

SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE
SCHOOL OF ENGINEERING

Dean's Report 2009

Engineering **IMPACT**



Our Vision

The vision of the School of Engineering is to be a partnership of faculty, students, staff, alumni and other professionals who work together to provide the highest quality education and maintain innovative resources that support the technical growth and economic development of the region.



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Message from the Dean

The theme of this report is "Engineering Impact." Included in these pages are a few testimonials and stories about how the SIUE School of Engineering's programs, faculty, staff and students are impacting our region and society.

We are proud to report that all School of Engineering undergraduate programs were recently reaccredited. Our programs continue attracting outstanding faculty members. Since 2006, we have added 18 faculty members to our world-class faculty roster, nine alone in 2009.

We are particularly happy about the reformation of the Department of Construction in 2009. Four excellent new faculty members with great credentials and experience joined the Department. This is a synergistic group that has already started responding to the needs of our students and the regions' construction industry.

Our faculty members focus on excellence in teaching while engaging students in research projects. This helps to attract increasingly well-prepared students into our programs. In 2009, we reached a record high enrollment of 1,156 students.

A key factor attributing to our appeal and success is our student chapters. Through participation in professional student chapters such as Engineers Without Borders and the Constructors' Club, our students volunteer their time and energy to community projects while preparing themselves to take on the challenges they will face as professionals. Our students have a positive impact on area high school and middle school students by showcasing their robotics, steel bridge, concrete canoe, formula car, solar car and mini baja projects at open houses, previews and high school visits.

The School's positive impact on the region grows daily. Our alumni and regional engineering, construction and information technology companies play a vital role in weaving a strong network, helping our students receive scholarships, internships, co-ops and job opportunities. We greatly appreciate the continued support of our alumni and friends. That support allows us to embark on a fiscally challenging year with optimism and promising projects.

A handwritten signature of Hasan Sevim in black ink.

Hasan Sevim, Ph.D.
School of Engineering Dean



About SIUE

SIUE is a nationally recognized university that educates and develops professional and community leaders through its excellent faculty and broad choice of degrees and programs ranging from liberal arts to professional studies. Undergraduate and graduate degrees are offered in the arts and sciences, business, education, engineering and nursing. Professional degrees are available in dental medicine and pharmacy. Nearly 14,000 students choose SIUE for the enlightening programs, engaging faculty and convenient locations just 25 minutes from St. Louis.

Message from the Chancellor

SIUE is dedicated to positively impacting the quality of life for our students, faculty, staff and surrounding communities. Despite the difficult economic times, the University continues to thrive with a fall 2009 enrollment of 13,940 students, the largest in the history of the University.

U.S. News & World Report recognizes SIUE as one of 77 "Top Up-and-Coming Schools." The University is among a select group of schools nationwide considered to be making the most promising and innovative changes in academics, faculty, students, campus or facilities. For the fifth consecutive year, *U.S. News* also has heralded SIUE for its Senior Assignment Program, an integrative learning experience required of all seniors prior to graduation.

Consistent with the University's forward momentum, School of Engineering

students strive to make a positive impact locally, regionally, nationally and internationally. Whether through building a playground for a neighboring community or traveling thousands of miles to bring clean water to third-world countries, their efforts are a testament to the School's commitment to SIUE's values of Excellence, Openness, Wisdom, Citizenship and Integrity.

Thank you for taking the time to explore one of the many outstanding programs at SIUE. I encourage you to visit campus and learn more about our exciting progress.

Go Cougars!

Vaughn Vandegrift, Ph.D.
SIUE Chancellor

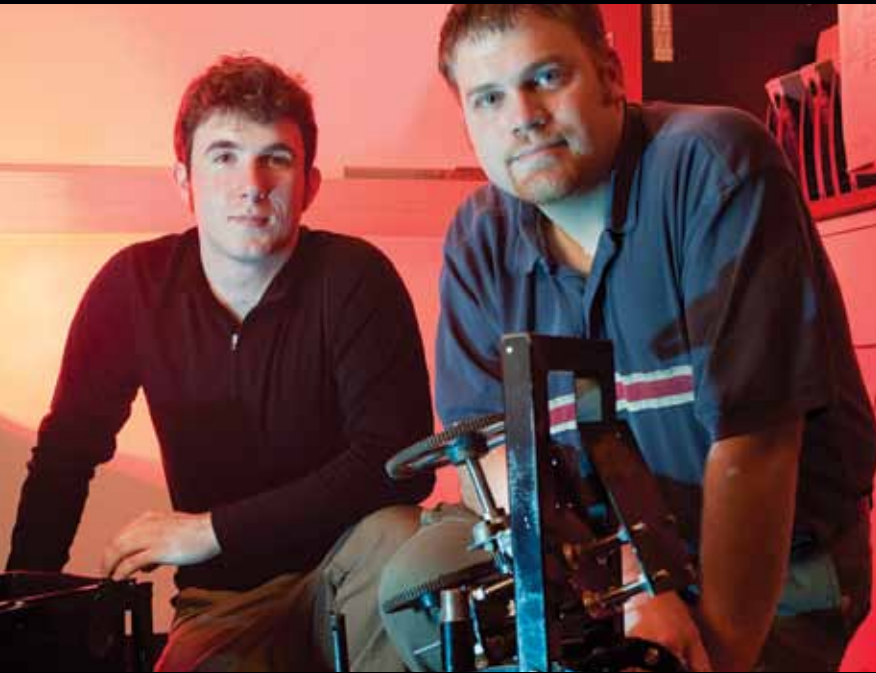
Message from the Provost



One of the major Academic Affairs Imperatives at SIUE centers on ensuring academic quality with effective assessment. A significant component of that imperative is seeking national review and evaluation of our academic programs by our peers through the process of program accreditation. The School of Engineering has received full accreditation by the Accreditation Board of Engineering and Technology (ABET) for its bachelor degree programs in civil, electrical, computer, industrial, manufacturing and mechanical engineering. The ABET Computing Accreditation Commission has accredited the computer science program and the American Council for Construction Education has accredited the construction management program.

These accreditations acknowledge a significant level of excellence in our engineering programs and provide added value to our faculty and student experiences and contributions to the citizens of Illinois and the profession of engineering.

Paul W. Ferguson, Ph.D.
Provost and Vice Chancellor for Academic Affairs



Navigating Success

The Mini Grand Challenge, which is modeled after the U.S. Department of Defense's Advanced Research Projects Agency (DARPA) Grand Challenge, is a test of autonomous navigation. While the Grand Challenge is looking for ways to keep soldiers off the battlefield and out of harm's way, the Mini Grand Challenge tests autonomous ground vehicles' ability to find their way around the suburban campus of Penn State Abington College while avoiding obstacles and tackling off-road detours.

This spring marks the third year SIUE School of Engineering students have entered the competition. The challenge is difficult—and it was designed to be that way. So far, no one team has been able to successfully complete the entire course.

SIUE's interdisciplinary team, comprised of computer science, electrical engineering and

mechanical engineering students, hopes to be the first to finish the course. They are making significant changes to last year's entry, including a frame redesign and new braking and steering systems.

"We are redesigning the software to enhance the artificial intelligence and computer vision systems," said senior computer science student Nate Roney. "The addition of a laser rangefinder will improve the path finding system, and porting the software to an open source operating system has opened up new possibilities regarding the way we use the data from the sensors."

Nate and senior mechanical engineering student Eric Poettker are using the experience as their Senior Assignment project (see sidebar). A multi-disciplinary Senior Assignment better prepares students for their careers. Students face many

challenges, but the interdisciplinary experience is hugely beneficial in the long run," said Ryan Krauss, assistant professor of mechanical engineering. Krauss, along with Brad Noble, associate professor of electrical and computer engineering, and Jerry Weinberg, professor of computer science, are faculty advisors for the team.

For Eric, the teamwork and collaboration involved in the Mini Grand Challenge has been the most impactful aspect of the project. "Working with computer science and electrical engineering team members has definitely challenged me to understand the project from their perspective," he said. "Our collective ideas and goals will make our entry stronger and make me better prepared for my career."



Through the Senior Assignment program, students are actively engaged in the development, rather than the consumption, of knowledge. For the past five years, *U.S. News & World Report* has heralded SIUE for its outstanding senior capstone experience. The Association of American Colleges and Universities recognizes SIUE's Senior Assignment as an "exemplary practice" for assessment of learning outcomes.

Student Competition Results

American Society of Civil Engineers

Regional Concrete Canoe Competition

1st Place: Overall Performance, Men's Sprints, Women's Sprints,
Coed Sprints, Women's Endurance

2nd Place: Oral Presentation

3rd Place: Men's Endurance, Design Paper, Final Product

National Concrete Canoe Competition

18th Place: Overall Performance

American Society of Civil Engineers / American Institute of Steel Construction

Regional Steel Bridge Competition

2nd Place: Lightness, Stiffness, Efficiency

3rd Place: Overall, Construction Speed, Display, Economy

National Steel Bridge Competition

41st Place: Overall

Associated Schools of Construction Region 3

Design Build Competition

2nd Place: Overall

American Concrete Institute

Team International Concrete Cube Competition

25th Place: Overall

Society of Automotive Engineers

Formula Racing Team

76th Place: Overall

International Beyond Botball Competition

2nd Place: Overall

Society of Automotive Engineers

Mini Baja Racing Team

Out of 101 teams:

7th Place: Sled Pull

13th Place: Endurance Race

21st Place: Overall

CAD/CAM/CAE Student Competition

Product Lifecycle Management World Conference

1st place: Overall



The Construction of Fun

Melissa Stoltz, park committee treasurer in Summerfield, Ill., lives across the street from the community park. She enjoys watching kids play on the playground. The park is the only place for them to play in the small community of 500 residents. So, when the park commission received a grant to replace their park's outdated 60-year-old playground equipment, community members were very excited—especially the kids.

“Once we got the equipment and found out how expensive it would be to install, we were lost,” Stoltz said. “Our grant writer literally got out the phonebook and started calling private companies and universities, looking for someone who would volunteer to install the equipment and not charge us the estimated \$7,000 installation costs.”

The SIUE School of Engineering construction department was the only one who returned the

call, and the Constructors Club willingly stepped up to volunteer.

“We were excited to get out and use our knowledge to build something,” said senior construction management student Garth Hand, who was in charge of managing the project. He coordinated the logistics of bringing volunteers to the site, assigned volunteers to tasks and was responsible for troubleshooting the installation process. “We broke down into groups as we would on an actual construction site,” Garth said. “I learned how to organize and schedule so that everything was completed on time.”

The group put in a total of about 300 hours and got the job done quickly. It was not an easy job, by any means. Students first had to survey the area, then they drilled 34 concrete footings, assembled the playground pieces, set anchoring pieces in the

foundation holes and poured the concrete. Once the project was finished, village inspectors looked over the work and declared it to be rock-solid, safe and ready for use.

Summerfield residents, park committee members and the mayor helped the Construction Club with mulching and other finishing steps. Stoltz praised the students' work. “They were very professional and worked extremely well together,” she said. “Everyone from Summerfield was amazed at how quickly the playground went together. This was a very important project for our community. The students had it all figured out and did an excellent job.”



Engineers without Borders

Shane Richardson has seen first-hand the challenges faced by people living in developing countries. The civil engineering major from Collinsville has visited Haiti twice for mission trips, traveled extensively during his five years in the Navy and most recently spent time in Honduras. “We don’t realize how in need people are,” he said. “It’s not just third-world countries—there are even parts of Italy in need of clean drinking water.”

When he learned about Engineers Without Borders (EWB) he knew he had to get involved. EWB is a national organization of professional engineers and engineering students committed to improving the basic quality of life to all people around the globe through sustainable engineering projects.

Shane created an EWB student chapter at SIUE in fall 2008, and the newly formed group got to work. This past summer, seven SIUE EWB chapter

members traveled to Pimienta, Honduras, with members of the St. Louis EWB professional chapter.

“Pimienta’s mayor is trying his best to improve the quality of life for residents,” Shane said. “Nearly 30 homes were built a few years ago, but unfortunately, they were built quickly and with no engineering forethought for sustainability.”

The group improved infrastructure in the small Honduran community by building a more than 50-foot retaining wall to stabilize a portion of the terraced housing development, installing a composting toilet, and developing infrastructure for waste water and erosion control.

Shane and his fellow students applied what they are learning in the classroom, while helping other people in extraordinary ways. Students witnessed a “sense of pure joy” from members of the Pimienta community,

despite their subpar living conditions. “These people were happy to be alive,” Shane said. “There was visible pleasure in everything they did. They were so grateful to have us there.”

“This experience was more beneficial than any class I could take,” Shane continued. “I will be able to take the engineering design experience forward with me to future employment opportunities.”

The SIUE team currently is designing a storm water and runoff drainage plan for the Pimienta community and will return there this summer to construct gutters for the homes and drainage ditches for the area. The students are completing the plan for their Senior Assignment, an integrative learning experience required of all seniors prior to graduation.



Seeing through Sound

Andreas Stefik, assistant professor of computer science, took a ballroom dancing class as a college student from a legally blind instructor. Years later, his professor in graduate school was researching ways to adapt sound to computer code.

These two experiences got Andreas thinking about how to combine his computer science expertise with auditory technologies to help blind individuals obtain careers as computer programmers.

“Blind individuals have few technologies that allow them to create their own software, which means they are ultimately reliant on corporations to build tools for them,” he said. “Even if a blind individual is incredibly motivated to become an engineer and overcome many difficulties, learning how to program a computer is challenging. If you’re blind and the tools are designed for sighted users, you don’t have a chance.”

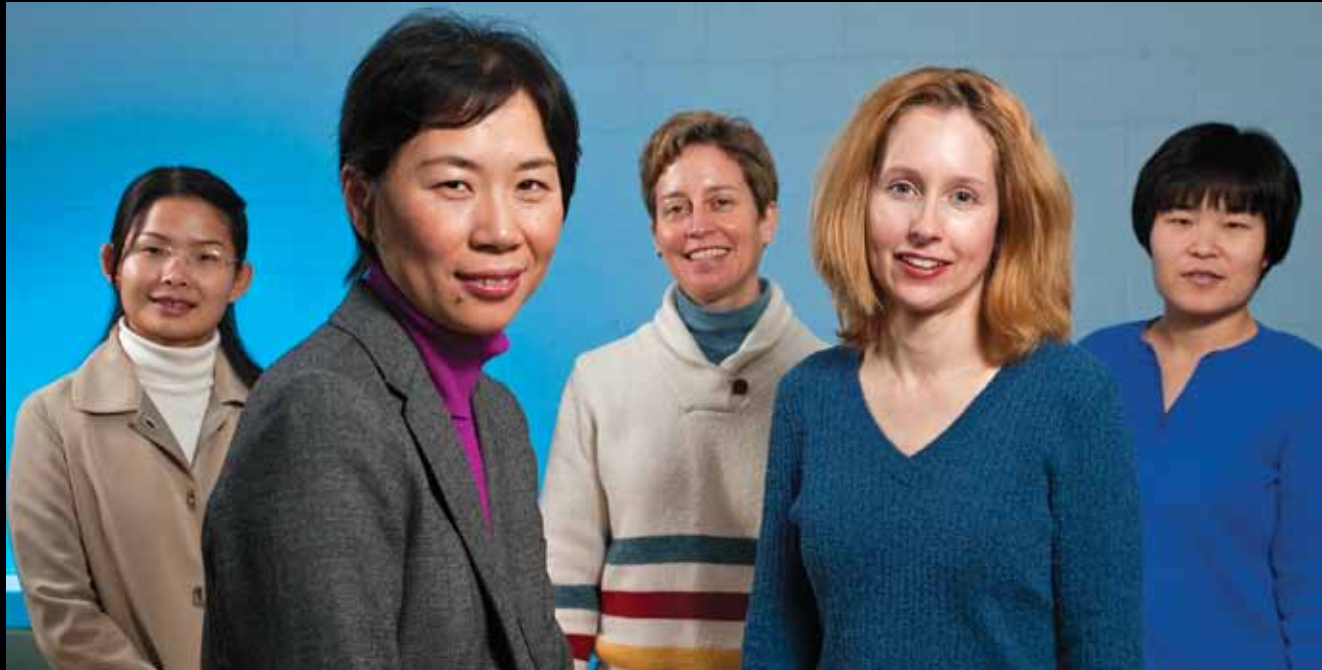
Blind individuals have somewhat limited viable career paths, which has led to staggering unemployment figures—approximately 57 percent of blind individuals are not in the work force. Computers have powerful sound capabilities, making programming a feasible career path. Beyond the technological solutions, Andreas and his team are creating an educational pipeline and will be integrating their tools into five K-12 schools across the U.S. over the next three years.*

Consistent with the SIUE culture, Andreas is committed to incorporating innovative research into student learning opportunities. Computer science graduate student Neelima Samsani is building a custom computer programming language for this technology. Her goal is to make the technology easy enough for blind children to use, while also making it powerful enough for blind professionals to use in the workplace.

Senior computer science major Andrew Hauck is participating in the project through SIUE’s Undergraduate Research and Creative Activities (URCA) program. The URCA allows students to use their undergraduate academic experience through research collaborations with faculty scholars. Andrew is writing computer software that makes their technology compatible with commercial technologies, including Braille readers and other sound output tools, often called screen readers.

Neelima and Andrew interact with blind clients who actually use the software. “I want students to realize that research is about thinking rationally and trying to solve real world problems,” Andreas said. “I want them to understand that they can, and should, try to impact society for the greater good.”

** Stefik received a \$409,000 National Science Foundation grant to fund the project.*



Pictured from left to right: Yun Wang, assistant professor of computer science; Ying Shang, assistant professor of electrical engineering; Anne Werner, assistant professor of construction; Susan Morgan, professor of civil engineering and chair of that department; Fengxia Wang, assistant professor of mechanical engineering

Taking Gender Out of the Equation

The common perception is that engineering is a man's profession and women are not encouraged to consider engineering as a career. Ying Shang, assistant professor of electrical engineering, and Yun Wang, assistant professor of computer science, are investigating ways to attract and retain more women in engineering by designing more female-friendly education strategies. "We hope to improve the engineering curriculum structure to keep girls' interest alive," said Shang, faculty advisor for the SIUE chapter of Society of Women Engineers (SWE). SWE empowers women to succeed in engineering.

One of the inequities that Shang and Wang are investigating is the lack of female role models in science, technology, engineering and math (STEM) fields. For SIUE student Laura Hemker, a senior majoring in manufacturing engineering, female role models have been a key part of her educational experience.

During an internship at The Boeing Company, Laura formed a relationship with her executive focal mentor, Kay Guse. "Kay is truly a role model to me. I look at her accomplishments in life and am inspired to do great things, too," Laura said.

A 1988 School of Engineering alumna, Kay did not have any female engineering professors in her undergraduate or graduate work. She succeeded, despite the odds. "Every single professor at SIUE just assumed I could succeed, so I did," she said. "It was an amazing atmosphere to get an education."

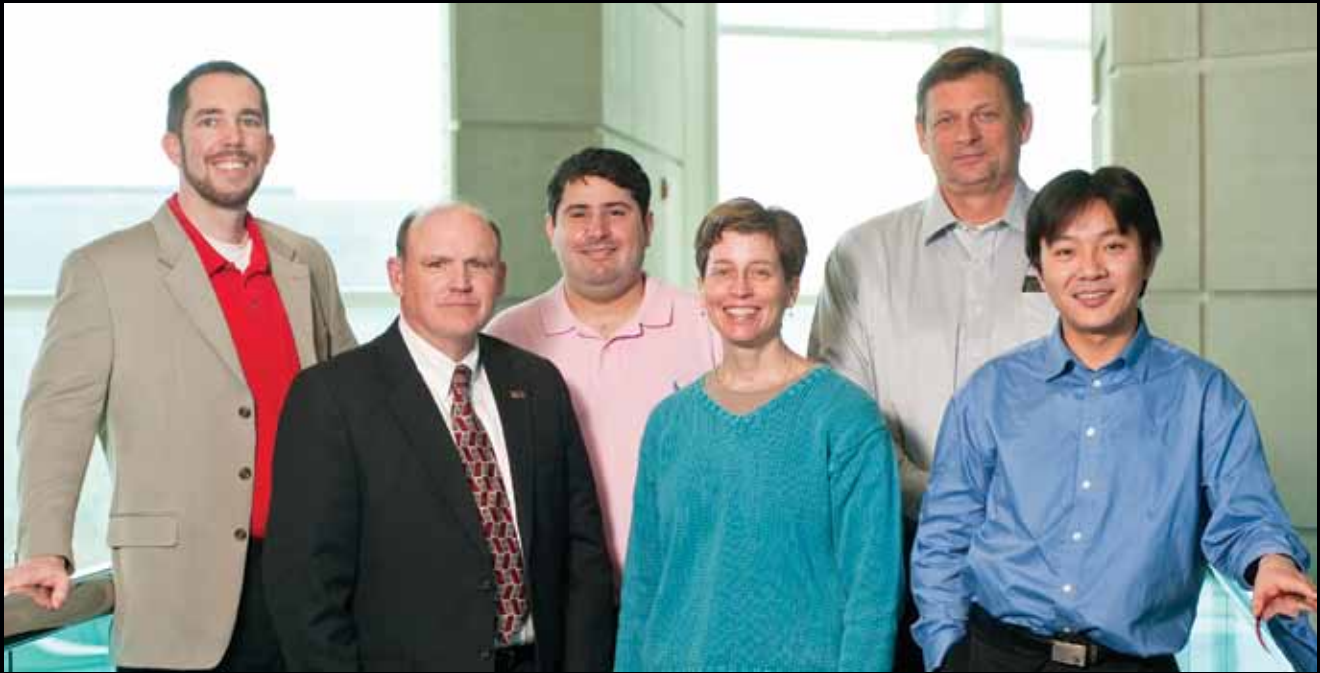
Understanding the impact of a supportive learning environment on female engineering students, Kay is an active participant in Boeing's mentor program and regularly visits St. Louis area K-12 schools to increase female interest in pursuing careers in engineering.



"The most successful women do not give up their priorities and principles for their job, they integrate those principles into their job."

Kay Guse, BS '88
Director of Policies, Procedure and Processes
Engineering, Operations and Technology
The Boeing Co.

Department of Construction faculty members pictured from left to right: Chris Gordon, assistant professor and chair; David Sherrill, instructor and surveying coordinator; Marcelo Azambuja, assistant professor; Anne Werner, assistant professor; Mark Grinter, assistant professor; Jie Gong, assistant professor



A Solid Foundation

Construction leaders are constantly searching for ways to improve productivity, build sustainably and continue industry advancement. As the only undergraduate construction program in the St. Louis Metropolitan area, the SIUE School of Engineering's Department of Construction is actively participating in this process. The department has created a team of top-notch faculty with academic interests, experience and qualifications in emerging management techniques and technologies, and sustainable construction practices.

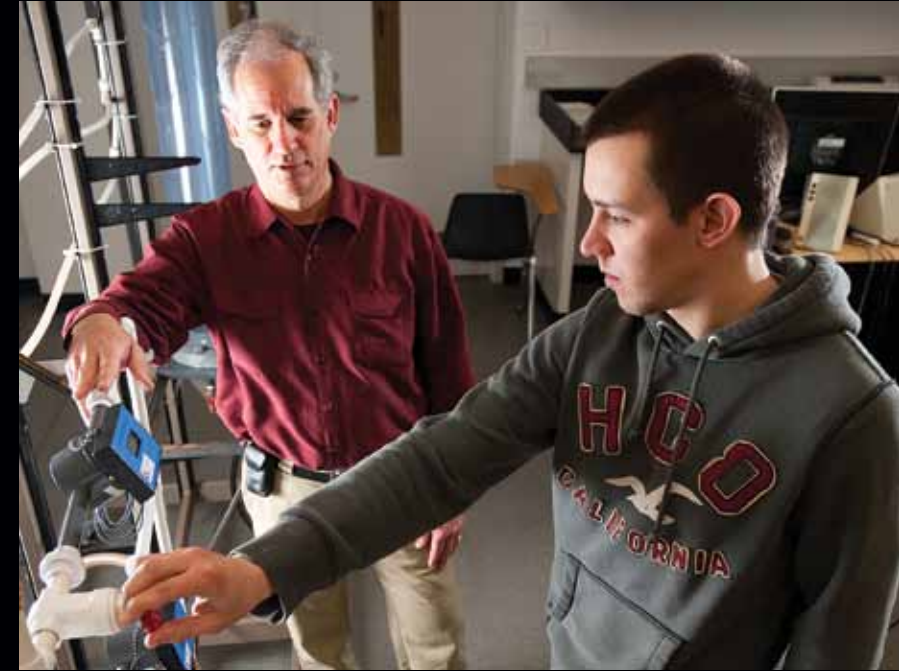
"The industry is changing rapidly, and we recognize that we need to keep pace with these changes," said Chris Gordon, assistant professor of construction and chair of the department. "We have developed a high-value, cutting-edge program that prepares students to be leaders in the construction industry."

■ The construction industry is seeing greater innovation in management practices at the organization and jobsite level. Companies are collaborating and focusing on management techniques to improve their productivity. With more than 15-years in the U.S. Navy and Army Corps of Engineers, Assistant Professor Anne Werner has expertise in leadership and the communication skills needed to succeed in this collaborative business environment. Assistant Professor Marcelo Azambuja has experience in lean construction practices, which focus on eliminating waste in construction processes.

■ "We are going to continue to see a tidal wave of innovation in construction technology," Gordon said. Both Gordon and Assistant Professor Jie Gong are active in implementing information technologies, such as web cameras, laser scanners and building information modeling software on construction sites.

■ There is increased emphasis on incorporating sustainable construction practices and certifying green buildings using Leadership in Energy and Environmental Design (LEED) rating systems. Faculty member Mark Grinter managed the construction of four LEED certified buildings during his more than 20 year career at Korte Construction Co. Grinter and Gordon both are LEED Accredited Professionals.

■ Relatively recent construction innovations, such as laser-guided or GPS-guided equipment control, require advanced surveying knowledge. The School's land surveying specialization prepares students to sit for the Land Surveyor in Training exam, the first step toward becoming a Professional Land Surveyor. Grinter and David Sherrill, surveying coordinator for the department, are both licensed Professional Land Surveyors.



We Learn by Doing

Developing critical thinking skills, connecting classroom knowledge to industry scenarios, making judgment calls, testing ideas and interpreting results are just a few of the benefits of hands-on learning.

Steve Muren, Brent Vaughn, Jeff Croxell and Dennis O'Connor know this first-hand. All SIUE School of Engineering alumni, they work in the various laboratories housed in the School. They are responsible for the students' applied learning experiences, as well as lab maintenance, equipment purchasing and training, and computer support for their respective departments.

■ Muren (*pictured above left*), lab manager in the electrical and computer engineering department, worked as an electrical engineer for more than 20 years before joining the School of Engineering. "Laboratory courses help students see the practical

aspects of what they are learning in the classroom," he said. "I enjoy helping students understand the impact of what they're learning and help them prepare for the workforce."

■ After a dozen years working in telecommunications and other engineering fields, Vaughn (*pictured above right*) had the opportunity to go back to school. He earned a master's in civil engineering from SIUE and worked as a geotechnical engineer for three years. When the need arose for a lab specialist/lecturer in the civil engineering department, he returned to his *alma mater*. "I loved the technical learning opportunities I had as a student," he said. "Now I am able to impact student learning"

■ Croxell became the instructional support specialist for the computer science department while he was working on his graduate degree. "As both a student

and now a staff member, I know that SIUE focuses on students. This is both important and refreshing," he said.

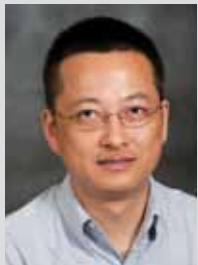
■ "I want to help students understand engineering and care about it as much as I do," said O'Connor, who fell in love with academia as an undergraduate student at SIUE. As a lab specialist in the mechanical engineering department and a student in the School of Engineering cooperative Ph.D. program, he is involved in ongoing industrial research projects that relate to the mechanical engineering curriculum. His goal is to bridge the gap between theory and practice and cultivate a love of learning in his students.



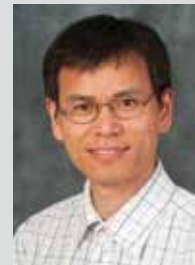
Marcelo Azambuja, Assistant Professor
Department of Construction
Ph.D., civil engineering
University of Texas at Austin
M.S. and B.S., civil engineering
Universidade Federal do Rio Grande do Sul, Brazil
Azambuja conducts research and teaches courses on lean construction, planning and estimating, and supply chain management.



Jie Gong, Assistant Professor
Department of Construction
Ph.D., civil engineering, University of Texas
M.S., civil engineering, Texas Tech University
Gong's areas of interest include the field of information, sensing and computing systems for construction, and infrastructure systems.



Xin Chen, Assistant Professor
Department of Industrial
and Manufacturing Engineering
Ph.D. and M.S., industrial engineering
Purdue University
Chen's research and teaching focus is on optimization, supply chains, information systems, decision science and complex network theory.



Ke Li, Assistant Professor
Department of Mechanical Engineering
Ph.D., mechanical engineering
Michigan Technological University
M.S., National University of Singapore
M.S., mechanical engineering
South China University of Technology
Li was a senior engineer at Schlumberger Technology Center before joining the School of Engineering.



Mark Grinter, Assistant Professor
Department of Construction
M.S., civil engineering, SIUE
B.A., biology, and B.S., environmental planning
Western Washington University
Grinter is a licensed professional land surveyor in Missouri and Illinois and was the assistant vice president for the Korte Co. before joining the School of Engineering.



Gary Mayer, Assistant Professor
Department of Computer Science
Ph.D., computer science, Arizona State University
M.S., computer science, SIUE
B.S., mechanical engineering
Worcester Polytechnic Institute
Mayer teaches courses in simulation and software engineering and has nearly ten years of experience as an active duty U.S. Air Force officer.



Andreas Stefik, Assistant Professor
Department of Computer Science
Ph.D., computer science,
Washington State University
M.S., computer science,
Washington State University
B.A., music, and B.S., computer science,
Central Washington University
Stefik's research interests are in the areas
of program comprehension and computer
programming languages, including the creation
of technology that helps those with visual
disabilities create computer software.



Fengxia Wang, Assistant Professor
Department of Mechanical Engineering
Ph.D., mechanical engineering, Purdue
University M.S. and B.S., Beijing Institute of
Machinery Wang's research focuses on nonlinear
vibrations and flexible multi-body dynamics. She
was employed as a senior research engineer in the
virtual product development technology division
of Caterpillar before joining the School
of Engineering.



Anne Werner, Assistant Professor
Department of Construction
Ph.D. and M.S., civil engineering,
University of Illinois at Urbana-Champaign
M.E., ocean engineering, Texas A&M University
B.S., civil engineering, Missouri S&T
Werner has more than 15 years experience
working in engineering and construction with
the federal government. Her teaching and
research areas focus on construction materials,
construction leadership, team work and
communication skills.



"This year, we added nine more outstanding faculty members to the School of Engineering's already nationally and internationally reputed faculty roster. These junior faculty members bring new knowledge, enthusiasm and energy to the School. They have immersed themselves in teaching and research and generated synergy among themselves as well as with senior faculty. The future of the School looks bright with the addition of the eighteen world-class faculty members who have been hired since 2006."

Hasan Sevim,
School of Engineering Dean

“I would have never expected life to turn out the way it did. A lot of it has to do with SIUE and the opportunities that it provided for me.”

Shelley Niedernhofer



All in a Day's Work

When Tom and Shelley (Mettlach) Niedernhofer graduated from the SIUE School of Engineering in the early '80s, neither knew exactly where life would take them or how impactful their engineering careers would be. “It’s amazing what you can do with an SIUE engineering degree,” Tom said.

Tom ('80 BS, Civil Engineering) is an urban search and rescue program manager for the U.S. Army Corps of Engineers. When the Loma Prieta earthquake struck the San Francisco Bay Area in 1989, Tom did structural assessments on damaged buildings. That was his first experience with emergency response work.

Since then, he has worked on rescue response for Hurricane Andrew, the 1994 Northridge earthquake and other disasters. He was the lead engineer for the night shift at the Oklahoma City bombing, and he worked at the 9-11 World Trade Center disaster site.

Most recently, Tom was deployed to Haiti on a search and rescue mission just days after a magnitude-7.0 earthquake devastated Port-au-Prince on January 12. After several days in Haiti, Tom’s Structures Specialist task force was redeployed with a military unit to assess major structures in Port-au-Prince and outlying areas. They took command of the Hotel Montana in a deconstruction effort necessary to recover bodies.

“What you do at SIUE is the foundation for the rest of your life,” Tom said. “I’ve gotten to travel all over the world, and I’m not done.”

Shelley ('83 BS, Civil Engineering) is a design and construction program manager for the National Park Service. Working closely with Jimmy and Rosalynn Carter, Shelly managed a project which tells the story of how living in rural South Georgia shaped the President’s character.

She has worked hard to develop places for people to have relaxing and rewarding vacations “I have hiked the Grand Canyon rim-to-rim, rafted the Colorado River, flown over and through the Canyon and Lake Meade, and more,” Shelley said. “While doing that, I’ve been involved in an effort to create places where people can find peace and refuge from their everyday stressful lives. It is very fulfilling to know that what I do has an impact on the people of our nation.

“I would have never expected life to turn out the way it did. A lot of it has to do with SIUE and the opportunities that it provided for me,” Shelley continued. “My career has taken me on a path I never could have planned. I guess that goes to show that life happens when you’re busy planning it.”



In His Father's Footsteps

Carl Basler started his electrical career in the '30s by rewiring milk houses and motors working out of his father's garage in Highland, Ill. By the beginning of World War II, Basler Electric was making needed products for the war. When Carl died in 1984, he left a \$50 million business to his son, Bill.

Since taking over, Bill has built Basler Electric into a \$100 million business with more than 1,000 employees. Like his father, Bill reached out to his sons. All three of his sons bring their own area of expertise to the company: Matt is the vice president of engineering, Greg is the vice president of manufacturing and Chris is the chief information officer.

Basler Electric serves the electric power industry with a unique diversification of products including transformers, voltage regulators, excitors, and protective relays for the control and protection of power. With its worldwide headquarters in Highland, the company has facilities in Texas, Mexico, France, China and Singapore.

In the midst of the company's global emergence, Bill remains committed to maintaining a strong presence at home, including a beneficial relationship with the SIUE School of Engineering. Basler Electric has donated time, talent and financial resources to the School through the years. Most recently, Basler engineers worked with a group of SIUE students on their senior design project. "We all benefitted from the experience, and both Basler and SIUE learned about wind farms," Bill said.

According to Bill, the industry/university relationship is a win-win. "It is important to mix industry and education," Bill said. "Through our collaborations, the School of Engineering knows what we are looking for in future engineers. Collectively, we are able to give students a good picture of what they need to be able to do out in the real world.

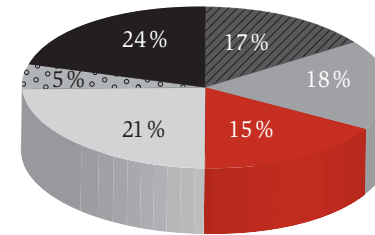
"As a result, SIUE students come to us much more prepared. They bring not only the basic knowledge, but the applied knowledge as well."

Engineering Degrees

The SIUE School of Engineering offers a comprehensive collection of professionally accredited engineering programs:

Civil Engineering – BS, MS
 Computer Engineering – BS, Minor
 Computer Science – BA, BS, MS, Minor
 Construction Management – BS, Minor
 Electrical Engineering – BS, MS, Minor
 Industrial Engineering – BS, MS, Minor
 Manufacturing Engineering – BS, Minor
 Mechanical Engineering – BS, MS, Minor
 Engineering Science – Ph.D.
 (collaborative program with SIUC)

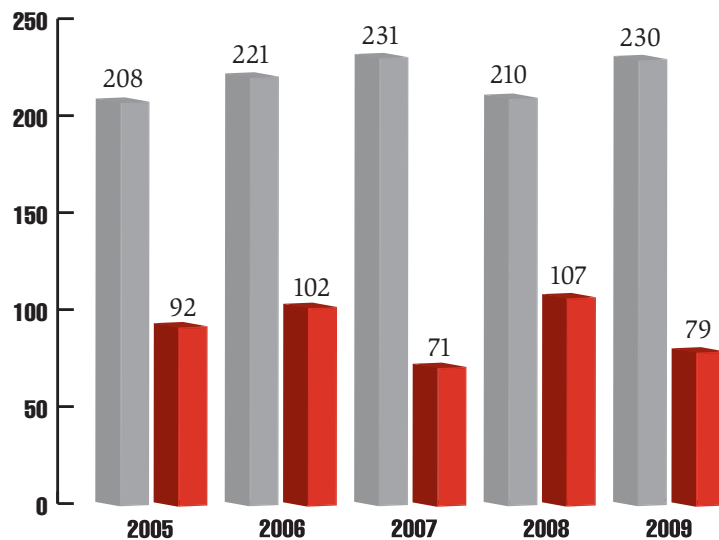
2009 School of Engineering Undergraduate Enrollment by Program



- Civil Engineering - 17%
- Computer Science - 18%
- Construction - 15%
- Electrical and Computer Engineering - 21%
- Industrial and Manufacturing Engineering - 5%
- Mechanical Engineering - 24%

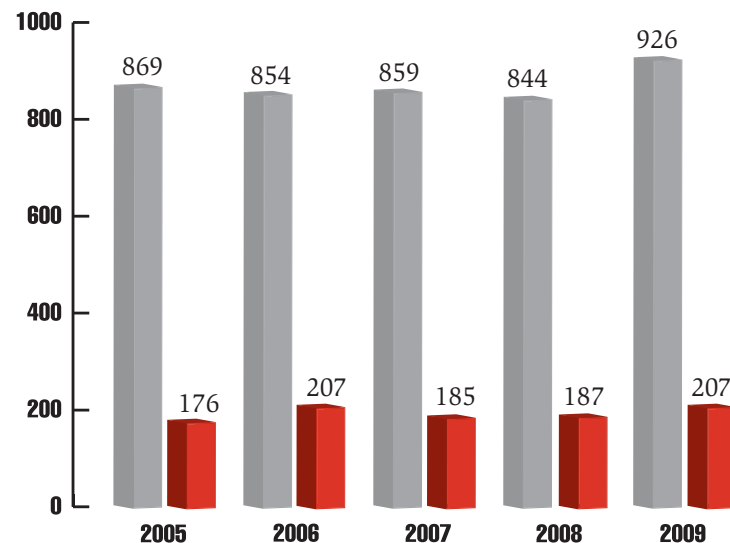
School of Engineering Graduate Students Enrollment and Graduation

■ Total Enrollment ■ Graduation



School of Engineering Undergraduate Students Enrollment and Graduation

■ Total Enrollment ■ Graduation



The Positive Impact of Partnerships

The School of Engineering Industrial and Professional Advisory councils and the Industrial Advisory Board support the School in several ways. They help the School meet the constantly changing landscape of engineering education, provide student-internship opportunities, help assess strengths and weaknesses of current curriculum, bring contemporary issues and directions to the attention of the administration and faculty, help students develop employment contacts and add credibility to the engineering programs.

School of Engineering Industrial Advisory Board

<i>Willem F. Bakker</i> Executive Director Information Technology Coalition of Innovate St. Louis	<i>Todd Korte</i> President & CEO The Korte Co.
<i>Mike Blakey</i> Assistant Operations Manager Process Support Anheuser-Busch Cos.	<i>Rich Oller</i> President Oller Engineering
<i>Paul J. Galeski</i> Chairman & CEO Maverick Technologies	<i>Jeff Pitts</i> General Manager Anheuser-Busch Cos.
<i>Kay Guse</i> Director EO&T Policies, Procedures & Processes The Boeing Co.	<i>Robert A. Roseman</i> President Ehrhardt Tool & Machine Co. Inc.
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