campus twice a year. More information about the council can be found at www.eng.auburn.edu/programs/insy/alumni.

Doris P. Donald – First in Line

As far as we can tell from the data in our files, our first female industrial engineering graduate was Doris Donald, a member of the class of 1949. Donald currently resides in Alabama and recently wrote us a letter about her life as a student at Auburn and beyond. Although space prevents us from printing the entire letter, we are including excerpts. The entire letter can be found at our website: www.eng.auburn.edu/ise.

“Well, when I came to Auburn it was Alabama Polytechnic Institute. Much more impressive, don’t you think? It was nearing the end of the great depression, and frankly, I wanted to make money – lots of money. I had worked a couple of years – as a stenographer – near a group of young men from Philadelphia who called themselves “Energy Engineers,” or something equally catchy. Then and there I determined to be one of those. They weren’t doing anything I couldn’t do… better (I thought).”
"It was harder than I thought it would be after high school. I almost sank over Algebra in the first weeks but was saved by a grand girl who coached me through. Jan was her name, but due to the system of having it changed when you marry I don’t know her surname. So the first year was a nightmare of making the grades, but I caught up and maintained a 3.75 or better."

"I was interviewed by many of the businesses that came to the school for employees. I was to find out that there were none in the state that would take a woman. The grades did not count; no one would have a woman. I saw men who were even in the low C’s offered high entry-level positions. I was interviewed only for the curiosity by men who had prior knowledge that they would not accept me into their ranks."

"So I took a job as a teacher in a business college, and turned my abilities toward encouraging my children to be the best they could be – at whatever they undertook. The standards are much higher now and there is more to know. So I hope that my grandchildren – the last two of twelve – who are in Auburn University will make it without my traumatization."

"I was still in there pitching and was accepted, at age 56, into the ranks of management employees."

"Outside of making a career of sorts, I always wanted to live in the country, and now I do. My husband and I built a house – without a single smidge of knowledge and starting with only about $250.00. It still is not finished. But livable!"

ISE Scholarship Holders

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<thead>
<tr>
<th>Name</th>
<th>Hometown</th>
<th>Scholarship</th>
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<tr>
<td>Ntam Baharanyi</td>
<td>Congo</td>
<td>Paton</td>
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<tr>
<td>Benjamin Browning</td>
<td>Attalla, Ala.</td>
<td>Payne</td>
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<tr>
<td>James Christakos</td>
<td>Niceville, Fla.</td>
<td>Parke &amp; CSEMS</td>
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<td>Jaime Coppens</td>
<td>Madison, Ala.</td>
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<td>Robert B. Daugherty</td>
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<td>CSEMS</td>
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<tr>
<td>Andrew Dillon</td>
<td>Gardendale, Ala.</td>
<td>Comer &amp; Carnahan</td>
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<tr>
<td>Megan C. Disbrow</td>
<td>Madison, Ala.</td>
<td>CSEMS</td>
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<tr>
<td>John (Randall) Frost</td>
<td>Mobile, Ala.</td>
<td>Textile IE</td>
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<tr>
<td>Allison Haack</td>
<td>Huntsville, Ala.</td>
<td>Comer</td>
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<td>Richard Ivey</td>
<td>Huntsville, Ala.</td>
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<td>Patrick Johnson</td>
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<tr>
<td>Samuel R. Kerr IV</td>
<td>Texas</td>
<td>CSEMS</td>
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<tr>
<td>Cindy Kirk</td>
<td>Mobile, Ala.</td>
<td>CSEMS</td>
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<tr>
<td>Kristen Kozlowski</td>
<td>Ohio</td>
<td>CSEMS</td>
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<tr>
<td>Kyle MacDonald</td>
<td>Hoover, Ala.</td>
<td>Comer</td>
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<td>McKenzie Mayo</td>
<td>Shreveport, La.</td>
<td>Alpha Pi Mu</td>
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<td>Jessica McCauley</td>
<td>Anniston, Ala.</td>
<td>SWE</td>
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<td>Michael Osborn</td>
<td>Moulton, Ala.</td>
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<tr>
<td>Sequoyah Patrick</td>
<td>Athens, Ala.</td>
<td>Comer</td>
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<td>Michael Porter</td>
<td>Eustis, Fla.</td>
<td>Parke</td>
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<td>Matthew Preston</td>
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<td>Accenture</td>
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<tr>
<td>Joshua Ridenour (Masters)</td>
<td>Meridianville, Ala.</td>
<td>CSEMS</td>
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<td>Drew Robertson</td>
<td>Blountsville, Ala.</td>
<td>Howard &amp; CSEMS</td>
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<tr>
<td>Alecia Sartori</td>
<td>Autauga Co., Ala.</td>
<td>CSEMS</td>
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ISE graduate program ranked 26th in the nation by *U.S. News & World Report* (April 1, 2006)

**Alumni listserv**

Join the IM/IE/ISE alumni e-mail listserv by visiting http://eng.auburn.edu/programs/insy/alumni

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