Celebrating Success and a Brilliant Future.
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On the Cover:
Dr. Philip Yu, right, and alumnus Peter Wexler celebrate the inaugural investiture of Dr. Yu to the Wexler Chair in Information Technology.

The College of Engineering of the University of Illinois at Chicago publishes Engineering News. We welcome your comments, suggestions, and news of your professional and personal accomplishments. Please direct questions about this issue and advertising rates to Nancy J. Cohen, Editor, Engineering News; and Director of Development at enginews@uic.edu or address correspondence to Engineering News, College of Engineering (mc 159) 851 South Morgan Street, Chicago, Illinois 60607-7043.

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We gratefully acknowledge the alumni who provided additional photography, and those students, alumni and faculty who contributed their impressions and words. Contributing writers are Nancy J. Cohen, Paul Francuch, and Jade Webber. Contributing Editor is Arnaud Buttin.

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Dear Alumni and Friends,

I hope that you are as impressed with all that our community accomplishes as I am.

On May 10, 2008, our 41st class graduated and Rick Hill, an alumnus of the class of 1974 who generously established three endowed Professorships at our College, received an honorary doctorate from the University – a first for the College of Engineering.

Our new professors are the most talented academia has to offer. Philip Yu is the first to hold the Peter S. and Deborah K. Wexler Endowed Chair in Information Technology. As we hire faculty around our new Chair and utilize four of our endowed professorships to build our core areas of excellence, expect more excitement.

Our student societies prepare engineers for a life of continued learning and service and enhance our educational programs and community outreach. IEEE Potentials magazine featured the successful rebuilding activities of our IEEE chapter as an example to other chapters. The Engineering Design Team took first and fourth place in the Jerry Sanders Robotic Competition at UIUC. The UI Board of Trustees honored Engineers Without Borders with a Resolution.

Athlete-engineers Peter Ifft, starting pitcher for the Flames baseball team, and Tim O’Brien, a tennis player, shared the Flames Male Athlete of the Year Award.

Dima Alfawakhiri, Chemical Engineering, and Farah Shareef, Bioengineering, received scholarships that will shape their futures. Dima won a Morris Udall K. Scholarship. Farah, named to the USA Today Academic First Team, will spend next year in London as a Fulbright Scholar.

Alumni and staff are unstoppable when they team up on behalf of our students. The Engineering Alumni Association and Engineering Career Center hosted successful Engineering Career Prep Days in September and February - its 11th year. Eighty companies and agencies attended the E-Week Career Fair setting attendance records for employers. We will celebrate the 20th anniversary of Senior Design EXPO on April 21, 2009. Thank you to all our volunteers and recruiters.

We are a central partner in the creative and interdisciplinary UIC Innovation Center. We will be reporting regularly on its evolving engineering projects.

The Brilliant Futures Campaign for UIC is moving ahead as well, thanks to you. Annual Fund Leadership gifts are supporting 48 Freshmen Merit Scholarships in 2008, and we are more than half way towards reaching one of our campaign goals—to raise $1 million in annual fund gifts by December 31, 2011. Alumni and faculty are remembering the College in their wills and estate plans, and some are honoring Assistant Dean Vivian Cardwell through gifts in her memory. More of you are preserving the power of your gifts in perpetuity through endowments.

Alumni often tell me that they have reached a point in life where, after deep reflection, they know that their decision to attend UIC transformed their lives. Let me share with you one story with a twist—a scholarship endowed by the Philippine Engineering and Science Organization (PESO) and its members. Though none of their officers attended UIC, they have chosen to say thank you to the United States for opportunities given to them as immigrants by rewarding our College for educating so many first generation college students.

We invite you to visit the College and to explore our changing campus. Please keep current with College of Engineering activities at www.uic.edu/depts/enga.

Best wishes,

Pete Nelson
Professor and Dean
The College of Engineering formally invested Philip S. Yu as the Peter L. and Deborah K. Wexler Endowed Chair in Information Technology on May 9, 2008. This is the first endowed chair ever to be established at the College. Chancellor Eric Gislason officiated and joined Dean Pete Nelson, faculty, staff, students and the College of Engineering Advisory Board to honor Philip Yu and Peter and Deborah Wexler, whose generous gift made this chair possible.

"This is a celebration of firsts," said Dean Nelson. "Peter and Deborah are great friends of the College. Their generosity in establishing the largest endowed gift that we have ever received has allowed us to recruit Philip Yu, a world-class scholar and innovator in the area of data mining, databases and multimedia systems. Our students and faculty will benefit immensely from his presence in our College. We hope to recruit remarkable faculty like Dr. Yu with similar chairs in the future."

Guests at the investiture also recognized Dr. Yu as both one of the 10 most central computer science authors of all time and of the past five years. He has published more than 500 papers in refereed journals and conferences.

An IBM Master Inventor, Professor Yu comes to UIC from the IBM T.J. Watson Research Center where he was manager of the Software Tools and Techniques group. He holds or has applied for more than 300 U.S. patents, and received two IBM Outstanding Innovation Awards, an Outstanding Technical Achievement Award, two Research Division Awards, and the 93rd Plateau of Invention Achievement Award.

A Fellow of the ACM and the IEEE, he is associate editor of ACM Transactions on Internet Technology and ACM Transactions on Knowledge Discovery in Data. On becoming a Fellow, each organization cited him for his contributions to the theory and practice of analytical performance modeling of database systems. He is also on the steering committee of the IEEE Conference on Data Mining and was a member of the IEEE Data Engineering steering committee until 2005. He was the editor-in-chief of IEEE Transactions on Knowledge and Data Engineering from 2001 to 2004.

Dr. Yu's research interests also include Internet applications and technologies, parallel and distributed processing and performance modeling. He received a Research Contributions Award from the IEEE International Conference on Data Mining in 2003 and an IEEE Region 1 Award for "promoting and perpetuating numerous new electrical engineering concepts" in 1999.

Dr. Yu holds Ph.D. and M.S. degrees in Electrical Engineering from Stanford University and an M.B.A. degree from New York University. He received his B.S. degree in Electrical Engineering from National Taiwan University. He now holds joint appointments in the UIC departments of Computer Science and Electrical and Computer Engineering.

Peter Wexler, who received his M.S. in Bioengineering in 1981 at UIC, is vice president of engineering at Copibia Inc. in Palo Alto, California. Deborah Wexler is an educator.
“Your ability to succeed is only limited by the heights of your imagination... I encourage you to reach out and have dreams...”

Rick Hill, Bioengineering alumnus and chair and CEO of Novellus Systems Inc., returned to campus in May for a dual celebration. As he stepped down from his term as chair of the Dean’s Advisory Board, Hill celebrated becoming the first UIC engineering graduate to receive an honorary Doctorate of Engineering from the University of Illinois at Chicago, a degree conferred at commencement. In addition to endowing three professorships and making numerous other gifts to the College with his wife Loan, Rick has served on the College’s Advisory Board since 1997 and as Chair of the Advisory Board since 2005. A member of the Chancellor’s Technology Board and the University of Illinois Foundation Board of Directors, he also serves on the Brilliant Futures Campaign Steering Committee for the UIC campus.

Hill thanked the students for allowing him to share in their graduation. He had missed his own in 1974. Donning a cap and gown for the first time, he let the graduates know that there was no better place for him to have this experience than at UIC with his family present. It was, in one word, exhilarating.

His message, right to the point, followed that of Illinois Congressman Dan Lipinski (D-IL 3rd), one of the few engineers and scientists serving in Congress. Hill noted that graduates in 1974 and 2008 face similar problems: the largest U.S. deficit in history, the falling dollar, rising gas prices, and growing inflation driven by a war. Yet, Hill said, “The opportunity for each of you is better than it ever was before because, as the honorable Congressman Lipinski said, engineers solve problems and without problems, we have no future.”

That opportunity comes from the energy crisis and the creation and conservation of energy.

“I want you to think of the ideas and solutions that are required,” Hill cautioned. “The most important element to the quality of life is the consumption of energy. You, as engineers, hold the key to the quality of life for people across the globe.”

To succeed in life and serve their families, students must dream. Many had done that, he recognized, simply by receiving a college education at UIC. Hill, who drove a Zamboni at ice rinks to pay for his tuition, was the first in his family to attend college. For this, he is a grateful and proud alumnus.

“Thanks to the ability to attend college, I was able to achieve things that I never ever dreamed of. The culmination of your success is your parents seeing you make your children more successful. To do that, you must apply yourself fully. You must dream!”

“UIC is a premier research institute with faculty that is second to none in the U.S. and the world. What you have accomplished is recognized around the world. Your ability to succeed is limited only by the heights of your imagination.”
The University with significant support from Motorola has opened the UIC Innovation Center. The Innovation Center, a distinctive interdisciplinary educational and research environment, represents one way UIC is becoming a national leader in education on innovation, in creating breakthrough integrative designs and technologies, and in commercializing technologies and ideas within targeted discovery domains.

“We call this an idea incubator,” says Dean of Engineering Pete Nelson. “The Center will give rise to novel product development methodologies and create new ways to teach product design and research. The non-traditional open spatial plan encourages multi-functionality and a free flow of information between all the project teams. Everyone will be learning from everything that is going on.”

Specialty areas keep the ideas coming as the Center cleverly utilizes its space to foster creativity whether conducting and analyzing consumer research or doing research and product prototyping.

“The inspiration for a dedicated Innovation Center is an outgrowth of our experiences with the Interdisciplinary Product Development (IPD) course and our client companies,” says Professor Michael J. Scott, Department of Mechanical and Industrial Engineering.

The UIC landmark IPD program was developed and implemented by professors Scott, Stephen Melamed, College of Architecture and the Arts Department of Art and Design, and Albert Page, College of Business Administration Department of Marketing.
IPD students, drawn equally from engineering, industrial design and business, work in cross-functional teams. They learn to research and develop new product concepts by concentrating on the early stages of product development from identifying market opportunities to initial prototyping. The year-long course focuses on product innovation in the corporate rather than entrepreneurial context with a client sponsor each year supplying course funding, a relevant problem arena for new concepts, and regular interaction with student teams.

The inaugural client in 2002-2003 was Whirlpool. Championed by UIC alumnus Ray Raman, Motorola’s Mobile Device Division became the 2006-2007 IPD client. It was clear early on that Motorola was interested in extending its commitment. Along with Elkay Manufacturing, which had already contracted as a client, Motorola again sponsored the course 2007-2008. That sponsorship became the catalyst for a philanthropic gift from Motorola to create the Innovation Center.

“"We’re riding the new wave of knowledge," reports Nelson. "There is global awareness of the need for new ways to design products and teach innovation. Our students and faculty come from around the world bringing knowledge of science, economic need and a perspective on possibility. As new product designs and technologies are developed, so are new ways of teaching innovation. Together, we are opening doors for exchanging ideas and information. Imagine what this does for engineering education!"

Engineers educated in this environment will be making new and informed contributions. They will better understand the application of science and consumer research, construction of products, and the intersection of where creativity, business processes and global economic demand meet.
Engineers Without Borders

A Wall Brings Us Together

Engineers Without Borders at UIC (EWB-UIC) has found a second home in the mile-high village of Cerro Alto, Guatemala, where in 2007 members fulfilled a humanitarian project by engineering and constructing a much-prized enclosure around the community elementary school. In 2008, they returned to test the water quality and propose solutions to water-born problems.

Facilitated by Peace Corps volunteer Michelle Doherty, a May 2006 meeting in Cerro Alto with the elementary school’s teachers, the village’s Women’s Committee, and locally elected leaders, concluded that a wall would designate the school as a respected institution. It would keep animals from wandering into the schoolyard spreading disease, reduce vandalism and provide a safe haven for children who risk injury on the mountain roadways when they run home at recess.

Over an eight-month period, the team developed construction plans with Guatemalan designers, contracted a Cerro Alto–based project foreman, masons and helpers, arranged to trench half of the foundation, and raised funds to complete half the project.

Arriving in January 2007, an implementation team set out to purchase materials, verify the design on-site, and contribute labor.
“This was a true engineering challenge. We had no practical experience in construction design for this rigorous mountain environment,” says Frank Zurek. “We needed proof that a common cinderblock wall could resist the strains placed on it by the hills abutting it. We had to figure out what would happen under pressure during the severe rainy season. What was the soil strength? Was the foundation deep enough? We developed field tests with Professor Michael Scott and performed calculations, some just with pencil, paper and engineering know-how, and finally modified the rebar to distribute the loads.”

To move the six truckloads of rebar, sand, gravel, concrete mix, and several thousand blocks, the team resorted to the most common use of energy.

“We carried everything up and down the hills around the school, passing blocks down a chain and hauling concrete in buckets,” remembers Miiri Kotche.

Upon their return to Chicago, generous donations arrived changing the timeline. This called for a stepped-up commitment from the Cerro Alto team to remove a tree line and excavate further. As work progressed, students made design corrections via email relying heavily on Spanish-speaking EWB-UIC members.

Returning in January 2008, a EWB-UIC technical assessment team experienced the incredible change and felt the momentum that resulted from their partnership. Four of the six members had been on the 2007 construction team.

“Walking through the iron gate, we saw concrete latrines under construction, stairs replacing a steep walk way and a dirt path on either side of the school. We listen to our partners in Cerro Alto. We work with communities to apply our technology to their needs, respecting their priorities. The focus of this brief trip was to test water quality.
a problem that our 2007 health assessment suggested is deeper than the community once thought. We returned to Cerro Alto looking for a meeting of minds, insider knowledge, and test results on which to base our next project.”

In fact, community leaders and educators all felt strongly that water quality was a problem that government and NGOs had tried to fix with mixed success.

Electrification came to Cerro Alto in 2001. A water distribution system followed. Water from the aquifer is pumped uphill to a holding tank. It is gravity fed to homes in Cerro Alto and Labor de Falla through PVC piping; however, the pipes often lie partially exposed. Where women and children once spent hours hauling water from wells or days washing clothes at a stream, water now runs to each village three days a week. Families distribute water into personal holding tanks. These consist of plastic or ceramic containers for drinking water, and either plastic-lined wooden pens or concrete cisterns known as pilas for personal use, clothes and dish washing.

Still, parents reported that their children had not become measurably healthier in terms of gastrointestinal problems. Could the cause be isolated? A first wave of tests began.

Enthusiastic leaders spread the word and each home visited cooperated. Over four days, the team hiked through both villages testing the water quality at 48 sites representing variations of wealth, education, proximity to agriculture and geography. They also collected samples to test later.

“We had a structured plan with specific tests and interview criteria,” reported project manager Shawon Carlstrom. “Axel and Marino Iquique, sons of our hosts Miriam and Julia, introduced us to residents and became trained in water quality testing. Professor Steve Lacey took notes, advised us, and interviewed families. Ozzie Garza translated. Seema Farooqui, Charlie Frangos and I tested water and Nancy Cohen photographed holding containers and run-off. We plotted the GPS data on Google maps and documented how water was contained for each domestic purpose, how recently each family had replenished it, and whether the cisterns were covered or scrubbed. We looked for proximity of latrines and animals.”

Home at UIC, members conducted further tests on 96 water samples in the Environmental Engineering Lab under the instruction of Professor Amid Khodadoust.

Despite subsistence agriculture and the appearance of new farms providing roses and tomatoes to landscaping industry and markets, there was almost no fertilizer contamination.

Coliform cultures showed potential bacteriological problems at the mountain top cistern, at a separate school well and in homes. The source of the bacteria has not been isolated, and not a single rapid test registered chlorine as being used to purify the water.

Widespread chlorination will diminish these problems. Civil Engineering seniors Frank Zurek, Ozzie Garza, Charlie Frangos, Chad Dillavou, and Shawon Carlstrom used this data for their 2008 senior research project. They also investigated other forms of sustainable water treatment. They knew that the Cerro Alto community had struggled to obtain chlorine tablets in the past. Villagers explained that chlorine tablets were expensive, not readily available, and came with no instructions on how to apply them appropriately.

The EWB-UIC chapter has accepted their findings and has recommended to both chlorinate the water at the cistern and to use a sustainable filtering system in homes for its 2008 implementation project. Chlorination at the cistern will kill 99.9% of the bacteria and protozoa, and EWB will provide a significant supply of the tablets. In conjunction with TPS, an NGO located nearby in Chimaltenango, the EWB-UIC will provide Filtron, a locally made filter used to purify drinking water in 150 homes. The initial cost per family will be about $10.00 and the annual replacement cost for the porous silver treated filters is expected to be $4.00 per family.

EWB-USA is a fast growing organization that speaks to the desire of UIC engineers and non-engineers from other colleges at UIC to make the world a better and safer place, one village at a time.
Commencement 2008:
A Graduation with a Special Meaning

Commencement is the formal recognition of the first of many achievements in the lifetime of every engineer.

The College of Engineering salutes all of its students who have overcome challenges to receive the engineering education that they seek and the families who provide them with encouragement.

At the May 2008 Commencement, the College of Engineering paid special tribute to graduating bioengineer Lucy Trevino, whose academic success exemplifies the desire to earn an engineering education. Lucy, who has Spinal Muscular Atrophy, has been unable to walk since age nine. To an emotional and celebratory ovation, Lucy received her degree and her remarkable mother, Rosa Trevino received a bouquet for her tremendous dedication in attending every class, lab, and study session, and negotiating the CTA daily with Lucy over the past six years.

A Special Scholarship Honors Rosa Trevino

After hearing about the story of this special Mother-Daughter relationship, the University of Illinois Board of Trustees established a scholarship named for Rosa Trevino.

"It is our honor to remember, through this scholarship fund, your courage, perseverance and achievement and your love and assistance for your daughter," said U. of I. President B. Joseph White. A $1,000 scholarship will assist a student with disabilities annually.

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Giving

“UIC was a true gateway to opportunity in my life”

Glenn and Linda Neland Thank UIC

Although Glenn and Linda Neland arrived at An Evening at UIC to be honored as the benefactors of an endowed scholarship, Glenn’s real wish was to thank UIC for giving him the chance of a lifetime – an education that opened the world to him. His remarks and those of engineering senior Nick Novak are a conversation about their shared desire for education, gratitude for opportunities and the need to pay it forward.

Nick’s story is simple: A scholarship has a far-reaching effect on a student who is running out of money.

“Two years ago, I was struggling to pay for my education. Eventually, we didn’t have any way of paying for my tuition and I couldn’t pay off my balance. I was forced to take two semesters off to work full time,” explained Nick, who found a coop program at Panduit Corporation. “Dropping out and giving up on my education was a real possibility.”

In the fall of 2007, Nick returned to class encouraged by the Glenn and Linda Neland Scholarship, the most substantial award available to undergraduates.

“I can say with complete confidence that the Neland Scholarship has given me the opportunity to continue my education,“ Nick told the audience of over 300 guests.

The Nelands, married for 36 years, raised two sons in Austin, Texas. Both of them have developed successful professional careers as well as a reputation for community involvement.

Glenn Neland recognizes first hand how bright the future can be when given the right help.

For Glenn and Linda, Glenn’s UIC education, paid through hard-earned veterans benefits, led to a “charmed life,” one that “was not bad for a boy who grew up in the Austin and Irving area of Chicago.”

Glenn Neland recognizes first hand how bright the future can be when given the right help.

“He sent messages of thanks to faculty with a confirmation of UIC’s mission, “The education you are providing does open doors. It does provide opportunity and it does have a huge impact on individual lives.”

“I have been in arguably the most interesting and challenging business around – the personal computer business – for the last 30 years, ever since the industry first began. As I look back, there were many contributing factors but UIC was clearly one of them. I didn’t realize it at the time, but UIC was a true gateway to opportunity in my life. UIC provided me with an education, some self-confidence and, most importantly, it developed my intellectual curiosity – a trait that has made me ask “why not?” many times in my career. Without UIC, I would never have had the doors to Texas Instruments, Dell, and to the computer industry opened to me. For that, I am ever thankful.”

As for Nick Novak and his promise, Glenn Neland has these words: “Nick, you go make all you can of yourself. Make the most of your capability and, hopefully, you can help open doors for the next generation.”
Leaving a Legacy

"Valaree is a strong advocate of college education as the pathway to a better life," says Dean Emeritus Lawrence A. Kennedy, explaining how his endowed scholarship honoring his wife Valaree underscores their deep personal values: ones convergent with the UIC mission.

As Dean, he met many students who were among the first generation of their families to attend college. They had limited resources making the pursuit of higher education a financial challenge. They are typical UIC students.

"I do not think this will change," says Larry.

"Valaree and I saw a strong need for both financial assistance and merit recognition for our most qualified students. Our initial gifts, made while we were involved in the day-to-day life of the College, seemed like a nice way to both honor Valaree and address the need of meritorious students."

They chose in 2007 to expand the Valaree J. Kennedy Scholarship with a mandatory distribution from a retirement account. "We felt that it was appropriate to increase the Valaree J. Kennedy Scholarship Fund to at least $50,000. In this way, we'd be assisting students to achieve their goals in perpetuity."

Larry Kennedy is a voice for investing in the College: "Through their financial support, alumni, faculty, staff and friends of the university need to help the most qualified students. Valaree and I hope that in future years, her scholarship fund will assist many students to become all that they are capable of becoming."

Keeping Connected

For John and Catherine Hickey Hardin, "It is right to reward an institution that helps one start out."

As he looks back over 35 years, John appreciates his engineering education. "I left school as a chemical engineer and that is how I think today — as an engineer," says John, class of 1974.

"My education is the underpinning of what I am. Yes, I received an MBA, but my undergraduate engineering training, backed up by a job at Sweetheart Cup while a student, gave me that fundamental grounding that I needed — knowledge and practical, go-to-work experience."

These skills serve John well as he is the first non-family member to be president and CEO of La-Co Industries in its 75-year history.

"UIC got it right when it identified its mission as an urban mission. Our engineering and business communities recognize this," says John. "Our students are capable of going anywhere."

That continuity reminds John and Catherine why they give a $2,500 Leadership Annual Gift.
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For 41 years, the UIC College of Engineering has awarded degrees and provided a unique, dynamic location where access to excellence in engineering is highly prized. We promise to continue our concern for our students and the academic environment.

We recognize and honor all of our individual, corporate and foundation partners for their gifts. The donors of $100 or more to the Engineering Annual Fund, our endowments and research enterprises are listed here.

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With Continuing Gratitude

The College of Engineering extends its gratitude to each of the alumni, friends, associations, corporations and foundations that support the College.

Each has a stake in the future of the College of Engineering and acts on it through their volunteer activity, donations to the Engineering Annual Fund, endowed and planned gifts to perpetuate programs or educational assistance, grants and contracts that underwrite faculty research, and provision of materials to revitalize laboratories and classrooms.

2008

The College of Engineering

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The Academic Challenge - Senior Design Research

Senior Design EXPO, a capstone event where seniors demonstrate their research and compete for prizes, provides insight into the broad interests of engineering students.

Pursuing research challenges provided by a corporate partner, finding highly personalized solutions to access issues for the clients of the DuPage County Easter Seals Society Assistive Technology Center, solving drinking water problems for Engineers Without Borders, tackling medical problem to serve the future, or following their own deep intellectual interests, our engineers take pride in their efforts. The results of knowledge, application, sweat and long nights, came together each April as seniors display their work to classmates, faculty, alumni and corporate judges, family and friends.

The student teams shown throughout the Honor Roll of Donors represent some of the approximately 70 teams that competed in 2008.
As a theoretical engineer who joined the Electrical and Computer Engineering faculty in 2002, Gyungho Lee is always interested in reasoning behind the design of a computer, asking, “Is there a better way? Are there tradeoffs?”

His research focuses on securing software from malicious software attacks that compromise memory, data and operations and are not detected in the current machine architecture, often designed for performance with little consideration of trustworthiness.

With computers massively interconnected, “the ubiquitous nature of modern computing devices” leaves memory open to attack or compromise. So, Lee studies how low-level software behavior validation deals with the trustworthiness issue directly in order to amend the existing computer architecture.

Computer scientist Sol Shatz investigates formal, mathematically-based techniques to model software designs to capture and analyze their coordination properties. With his students, he designs software architecture and analysis tools for complicated, mission-critical, large-scale software systems written by teams of programmers. These commonly use multiple computers working together such as air traffic control and nuclear power plants.

His team is making important advancements by presenting model-based approaches to designing and implementing multi-agent software systems using Petri net techniques and tools to detect early design errors. Shatz’s research has also focused on net modeling of object-oriented software, involving translation of semi-formal models into Colored Petri net models to provide for formal semantics and support for automated simulation and analysis as well as sensor networks. There, his work is likely to...
Craig D. Foster, an assistant professor of Civil and Materials Engineering, earned his Ph.D. at Stanford University. Foster’s research focuses on computer modeling of deformation in solid materials with an emphasis on geomaterials. He uses finite elements to investigate a variety of problems, from plasticity and damage to fracture, shear banding and other types of localized deformation.

Eduard Karpov joined the Civil and Materials Engineering faculty as an associate professor. He received his Ph.D. in Mechanical Engineering from the University of Southampton, and was an assistant professor of Mechanical, Aerospace and Biomedical Engineering at the University of Tennessee, Knoxville. His research areas are advanced energy systems, mechanical and chemoelectrical properties of nanostructures, and multiscale modeling methods.

Wenjing Rao, who received her Ph.D. at the University of California, San Diego, joined Electrical and Computer Engineering as an assistant professor. Her research area is nanoelectric systems, fault tolerance, digits testing, design for testability VLSI CAD and embedded systems. She conducted research in the Beijing University Computer Architecture Lab.

James Patton, associate director of the Center for Rehabilitation Robotics and a research scientist in the Sensory Motor Performance Program of the Rehabilitation Institute of Chicago, joined the Bioengineering faculty as an associate professor. He received his Ph.D. at Northwestern University. He is conducting research on global modeling of adaptive, dynamic balance control.

Ying Liu has joined the faculty in Chemical Engineering as an Assistant Professor. She earned her Ph.D. at Princeton University in 2007. Her research is in both physics and applications of nanoparticle suspensions for their advantages of targeting delivery and sustained release. Her research goal is to devise a Synergistic Drug Delivery System with optimized properties to control multiple-drug pharmacodynamics for diagnosis and treatment of these complex diseases.

NSF Faculty Early CAREER Development Awards

Tanya Berger-Wolf, Computer Science, and Randall Meyer, Chemical Engineering, received the prestigious National Science Foundation Faculty Early CAREER Development award. Each year about 200 faculty members in science and engineering receive this five-year award, the NSF’s most prestigious honor awarded to junior faculty members who demonstrate a commitment to research and teaching.

Tanya Berger-Wolf will receive $505,000 to develop computational tools for population biology. She has also received a Best Advisor Award from the College.

Randall Meyer will receive $400,000 to perform research the roles and interaction of disparate metal p-d alloy catalysts.

Celebrating a New Fellow

Jie Liang is a newly elected Fellow of the American Institute for Medical and Biological Engineering. Dr. Liang joined the Department of Bioengineering in 1999. He received his Ph.D. in Biophysics at UIUC in 1994 and an additional MS in Computer Science in 1995. He was an NSF Computer and Information Science and Engineering Division postdoctoral research associate in the UIUC Department of Computer Science and National Center for Supercomputing and its Applications. He then was a visiting fellow at NSF Institute of Mathematics and Applications and the Department of Biochemistry at the University of Minnesota. From 1997 to 1999, he was an investigator at SmithKline Beecham Pharmaceuticals. His research focuses on protein binding site and function prediction, protein–protein interactions, protein and peptide design, membrane protein, the biophysics of protein structures and protein structure prediction, and the evolution of protein structure and folding.

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Why We Give
UIC and Giving Change Lives!
Read How on Page 12.

Alumnus Glenn Neland receives recognition from scholarship recipient Nick Novak and the University of Illinois Foundation at An Evening at UIC.