THE IOWA FLOOD CENTER:
Understanding and withstanding floods
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On the cover and on page 2:
IIHR engineer Dan Ceynar installs a stream sensor, one of 50 on bridges statewide.

Right:
The Iowa Flood Center's Google-based flood maps illustrate the extent of flooding under different conditions (at right, in Des Moines).

Photos and maps courtesy of IIHR

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Every hurricane season when mighty ocean-bred storms build and sweep toward the United States, the National Hurricane Center in Miami, Florida becomes a beacon of information for coastal residents, concerned citizens, policy makers, and researchers. Created at the end of the 19th century, the center is located on the campus of Florida International University and charged with predicting and tracking the behavior of tropical depressions and hurricanes. But when rain and snowmelt cause inland lakes and rivers to swell, no comparable national center exists to provide information to downstream homeowners and municipalities at risk from rising water.

The Iowa Flood Center is about to change all that.
Established in 2009 and based at the University of Iowa’s world-renowned IIHR-Hydrosience & Engineering research institute, the advanced flood research center describes and monitors river basins, predicts flood potential, and educates policy makers and the public about the causes and nature of flooding in the state. Launched with $1.3 million of state appropriations, the center is led by Witold Krajewski, Rose and Joseph Summers Chair in Water Resources and Professor of Civil and Environmental Engineering.

The idea to establish a center arose from the floodwaters that roared through the UI campus in 2008, inundating more than a dozen buildings, including the C. Maxwell Stanley Hydraulics Laboratory.

“As we were leaving the building, Professor Krajewski and IIHR director Larry Weber were saying, ‘We have to collect data on this,’” says flood center managing director Carmen Langel.

Historically, the institute focused its research on river systems around the world, with little emphasis on Iowa. The 2008 flood, however, profoundly affected the University of Iowa campus, and Weber and other IIHR researchers became critically important resources for UI administrators, public safety officials, governor’s office, legislators, policy makers, the National Guard, and the public. With all eyes on the institute, Weber and his colleagues seized the moment and created a unique research center to study floods and flooding.

“Working with the general public and sharing our resources has been one of the most rewarding aspects of the Iowa Flood Center,” Weber says. “We are delighted to be able to help Iowans and others better understand and improve their resiliency to floods.”

“Our vision for the center has been to shorten the path between research and application,” notes Krajewski. “Traditionally, researchers get an idea, write a proposal, conduct a few trials, gather and analyze data, and write papers that a few of their colleagues may read. Even if a researcher comes up with an exceptional idea, it may be years before someone might actually act on it. But in the center, the creators of ideas and producers of research work with collaborators to also be the implementers of the fruits of that research.”

Krajewski describes the 2008 flood as “a nice challenge for us.” In between sandbagging and moving the contents of their offices to their homes, IIHR researchers collected data on water levels, contaminants, and flood patterns. During the twelve weeks when the building was vacated, they brainstormed a framework for the new center and began contacting potential funding sources. The researchers returned to the building with outlines of the new center in place and newly formed partnerships with UI colleagues across campus. By the first anniversary of the flood, the team also had garnered a half-million dollars.

The Center relies on about twenty undergraduate and graduate students, some of whom designed a relatively inexpensive stream-level sensor that uses sonar to measure river levels. Attached to the side of a bridge, the sensor measures the distance from the device to the water surface every fifteen minutes and then transmits the data via cell phone to a central database.
dollars of National Science Foundation funds for flood-related research and secured first year funding of $1.3M for a new Iowa Flood Center. Today the center’s work is supported by more than $20 million in state and federal grants.

Despite its infancy, the Iowa Flood Center has already managed to launch a number of significant projects that will help Iowans better predict and prepare for floods. The Floodplain Mapping Project, for instance, will develop floodplain maps for the 85 Iowa counties declared federal disaster areas following the 2008 floods. In collaboration with the Iowa Department of Natural Resources, the center will use LIDAR (laser radar) data to develop highly accurate digital elevation models of the land surrounding stream networks draining one square mile or more. The researchers will describe the river networks and develop computer models to simulate flood potential.

“It’s an exciting project,” IIHR research engineer and project manager Nathan Young says. “We can resolve data down to particular hill slopes, which will help us predict runoff and the route of water as it flows through a basin. The maps can be used by individuals, policy makers, and public officials to help guide decisions about land use and management.”

Langel adds that “these maps will be powerful tools for decision makers because any drop of water that falls in one of those basins has the potential to flood someone downstream.”

Center researchers collaborate with UI colleagues in geography, mathematics, public policy, and law, as well as partners at Iowa State University, the National Weather Service, the National Oceanic and Atmospheric Administration, and communities throughout Iowa. The center also relies on about twenty undergraduate and graduate students, some of whom designed a relatively inexpensive stream-level sensor that uses sonar to measure river levels. Attached to the side of a bridge, the sensor measures the distance from the device to the water surface every fifteen minutes and then transmits the data via cell phone to a central database. The student-designed project was funded by the Iowa Department of Natural Resources, which hopes to expand the pilot project into a statewide reporting system.

One of the goals of the Iowa Flood Center is to attract new, talented researchers to the University, including those interested in the science and public policy surrounding issues of sustainability. As center researchers work to better understand the behavior of water in river basins, they also seek to better educate the public about flood risk.

The Iowa Flood Center is unique in the world, but floods can happen anywhere, and researchers hope the work they do here will have an impact wherever people are at risk from rising waters.

“The scope of the problem of floods and flooding is very broad,” Krajewski says. “With excellent collaborators and the right funding, we will be busy for many years to come.”
In some schools, a 37 percent increase in undergrad students can be seen as a good news/bad news scenario. At the University of Iowa, that increase is considered good news, great opportunity for students, and a chance to grow the engineering program even further.

*Above: A busy night of studying and fun.*

*Right: Hannah Taylor teaches circuits.*
“We’re not just admitting more students,” interim dean Alec Scranton says, “but creating new curricular and programmatic opportunities that didn’t exist. The college is adaptable, so we can meet new challenges, and we are delighted to accommodate the additional students.”

While some of the increased interest in engineering can be attributed to the recent recession, Scranton notes that several factors specific to Iowa have attracted and retained a record number of students to the college.

“We have greatly enhanced our outreach and recruitment efforts in recent years,” he says, “and our excellent facilities enable the high-quality teaching and research that goes on here. Curriculum redesign continues to provide the best learning opportunities for 21st-century engineering students at Iowa.”

“The increase in enrollment is really exciting,” says associate dean for academic programs Keri Hornbuckle. “The quality of Iowa engineering students remains very high, and there’s a lot of positive energy about the increase.”

In essence, the college is educating more students more effectively. In the Big 10 college that prides itself on its small-college atmosphere, the recent uptick in first-year students has sparked a number of changes to maintain the best student experience. Rather than significantly increase class size, faculty members volunteered to teach additional lectures, and highly qualified adjunct lecturers and teaching assistants lead additional discussion sections, whose enrollments have remained around 30 students for a number of years. Experiential learning continues to be a critical facet of UI engineering students’ educational experience—85 percent participate in research, co-ops, internships, study abroad, or the new Engineering Grand Challenges Scholars Program.

One of the most dramatic changes has occurred in the Student Development Center which provides direct student support, particularly academic advising, tutoring, and scholarships for first-year students. Anticipating an increase in enrollment, center staff members created two significant opportunities for students to connect with the college.

“We have a really great team here,” director of records and retention Megan Allen says, “and we put together a series of workshops that students seemed to like. The workshops address everything from how to manage stress, to strategies for obtaining scholarships, to making informed curriculum decisions.”

In addition to offering workshops, the center also dramatically enhanced the nature of academic support in the college by providing additional space, new hours of operation, and increased academic support staff. Students now flock to the Student Development Center, making good use of the additional space and staff.

“We average about 45 students per night,” she says, “and before a big exam, that number swells to 60 or 70. And it’s
not just first-year students; we’re seeing a substantial increase in the number of upper-division students who are coming in seeking help.”

Allen and her colleagues—Nancy Schneider, and Kelli Delfosse—address questions about curriculum planning and professional development. In addition, 35 student tutors answer academic questions. Allen hires sophomore, junior, and senior student tutors based on their academic success and teaching skills. And how does she know how well they can teach?

“When students come in for help, I listen to how they work with their peers, articulate questions, and solve problems,” says Allen, who was one of two recipients of the University’s 2011 Lola Lopes Award for Undergraduate Student Advocacy in recognition of her support of undergraduate students. “That gives me a good idea of who might be a good peer tutor in the future.”

She adds that having students work in groups with a variety of tutors is a “fantastic way for students to learn that a problem can be tackled from an array of perspectives”—an approach that underscores the team-based problem-solving skills so critical to the profession.

While the new tutoring space carved out of the Student Development Center is a welcome resource, Allen says it can be very noisy during the evening hours when students are working cheek-by-jowl at the tables. In general, however, students seem so focused on solving the problems in their own groups that the noise doesn’t seem to distract them. If it does, or if students want a consultation one-on-one or regular small-group support, the Center also provides small break-out rooms.

In addition to effective tutoring space, the relaxed, student-directed setting also offers opportunities for students to meet others who share their academic and professional goals. “They don’t have to make an effort to make friends,” Allen says, “it just happens.

“We think it’s created a whole new atmosphere,” she adds, “with more students and a broader range of students coming in for peer tutoring and staff advising. Many engineering students never had to ask for help in high school; we’re showing them that they can learn more deeply by learning to ask questions and brainstorm answers with help from us and their peers.”

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Megan Allen, director of records and retention
Above left: Christopher Taylor McClendon works out a problem.

Above: Doug Nguyen.

Left: Michael Sealy helps a student understand chemistry.
Students on Scholarship

During homecoming weekend each fall, the UI Foundation hosts a scholarship luncheon inviting engineering scholarship donors and scholarship recipients. Last October’s event recognized 91 individual donor scholarships and almost 270 scholarship recipients.

Some scholarships were endowed long ago and the donor has left a legacy that supports many students. For example, the late Fred Stebler of Riverside, CA, established an endowment fund in 1959 for scholarships. Due to successful management over time, 36 engineering students received Fred Stebler Scholarships for this academic year.

Other scholarship funds established in the recent past allow donors to meet with the student recipient. Ethan Guio, senior in chemical engineering, has twice been awarded the William Liike Scholarship.

William Liike (BSchE 1955) feels particularly fortunate to be able to provide financial support for Ethan. He writes, “I have been able to meet and interact with Ethan during the past two years. To me it has been very gratifying to track his progress toward obtaining his degree and his anticipation of obtaining his first job. I have taken pleasure in sharing highlights of my professional career as well as many of my life experiences with Ethan.”

Ethan, as well, has enjoyed the relationship with Liike. They have exchanged emails over the past two years and when Liike is in town, they get together for dinner. “Getting to know Mr. Liike the past two years has been a great way to get professional guidance from someone with years of industry experience. Every time we get together he always has a lot of advice about where jobs will be coming from in the future and what will be the important fields in chemical engineering in the future. Also, it seems he has a lot of fun at retirement age and his optimistic attitude is contagious.”

Scholarships play a vital role in attracting and retaining quality students. With increasing number of students each fall, the need for scholarship funds is also increasing. Of the 459 incoming freshman last fall, 67% received at least one University of Iowa or College of Engineering merit scholarship. Scholarships also come from corporate partners and a myriad of outside sources. All scholarships contribute to students becoming the engineer...and something more.

“Every time we get together he always has a lot of advice about where jobs will be coming from in the future and what will be the important fields in chemical engineering in the future.”

Ethan Guio, senior in chemical engineering
Engineering Faculty, Staff Generate $50.9 Million in FY 2010 Research

University of Iowa faculty generated impressive growth in extra-mural support in fiscal year 2010. Total external funding achieved—yet another all-time record—is $466.5 million, which represents an impressive 9 percent increase over 2009 and continues a trend of increases that has almost doubled annual award dollars within a decade.

The College of Engineering total came to $50.9 million—a 141 percent increase over FY 2009.

Among leading university individual faculty and staff members driving the funding are 11 with primary appointments in the College of Engineering. They are:

Larry Weber, $15,273,204
Nathan Young, $10,257,590
Jon Kuhl, $4,024,800
Fred Stern, $2,471,867
P. Barry Butler, $2,362,117
Karim Abdel-Malek, $2,162,117
Thomas Schnell, $1,428,505
Mani Subramanian, $1,386,956
Milan Sonka, $1,178,758
Gregory Carmichael, $1,150,286
Timothy Brown, $1,049,861

UI Receives $2.6 Million Grant for Geoinformatics Program

The University of Iowa received a $2.6 million grant for graduate student fellowships in a new interdisciplinary program, Geoinformatics for Environmental and Energy Modeling and Prediction (GeoMaP). Students enrolled in the program will learn to use advanced computational methods to address real-world problems in environmental science and energy production. Students in six departments, including civil and environmental engineering and industrial engineering can apply to the program.

Engineering Staff Advisory Council Installs World Flag Display

The Engineering Staff Advisory Council installed a permanent display of world flags in the student commons area. The flags represent the home nations of students, faculty, staff, and alumni of the College. The program was supported by the UI Catalyst Seed Grant, the Coca-Cola Fund, Ethnic Inclusion Effort for Iowa Engineering, Center for Computer-Aided Design, a “Sponsor-a-Flag” pledge drive and UI Laundry Services.

A memorial service was held July 30 for Geoffrey McLennan, professor of internal medical, radiology, and biomedical engineering and co-director of Iowa Institute for Biomedical Imaging. McLennan was a pioneer in the area of computer-assisted bronchoscopy including methods for virtual guidance, in-vivo microscopy. He served as chair of the National Institutes of Health Lung Image Database Consortium. He was a long-standing researcher in emphysema, lung cancer, sarcoidosis and asthma.

Former professor (1967–1992) and departmental executive officer (1982–1992), C. J. Chen, announced his retirement as dean of the Florida A&M University — Florida State University College of Engineering after 19 years of service. He is credited with combining a research I university with a historically black undergraduate college and transforming the program to a balanced Bachelor, Master and Doctoral degree granting college. Florida A&M University is one of the top five producers of BS minority engineers in the nation.

Karl Lonngren, professor of electrical and computer engineering, retired in December after 28 years with the College.

Alec B. Scranton, University of Iowa Foundation Distinguished Professor, associate dean of academic programs and professor of chemical and biochemical engineering, was appointed interim dean of the College of Engineering.

Lea-Der Chen, departmental executive officer and professor of mechanical and industrial engineering, retired in July after 28 years with the College.

Keri C. Hornbuckle, departmental executive officer of civil and environmental engineering, was named associate dean for academic programs for the College of Engineering, effective November 1.

Michelle Scherer, was appointed departmental executive officer of civil and environmental engineering, effective December 17.

Recognitions

The following were appointed Donald E. Bently Faculty Fellows of Engineering:

C. Allan Guymon, professor of chemical and biochemical engineering

Thanos Papanicolaou, professor of civil and environmental engineering and faculty researcher in environmental engineering at IIHR—Hydroscience and Engineering

The following were appointed Robert and Virginia Wheeler Faculty Fellows of Engineering:

Michelle Scherer, professor and departmental executive officer, civil and environmental engineering

Xiadong Wu, associate professor of electrical and computer engineering and radiation oncology

The National Research Council (NRC) rated three UI College of Engineering doctoral programs in the top one-third in the country. The highest-rated programs were electrical and computer engineering, industrial engineering and mechanical engineering.

Ho Seop Eom, doctoral candidate, won the 2010 Doh Wonsuk Memorial Award. The award is sponsored by the U.S. Chapter of the Korean Institute of Chemical Engineering.

John Forys, head of the Lichtenberger Engineering Library, received the 2010 Arthur Benton Excellence in Reference Services Professional Development Award.

Vicki Grassman, professor of chemistry and chemical and biochemical engineering, was named a Fellow of the Royal Society of Chemistry. She was also named a Fellow of the American Vacuum Society, a nonprofit scientific member society of the American Institute of Physics.
Craig Just, adjunct assistant professor and coordinator of the College’s sustainability program, was selected to receive the 2010 David J. Skorton Award for Staff Excellence in Public Service.

Witold Krajewski, Rose and Joseph Summers Chair in Water Resources Engineering, was one of six UI faculty members to win the 2010 Regents Award for Faculty Excellence.

Michelle Scherer received the Malcolm Pirnie/Association of Environmental Engineering and Science Professors Frontier in Research Award in October.

Grants and Contracts
P. Barry Butler and team members Albert Ratner, assistant professor of mechanical and industrial engineering, and Ferman Milster, associate director, utilities and energy management, received a one-year, $951,000 U.S. Department of Energy grant to increase the amount of green energy produced at the UI’s Oakdale Renewable Energy Plant and to develop a “UI Green Power Initiative.” The project will integrate undergraduate and graduate-level teaching through classroom studies, experiential learning and applied research to develop a biomass-based, university-scale functioning power plant.

Sharif Rahman, professor of mechanical and industrial engineering, received a three-year, $272,286 grant from the National Science Foundation for studies in stochastic optimization of large-scale complex systems. Potential engineering applications from the research include the design of nano-electro-mechanical systems, vehicle design for improved durability, and fracture-resistant design for civil and aerospace applications.

Thanos Papanicolaou, Donald E. Bently Faculty Fellow of Engineering, associate professor of civil and environmental engineering, and researcher at IIHR—Hydroscience & Engineering received a three-year $642,000 federal grant through the University of Northern Iowa to study agricultural soil erosion and the carbon cycle in Iowa. The project, involving collaboration between the UI, the University of Northern Iowa and the USDA National Laboratory for Agriculture and the Environment, investigates how soil erosion may be threatening climate mitigation policies within the state.

Lectures and Presentation
In November, Greg Carmichael, Karl Kammermeyer Professor of Chemical and Biochemical Engineering, and associate dean of graduate programs and research, was one of 300 invited scholars to attend the annual Beijing Forum. While there, he participated in a 15-member international scholars panel titled, “Addressing Global Environmental Challenges: Policies and Actions.” Carmichael delivered the keynote address at the International Environmental Cooperation Symposium, November 9, in Fukuoka, Japan. The address focused on the need for new frameworks for environmental cooperation between China, South Korea, and Japan.

The National Advanced Driving Simulator exhibited the NADS MiniSim™ at the first USA Science and Engineering Festival held October 23-24 in Washington, D.C. and at the 101st annual meeting of the Mississippi Valley Conference of State Highway and Transportation Officials, held July 7-9 in Des Moines, IA.

Publications and Creations
Karim Abdel-Malek, professor of biomedical engineering and director of the Center for Computer-Aided Design, presented the Virtual Soldier Research program at the Institute for Defense and Government Advancement’s (IDGA) Future Ground Forces Summit held September 20-22 in Washington, D.C.

An NSF funded research study by Greg Carmichael, Karl Kammermeyer Professor of Chemical and Biochemical Engineering, and colleagues was published in the July 25 issue of the journal Nature Geoscience. The study shows that increasing the ratio of black carbon to sulfate in the atmosphere increases climate warming.

Andrew Kusiak, professor and departmental executive officer, is co-editor of a new textbook titled Green Energy and Technology: Wind Power Systems—Applications of Computational Intelligence. Kusiak was named vice-chair of a new formed task force on Smart Grid within the IEEE Computational Intelligence Society.

Longevity Awards
Sudhakar Reddy, professor, celebrated his 70th birthday surrounded by current and former students. UI alumni joining in the celebration were Dong Sam Ha, professor of electrical and computer engineering, Virginia Tech; Kewal Saluja, professor of electrical and computer engineering, University of Wisconsin-Madison; Jon Kuhl, professor of electrical and computer engineering, The University of Iowa; Srinivas Patil, Intel Corporation, Austin, TX; Vijay Kumar, president, VPK Enterprises LLC, Holmdel, NJ; Yu Huang, Mentor Graphics, Boston, MA; and Fan Yang, LSI Corporation, Milpitas, CA.

Christopher Fomon and David Funk of Computer Systems Support were recognized in July for 25 years of service to The University of Iowa. They each received a certificate and letter of appreciation from the Office of the President.
1940's

Thomas Daniels (BSEE 1948) became a member of the Wall of Honor for the InfoAge Science History Learning Center and Museum on September 25 at historic Camp Evans, New Jersey—a former military base associated with Fort Monmouth. Daniels is the former director and deputy director of the combat surveillance and target acquisition laboratory while at Fort Evans. In January 1988, Daniels published an article in the Journal of the NTA on “Black scientific and engineering contributors to the U.S. Army at Fort Monmouth, N.J.”

The Environmental and Water Resource Institute (EWRI) is honoring Margaret S. Petersen (BSCE 1947, MS 1953) with the establishment of the Margaret Petersen Outstanding Woman of the Year Award. The award honors the life-long professional accomplishments of Ms. Petersen.

Edward Schneckloth Hill (BSME 1943) of Sherman Oaks, CA, a retired project market engineer from Lockheed in Burbank, Calif., is author of the science-fiction novel Whence We Came.

1960's

S.K. Nanda (MS 1968), member of the Distinguished Engineering Alumni Academy was featured in the October 19, 2010, Quad Cities Online for his illustrious career with the U.S. Army Corps of Engineers. During his 40-year career, Nanda became nationally known in the field of hydraulics and design of water resources projects. Nanda joined the hydraulics branch of the Corps as a hydraulic engineer in 1968 and was heavily involved in the design of flood protection projects in Bettendorf, Clinton, and Waterloo, Iowa, and Rockford, IL. He became nationally known for developing the probabilistic method for design of interior flood-control projects, which is part of the Corps engineering manual today. After The Great Flood of ’93, he was appointed to the interagency White House Scientific Assessment and Strategy Team. His work brought commendations from Maj. Gen. Stanley Genega and then-Vice President Al Gore. He received all five U.S. Army Civilian Service Medals.

Dick Stanley (MS 1963) and his wife, Mary Jo, were named the first recipients of the University of Iowa International Impact Award. UI President Sally Mason presented the award on November 2, 2010, at the University's 2010 International Education Week. The award was created to recognize distinguished alumni, friends or other individuals who've made important international contributions that benefit Iowans.

1980's

Gary Ashland (BSE 1985) of PEO STRI, Orlando, FL, has worked the past two decades for the US Army for simulation systems that are Laser based for testing/training purposes. He continues to achieve his goal made in April 1990 to wakeboard every month of the year. Upon receipt of his note, he was over 245 consecutive months.

Robert Cooley (BSME 1980) is senior engineer-commercial products at Deere & Company, Grovetown, GA.

Gregg Machetta (BSE 1988, MS 1990) has been appointed manager-industrial and systems engineering, Ag & Turf Division, for Deere & Company, Moline, IL. Machetta also has the lead role for organizing the UI Engineering recruiting team for Deere.

1990's

Choong Han Chu (BSE 1991, MBA 1993) is a project manager with the development and construction of renewable energy projects in Australia.


Shane Ellickson (BSE 1995) of Shoemaker & Haaland Professional Engineers passed the exam for structural engineer II.

Jeremy (BSE 1997) and Kate (BSE 1999) Fortier of Indianapolis, IN, are co-captains of the Kooky Ketones Stepping Out for Diabetes Team. This is the sixth year for the team to participate having raised over $22,000 for the cause.

Laura Frey Law (BSE 1990), assistant professor of physical therapy and rehabilitation science at the UI Carver College of Medicine received the Eugene Michels New Investigator Award from the American Physical Therapy Association (APTA) in June. She was honored for her independent research in musculoskeletal pain and fatigue.
Amanda Mikhail (BSE 1999) has been appointed to the College of Engineering Advisory Board. Mikhail is manager, midrange systems, mechanical and thermal development at IBM Corporation, Rochester, MN. She also serves on the UI Mechanical and Industrial Engineering Advisory Board.

Steve Mitchell (BSE 1998, MS 2000, PhD 2004), founder of Componica LLC, was featured in the October 2010 issue of Iowa Alumni Magazine.

**2000’s**

David J. Atkinson (BSE 2006) is an account manager at Molex.

Avery Bang (BSE 2007) is director of operations for Bridges to Prosperity. She was instrumental in coordinating the UI students participation in the Zambia bridge project. Avery was recently named to ASCE's 2011 New Faces of Civil Engineering.

Eric J. Dean (BSE 2006) is a staff engineer at Manhard.

Mike Depierro (MS 2004, PhD 2006) is a coating technologist at SABIC Innovative Plastics, Evansville, IN.

Tony Dusek (BSE 2005) is a software test specialist at Research in Motion.

Andy Ewald (BSE 2008) is decontamination engineer at Edgewood Chemical & Biological Center, US Army Research, Development, and Engineering Command, Rock Island Arsenal, IL.

Joe Friedrich (BSE 2002) is senior quality manager at Boston Scientific.

Andrew Kern (BSE 2008), graduate assistant in the department of orthopaedics UIHC, is first author of the award-winning podium paper, “Equivalence of elastic contact and finite element models of patient-specific contact stress exposure in the human ankle,” presented at the i-FAB 2010 Seattle 2nd Congress of the International Foot and Ankle Biomechanics Community, held September 16-18 in Seattle, WA.

John Loperfido (PhD 2009) received the Graduate Dean’s Distinguished Dissertation Award for 2010. The title of his thesis is “High-frequency sensing of Clear Creek water quality: mechanisms of dissolved oxygen and turbidity dynamics, and nutrient transport.” The award is made only in occasional years and recognizes exceptionally meritorious scholarship.

Kevin McWhorter (BSE 2008) is fleet performance and diagnostic center leader at NextEra Energy Resources, West Palm Beach, FL.

Kevin Meredith (BSE 2001) of Arlington, VA, is a technical account manager for Microsoft Corporation serving various agencies within the Department of Homeland Security.

Scott E. Nielsen (BSE 2009) is a mechanical engineer at Electroimpact.

Anna Powell (BSE 2008) is production scientist I at Integrated DNA Technologies, Coralville, IA.

George Reins (MS 2008) is a mechanical associate at Sargent & Lundy.

Robert S. Smith (BSE 2006) is a consultant at Accenture.

Elizabeth Theobald (BSE 2008) is an engineer at Cook Medical, Bloomington, IN.

Thaddeus Thomas (BSE 2004, MS 2007) received the Clinical Biomechanics Award at the 34th annual meeting of the American Society of Biomechanics. His presentation was entitled “Virtual pre-operative reconstruction planning for comminuted articular fractures,” co-authored by Donald D. Anderson, J. Lawrence Marsh, and Thomas D. Brown and by Andrew R. Willis (University of North Carolina at Charlotte).

Ross Turbiville (BSE 2008) is an applications engineer at Emerson Process Management.

Soumik Utkil (PhD 2006) is a systems software engineer at TeraRecon, Inc.

Mike Walters (BSE 2006) is a manufacturing engineer at Lozier Corporation.

Craig Winn (BSE 2005) of Shoemaker & Haaland Professional Engineers has attained the status of professional engineer.

Dr. Jingzhou “James” Yang (PhD 2003) an assistant professor of mechanical engineering and the director of the Human-Centric Design Research laboratory at Texas Tech, is developing computer-based human simulations that aid in the development of products, vehicles, safety devices, and procedures.

**2010’s**

Eric Burknap (BSE 2010) is manufacturing engineer at Valen Biosciences, Libertyville, IL.

Jamie Cecil (BSE 2010) who served as a teaching assistant in engineering and the president of the UI chapter of Omega Chi Epsilon now works with General Mills in Murfreesboro, TN.

Thomas Ferris (BSE 2003) is an assistant professor, Industrial and Systems Engineering at Texas A&M University.

Samantha M. Lane (BSE 2005) received her M.B.A. from the University of Iowa last May. She is a Senior Financial Analyst with Kraft Foods in Chicago. She serves on the College of Engineering Young Alumni Advisory Board.

Dustin Tardiff (BSE 2010) is attending the University of South Carolina’s International Masters in Business Administration Program.

Matt Zanker (BSE 2008, MS 2010) has been appointed a performance engineer with Cummins Engine in Columbus, IN.

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IN MEMORIAM

1930's

1940's
Basil J. Hunter (MS 1941) of Edwardsville, IL, February 1, 1999.
Elmer M. Bruce (BSME 1948) of Cedar Rapids, IA, September 2, 2010.
Phillip E. Moorhead (BSEE 1949) of Marion, IA, October 4, 2010.
Darrell M. Schumacher (BSCE 1941) of Cedar Rapids, IA, August 21, 2010.
Harold W. Wolf (BSCE 1949) of Austin, TX, April 15, 2009.

1950's
Irvin E. Faber (BSEE 1959) of Moravia, IA, October 30, 2010.
James W. Gerlich (BSCE 1950) of Cedar Rapids, IA, October 26, 2010.

1960's

1970's
Chandra K. Arora (MS 1972) of Fairfax Station, VA, June 19, 2010.

1980's

1990's

From the Foundation

In this edition of Iowa Engineer, we are informed about our record enrollment numbers last fall and how the college is working to accommodate the increased growth. Along those lines, an effort to increase the number of women in the college is already underway.

Kelly Ortberg, UI graduate and executive vice president for Rockwell Collins Government Systems, recently donated $50,000 to the college to recruit and retain undergraduate females interested in engineering. Ortberg established the Carol M. Ortberg Memorial Scholarship as a tribute to his mother who recently passed away. When he inquired about creating a scholarship in her memory, he noted that he hoped his gift would help young women enter the engineering field and earn their degree. I was thrilled to assist him with this remarkable tribute.

Student support, particularly through endowed scholarships, is vital to recruiting top-notch students to the College of Engineering. And a big part of my job entails working with alumni and friends of the college to match their giving interests with the needs of the college. Ortberg—and so many others—choose to support the college in this way because they value the education and experience the UI provides, and want to offer that same opportunity to future generations.

Providing financial assistance to talented UI students who are pursuing a degree in engineering is a top priority of the college. Private gifts also support faculty, research, and other resources that will give these future engineering leaders a remarkable Iowa experience.

To learn more about The University of Iowa Foundation, and how gifts from alumni and friends support students and faculty in the UI College of Engineering, please visit www.uifoundation.org/engineering or contact me at kate-metcalf@uiowa.edu, (319) 335-3305 or toll-free 800-648-6973.

Kate Metcalf
Director of Development for the College of Engineering
University of Iowa Foundation
Butler Named UI Provost

University of Iowa President Sally Mason has named Barry Butler executive vice president and provost effective May 17, pending formal approval by the Iowa Board of Regents.

Butler, who has served in the role on an interim basis since November, was dean of the College of Engineering from 2000 until his appointment as interim executive vice president and provost last November.

“I can’t think of anyone better suited to this position or more committed to The University of Iowa than Barry Butler,” Mason said in making the announcement. “As dean of the College of Engineering, interim provost, and as a world-class engineer and educator, Barry has my every confidence that he will be an excellent leader of our institution’s faculty and academic programs.”

As provost, Butler is responsible for more than 100 academic programs in the university’s 11 colleges, oversees the Division of Continuing Education, the UI Library and Museum of Art, and is responsible for a general education fund budget in excess of $440 million. He will be instrumental in advancing the university’s strategic plan, is responsible for coordinating the academic components of the arts campus rebuilding effort, and provides leadership in the university’s recent cluster hiring initiatives in water sustainability, aging mind and brain and digital public humanities.

For more information on Butler’s appointment, go to http://www.engineering.uiowa.edu/news/newsDetail.php?newsID=744

A New Tradition

The first annual “Party after the Parade” was held October 1. Following the Homecoming Parade, alumni, faculty and staff, friends of the College and their families headed to the Seamans Center to enjoy carnival games and refreshments. Herky, the baton-twirling golden girl and members of the Hawkeye Band stopped by to provide a rousing rendition of the Iowa Fight Song and other favorites.

Join us for the 2011 “Party after the Parade” on October 21, 2011, at the Seamans Center.