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**Message from the Dean**



Greetings from the School of Engineering.

Both Spring and Summer 2009 semesters were full of exciting activities for the School.

In February, we held our Third Annual Awards Banquet where we recognized our outstanding faculty and students who excelled throughout the year. Keynote speaker Paul Galeski, Chairman and CEO of Maverick Technologies, shared his views of engineering entrepreneurship. More than 240 people attended the evening's festivities.

I am very pleased to report to you that we hired seven outstanding junior faculty members during spring 2009. Two of the faculty are in computer science, two in mechanical engineering, one in industrial engineering, and two in construction. Our students will benefit from the industrial experience and cutting-edge research skills they will bring to the School. We will introduce all seven to you in the January "e"nnovation" issue as well as in the 2009 Annual Report.

We now have a newly designed and equipped "Engineering Student Services" office where our students will receive advisement and guidance from the Director, Loen Graceson-Martin, and three professional advisors. To provide an exemplary educational experience to our students, a select group of our dedicated faculty members will complement the professional advisement with professional mentoring.

Our student groups, mentored

by dedicated faculty, are raising the bar continuously in collegiate contests and in senior design projects. You will read a few short select stories about their success in this issue.

The School continues to strive in offering the best outreach programs to well qualified area high school students in order to entice them to pursue careers in engineering and science. This summer, altogether 50 students benefited from our week-long program that focused on hands-on, project oriented activities.

We are ready to embark in another productive and enjoyable fall semester. I have two invitations for you all; 1) Join us at the Homecoming celebrations, and 2) Send your news to be published in the January issue of "e"nnovation."

Best wishes,

Hasan Sevim, Dean

**Upcoming Events**

**August 24, 2009:** Fall Semester Begins

**September 25, 2009:** Sediment & Erosion Control Field Day

**October 9, 2009:** Homecoming

**Golf Scramble at Stonebridge Golf Club in Maryville, IL.** For more information, email Kaitlin Betz at [kbetz@siue.edu](mailto:kbetz@siue.edu)

**October 10, 2009:** Alumni Hall of Fame Induction Ceremony

**October 12 & November 11, 2009:** Preview SIUE. For more information, visit:

<http://www.siue.edu/prospectivestudents/visit/preview.shtml>

## New Advisement Office

Beginning in the Fall 2009 semester, the Engineering Student Services office will be open for business. The office provides academic support and resources for all undergraduates in the School of Engineering. The Student Services office houses undergraduate advisement - where a full-time professional staff (pictured) is available to serve the advising needs of undergraduate students in the School of Engineering. The office is also involved in other re-

cruitment and retention activities within the School, including meeting with prospective students and their families; participation in open houses & previews (on- and off-

campus); high school and community college outreach; and involvement in planning of Honors Day and the Annual Awards Banquet.



Loen Graceson-Martin  
Director



Eileen Harrison  
Advisor



Janelle Buettner  
Advisor



Niya Bond  
Advisor



Tonja Asperger  
Office Manager

## Department of Construction Welcomes New Chair

We are happy to announce that Dr. Chris Gordon has been named Chair of the Department of Construction at SIUE. Dr. Gordon is an Assistant Professor whose teaching interests include project management, sustainable construction and computing in construction. In his research, Gordon investigates applications of emerging tech-

nologies in the construction domain. Gordon earned a Ph.D. in Civil & Environmental Engineering at Carnegie Mellon University and both a B.S. and M.S. in Civil & Environmental Engineering at Stanford University. Prior to his doctorate, Gordon worked in construction management on construction projects ranging from \$25 million to

\$2.5 billion and in project management and product development for an early-stage start-up software company. Dr. Gordon joined SIUE in January of 2007.



Chris Gordon

## School of Engineering Outreach

School of Engineering students, faculty and staff participated in a myriad of community outreach activities throughout the spring 2009 semester.

- The School hosted 50 high school students for two, week-long residential camps. Students were given the opportunity to participate in hands-on activities and field trips while spending a week in an SIUE residence hall. Many of the students plan to become



High School Summer Program Participants

engineers, computer scientists or construction managers in the future.

- For the fourth consecutive year, SIUE held the Greater St. Louis Regional Botball Robotics tournament and hosted 14 middle and high school teams from Illinois, Indiana, Michigan and Missouri. School of Engineering faculty, staff and students provided a two-day instructional workshop in the time leading up to the event to help the students prepare for the competition.
- In March, computer science students and faculty partnered with the Edwardsville High School Robotics Team to facilitate a mini-camp to introduce middle school students to robotics. The campers spent the day designing and constructing robots to compete in a "Robot Carnival."



Preschoolers sieve sand while visiting CE labs

- Civil engineering faculty and staff hosted 16 preschoolers from the SIUE Early Childhood Center in February. The youngsters participated in a stream table erosion activity, sieved sand, rolled soil and witnessed an open-channel flow demonstration.
- ASCE students hosted a shake table demonstration at the Edwardsville Children's Museum through the year.

## School of Engineering Third Annual Awards Banquet

The School of Engineering held its Third Annual Awards Banquet Thursday, February 19, 2009. The event is held each year to celebrate the academic excellence, service, and leadership of both students and faculty in the School of Engineering. This year, over 240 School of Engineering alumni, students, faculty, staff, and industry friends attended.

Paul Galeski, President & CEO of MAVERICK Technologies, gave an informative and witty keynote speech, "Entrepreneurship in Engineering: Rewards and Pitfalls". Paul graduated from the SIUE School of Engineering with a bachelor's degree in electrical engineering in 1983. He has since founded two successful companies, received numerous professional

awards, and serves on the School of Engineering's industrial Advisory Board.

Select faculty members were recognized for teaching excellence and select students were recognized for academic excellence and outstanding service.



Keynote Speaker, Paul Galeski

## Faculty & Students Recognized at Awards Banquet

### Outstanding Seniors

Melaina Costello — *Electrical & Computer Engineering*

Jennifer Titchenal — *Civil Engineering*

Kevin Doss — *Mechanical Engineering*

Corey Peach — *Industrial & Manufacturing Engineering*

Megan Ladwig — *Construction Management*

Michael Calvin — *Computer Science*

### Outstanding Juniors

Matthew Clark — *Electrical & Computer Engineering*

Laura Niemeyer — *Civil Engineering*

Kameron Kizzire — *Mechanical Engineering*

Mark Munter — *Industrial & Manufacturing Engineering*

Daniel Vielhaber — *Construction Management*

Aaron Jansen — *Computer Science*

### Outstanding Graduate Students

Jhansi Lakshmi Akkineni—*Electrical & Computer Engineering*

Laxman Shrestha—*Civil Engineering*

Yang Wang—*Mechanical Engineering*

Robert Long—*Computer Science*

### Faculty Award Winners

Dr. George Engel — *Electrical & Computer Engineering*

Dr. Brad Cross — *Civil Engineering*

Dr. Serdar Celik — *Mechanical Engineering*

Dr. S. Cem Karacal — *Industrial & Manufacturing Engineering*

Dr. Kerry Slattery — *Construction Management*

Dr. Dennis Bouvier — *Computer Science*

### Outstanding Service Award Winners

Jessica Huxman — *JESC President*

Laura Hemker — *JESC Treasurer*

Kyle Corcoran — *JESC Secretary*



Award Winning Faculty with Dean Sevim



Award Winning Students with Dean Sevim and Associate Dean Alkin

## Civil Engineering Students Set the Bar High at Nationally Administered Exam

According to administrators at the national Fundamentals of Engineering (FE) examination, 20 of 21 SIUE civil engineering seniors passed the exam administered in Fall 2008. This is an outstanding pass rate of 95%.

The FE exam is a nationally administered test taken by seniors in various engineering majors, but mostly by civil engineers due to the nature of their career functions in the industry. The FE is considered an important

milestone on the road to professional engineer licensure.

SIUE School of Engineering Dean Hasan Sevım called the accomplishment an extraordinary performance by the SIUE civil engineering seniors. "It is particularly remarkable," he said, "because it significantly exceeds the passage rate of the civil engineering students at the Carnegie master's level institutions and Carnegie doctoral

extensive institutions." Those rates remained at 58 percent and 73 percent, respectively.

"The civil engineering students at SIUE have consistently performed better than the national averages for many years," Sevım pointed out. Kudos to the students, faculty, and staff.



## SIUE Student Teams Compete in National Competitions

- Concrete Canoe Team** — The SIUE Concrete Canoe Team competed at a regional competition in Carbondale in April and won first place overall, making them eligible to compete at the national competition at the University of Alabama in Tuscaloosa, Alabama. More information about the concrete canoe team is available at their website: <http://www.ce.siu.edu/ASCE/index.html>
- Steel Bridge Team** — The Steel Bridge Team earned third place overall at their regional competition held in Carbondale in April, making them eligible to compete in the 2009 ASCE/AISC National Steel Bridge Competition held at the University of Nevada-Las Vegas. More information about the steel bridge team is available at their website: <http://www.ce.siu.edu/ASCE/index.html>



Steel Bridge Team



Concrete Canoe Team

- Formula Car** — The Formula SAE Team designed, built, and raced a car that placed 76th out of 120 registered national and international teams.
- Robotics Team** — The SIUE School of Engineering Robotics Team took 2nd place in the International Beyond Botball Tournament held in Washington DC on July 2nd. The Robotics Team lost to their perennial rivals from Lockheed Martin (whose team was comprised of professional engineers) in a great head-to-head final match. The Team was presented with the Judge's Choice Award in recognition for the use of sensors for intelligent robot behavior. SIUE students Aaron Parker, Rob Long and John Marriot comprised the team led by Dr. Jerry Weinberg, chair of the Computer Science department. The International Beyond Botball Tournament is a robotics competition in which teams program autonomous robots by integrating science, technology and math with robotics. The SIUE team has consistently performed well in the Tournament. SIUE will be the host site for the Tournament in 2010 as part of the Global Conference on Educational Robotics.



Cougar Baja

## SIUE Civil Engineering Design Team Takes 1st Place at International Conference

The Fall 2008 SIUE Civil Engineering Senior Design Environmental Student Team took first place honors in the Parsons Brinckerhoff Environmental and Water Resource Student Design Competition held in conjunction with the 2009 ASCE EWRI World Water and Environmental Congress May 17-21, 2009, in Kansas City, Missouri. Team members included Trisha Youngquist, Troy

Turner, Steven Linenfelser, Sara Andert, Amanda Dioneda, Dustin Hill, and Adam Rhein.

The team had been previously selected from national entries to compete as finalists in the Congress. The SIUE environmental group project detailed the environmental aspects of an upgrade to the SIUE Heating

and Refrigeration Plant. Items related to indoor air quality, drinking water quality, hazardous materials, environmental hazards, and noise levels were included in an environmental quality review. Recommendations were made based on current maintenance facility usage, as well as potential future uses for engineering lab space.

## Mechanical Engineering Students Build “Green” Motorcycle

A team of mechanical engineering students designed and built a “green” motorcycle for their senior design assignment. The team consisted of Ronak Desai of Troy, Philip McAndrews of Glen Carbon, Chad Pike of Effingham, and Andre Stunson of Glen Carbon.

The motorcycle, known as the Green Bike, is 11’8” long and runs on B99 Biodiesel, which is soy-based and produces 78 percent less emissions than standard diesel.

The team designed the bike to reach top speeds of 150 mph, and they hope to break the current world record of 130.614 mph for a biodiesel powered motorcycle. Team

member Andre Stunson will race the bike during Speed Week in Bonneville, Utah, this summer.

Ryan Krauss, the instructor for the senior design course, was impressed by the effort and determination of the group. “This was an extremely ambitious project,” Krauss said. “I originally tried to talk them into scaling it down somehow. They put an astounding amount of work into this.”

Team member Ronak Desai said, “We wanted to create a vehicle that would bridge the gap between high performance and renewable fuel sources. We were thinking outside of the box.” Their determination



Mechanical Engineering Students with their “Green Bike”

and commitment to this project is evident, as team members used \$4,200 of their own money to complete the bike.

## SIUE Engineering Students Know No Borders

A group of students from the SIUE School of Engineering spent a week improving the lives of people living in a third-world country.

Members of the SIUE Chapter of Engineers Without Borders (EWB) visited the community of Pimienta, Honduras, with a group of St. Louis area EWB professional members. EWB is a service organization that was established to give professional engineers the opportunity to help communities in need of infrastructure improvements and enhancements.

The team of professionals and students improved infrastructure in the Honduran community by building a more than 50-foot

retaining wall, installing a composting toilet and providing infrastructure for waste water and erosion control.



Students work on retaining wall in Honduras

The SIUE team was led by Shane Richardson, a senior civil engineering major who started the SIUE chapter of EWB last fall.

During their time in Honduras, the students assessed the community’s water distribution needs and are planning the installation of a design in 2010.

The students spent the last school year raising money for the project. One fundraising initiative involved taking a 120-mile bike ride from Elizabethtown to Chester. The group will return to Honduras this fall, thanks to an SIUE Excellence in Undergraduate Education grant, and again in the spring as part of a senior design project.

## SIUE Construction Students Travel to Mexico

In March, two faculty from the Department of Construction, Chris Gordon and Carla Lopez, led a group of seven students to Mexico on a week-long travel study for a new course, International Construction. This travel-study was subsidized by funds from an Excellence in Undergraduate Education (EUE) grant and the International Programs Office at SIUE.

In the weeks leading to the trip, the class studied globalization in construction and

challenges and opportunities that come with entering new markets and building in a foreign country. During the week abroad, the students visited several world-class projects in Mexico City, visited a new \$350 million cement plant in Puebla, attended lectures on construction challenges in Mexico from professors at Universidad de las Americas, and made cultural excursions to colonial sites in Puebla and Cholulua, and to pre-colonial sites, such as Teotihuacan.



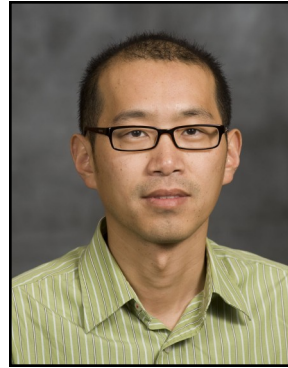
Construction Students and Faculty in Mexico



## Civil Engineering Faculty Receive IDOT Grant

In July 2009, the School of Engineering received a \$102,011 research grant from the Illinois Department of Transportation (IDOT). Dr. Huaguo Zhou was the PI of the proposal; Dr. Ryan Fries joined him as co-PI. The research project is to develop a comprehensive Highway Incident Management Operational and Training Guide for different incident responding agencies in the

Midwest region. The training guide will enhance the safety of incident responders and motorists. The second phase for this project is to develop a web-based training for the incident responders from different agencies. After completing this two-phase project, SIUE will become the center for highway incident management training and research in the Midwest region.



Huaguo Zhou



Ryan Fries

## Computer Science Faculty Receive NSF Grant

A research group in the Department of Computer Science led by Dr. Jerry Weinberg and in partnership with RoadNarrows Robotics has been awarded a second phase grant of \$500,000 from the National Science Foundation (NSF). The SkewlZone project involves the development of a "Brain Pack" and sensor suite to simplify the use of humanoid and other legged robots. The Brain Pack is a small computer carried like a

backpack that can be used on various legged robots. Specific sensors, such as pressure sensors on the feet, aid legged robots in walking and autonomous abilities.

Dr. Weinberg and his team secured an initial \$150,000 grant from the NSF in May of 2007. The second phase of this grant will look to improve the software, sensors, and platforms developed during the first phase to create a fully marketable product.



Jerry Weinberg

## Southern Illinois Builder's Association Continues Generosity to School

The Construction Management program received a \$28,000 contribution from the Southern Illinois Construction Advancement Program (SICAP.) Originated through the Southern Illinois Builder's Association (SIBA,) SICAP is a not-for profit industry fund powered by employer contributions based on hours worked by craftsmen in the Southern Illinois area. The contribution by SICAP made it possible for the department to pur-

chase a Trimble S6 Total Robotic Surveying Station. This robot will greatly enhance the new Land Surveying Specialization program in the Construction Management department. SICAP's first donation to the program was made over 30 years ago and is the most recent in their long history of generosity and support to the construction management program and the School of Engineering at SIUE.

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

## PhD Student Receives 1st Place in Paper Competition

Jiguang Zhao, a doctoral student in the SIUE School of Engineering, received first place in the Missouri Valley Section of Institute of Transportation Engineers (ITE) student paper competition. Considered one of the most prestigious transportation societies in the world, ITE is for those engaged in the planning, design, and operation of streets, highways, and other transportation facilities. MOTIVE is the Midwest section of ITE.

The annual MOTIVE student paper competition involves universities in a seven-state Midwest region that includes Illinois, Iowa, Kansas, Missouri, Nebraska, Oklahoma, and Wisconsin.

Zhao will present his paper, "Safety Issues of Left Side Off-Ramps on Freeways," at a MOTIVE meeting this fall and will accept a scholarship award of \$1,500. His paper evaluates effects of left-side, off-ramp de-

sign in traffic operation and safety, which could be used to improve the design and safety of left-side off-ramps on freeways.

Zhao is one of the first group doctoral students recruited by the SIUE Department of Civil Engineering after the School of Engineering started the cooperative PhD program with SIU Carbondale in Spring 2008. Zhao's major is transportation engineering.

## Alumni News

### 2000's

**Alicia DeShaizer** (BS '07) finished fourth in the women's javelin throw at the United States Track and Field National Championships in Eugene, Ore. Alicia holds the SIUE school record in the javelin throw. She is employed at Oates Associates.

**Chad Komnick** (BS '07) married Kelsey Sand in Bismarck, ND. Chad is a Structural Design Engineer with MiTek Industries, Inc.

**Trenton Lowe** (BS '07) married **Jessica Huxman** July 21<sup>st</sup> in St. Lucia. Trenton is employed as an engineer at Fabritech Inc. Jessica is currently a senior Civil Engineering student at SIUE. Jessica is interning at David Mason & Associates.

**Gary Mayer** (MS '04) received his Ph.D. from Arizona State University and will be joining the computer science faculty at SIUE in Fall 2009.

**Ross Mead** (BS '07) received an NSF (National Science Foundation) Graduate Research Fellowship to work on robotics in the Ph.D. program at University of Southern California.

**Miles Musick** (BS '08) married **Lisa Cook** (BS '08) in St. Louis on June 20<sup>th</sup>. Miles is a Quality Engineer at John Deere and resides in Oskaloosa, Iowa.

**Jason Richter** (BS '07) married Nicole Keckritz on August 8 in Aviston, IL. He currently works for Emerson Motor Technologies in St. Louis.

**Ryan Sheehan** (BS '05) married **Jadrien Komnick** (BS '05) July 11<sup>th</sup> in Bethalto, IL. They reside in Naperville, IL.

**Jenna Toennies** (BS '08) received an NSF (National Science Foundation) Graduate Research Fellowship to work on robotics in the Ph.D. program at Vanderbilt University.

**Melissa Glauber** (BS '03) has been recognized by the St. Louis Business Journal as one of St. Louis' 30 Under 30 for 2009. Melissa also holds a JD from the St. Louis University School of Law. Melissa is an attorney for Armstrong Teasdale and is a member of the firm's Intellectual Property practice group. She is a member of the

Illinois and Missouri State Bar Associations and the U.S. Patent and Trademark Office.

### 1990's

**Mike Blakey** (BS 1993, MBA 1999) visited the School of Engineering to speak to our Summer Outreach Campers about life as an Engineer. Mike is the Assistant Operations Manager- Process Support for Anheuser-Busch InBev and serves on the School of Engineering Industrial Advisory Board.

**Stephanie Muentnich** (BS '96) received the 2009 Young Engineer of the Year Award from the St. Clair Chapter of the Illinois Society of Professional Engineers (ISPE.) The award recognizes young members of the ISPE who have made outstanding contributions to their profession and/ or community. Stephanie is employed at Oates Associates as a Project Manager/ Engineer. She holds Professional Engineer (PE) licensure in both Illinois and Missouri and is a member of the ISPE. Stephanie is married to Scott Muentnich, a 1996 construction management graduate.

**Geri Boyer** (BS '91) is founder and managing partner of Kaskaskia Engineering Group, LLC. Geri holds a BS in Mining Engineering from SIUC and a MS in Pastoral Studies from Loyola University- New Orleans. Geri serves the School of Engineering as a member of the Civil Engineering Advisory Council.

**Jim Middleton** (BS '93) is the MODOT Project Manager for the new Mississippi River Bridge. Jim has visited campus to speak to the ASCE student chapter and the Summer Outreach Program campers several times throughout the year.

**Larry Thomason, Jr.** (BS '93) received the Richard B. Teitelman Distinguished Service Award from Legal Services of Eastern Missouri. Larry works for the Kaskaskia Engineering Group three days a week and performs pro-bono legal services for LSEM two days a week.

**Ryan Zorko** (BS '93) is an Engineering Manager at Anheuser-Busch InBev. He received his MBA with a concentration in Finance from the Olin School of Business at Washington University. He is married and has two boys.

### 1980's

**Paul Galeski** (BS '83) is the President and CEO of MAVERICK Technologies, LLC. Paul was named one of *Fast Forward's* "40 under 40," a listing of the top young executives in the St. Louis area.

**Bruce Schopp** (BS '82) has been appointed the President of the Illinois Section of Professional Engineers (ISPE.) Bruce is the chief structural engineer and firm principal at Oates Associates, Inc. Bruce lives with his wife Kristine and their three children in Freeburg, IL. Bruce is a member of the School of Engineering Advisory Board.

**Raymond Walter** (BS '86, MS '93) is a Targeting and Weapons Systems Engineer at The Boeing Company. Raymond is earning his Ph.D. in electrical engineering from SIUE.

### Alumni:

We want to tell your  
stories to your classmates in the next  
ennovation.

Send your news to:  
kbetz@siue.edu

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**We're on the web:**

**[www.siu.edu/engineering/](http://www.siu.edu/engineering/)**

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*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.*

## More Scholarships to the School

Two new School of Engineering scholarships were established spring semester 2009.

William "Hal" Gentry established the William H. and Jean Daniel-Gentry Scholarship in Computer Science. Hal Gentry is a 1982 computer science graduate who was the founder and CEO of Gentry Systems and Gridlogix. Gentry Systems focuses on Geographic Information Systems and System and Operations Management technology for the electric utility industry and is a leading software solution provider for enterprise software and "machine-2-machine" interoperability. Gridlogix's products integrate systems throughout the extended enterprise into a real time management system for Energy, Maintenance, Security and Compliance. In 2001, Autodesk acquired Gentry Systems and Hal went on to found Gridlogix. The scholarship will be awarded based in interest earnings from the balance of the gift, and will benefit an outstanding sophomore computer science major.

The Evan David Allen Scholarship was

established by David and Debra Hill and the Southern Illinois Sheet Metal Contractors Organization in memory of the Hill's grandson, Evan. Evan was born May 24, 2002 to proud parents Daven and Nathan. Both Daven and Nathan are SIUE graduates, Daven in elementary education, and Nathan in mechanical engineering. Evan left this world just three days before his kindergarten graduation in 2008. Evan loved camping, fishing, riding his father's four-wheeler and his own dirt bike at the age of four. Evan had a curious spirit and always wondered how things worked and how they were built. Evan's parents and grandparents believed he would become a mechanical engineer like his father, and they wanted to share his dream with others. "We would like to honor Evan by sharing the opportunity of a college education, an opportunity that he did not have, with students in the area, in which we strongly feel, Evan might have chosen" said Evan's father, Nathan Allen. The scholarship will be awarded to one, two or three mechanical engineering students each year and is foremost based on need.