

Volume 3, Issue 1

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Message from the Dean



Greetings from the School of Engineering.

Fall 2008 was another busy and productive semester at the School. We added four new assistant professors to the roster of our distinguished faculty; Drs. Yun Wang, Ryan Fries, Huaguo Zhou, and Sohyung Cho. They brought to the School state-of-the-art teaching and research skills along with their energy and enthusiasm. You will read a brief introduction of them in this issue of **e**nnovation.

This fall marked a new administrative restructuring with the creation of a Director of Engineering Student Services position to head the newly configured Advisement Office in the School. Loen Graceson-Martin joined us to take the responsibilities of this very important position for the School. She brings experience, enthusiasm and excellent interpersonal skills. She is briefly introduced in this issue. Starting fall 2009, three professional advisors will help our students to receive the best guidance they deserve.

I am also very happy to report that we now have a new Director of Development. The School will benefit from Kaitlin Betz's wonderful personality and passion for her job, especially during the Capital Campaign time. She too, is introduced briefly in this issue.

The international dimension we have added to the School con-

tinues to grow. A group of our students went to China to work on their senior design projects in collaboration with Chinese professors and students. Another group is getting ready to go to Mexico next summer. The Industrial Engineering Dual Diploma program with Istanbul Technical University is in full swing with the expectation of approximately 25 Turkish students joining us every year starting fall 2009.

The PhD program is going strong with 7 students enrolled during fall 2008 with the number increasing to 9 in Spring 2009.

The faculty and staff have already embarked in a productive Spring 2009 semester. We will keep you updated on our efforts toward excellence. In exchange, we want to hear from you as well.

Hasan Sevim, Dean

Alumni:

We want to tell your stories to your classmates in the next **e**nnovation.
Send your news to:
kbetz@siue.edu

Upcoming Events in 2009

Friday, February 13: Application deadline for PIECES Scholarship
www.siue.edu/engineering/pieces

Thursday, February 19: School of Engineering Annual Awards Banquet
www.siue.edu/ENGINEER/banquet/index.html

Saturday, February 28 through Sunday, March 1: Two Day Middle School Robotics Camp

Tuesday, March 10: WYSE Competition
www.siue.edu/engineering/wyse.shtml

Saturday, March 21: School of Engineering Open House
www.siue.edu/engineering/openhouse.shtml

Sunday, April 5: Honors Day

Friday, April 24: Application deadline for High School Outreach Summer Programs
www.siue.edu/engineering/hso.shtml

Saturday, April 25: Botball Tournament
www.botball.org/current-season/GSL/

Saturday, May 9: Spring Commencement

Dr. Huaguo Zhou Joins Civil Engineering Faculty

Dr. Huaguo Zhou joined SIUE as an assistant professor in the Department of Civil Engineering in Fall 2008. He holds a Ph.D. degree in transportation engineering from the University of South Florida and a bachelor's and PhD. degree in railway engineering from Beijing Jiaotong University. Before joining SIUE, he worked as a senior research associate at the Center for Urban Transportation Research (CUTR) at the University of South Florida. He has published 14 peer reviewed journal papers and over

30 conference papers, and conducted research on many transportation projects including traffic operations, highway and transit safety, computer simulation, access management, and incident management.



Dr. Huaguo Zhou

Dr. Ryan Fries Joins Civil Engineering Faculty

Dr. Ryan Fries joined SIUE's Department of Civil Engineering in Fall 2008 as an assistant professor. His area of focus is transportation engineering, specifically intelligent transportation systems and transportation infrastructure security. Dr. Fries recently moved from Clemson University in South Carolina, where he served as an adjunct faculty member and post doctoral researcher after earning his masters and doctorate degrees there. He recently earned his P.E. license and completed his first

book, *Transportation Infrastructure Security Utilizing Intelligent Transportation Systems*. Dr. Fries has published 20 articles in peer reviewed journals and conferences. He also reviews papers for the American Society of Civil Engineers, the Transportation Research Board, and Intelligent Transportation Systems America. He has been collaborating with Dr. Zhou in reshaping transportation engineering offerings at SIUE.

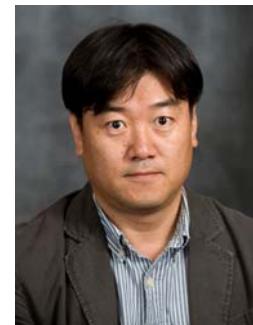


Dr. Ryan Fries

Dr. Sohyung Cho Joins Industrial and Manufacturing Engineering Faculty

Dr. Sohyung Cho joined the School of Engineering in Fall 2008 as an Assistant Professor in the Department of Industrial and Manufacturing Engineering. He received his Ph.D. degree in Industrial and Manufacturing Engineering from the Pennsylvania State University. Dr. Cho served as an assistant professor at the University of Miami (FL) before joining SIUE. In addition to his career in academia, Dr. Cho has over ten years of consulting experience for companies in Korea, Pennsylvania, and Florida in

the field of manufacturing automation and control. His research focuses on manufacturing automation including robotics, manufacturing system control, machine learning and data mining, and bio-manufacturing. He has also been published in many prestigious journals including Journal of Manufacturing Systems, IIE Transactions and Automatica. He teaches courses in manufacturing processes and systems, CAM, CIM, and engineering metrology.

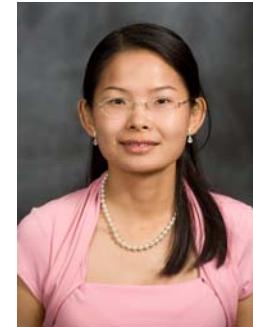


Dr. Sohyung Cho

Dr. Yun Wang Joins Computer Science Faculty

Dr. Yun Wang joined the School of Engineering as an assistant professor in the Department of Computer Science in Fall 2008. She received a BS degree in computer science and engineering in 2001 at Wuhan University, Hubei, China, and her Ph.D. degree in computer science and engineering in 2008 at University of Cincinnati, Ohio. Her research interests include various wireless networks such as wireless sensor networks, wireless ad hoc networks, and wireless mesh networks. She has been conduct-

ing research on modeling and analyzing wireless sensor networks for optimal sensor deployment, energy efficiency, positioning, lifetime enhancement, and network security. She also performs research on MAC protocol design in wireless ad hoc networks, and delay and capacity optimization in wireless mesh networks. She has published 20 peer reviewed papers in her areas of interest.



Dr. Yun Wang

New Director of Engineering Student Services

Loen Graceson-Martin joins the School of Engineering this Spring as the Director of Student Services. Loen earned a B.A. in Psychology and M.S. in Education from Southern Illinois University Carbondale. Loen is currently working on her Ph.D. in Educational Administration. Before joining SIUE, Loen served as the Chief Academic Advisor in the College of Engineering at Southern Illinois University Carbondale. Loen is excited to be a part of the School of

Engineering's Academic Advising and Student Services Initiative. She sees this as an excellent opportunity to enhance our services to students, faculty and staff. Loen also plans to use the School of Engineering's Office of Student Services as another resource to develop new, and continue to improve upon, existing relationships with area high schools and community colleges; and also work with organizations to further promote the School of Engineering.



Loen Graceson-Martin

New Director of Development

Kate Betz joins the School of Engineering as the Director of Development. Kate earned a B.A. in History from Eastern Illinois University in 2004. Before joining SIUE, Kate served as the Campaign Director for the Pi Beta Phi Foundation in Town & Country, MO where she orchestrated a successful \$6 million fundraising effort. Kate lives with her dog, Winston Leonard Spencer Churchill, in Belleville.

Kate is thrilled to represent the School of Engineering in its fundraising efforts. She will be meeting with alumni, employers of the School of Engineering graduates, foundations, companies and other generous individuals to gain support for the excellent programs and scholarships offered by the School. She also hopes to be an active participant in the School of Engineering programs and student and alumni groups.



Kaitlin Betz

William Tenboer Joins SIAM Staff

William Tenboer has joined SIUE as professional staff with the SIAM Center in July 2008. He is the Lead Engineer under the Center's Director, Dr. Kevin Hubbard. William received his Bachelor of Science degree from SIUE in Manufacturing Engineering in May 2008. He is currently pursuing a Master of Science in Industrial Engineering with an emphasis in Manufacturing Engineering at SIUE.



William Tenboer

Carla Lopez del Puerto Wins ASCE Best Peer Reviewed Paper Award

Carla Lopez del Puerto, an instructor for the Department of Construction, recently won the American Society of Civil Engineering 2008 Journal of Management in Engineering—Best Peer Reviewed Paper Award. "This award makes me feel that my research is valuable to the profession," said Lopez del Puerto. "It also brings recognition to the department and the University at the national level."

In the paper, "Comparative Analysis of Owner Goals for Design/Build Projects,"

Lopez del Puerto and two others, D. Gransberg and J. Shane, explore industry attitudes about design/build project delivery and compare those with owner attitudes regarding design/build project success. The paper also reports the results of a study that compared what owners believe is important to achieve in their project goals using design/build project delivery to what they make important in their design/build proposal evaluation plans.



Carla Lopez del Puerto

Dual Diploma Program with ITU is in Full Swing

In 2007, SIUE and Istanbul Technical University (ITU) started a dual-diploma program in Industrial Engineering. Within this program, students spend their freshman and junior years at ITU. The sophomore and senior years are spent at SIUE. Upon successfully completing the program, students are awarded bachelor's degrees in industrial engineering by both SIUE and ITU. Under the program, ITU admits 35 students annually. Those who are not yet fluent in English go through a year of language train-

ing at ITU before they can start the freshman year of the program. The first group of four students who were able to pass the TOEFL exam and did not need language training started their sophomore year at SIUE in Fall 08. Their initial impression of the academic and student life at SIUE is very positive, and they are already looking forward to their senior year at SIUE. In Fall 09, the remainder of the first group of admitted students will arrive at SIUE for their sophomore year.



IME Students with Drs. Sevim and Karacal

PhD Program Off to a Successful Start

The SIUC/SIUE Cooperative Doctoral Program had a great first year. With two new arrivals in the Spring 2009 semester, the program now has nine active students: four in electrical and computer engineering, three in mechanical engineering and two in civil engineering. In addition, one student was admitted to begin in the Fall 2009 semester, and several potential students are

in the process of preparing their applications.

SIUE is recognized as a residence center for the doctoral program, and students are able to satisfy all degree requirements in Edwardsville.



PhD Students with Drs. Sevim and Alkin

Civil Engineering Students Participate in St. Louis Riverfront Charrette

Five SIUE civil engineering students joined some 45 other students representing architecture, urban design, art, and traffic engineering disciplines from Washington University in St. Louis, the University of Illinois, Drury University, Saint Louis University and Missouri University of Science & Technology. The students participated in a design charrette to propose re-design options for the Thomas Jefferson National Expansion Memorial and the surrounding downtown St. Louis riverfront area.

A charrette (a collaborative session of designers working toward a solution to a proposed project) took place at the downtown St. Louis Mansion House complex overlooking the Memorial grounds. Teams of students offered strategies and design scenarios for proposed change to the grounds, which include the St. Louis Gateway Arch. During the charrette, students were ex-

posed to a collaborative work environment and addressed a complex set of urban issues simultaneously. Students learned about negotiation and integration of multiple factors that often affect the decision-making process, and how to become pro-

ductive generators of design. The final designs were unveiled in a Nov. 9 presentation; posters of the designs are being exhibited at the Landmarks Association of St. Louis, 911 Washington Ave., in downtown St. Louis. In January the designs will become part of an exhibit in Washington University's Steinberg Gallery alongside a curated show highlighting Eero Saarinen and his original proposal for the Gateway Arch. Architect Fred Powers, of Powers Bowerson Associates of St. Louis, coordinated the project. The National Park Service has agreed to alterations in its general management plan. The Park Service also announced a national design competition to generate ideas to revitalize the St. Louis Riverfront Memorial.



SIUE Student Tim Delaney review plans at the Charrette

Mechanical Engineering Students Explore China

Four mechanical engineering students—Nicole Cornelius, James McManus, Nick Rybak and Steven Ziebkra—recently traveled to China to conduct senior design and to explore Chinese culture. They spent two months at the Henan University of Science and Technology (HUST). The group was led by Professor Keqin Gu, Chair of the Department of Mechanical and Industrial Engineering.

In a globalized world, it becomes increasingly common for engineers to work closely with their colleagues of different cultures and is therefore highly desirable for us to educate engineering graduates with a good understanding and appreciation of international culture. During the two months, the four SIUE students worked closely with Chinese faculty members, as well as graduate and undergraduate students in completing the required senior design classes. They learned similarities and differences of the two educational systems.

In addition, they had a chance to visit the

remarkable Great Wall and Forbidden City, and view famous Terracotta Warriors. They also toured subsidiaries of U.S. companies such as Emerson Motors, a major Chinese manufacturer, and the Chinese Academy of Science. Daily interactions with Chinese students on a personal basis allowed our students to gain a deep understanding of



SIUE Engineering Students at the Great Wall

Chinese culture and history. They ate lunches and dinners daily with the Chinese students, and played basketball frequently. They were invited to the home of a Chinese student, performed karaoke together, tried out various exotic Chinese dishes, and were even chosen to perform kungfu on stage in the Shaolin Temple.

Our students also left a deep impression at HUST. They celebrated the Fourth of July and gave a presentation about American college life. All enjoyed the experience tremendously. Through this experience, they were able to see the “real China.” Steven fondly recalled how they startled a street peddler by using Chinese to decline her solicitation, and bargained with merchants in purchasing souvenirs. Nicole remarked that “I wouldn’t have minded staying a couple of weeks longer if it were possible.” According to James, “the biggest accomplishments were all the experiences and memories we’ll retain for life.”

Computer Science Graduate Wins Top 30 Under 30 Award

Jyoti Dharna, a 2003 School of Engineering graduate, has been named one of the “Top 30 Under 30” award winners by the St. Louis Business Journal for the year of 2008. Jyoti grew up in Nairobi, Kenya, and moved to the U.S. when she was 19. She completed a bachelor of science degree in computer science at SIUE and was the commencement speaker at graduation. She started at Monsanto as an application de-

veloper but is now a functional architect. “I basically do what a business analyst does – talk with the business to figure out its needs and ways to improve workflow – but with added responsibilities, such as project management and database design.” Having no background in plant breeding, she had to learn on the job. Jyoti has volunteered at the St. Louis Food Bank and the Butterfly House. She also contributes monthly to the

“Nothing but Nets” program, which provides mosquito nets to the needy in Africa to help prevent and reduce malaria.



Jyoti Dharna

SIUE Engineering Students Participate in RBC Mentor Program

The Regional Business Council (RBC) is a group of CEO's representing some of the region's largest companies. The RBC is partnered with the St. Louis region's universities to form the Higher Education Collaboration, a partnership with businesses and engineering schools at 15 of the region's foremost colleges and universities to create and retain an effective workforce.

Every academic year, each of the 15 Schools of Business and Engineering in the Collaboration recommends a small group of students, based on academic performance,

to participate in the RBC Mentor Network. These students are then individually paired with a CEO of an RBC company to receive practical, “real world” knowledge and post-graduate opportunities.

This year, the SIUE School of Engineering has four students that were selected for the Mentor Network including: Computer Science junior Josh Wade, Civil Engineering senior, Jessica Huxman, and Construction Management juniors Ashtyn Doty and Devin Gates.

*Check out the School of Engineering's giving opportunities page at:
[www.siu.edu/
engineering/giving/](http://www.siu.edu/engineering/giving/)*

Computer Science Professor and Student Win Award at International Competition

Computer science Assistant Professor Dennis Bouvier and SIUE graduate student Britain Oates recently won an innovation award in an international competition involving the growing field of study of visual analytics.

Bouvier, who teaches a course in visual



Assistant Professor Bouvier

analytics at SIUE, said the study involves incorporating computer visualization so that it's meaningful to the person who is using the data. "We're taking data that isn't graphical and presenting it in a practical way."

Bouvier and SIUE grad student Britain Oates developed a software application that solved what might be termed a Homeland Security problem. Participants in the IEEE's Symposium on Visual Analytics Systems and Technology competition began solving the information puzzle last spring and Bouvier and Oates were notified recently they'd won in the Innovation Category and that they would be recognized at the IEEE conference in Columbus, Ohio. Participants in the competition were given data, which consisted of sketchy narrative text and numeric evidence, and they were to answer certain questions as if they were investigating a bombing in a building. "Our scenario was that a bomb had gone off in a building with several people inside, all of whom were wearing radio frequency ID badges, so we knew where they were inside

the building at any given time," Bouvier explained. "They then asked us certain questions about what had happened. They weren't as interested in the answers to the questions but in the software we developed to answer them."

Bouvier said entering the competition began last spring as a class project but then it continued as a summer project with Bouvier and Oates. Bouvier admitted most computer programmers could work out this scenario as he and Oates did, but the innovation came from how they programmed it. Bouvier said the win was made even sweeter by the fact that there were several companies and schools competing who are considered leaders in the field of visual analytics. "We were the underdogs and came away with a win."

School of Engineering Alumni Inducted into Alumni Hall of Fame

Since its inception in 1957 Southern Illinois University Edwardsville has produced some 80,000 graduates, in turn achieving tremendous success in their careers. To honor their successes, the SIUE Alumni Association created the SIUE Alumni Hall of Fame in 2008. The Alumni Hall of Fame recognizes and honors SIUE alumni who, through leadership, character and hard work, have made exceptional contributions in their chosen field, in their communities and at SIUE. The inaugural class was recognized Oct. 10 at the SIUE Alumni Hall of Fame Awards Dinner. Among them, two School of Engineering graduates were honored: Paul Galeski and Richard Oller.

Paul Galeski is the Chairman and Chief Executive Officer of MAVERICK Technologies

in Columbia, Ill. Following graduation from SIUE in 1983, Galeski began his professional career working as a control systems engineer with various companies including McDonnell Douglas Corporation, Monsanto Chemical Company and Anheuser-Busch. Richard Oller graduated from SIUE in 1976 and is the Chief Executive Officer and President of Oller Engineering, Inc., a civil/environmental consulting engineering firm based in Lubbock, Texas. Oller is responsible for the overall direction of OEI by being involved in the design process and operations of various municipal water and wastewater systems.

For more information about the Alumni Hall of Fame, visit www.siu.edu/alumni/



Paul Galeski



Richard Oller

High School Counselors Visit Campus for Luncheon Meeting

School of Engineering K-12 Outreach luncheon was held on Friday, December 5-th. In attendance were thirteen representatives of area high schools as well as representatives of the School of Engineering. Dr. Oktay Alkin, Associate Dean for the School of Engineering, gave a presentation on STEM initiatives, engineering summer camps, scholarships, and recruitment

efforts. Dr. Susan Morgan, Department Chair for Civil Engineering, informed the participants about the new PIECES scholarship. Dr. Dennis Bouvier, faculty member in Computer Science, talked about the upcoming Botball competition. Discussion ensued on ways of improving collaboration between the School of Engineering and area high schools.



High School Counselors with Drs. Sevim, Morgan, & Alkin

High School Summer Program Participants Reunite

Students who participated in the High School Summer Programs this past summer had a chance to reunite with some of their fellow campers in a small reunion held this past November. SIUE's nationally competing Concrete Canoe Team hosted the event.



Students help mix a batch of concrete for testing

Canoe team captain Ryan Zwijack explained the concepts of concrete to the students and their guests, and a short question and answer session followed. Everyone was then invited into the concrete lab where the canoe team tests and builds their canoes each year.

Summer campers had the opportunity to be a part of this year's canoe preparations as they mixed concrete that would later be tested and evaluated for this year's canoe. They also made concrete cubes that they will be able to test at their next visit. The students also had the chance to see how concrete is tested in the lab.

While this was the first reunion of its kind, Associate Dean Oktay Alkin hopes that there will be more. Often in the past, after the summer camps were over, the University lost contact with many of the participating students. These reunions are a way to



Canoe Team member Don Seitz shows students the results of a concrete cylinder test

keep the students coming back even after the summer camps are over so they may meet their future classmates and they may see what SIUE has to offer.

Department of Civil Engineering Hosts Regional Conference

The Southern Illinois University Edwardsville Department of Civil Engineering hosted the 13th Annual Mid-America Environmental Engineering Conference on October 25. Approximately 40 environmental engineering faculty and students attended from SIUE, Missouri University of Science and

Technology, SIUC, the University of Missouri Columbia, and Washington University in St. Louis.

The Metropolitan St. Louis Sewer District (MSD) sponsored the event. Gary Moore of MSD opened the conference with an overview of MSD's initiatives to protect local

waterways. Graduate students from each university presented their research, which included work of regional and national importance in such areas as remediation of contaminated sites and wastewater treatment.

NSBE Students and Alumnae Mentor at SIUE's East St. Louis Center

Civil Engineering is an excellent choice to consider and is one that helped build a bridge to success for one native East St. Louisan. Sharon Byrd, a civil engineer with the Illinois Department of Transportation (IDOT) is part of a new mentoring program at the SIUE East St. Louis Center (ESLC). The program, Career Education Exploration, is designed to help increase minority representation in the civil engineering industry. About 50 students from the Upward Bound EC and Upward Bound BEMV participated in the program twice a month until December 2008. "Students received instruction on how to build a bridge and construct a model replica," said Barbara Sams, Upward Bound EC program director.

Instructing the students are Byrd, a 1986 graduate of the ESLC's Upward Bound Program and Lincoln Senior High School, and IDOT Civil Engineer Delon Coleman. "This is

a chance for the students to get a first-hand look at how the infrastructure of a community is put together," Ms. Sams said. "It's also an opportunity for exploring new career paths and scholarship funds that may become available this year." Members of SIUE's National Society of Black Engineers (NSBE) Chapter also helped mentor the students.

Byrd said she hopes that Upward Bound students and other minority students will consider pursuing the exciting career opportunities in the field of engineering. IDOT's mentoring program introduces students to engineering projects that encourage teamwork and problem solving, she said..

Ms. Byrd decided to become an engineer in high school. "I mainly credit this to the Upward Bound Program at the East St. Louis Center and the excellent District 189 math and science teachers that I had from ele-

mentary school through high school," she said. Byrd earned a bachelor of science degree in civil engineering at SIUE.



NSBE President Jay Scott helps construct a bridge

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We're on the web:

www.siue.edu/engineering/

*Educating tomorrow's engineers,
computer scientists, and
construction managers today.*

The mission of the School of Engineering is to provide excellent innovative engineering, computer science, and construction education to citizens of Illinois, the greater St. Louis metropolitan area, and representatives of the global community. The School focuses on strong undergraduate education and graduate programs that serve the needs of full-time students and employed professionals. The faculty conduct basic and applied research and outreach activities in partnership with others that contribute to technological advancement in our fields.

Scholarship Honors SIUE Alum

More than 50 years after launching his company-today recognized among the nation's top 400 construction firms-Ralph Korte is being honored with a scholarship fund created in his name at Southern Illinois University Edwardsville. The Korte Company established the endowed scholarship fund in construction management.

"The purpose of this gift is to honor his 50 years of service and recognize his retirement from The Korte Co.," said Susan Bowman, the controller at The Korte Co. and Korte's daughter. "The award in his name represents his 50 years of dedication and commitment to the construction industry in Southern Illinois. He's always said that he feels his degree is what propelled his business to the next level. He attended school two nights a week for nine years to earn his bachelor's. This award will make it a little easier for someone else who otherwise would not have the chance to attend college."

Today, the Korte Co., valued at more than \$300 million, has locations in Highland, St. Louis and Las Vegas.

Through the Ralph F. Korte Scholarship Endowment for Construction Management, interest earnings from the balance of the gift will be used to award a scholarship each year. The scholarships will cover the cost of tuition and provide students an opportunity to work toward obtaining a valuable degree

and providing a competitive edge in the workforce. "Ultimately this scholarship is to be awarded first and foremost on the basis of need," said Patrick Hundley, SIUE's vice chancellor for University Relations. "Recipients of this award should exhibit need to the point of not being able to attend college without this award." Along with need, a student must demonstrate a minimum 3.0 high school grade point average, and must maintain a 3.0 or better GPA during tenure at SIUE. The award can be renewed for a maximum of four years, at which time graduation with a degree in construction management is expected.

Korte was instrumental in promoting the idea for the Department of Construction Management within the SIUE School of Engineering. He believes business skills, combined with strong construction and design knowledge, are essential to creating leaders in the construction industry.



Ralph Korte