

University of Illinois at Urbana-Champaign

Fall 2006

Inside

- Letter from the Alumni Board.
- New courses on quality engineering, product development for poverty stricken areas, and teen decision-making skills.
- Construction on a new \$1 million state-of-the-art Senior Design Studio will begin in fall 2006.
- After class: internships, jobs, and grad school.
- A growing breadth and depth of expertise positions the department for preeminence.

Web Feature

"One Bold Future"—A leader in an emerging discipline that unites business with systems engineering, the Department of Industrial and **Enterprise Systems Engineering** expands and advances the prestigious legacies of the Industrial Engineering program and the **General Engineering Department.** Read about the merger on the department's new website, www.iese.uiuc.edu.





Welcome to the Department of **Industrial and Enterprise Systems** Engineering

Deborah L. Thurston, Interim Department Head

fter nearly 20 years

in this department, I am honored to have been asked to serve as Interim Head during this exciting time in our history. The transfer of the Industrial Engineering degree programs and renaming of the department is complete. We produced the first three PhD graduates in Systems and Entrepreneurial Engineering (SEE). New hires, retirements and transfers have resulted in a 50 percent turnover in faculty. The good news is we gained truly exceptional new faculty; the bad news is we lost great colleagues who devoted many years of their lives to building this special place. We owe them a huge debt of gratitude and already miss them.

As a research university, our mission is to create new knowledge and to impart that knowledge to others. My strategic vision places us at the leading edge of the emerging discipline called enterprise systems engineering. Business, energy, health care, financial, computing, transportation, and new product-development systems have reached mind-boggling complexity. Their design and management calls for increasingly sophisticated expertise. These systems must be economically, environmentally, and operationally sustainable. Ideally, their design facilitates reconfigurability in response to both anticipated and unanticipated future events. I believe this department is uniquely positioned to become a key player on the international scene in this exciting arena.

Our portfolio of faculty bring complementary skill sets to bear on these societal needs. They make theoretical advances in order to solve real problems. They come to us from the very best of our peer institutions, continuing our long tradition of breadth and depth. Their intellectual diversity is necessary for (and is, in fact, a defining element of) excellence.

The combined GE and IE undergraduate population is nearly 700 students. Our graduates have enjoyed the highest job placement rate in the College for the past four years. Our Senior Design projects won 19 of 36 national awards this year (bringing our total to 144), and one of our alums won the 2005 Academy Award for Best Animated Short Film for Ryan (Christopher Landreth, BSGE '84). The combined SEE and IE graduate degree programs comprise approximately 70 students.

Our instructional laboratories provide students with an unparalleled breadth of hands-on experience. Construction on a new \$1 million state-of-the-art Senior Design Studio will begin in 2007. A new Operations Research Lab and a Product Dissection Lab will complement our existing Engineering Graphics Lab, Robotics and Control Lab, Mechatronics Lab, and Telecommunications Lab. The Technology Entrepreneur Center's mission is to encourage innovation and technology commercialization.

In summary, charting our course is truly a once-in-a-lifetime opportunity, and I relish the challenge.

Message to Alumni

Alumni News

Alumni News is published for alumni, students, faculty and friends of the Department of Industrial and Enterprise Systems Engineering, College of Engineering, University of Illinois at Urbana-Champaign. Please explore the website for additional news, information and announcements throughout the year.

www.iese.uiuc.edu

Deborah L. Thurston Professor and Interim Head

Jeff Sands Associate Dean, Development Alumni Relations Coordinator

Manssour H. Moeinzadeh Associate Professor and Associate Head Undergraduate Programs Coordinator

Carolyn Beck Associate Professor Graduate Programs Coordinator

Writer Erica Rothmier Creative Services | Public Affairs

Graphic Design Jerry Barrett

Photography Thompson/McClellan Photography Joe Storch

Contact Us

We want to hear from you. Your letters, comments, and editorial contributions are invited.

Subscriptions are free. To place your name on our mailing list or to request an address correction, please contact us.

(217) 333-2731

Alumni News

Department of Industrial and Enterprise Systems Engineering University of Illinois at Urbana-Champaign 117 Transportation Building, MC-238 104 South Mathews Avenue Urbana, IL 61801 USA

The University of Illinois at Urbana-Champaign is an equal opportunity and affirmative action institution.

2

Department Changes to Respond to Students

imagine many of you have wondered what has happened to the old department head. Since I retired in 1987, there have been many changes including four new deans and four new department heads. We now have a PhD program in Systems and Entrepreneurial Engineering. We also have a Dobrovolny Professorship in the same field.

Of course the capstone program in the senior year in Program Design has continued to excel and receive national recognition. One of the strong features continues to be the secondary field of electives. This enables our graduates to go on to graduate programs in across-the-board fields of engineering, law, business, medicine, and others. When one looks at the subject matter that has provided these opportunities, the program has been systems engineering oriented.

Many are asking what the future will bring with merging Industrial and General Engineering. As the new name suggests, the result is Industrial and Enterprise Systems Engineering. The new name does not detract from the basic mission of either the General Engineering or the Industrial Engineering undergraduate program, because both have had a systems orientation all along.

Certainly there will be some consolidation of courses from both programs. Some have already occurred. We have many students that will continue to enroll in the graduate master's degree program as well as the PhD program in Systems and Entrepreneurial Engineering.

One suggestion I would make is to have our graduates write to the department head and dean of engineering to express an opinion on how your degree has enabled you to achieve your employment goals. This will help the new dean to become more aware of how successful the program has been for you.

All of you need to give your support to the department head during this transitional period of time. In the final analysis, the current new faculty will be responsible for any new directions, and they need to hear from you.

Jerry S. Dobrovolny Professor Emeritus

Editor's note: Professor Dobrovolny began teaching engineering drawing at the University of Illinois in 1945. He became department head of General Engineering in 1959 and retired in 1987.

"Congratulations! I predict this program will rise to the top of its field to parallel all the other great engineering programs at the University of Illinois. Love the name! This is long overdue."

J T. Black (PhD MIE '69) Professor Emeritus Industrial Engineering Manufacturing Engineering Auburn University This year, a task force worked to develop recommendations to present to the fall Alumni Board meeting. Members of the task force share some of their ideas.



It is truly an exciting time in our history as the broad appeal and strong, versatile curriculum of the General Engineering Department combines its energies with the well known, deep rooted traditions and core disciplines of the Industrial Engineering program to become what promises to be a leading-edge academic institution destined to join the national rankings of the elite.

As the Industrial and Enterprise Systems Engineering Department begins, we are finding ourselves on the cutting edge of many exciting developments within our discipline—developments that will surely keep and even propel our students into leadership roles in all facets of the global economy.

To support this new hybrid department, a group of General Engineering and Industrial Engineering alums who have already served as members of their respective alumni boards are working on the formation of a new Alumni Board. The mission of this board will be to support our new department by providing guidance and wisdom to our students, cultivate strong relations and dialogue with the faculty, department head, and the dean of our college, and to prepare our graduates to be among the most demanded engineers within their disciplines.

Some of the areas we will be concentrating on include developing interaction relationships with the students early on during their time on campus to not only bring insight to them regarding what the real world is like but also to help them understand what it really means to be a successful engineering graduate from the University of Illinois at Urbana-Champaign. We are exploring new ways to integrate our students into the professional workforce during their years of campus studies by expanding the intern and externship experience opportunities for growth and insights. We look forward to providing industry input for making adjustments to the curriculum to help better prepare our students to transition productively into the professional world as well as providing assistance in our new department to maintain the ABET certification. ABET is a national certification of academic departments of engineering. Receiving certification is typically attained by only the very best in class. Our underlying goal is to be an integral part of the team that will bring our new department into the "top five" limelight of nationally ranked engineering institutions.

Please consider joining us either in service on the board or through the many other ways you might reacquaint yourself to the campus through the many activities we have to offer. We welcome your input and would really enjoy either hearing from you or meeting you somewhere back here on campus in the near future.

Sincerely,

Art Davis (BSIE '64) Owner, The Davis Group Park Ridge, Illinois agdavis001@sbcglobal.net

Fred Chin (BSIE '75) Vice President of Operations, Universal Chemicals and Coatings, Inc. Elgin, Illinois fchin@unicheminc.com Deanne Dewitt (BSGE '94)

Operations Manager, IBM Northfield, Ohio Deanne.Dewitt@us.ibm.com

Ralph Wakerly (BSGE '80) President, Wakerly Partners, Inc. Downers Grove, Illinois ralph@wakerly.com

Make a Gift— Make a Difference

our gift can help the **Industrial and Enterprise** Systems Engineering Department attract the best and brightest students, support fellowships, organize alumni programs, and provide for many other activities that enrich the student experience and make the department more competitive. Special funds allow you to designate how your gift is used. For example, the IESE General Fund is used to respond to a variety of critical needs in the department. The **Facilities Fund supports** improvement of classrooms, laboratories, and equipment to provide the optimum learning and teaching environments.

To find out how to make a gift to these and other special funds, explore the Alumni and Friends link at www.iese.uiuc.edu or call (217) 333-2731.

Alumni News

Mechatronics Lab

E ach spring, GE 423, Introduction to Mechatronics, introduces students to the concept and practice of mechatronics. While the lecture portion of the course serves as a general overview, the lab section gives students hands-on experience with computer interfacing of physical devices (sensors, actuators), data acquisition, realtime programming and real-time control, and human-machine interfaces.

The lab was established in 1998 by Professor T.C. Tsao and Professor Mark Spong with help from a \$500,000 grant from John Deere.

For the past eight years, Dan Block, manager of the Control Systems Laboratory (CSL), has taught the lab section of the course where students spend the semester working with robot cars. At the beginning of the semester, each robot car has relatively the same platform, equipped with a digital signal processor (DSP) to run the robot and different sensory devices (a color camera was added in 2006). The CSL classroom, where the lab is taught, is equipped with computers that have wireless capabilities to connect them to the robots and a camera above the robot course that locates and tracks colors, simulating GPS.

The robots are also capable of expansion by adding new and different devices like

heat and mapping sensors. This year, one group of students chose to incorporate a color LCD screen from a cell phone into their robot. Currently, Block is investigating some new vision software for the robots. "I am always looking for ways to expand the course," said Block. "I don't like to have repetition, which is sometimes hard."

During the first nine or ten weeks of the semester, students become familiar

In the lab section of the Mechatronics class, students program robotic platforms to perform tasks such as recycling aluminum cans (above) and following a marked path (upper right).

Quality Engineering (Six Sigma Black Belt course)

n spring 2006, the Department of Industrial and Enterprise Systems Engineering offered a new quality engineering course (GE 498) designed to teach students the fundamental concepts in quality engineering and six sigma that can be applicable to diverse cases in academic and industry settings. Over the course of the semester, students work on four realistic six sigma projects, ranging from manufacturing service to transactional industries. The goal of the course is for students to have the ability to apply the fundamental concepts of quality engineering and six sigma paradigm in realistic cases. Upon completion of the course, students reach the six sigma black belt skill level.

The course is offered to students both on campus and online. "Based on the exit survey from students, this course is helping industry students to effectively deal with realworld quality issues they face every day," said course instructor Harrison Kim. "Also, it is a good indicator for on-campus students that the course material is on high demand in industry."



with programming the robots through structured lab assignments. The last four to five weeks of the semester are spent on a final project where teams of students modify and program their robots to perform a specific task.

The tasks of the 2006 final projects ranged from a firefighting robot to a talking robot that avoided obstacles while listening for information from ultrasonic GPS devices installed around the classroom. These GPS devices, called cricket modules, are indoor GPS satellites that were initially developed by MIT and have undergone further development through this course project.

Another interesting project from spring 2006 was the three-wheeled segbot, a modified robot platform based on the Segway robotic mobility platform. The initial segbot prototype was established in the 2004 mechatronics lab and has since extended into the research of ECE Professor Mark Spong.

"We try to incorporate not only the semester project but things that can go into research later," said Block. This is one of his goals for the course, however, Block's ultimate goal is to improve the control of the robots and make them more autonomous. With the advancement of technology, the possibilities seem endless.

The hands-on experience students receive through these labs exceeds that in most other courses. "It gives students job experience in a hardware/software integration engineering job," said Block. "It also prepares students for their project and/ or thesis development in graduate school."

For more information on the course or to look at past projects, visit coecsl.ece. uiuc.edu/ge423.



News and Features

Professor Viswanathan (College of Business) conducts one-on-one interviews with low income, low-literate buyers and sellers in rural southern India. Viswanathan is co-teaching the Product and Market Development course with Professor Ali Yassine this year.

Product and Market Development in Subsistence Marketplaces

This fall, the College of Business and the College of Engineering are collaborating in a two-course sequence titled "Product and Market Development in Subsistence Marketplaces." The sequence offers second-year master's degree students hands-on experience, focusing on products for low-literate, low-income individuals in subsistence marketplaces, such as transitional economies like India and China.

Working together, students from both colleges will learn to use the principles of marketing, cost accounting, project finance and management, engineering and manufacturing development, and new product development.

The extent of experiential learning and its highly cross-functional nature distinguishes this course from other product-development laboratory courses at the University and in the nation. Students participating in the course will travel to India in the fall and immerse themselves in the true context of the market they are studying.

The spring semester will be spent converting the developed concepts into workable prototypes, testing them in the market, and developing manufacturing, marketing, and business strategic plans. While most market testing can be accomplished locally, the goal is for some students to return to India over spring break for additional market testing. The outcomes of this course are anticipated to be very beneficial in product and market development.

"We expect project reports from students to

form the basis for future learning material that will be disseminated widely through publications," said Ali Yassine, professor of general engineering who is co-teaching the course. He also explained that the program will work closely with two U.S.based, multi-national corporations that have operations in India to define two real projects the students will work on.

The curriculum stems from issues in business and engineering and creates a broad range of collaboration within the two areas of study. At one end, it examines the bottom-up understanding of buyers, sellers, and marketplaces beyond literacy and resource barriers. At the other end, it explores the technologies used to develop innovative products. The course also investigates issues in product and market development and the nature of research methods to employ – all while benefiting the four billion people in the world who live at the "bottom of the pyramid."

According to Yassine, this new course is very important in two ways. First, the general levels of poverty and literacy of the target consumers suggests that both traditional market research and engineering methods must be modified in application. Further, the course provides an opportunity to compare, contrast, and therefore, sharpen marketing skill sets for traditional marketplaces. Lessons learned for subsistence marketplaces can be applied in other marketplaces.

Madhu Viswanathan, College of Business, teaches the course with Yassine. More information is available at www. business.uiuc.edu/new_product_ development.

The Hoeft Technology and Management Program

he Department of Industrial and Enterprise Systems Engineering strives to lead a discipline that unites business with systems engineering. The Hoeft Technology and Management (T&M) Program, co-directed by Professor Deborah Thurston, is a cooperative program with the College of Business that encompasses these ideals by bringing together students from both disciplines and preparing them to function effectively in a technical, interdisciplinary, team-based, industry environment.

The curriculum stems from industry's high demand of graduates who can work in cross-functional teams—engineers who understand the market forces and the financial implications of technology investment, and business majors who can conceptualize the technical aspects of process and product development. The program is 10 courses (22 credit hours), ending with a capstone integrated project course taken during the spring semester of the student's senior year.

The capstone project course pairs a team of three business and three engineering students with a corporate affiliate of the T&M program. The team then works with T&M program faculty and sponsor representatives to develop solutions for a real-life problem presented by the sponsor affiliate. These problems typically involve engineering, finance, marketing, and accounting processes.

Current corporate affiliates include ADM, Boeing, John Deere, Eaton, General Motors, Honeywell, Kimberly-Clark, Motorola, and State Farm. The program is also sponsored by contributions from Mr. and Mrs. Leonard Hoeft and the John D. and Catherine T. MacArthur Foundation.

Alumni News

New Senior Design Project Studio

he Department of Industrial and Enterprise Systems Engineering has a mission to better serve students and prepare them with the education needed to thrive in an enterpriseoriented world. In keeping with that mission, we are pleased to announce the renovation of the Senior Design Project Studio. The transformation is scheduled to begin in May 2007. Gorski Reifsteck Architects are heading the project.

The new Senior Design Project Studio will create a professional environment for both students and corporate sponsors with a fully integrated, secure, project work area for virtually all phases of student projects. Modernized workspaces will accommodate a variety of tasks and equipment, including a CAD laboratory with printers, plotters, and prototypes. Meeting and conference areas will have projection and video conferencing capabilities to support group planning and presentations. A resource area will house a history of Senior Design projects and reference materials. Laboratory spaces will be improved with power upgrades, air conditioning, fume hoods, wet sinks, emergency showers, and other equipment to increase student productivity, safety, and comfort.

The overall goal is to provide students with a facility that emulates a modern corporate design studio and the history of excellence that encompasses the IESE Senior Design Program.

The Program

The Senior Design Program is an innovative collaboration of education and industry, challenging students to find engineering and business solutions to realworld problems. This capstone course tests students' knowledge, skills, and creativity as well as their ability to lead, contribute as an individual, and work as a team.

Student teams, working with faculty advisors, have approached more than 750 problems with more than 200 sponsoring companies. Recognizing the value of tapping into new engineering technology and talent, many former students have returned to sponsor Senior Design projects.

The IESE department is a national leader in Senior Project design with hallmarks that include a well-conceived course plan and the involvement of the entire department faculty as advisors or evaluators. Senior Design teams have won more than 100 awards in national competitions and have seen their solutions implemented in companies throughout the country. Its success is also evidenced by the wealth of James F. Lincoln Arc Welding Student Engineering Design Competition awards earned since 1968. See page 11 for this year's Silver Award winners.

For more information about supporting the Senior Design Project Studio or other programs of the Industrial and Enterprise Systems Engineering Department, please contact Jeff Sands at sandman@uiuc.edu, (217) 244-9918.

"As alumni, we want to give something meaningful back to the students. Senior Design Project is important because by the time students take it, they are trying to visualize the end, to transition from school to a real job. It is something we all share. I can remember having team meetings in my adviser's basement because there wasn't space for us in the lab. Now I'm a project sponsor, and I'm amazed at how resourceful the students are—they deliver first-class results, but they struggle for credibility in the space they have."

-Mike Brunetto (GE '76)

News and Features

<u>A</u> Shared Legacy The Department of Industrial and Enterprise Systems Engineering Alumni Board invites all graduates and friends to share in raising the \$400,000 still needed to create an environment that reflects the professionalism and quality of engineering seniors through the Senior Design Project Studio renovation. The cost to transform the third floor of the Transportation Building is \$1.1 million. The University of Illinois is providing \$700,000 of seed money; the board and alumni, the department, and the College of Engineering will share the remaining cost equally.

Dear Friend,

Senior Design Project Studio is one of the most exciting renovations under way on campus. No matter how long it's been since graduation, everyone remembers this class as an important and meaningful part of their educational experience. We ask for your help in providing today's Senior Design students with a professional environment that reflects the quality of their work as well as the rich legacy of every Senior Design team that met their challenge.

Please contact me if you have questions about the studio. If you are ready to make your gift now, return the mail-in panel or log onto the website.

Sincerely,

Jeff Sands Associate Dean, Development sandman@uíuc.edu (217) 244-9918 The Industrial and Enterprise Systems Engineering Alumni Board, Department of Industrial and Enterprise Systems Engineering, and College of Engineering thank you for supporting the Senior Design Project Studio.

To give on the Web:

Please go to www.engr.uiuc.edu/alumni/gift. Be sure to specify GE Facilities Fund (31768) on the form.

To mail your gift, please send this completed panel to:

University of Illinois Foundation P.O. Box 3429 Champaign, IL 61801 USA

In support of the Senior Design Project Studio (GE Facilities Fund 31768), I enclose/pledge my gift of

\$5,000 \$2,500 \$1,000 \$ authorize the U of I Foundation to collect my credit card checked: Visa MasterCard	500 🔲 \$250 / gift in the amou DiscoverA	Other \$ I unt above through the merican Express
Card no.:	Expiration D	ate:
Signature:		
Pledge installment to be paidquarterly _	_semiannually _	_annually
My company,, employers Matching Gift form.	will match my gi	ft. I am enclosing my
Name		
Address		
City	State	Zip
Telephone		
Email		

Alumni News

ISDA Lab Applies Engineering to Teen Decision-Making

Professor Ali Abbas works with the Decision Education Foundation to help teens across central Illinois improve their decision-making skills. The flowchart below outlines the difference between reactive and proactive decision-making, a key concept in understanding how people make decisions.

Adult: How did you get here?

Bernard: So I'm driving along and this guy looks at me funny. So I pull over, he pulls over, and I beat him down. I drive off, he calls the cops, the cops arrest me, and now I'm here.

Adult: What do you think about the decisions in your story?

Bernard: [pause, thinking]...Well...he decided to look at me funny. He decided to call the cops. The cops decided to arrest me. So I don't like decisions-they put me here! (From a true conversation with a 16-yearold boy in juvenile hall in San Jose, Calif.)

⁶⁶ Everyone makes decisions but few people think about how they do it," explained Ali Abbas, assistant professor and director of Information Systems and Decision Analysis (ISDA) Lab within IESE. "One of our goals is to spread decision skills to teens in Central Illinois."

Abbas joined the Illinois faculty in fall 2004 after earning his PhD in management science and engineering at Stanford University. His research focuses on decision making under uncertainty. He is currently involved in two research projects funded by the National Science Foundation. The first, on assessing joint distributions using isoprobability contours, is in collaboration with David Budescu in the psychology department. The second, on applying decision theory to machining optimization, is in collaboration with Tony Schmitz at the University of Florida. His research group works closely with the Decision Education Foundation (DEF), a nonprofit volunteer organization that was launched in 2002 by several volunteers from Stanford, the Strategic Decisions Group, and Microsoft Corporation. Abbas helped launch the DEF and participated in many of their programs while doing PhD work. The DEF is led by Ron Howard, a founder of the field of Decision Analysis and Abbas' close mentor and friend.

"We do not teach teens *what* to decide; we teach teens *how* to decide," Abbas explained. "We aim to teach good decisionmaking—both how to judge whether a decision is a good one as it is and how to get to good decisions."

This fall, ISDA is in full-launch mode, with a new website and several outreach events planned for local teens, high school teachers, and local juvenile facilities.

We are fortunate to have lots of schools around us, and we want decision skills to be part of the high school curriculum—not just one class called 'decision skills' but every class—even history and literature." ISDA is developing a course and lesson materials to introduce the benefits of using Decision Analysis techniques in the classroom for both students and for teachers.

"The goal of the web page is to reach out to youth who would like some assistance in making any decision they are faced with," Abbas added. "Teens will have the opportunity to anonymously write in to the web page with a specific issue and can expect to get advice on how to make a good decision given the circumstances. This is the core of our vision: 'Better Decisions—Better Lives.'"

-by Rick Kubetz, Engineering Communications

For many ambitious Industrial and Enterprise Systems Engineering students, the summer break presented an opportunity to take their education one step further with hands-on experience through a summer internship. From a Chicago law firm to the Quaker Oats Company, IESE students spent the summer sharpening their skills throughout the region. Here is a glimpse at what some students did.

Amanda Breyer, '07 General Engineering – Engineering Administration, was an innovation and research intern at Medela Inc. in McHenry, Illinois, spending 13 weeks with the company. Her principal focus was product development, working closely with the senior product development engineer and contributing to the development process whenever possible. Breyer especially enjoyed her experience because of the products on which she worked, breast pumps, and the positive impact they have on society.

Keith Campbell, '07 Industrial Engineering, spent his summer as an intern in the Supply Chain Management Program at Halliburton in Houston, Texas. He worked on a process improvement project for a product service line that is used primarily on all Sperry Drilling Service Wells, and he learned about all the products the facility develops, manufactures, and tests. "This experience has shaped my leadership skills and given me the opportunity to apply knowledge learned in the classroom, along with valuable knowledge of manufacturing process improvement and all the decisionmaking and communication skills that are needed along the way," said Campbell.

Todd Herst, '08 General Engineering, spent his summer as a records assistant at the law firm of Kirkland & Ellis LLP in Chicago. Through this experience, he was able to read current case files, attend a mock trial, and become familiar with the state and federal courts. Herst intends to attend law school upon graduation and found the 11-week experience complementary to these plans.

David Hoffer, '07 General Engineering – Engineering Administration, served as a project engineer at Skender Construction Company in Palos Hills, Illinois. Here he learned about what goes into large-scale, multi-unit housing developments and the planning behind them. He saw projects through the various stages of completion and observed interactions between the owners, architects, and contractors. "The experience has been very beneficial and has peaked my interest into construction as a career," said Hoffer.

Greg Hoffman, '07 General Engineering – Engineering Administration, served as an intern in the product management department of Zebra Technologies in Vernon Hills, Illinois. He worked on a market segmentation project and various technical projects, gaining knowledge in both business and engineering. "I will be able to take the knowledge I have learned and apply it to my studies, but it has also given me a look at future job opportunities," said Hoffman.

Melissa Pelz, '07 Industrial Engineering, spent 12 weeks in Milwaukee, Wisconsin working for GE Healthcare as the manufacturing quality intern on the circuit side of their production shop. She worked on establishing a process to track over 2,000 feeders that place components into the circuit boards that GE Healthcare manufactures, and feels the experience was beneficial both in technical knowledge and its real-world applications. "This internship helped me to take what I have learned in the classroom and see how it is applied in the business world," Pelz said. **Sam Sadler,** '07 General Engineering – Engineering Administration, was an intern at the Quaker Oats Company in Cedar Rapids, Iowa for 12 weeks. Working in the technical services department, he was immediately "thrown" into a project that would be very beneficial to the company building an ultrasonics route in a database to monitor compressed air leaks and steam leaks. "It's great to finally see what I can do with my degree," said Sadler, stating the experience as a great motivator to get more of what he wants from his education.

Rob Tetzlaff, '07 General Engineering – Theoretical and Applied Mechanics, was an intern for Nestle at a beverage plant in Waverly, Iowa. He worked for the engineering manager, with tasks ranging from taking a full physical inventory of the entire factory to updating the planned maintenance schedule and converting it to the company's new computer system. "It is very interesting seeing how a huge plant operates," said Tetzlaff.

> Did you know that the Department of Industrial and Enterprise Systems Engineering has the highest job-placement rate in the College of Engineering? According to information submitted by recent graduates, 84 percent had been offered employment or accepted to graduate school as of July 2006.

> > 9

Alumni News

First Two Systems and Entrepreneurial Engineering PhD Graduates

Nick Gans (center), with advisor Professor Seth Hutchinson (left) and Professor and Interim Dept. Head Deborah Thurston, is one of the first two recipients of the Systems and Entrepreneurial Engineering (SEE) PhD. Steve Harper (pictured below) is the second SEE PhD graduate.

he Department of Industrial and Enterprise Systems Engineering builds on the tradition of excellence established by the College of Engineering. By merging the Department of General Engineering and the Industrial Engineering program, IESE gives both programs the resources they need to attain the national and international recognition they deserve.

The Systems and Entrepreneurial Engineering (SEE) PhD program reflects this mission by presenting the unique opportunity to create excitement, serious research, and scholarship at the crossroads of engineering technologies and the intersection of business and engineering.

On May 14, 2006, IESE awarded its first SEE PhD degrees to Nick Gans and Steve Harper. This major milestone for the department is a glimpse at exciting things to come.

Gans began his PhD studies in the Department of Electrical and Computer Engineering (ECE). His research focused on controls and robotics. Soon after, however, he realized that at most universities, the Departments of Computer Science, ECE, Mechanical Engineering (ME), and Industrial Engineering (IE) all did robotics research. "When the SEE PhD program was developed, I saw an opportunity to position myself at a crossroad between ECE, ME, IE, etc.," said Gans. "I could look for teaching positions in multiple departments."

Gans' thesis was on vision-based control of robots. He designed a stable controller that can switch between different methods depending on the situation. "IESE has a strong presence in controls and robotics," said Gans. "My research fit firmly in that arena." He is now completing his post-doc work at the University of Florida where he is involved in vision-based control, including patent application.

While Gans' thesis and research focused more on the controls/robotics side of SEE, Harper was more interested in the decision making and decision analysis side of things. His thesis focused on making strategic investment decisions in new technology in the electrical power system.

"A lot of the work involved was theory testing, simulation, and modeling," said Harper. He took a network of ten managers of an electrical power system, simulated over it over a 100-year time period, and determined the best sequences of replacement decisions for each manager based upon the economic cost, effective system reliability, and environmental impact of generating electrical power.

Harper began his PhD studies in the Business Administration Department at the University of Illinois, but when his advisor left, no one in the department specialized in decision-making. Looking into the programs offered by the College of Engineering, he came across Deborah Thurston's research in engineering decision making and decided to make the switch.

"Everything just fit together," said Harper, who eventually wants to teach the business side of things, "(The IESE program) is very flexible in what areas you can concentrate. Varied experiences are appreciated and built upon."

These varied experiences and realm of research possibilities are what IESE is all about.

As the only Illinois PhD program devoted to the integration of engineering and business systems, it focuses on the integration of different technologies across both existing and emerging disciplines and the integration of business principles with one or more technical disciplines. Current enrollment in the SEE MS and PhD program is 65 students.

Kalyanmoy Deb Wins India's Top Prize for Engineering Science

In September 2005, Kalyanmoy Deb (left) received India's top prize in engineering science from the prime minister of India.

Alyanmoy Deb was named a 2005 winner of the prestigious Shanti Swarup Bhatnagar Prize, India's top prize for engineering science. Deb has done more than any single person to spread the word on multiobjective genetic algorithms throughout the world and spread the practical application of genetic algorithms in his home country. The prize was given to Deb by the prime minister at a formal function held September 28, 2005.

Professor Deb was a visiting postdoctoral research associate in the Department of General Engineering's Illinois Genetic Algorithm Laboratory in 1992-1993. At that time, he collaborated with David E. Goldberg, Dobrovolny Distinguished Professor. Professor Deb is currently Professor of Mechanical Engineering at Indian Institute of Technology in Kanpur.

Senior Design Group Wins the Silver Lincoln Arc Welding Foundation Award

I have been lucky enough to receive two awards through the General Engineering Department during my two and a half years at the University. As a freshman I received the GE Freshman Scholar Award for \$500, and as a sophomore I received the White Scholarship of \$2500 per year for two years for students concentrating in construction. The financial benefits have been great, but even more, the awards have inspired me to work harder. Knowing that these opportunities are available has really motivated me to set high standards for myself and raise the bar for others. -Eric Jansen (BSGE '07)

From left to right: Professor Harrison Kim, Michael Huang, Ines Hubler, Jason Chentorycki, Aaron Kirkpatrick, and Erick DaMota

⁶⁶Accelerated Weathering Machine Humidification System Redesign for Reduced Water Damage" won the silver Lincoln Arc Welding Foundation award this spring. Harrison Kim was the project advisor.

The project was motivated by the real industry need to reduce water damage to the films tested in a weathering simulation machine. Atlas MTS, the project's corporate sponsor, had received numerous complaints in regards to this issue. The team of students, Jason R. Chentorycki, Aaron R. Kirkpatrick, and Ines M. Hubler, redesigned the filtering system and reduced large water particles in the chamber, which was the main cause of the problem.

"The result was excellent beyond our initial expectation. The redesigned system reduced the film damage problem to virtually none!" said Kim. "I am not surprised that this project was recognized at the national level."

Faculty Retreat

Alumni News

IESE Faculty Retreat

Avery successful faculty retreat was held on January 28, 2006 at the Levis Faculty Center in the Urbana campus. Both General Engineering faculty and Industrial Engineering faculty attended the retreat. After several years of debating the merits of the College reorganization, it was a great relief to have achieved consensus and finally turn our collective thoughts toward moving forward.

Faculty divided into three breakout sessions. The "Strategic Planning for Achieving a Top 5 National Ranking" group addressed questions such as "What important problems are we trying to solve? What are our competitors doing? What is our unique niche in the marketplace?" The "Strategic Planning for Teaching and Curriculum" group addressed questions such as "How do we meet the needs of our increasing enrollment while still maintaining our traditional standards of quality?" The "Outreach and Marketing" group addressed the question of "How do we spread the good word about our department to students, alumni, industry, and our peer institutions?"

The retreat was a wonderful opportunity to work together as a team toward common goals. Several retreat recommendations have already been implemented, including a town hall meeting to address student concerns and the hiring of additional faculty.

Front row left to right: Raymond Price, Ali Abbas, Deborah Thurston, David Goldberg, and Manssour Moeinzadeh Back row left to right: Harrison Kim, Wayne Davis, Xin Chen, Brent Hall, Uday Shanbhag, Thomas Conry, Scott Burns, Dusan Stipanovic, Dieter Vandenbussche, James Leake, Ramavarapu Sreenivas, and Henrique Reis

Faculty Retreat

Faculty from the General Engineering Department and the Industrial Engineering program attended a faculty retreat on the Illinois campus to discuss expectations and goals for the new Department of Industrial and Enterprise Systems Engineering.

Build on Success. Seek Opportunity.

www.UIUCEngineeringAlumni.com

Search Nearly 300 Current **Job** Openings **Network** with 1,500 UIUC Engineering Alumni **Recruit** an Illinois Engineer Share your **Insight Mentor** a Student **Enroll** in Engineering Online

Stay Connected.

Engineering Career Services provides free services and job search assistance to all UIUC Engineering Alumni. For more information or assistance, please contact us:

> tel: 217-333-1960 email: ecs@engr.uiuc.edu

Engineering Career Services

Awards

Alumni News

Awards

The success of the Department of Industrial and Enterprise Systems Engineering is best shown through our outstanding students and their achievements. With gifts from corporations, foundations, and private donors, we are able to recognize the many merits of our students and continue to provide them with world-class resources.

We are honored to acknowledge the support of organizations and individuals and the contributions they've made to the exceptional students below.

General Engineering

The Edward S. Fraser Award David A. Tilford

The Jerry S. Dobrovolny Award Christian C. Tansey

Distinguished Service Award Danielle Lasater Reva Kamhi

The Bernt O. Larson Awards First place: Jason R. Chentorycki Ines M. Hubler Aaron P. Kirkpatrick

Second place: Matthew C. Bardelli Aaron T. Kielar Adam D. Zmick

The Randolph P. Hoelscher Elton Chu

The Robert Jewett Award Peggy Spinato

The Herbert J. Sprengel Award Matthew C. Ludmer

The Mildred Mattux and Lisle Abbott **Rose Scholarship in General Engineering** Michael T. Shaw Robert W. Tetzlaff

The Dorothy B. and Donald W. White Scholarship Ben Edmiston Eric Jansen

Kenneth W. Hamming Award Brad Borland David Yadron

Daniel P. Krueger Scholarship Laura Sullivan

Marshall W. Tudor Scholarship Benjamin Putman

The Freshman Award Maria Lupo

Mary Chow Scholarship Award Chelsey K. Walker

The William A. Chittenden Award Andrew P. Williams

The Gamma Epsilon Excellence in **Teaching Award** Professor Dusan Stipanovic

The Gamma Epsilon Distinguished **Alumnus Award** Michael Brunetto

Pagels Scholarship Award Richard R. Erickson

The James H. and Carla A. Christensen Scholarship Brian Matesic

The Quaker, Tropicana, Gatorade Scholarship in General Engineering Laura Murphy

General Engineering Scholar Awards Freshman:

John C. DiMare Christopher D. Joyce Nathan J. Price Andrew Kickertz Kevin T. McParlan

Izaak D. Neveln Kushal J. Sanghrajka

Sophomore: Michael Gaw Thomas C. Minoff Christopher Knowlton Leo Rotstein

Junior: Kevin Henrick Melissa M. Kosobud

Steven Sam Robert Snell

General Engineering Service Awards

Senior: David Aument Doug Bach Amanda Breyer Tracy M. Butler Kevin J. Callaghan Robert W. Carthew Eric Chi Jeffery P. Cobia Jackie Cordell Kahla Dean Kevin P. Henrick

Junior:

Jennifer Kasler Mike Katzenbach Mike Kivisto Laurence Lin Chris Marshall Eric A. Mog Laura Murphy Miquel Reyes Megan Wimmer Licci Zizumbo Brandon Zobrist

Scott Dudek Jessica Levasseur Matt Englehart Hong Nguyen Phillip Hoerr Brad Ptasienski Greg Hoffman Peggy Spinato Mike Johnson Dave Yadron

Sophomore: Richard "Buddy" Erickson Brian Matesic Dana Ring

Freshman: Brian Budd Maria Lupo Jordan Vanloon

Awards

Senior 100 Honorary Award Leslie DiMare

The 2005 Accenture Outstanding Student Award Brad K. Borland Robert W. Carthew Elton Chu Phillip J. Hoerr Eric E. Jansen Melissa M. Kosobud Michael P. Muraretto Steven Sam Michael T. Shaw Justin B. Sheffield Peggy Spinato

The 2005 Accenture Outstanding Faculty Award Thomas Conry

Engineering Open House *Third place:* Just for the Fun if It— Hands-on Learning Gamma Epsilon's Egg Drop

Lincoln Arc Welding Foundation Awards

Silver awards: "Accelerated Weathering Machine Humidification System Redesign for Reduced Water Damage" Jason R. Chentorycki Ines M. Hubler Aaron R. Kirkpatrick Atlas MTS, Sponsor Harrison Kim, Advisor

"Butterfly Valve Cage Design" Matthew C. Bardelli Aaron T. Kielar Adam D. Zmick Yeary, Sponsor Henrique L.M. dos Reis, Advisor

Bronze award: "Treadmill Elevation System Analysis and Redesign" Kristen N. Anton Devesh A. Deshpande Paul J. Swierc Joshua L. Wolfe Life Fitness, Sponsor Henrique L.M. dos Reis, Advisor

General Engineering students had a lot of fun at the GE awards banquet on April 21 at Hawthorne Suites.

Industrial Engineering

James W. Ashbrook Scholarship Adrienne Etherton

Paul A. and Edna M. Beckemeyer Endowment Fund Scholarship Kevin Waicekauskas

Caterpillar Foundation Scholarship Jason Fitterer

Patrick B. and Janet A. Flanagan Scholarship Valerie Brisky Michael Chen Kyle George Jason Marx Gillian Weiss

Shell Oil Company Foundation Scholarship Andrew Wehrli

O.A. Leutwiler Award Gillian Weiss

Outstanding IE Junior Award Jason Fitterer

George W. Harper Award Shane Hall Mary Lentz

Richard N. Baxendale Alpha Pi Mu Outstanding Junior Award Samuel Dacanay

Alpha Pi Mu Outstanding Member Award Mark Vildgorn

L.C. Pigage Award Melissa Pelz

Brian D. Slavenas IIE Outstanding Member Award Jason Marx

Faculty

Alumni News

New Faculty

Dusan Stipanovic PhD, Electrical Engineering Santa Clara University, 2000

Stipanovic comes to Illinois and the IESE faculty from the Department of Aeronautics and Astronautics at Stanford University where he has spent the past five years as a research associate. His research interests are in decentralized control of interconnected systems with application to control of formations of vehicles and power systems, hybrid and discontinuous dynamic systems, game theory, and optimization with application to multiple vehicle coordination and systems safety verification.

Liming Feng PhD, Industrial and Engineering Management

Northwestern University, 2006

Feng joins the IESE faculty from Northwestern University where he just finished his PhD in Industrial and Engineering Management. His research interests include financial engineering, applied probability, and stochastic modeling.

Angelia Nedich

PhD, Mathematics and Mathematical Physics

Moscow State University, 1994

PhD, Electrical Engineering and Computer Science

Massachusetts Institute of Technology, 2002

Nedich joins the IESE faculty from the BAE Systems Advanced Information Technology. Her research interests include resource allocation, scheduling and planning, and large-scale decision systems, as well as optimization theory, stochastic control theory, game theory, and their applications.

Jiming Peng

PhD, Information Technology and Systems Delft University of Technology, 2001

Peng comes to Illinois and the IESE faculty from McMaster University where he was an assistant professor in the Department of Computing and Software. His research interests are in the field of optimization, including numerical methods for variational inequalities and complementary problems, interior-point methods for linear conic optimization, optimization modeling, and problem solving in knowledge discovery and engineering design.

Tolga Tezcan

PhD, Industrial and Systems Engineering Georgia Tech, 2006

Tezcan joins the IESE faculty from Georgia Tech where he just finished his PhD studies in Industrial and Systems Engineering. His research interests are focused on the performance analysis and control of parallel server systems with many servers, the applications of many-server diffusion approximations to call center management, and the optimal control and robust design of large call center systems.

Faculty Transfers from MIE

Xin Chen

PhD, Operations Research Massachusetts Institute of Technology, 2003

Chen's research interests include production, inventory and supply-chain management optimization, optimal stochastic control, computational mathematics, operations research, and operations management. He is also a co-director of the Operations Research Laboratory.

Richard Keane

PhD, Theoretical and Applied Mechanics University of Illinois, 1993

Keane's research interests are in thermal convection, experimental fluid flow measurement, and teaching lab development. He is also an IESE faculty member in the Hoeft Technology and Management program (see page 5).

Uday Shanbhag PhD, Operations Research Stanford University, 2005

Shanbhag's research interests include equilibrium programming, large-scale numerical optimization, and stochastic optimization. He is also a co-director of the Operations Research Laboratory.

Progress on the new office-remodeling project is inspected during an assistant professors' monthly lunch with the IESE department head. **From left to right:** Uday Shanbhag, Dusan Stipanovic, Harrison Kim, Dieter Vandenbussche, Deborah Thurston, and Ali Yassine.

Human Factors Faculty

The Department of Industrial and Enterprise Systems Engineering would like to announce our Human Factors jointappointed faculty members. These three faculty members are part of the Human Factors Division at the Institute of Aviation and work with the IESE department to coordinate and apply the studies of human-computer interaction, artificial intelligence, cognitive aging, complex systems, health care, human performance modeling, and skill acquisition into the IESE curriculum.

Alex Kirlik

PhD, Industrial and Systems Engineering The Ohio State University, 1989

Kirlik is the associate director and acting head of the Human Factors Division. His research interests include human factors and cognitive engineering: mathematical and computational modeling of cognition and performance in human-technology interaction, decision making, interface design, and human-automation interaction and training in technological workplaces.

In addition to the Human Factors Division and the IESE department, Kirlik is a member of the Department of Psychology and the Human-Computer Intelligent Interaction Group at the Beckman Institute.

Yi-Ching Lee

PhD, Mechanical and Industrial Engineering University of Iowa, 2006

Lee joined the Human Factors and IESE faculty in August 2006 after finishing her PhD in Mechanical and Industrial Engineering from the University of Iowa. Her research interests include human factors in ground transportation, guidance of attention in naturalistic settings, driver distraction, and modeling driver performance.

Dan Morrow

PhD, Cognitive Psychology University of California, Berkeley, 1982

Morrow is an associate professor in the Human Factors Division and part-time faculty in the Human Perception and Performance Group at the Beckman Institute. His research interests include communication and cognitive processes in complex domains such as aviation and health care, with a focus on the role of communication and cognition in older adults' everyday task performance.

Faculty List

Deborah Thurston, Professor and Interim Department Head

Ali Abbas, Assistant Professor

Carolyn Beck, Associate Professor

Scott Burns, Associate Professor

James Carnahan, Adjunct Professor

Xin Chen, Assistant Professor

Thomas Conry, Professor Emeritus

Rose Mary Cordova-Wentling, Professor

Wayne Davis, Professor Emeritus

Liming Feng, Assistant Professor

David Goldberg, Jerry S. Dobrovolny Distinguished Professor of Entrepreneurial Engineering

Brent Hall, Associate Professor

Harrison Kim, Assistant Professor

James Leake, Lecturer & Director of Engineering Graphics

Manssour Moeinzadeh, Associate Professor and Associate Head, Undergraduate Studies

Angelia Nedich, Assistant Professor

Jiming Peng, Assistant Professor

Raymond Price, Professor and Severens Chair in Human Behavior

Henrique Reis, Professor

Uday Shanbhag, Assistant Professor

Ramavarapu Sreenivas, Associate Professor

Dusan Stipanovic, Assitant Professor

Mark Strauss, Adjunct Associate Professor

Tolga Tezcan, Assistant Professor

Harry Wildblood, Coordinator Project Design

17

Louis Wozniak, Associate Professor

Ali Yassine, Assistant Professor

Retirees

Alumni News

Retirees

At a reception on May 19, 2006, the Department of Industrial and Enterprise Systems Engineering celebrated the retirement of four faculty members. Each made countless contributions to the department and will be missed. We would like to wish them the best in their future endeavors.

James Carnahan, PhD, adjunct professor, joined the department in 1983. His interests are in probabilistic modeling and applied statistics, and he taught operations research, control systems, statistics, simulation, data acquisition, and computer-aided drafting. Carnahan won the College-wide Everitt Award for teaching excellence (1989), the Gamma Epsilon Outstanding Professor Award (1986 and 1991), and the Andersen Award for Excellence in advising (1990 and 1991). He served from 1991-2001 as coordinator of senior design, garnering 300 industrially sponsored projects, more than \$2 million in gifts, and over 60 Lincoln Arc Welding Foundation Awards. He also served as Assistant Dean in the College of Engineering in 1992-1993.

Thomas F. Conry, PhD, professor emeritus of general engineering,

joined the faculty in 1971. His research interests are in tribology, machine dynamics, mechanical design, railroad engineering, and modeling of engineering systems. Conry served as Head of the Department of General Engineering from 1987-1998 and was the first College of Engineering codirector of the Program in Technology and Management, a joint venture with the College of Business.

Wayne J. Davis, PhD, professor emeritus of general engineering,

joined the faculty in 1975. His primary research activity is in developing strategies for the implementation of decision-making and control hierarchies in manufacturing systems. Principal research efforts are in the development of new processes for hierarchical programming and real-time decision-making.

Juraj Medanic, professor emeritus of general engineering, came from the Mihailo Pupin Institute in Belgrade, Yugoslavia. He joined the faculty in 1983 and taught graduate and undergraduate courses in control systems design. Medanic managed industry-sponsored research and development projects in systems-analysis, and supervised large-scale systems theory research. He had a joint appointment with the Coordinated Science Laboratory and the Department of Electrical and Computer Engineering at the university.

18

In Memorium

1926

Nelson K. Burrell (BSGE), 78 February 21, 2005

G.A. McCammon (BSGE), 99 December 8, 2004

1935

Cloyd M. Smith (BSPHD), 79 February 10, 2005

1939

Maynard M. Hufschmidt (BSGE), 92 February 16, 2005

1940

LTC. Don H. Dragoo (BSGE), 88 May 21, 2006

Kenneth W. Hamming (BSGE), 87 December 21, 2005

1942

Alpiner S. Eichman (BSGE), 84 August 20, 2004

1943 Charles A. Meyer (BSGE), 87 May 2, 2005

1944

Christ D. Kacalieff (BSGE), 82 April 25, 2005

1946

Barbara C. Johnson (BSGE), 80 February 18, 2005

1947

Ernest C. Kowall (BSGE), 80 October 15, 2005

Edward K. Matteson (BSGE), 84 May 2, 2004

1948

Donald Overbeek (BSGE), 85 February 27, 2006

1950

James W. Bullock, (BSGE), 81 October 5, 2005

Joseph L. Czyl (BSGE), 82 July 26, 2005

Leo J. Germain (BSGE), 79 February 7, 2006

In Memorium

1951

James Merutka (BSGE), 79 August 10, 2005

Russell H. "Harry" Miiles, Jr. (BSGE),76 June 17, 2005

1955

Lawrence H. Vroman (BSGE), 76 December 28, 2005

1958

John P. Huff (BSGE) February 3, 2005

Jesse F. Riggs (BSGE), 73 October 14, 2005

1959

Theophilus F. Bieniasz (BSIE), 69 March 10, 2006

Robert K. Else (BSIE), 69 June 7, 2005

1962

Elwyn F. "Bud" Henning (BSGE), 66 November 3, 2005

Paul P. Loeffel, Jr. (BSIE), 69 August 31, 2005

1963

Kenneth W. Hahn (BSGE), 65 February 8, 2006

1969

David N. Parlanti (BSIE), 60 February 2005

1972

Gaylord L. Gard (BSGE), 56 July 30, 2005

1974

Kathryn A. Davis (BSGE), 53 November 8, 2005

memberships, one of the joint members must meet this criteria.

1991

Teresa A. Treadwell (MSIE), 44 June 12, 2006

Faculty Morris Scheinman, 92 August 22, 2005

I'm involved with the Women in Engineering program, the Flippin' Illini gymnastics club team, and the Engineering 100 program. I was very honored to receive the Daniel P. Krueger award during the spring of my sophomore year. It was great to be able to meet Dan at the awards dinner and learn more about the opportunities available with a GE degree. -Peggy Spinato (BSGE '06)

Welcome to the **University of Illinois** Alumni Association.

Vour momborchin is
rour membership is
helping build an even
greater University alumni
network. We hope you
will become involved in
the Association's many
activities and take
advantage of the
growing number
of exclusive
member benefits.

Koren R. Jaylor

Loren R. Taylor President and CEO

Please clip and mail this application with your check or credit card authorization to:

University of Illinois Alumni Association Alice Campbell Alumni Center 601 South Lincoln Avenue Urbana, IL 61801

UNIVERSITY OF ILLINOIS ALUMNI ASSOCIATION MEMBERSHIP APPLICATION

PERSO	NAL	INFORMATION

Name	E-mail Add	dress			
Degree/Year	Social Security Number				
Address	۵. 	5			
City, State, Zip					
Home Phone	Fax Number				
SELECT YOUR MEMBER	SHIP OPTION AND PAYM	ENT METHOD			
Annual Membership ☐ Single \$45 ☐ Single, Recent Grad** \$30 ☐ Single, Senior Alumni*** \$30	☐ Joint* \$60 ☐ Joint, Recent Grad** \$40 ☐ Joint, Senior Alumni*** \$40	Method of Payment Check: Please make your check payable to the University of Illinois Alumni Association. Credit Card: Please charge my:			
Life Membership □ Single \$750 □ Single, Senior Alumni*** \$375	☐ Joint* \$1,000 ☐ Joint, Senior Alumni*** \$500	MasterCard VISA American Express Discover Card Number Expiration Date Signature			
Membership dues include \$12 per vest	for a subscription to Wineric Alumni ma				
Membership dues include \$12 per year	tor a subscription to minors Alumini maj	jazine.			
JOINT MEMBER INFORM	ATION				
If you have selected a joint me Joint Member Name	mbership, please provide the fo	bllowing for the joint member:			
Social Security Number		University of Illinois graduate?	🗆 No	□ Yes	
Relationship to Member (option	nal)	 A LEARNING TO DE CONTRACTOR DE LA COMPLEXIÓN DE LA CONTRACTÓR DE LA CONTRACTÍR DE LA CONTRACTÓR DE LA CONTRACTÓR DE LA CONTRACTÍR DE LA CONTRACTICACIÓN DE LA CONTRACTIC			
Name on Diploma (if different f	rom above)				
 Joint members are two persons livin Association, college and departmen Currently enrolled as a University of Must be age 65 or older or have gra memberships, one of the ionit memi 	ng at the same address who receive one t mailings. f Illinois student or earned a University of iduated from the University of Illinois 40 bers must meet this criteria.	copy of each issue of the alumni magazine a Illinois degree within the past three years. or more years ago. In the case of joint	and Alumni	JD14	

Department of Industrial and Enterprise Systems Engineering University of Illinois at Urbana-Champaign 117 Transportation Building MC-238 104 S. Mathews Avenue Urbana, IL 61801 USA

Non-Profit Organization U.S. POSTAGE PAID Permit No. 75 Champaign, IL 61820

SAVE THE DATES

- Fall Advisory Board Meeting Friday, October 6, 2006
- Reunion Celebration Weekend of October 7, 2006

Homecoming 2006: Saturday, October 7 Illinois vs. Indiana at Memorial Stadium 11:00 a.m.

Check the Industrial and Enterprise Systems Engineering Department's Events page on the Web closer to the event for reunion plans. Purchase Homecoming tickets and find out about accommodations now from the College's Alumni & Friends webpage (www.engr.uiuc.edu/alumni/events) or call (217) 244-1610.