The right people; the right place. The right time.

Biomedical Engineering at 40

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The right people; The right place; The right time.
When Joe Reinhardt talks about the “natural synergies” that characterize the UI College of Engineering’s biomedical engineering program, an aerial map of the UI campus makes it easy to see how those synergies developed and grew. The college is scarcely a mile away from the UI’s world-renowned academic medical center, with the Iowa River in between. As it happens, fluid mechanics plays a role in the growth of the UI’s biomedical engineering program as well (think heart valves and blood flow).

“When I came to the UI as a post-doc in 1994, I was looking for an environment where biomedical engineering was more closely integrated with the hospital,” says Reinhardt, now professor and Department Executive Officer (DEO) of the UI Department of Biomedical Engineering (BME).

“At my prior institution, the hospital was 100 miles away from campus. Here at Iowa, our proximity to University of Iowa Hospitals and Clinics remains one of the defining features of our program — the tight integration with the hospital, the Carver College of Medicine, and the other UI health colleges,” Reinhardt explains. “Having traveled to many other institutions I can tell you that ours is a unique environment.”

Reinhardt joined the UI’s biomedical engineering program in its 20th year; today, the program is celebrating 40 years of excellence in education and research innovation. The department has evolved from one of the college’s newest to one of its largest, with more than 400 undergraduates and approximately 75 master’s and doctoral students. Based on ACT and SAT scores, the quality of BME undergraduate students exceeds that of any other program on campus.

“Students are drawn to our BME program because of its distinctive combination of strengths,” Reinhardt says. “Many undergraduates come with the intention of pursuing a career in medicine, and it’s interesting to see how their plans change as they get excited about engineering. Biomedical engineering isn’t just a pathway to med school; it’s an incredibly rewarding career on its own.”

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**1973**

Kwan Rim initiates collaborative research with Carroll Larson, professor and head of the Department of Orthopaedic Surgery, UI College of Medicine.

Establishment of a biomechanics laboratory in the Department of Orthopaedics.

**1974**

Start of Kwan Rim’s idea.

Administrative support from engineering dean Bob Hering and engineering associate dean Paul Scholz.

Biomedical Engineering appears in the University of Iowa Catalog.

Steering committee co-chairs: Kwan Rim and Donald B. McDonald

Degree offered: B.S.

Four year-curriculum listed.

Nicole Grosland, PhD, professor of biomedical engineering, and Brian Adams, MD, a professor in the UI Department of Orthopaedic Surgery, developed this wrist implant.
A CULTURE OF COLLABORATION

Biomedical engineering is interdisciplinary by definition. Although the field did not become recognized as an academic and professional discipline until the late 1960s, for centuries physicians have used engineering practices to develop treatments for medical conditions ranging from hearing loss to missing teeth (e.g., George Washington and his famously uncomfortable dentures).

During the 1960s, according to Professor K. B. Chandran, the Lowell D. Battershell Chair in Biomedical Engineering and a BME pioneer, interest was growing among engineering faculty nationwide – especially in mechanical, civil, chemical, and electrical engineering – in applying engineering principles to understanding the physiology of the human body. (See K. B. Chandran story, page 6.)

At Iowa, the fields of medicine and engineering were already entwined, thanks to the efforts of faculty such as Kwan Rim, then chair of the Mechanics and Hydraulics Program, now UI professor emeritus of biomedical engineering. Kwan Rim and other UI engineering colleagues had begun collaborating on musculoskeletal biomechanics research during the 1970s with faculty in the Carver College of Medicine’s nationally ranked Department of Orthopaedics.

Based on those fruitful collaborations, Kwan Rim realized the potential for establishing a biomedical engineering program within the UI College of Engineering. “He saw such an endeavor as a vehicle for attracting high caliber students into the study of engineering,” Chandran says. “He also saw the unique advantage of starting such a program at Iowa, due to the presence of a medical school with significant research emphasis and home to one of the largest teaching hospitals in the country.”

Through Kwan Rim’s efforts and with the support of University and College leadership, the UI’s biomedical engineering program was launched in 1974. Over the next decade, the BME
program attracted faculty whose research specialties reflected the rapid expansion of BME as a discipline and were well suited to synergistic partnerships with UI colleagues across campus.

“From the earliest days, BME faculty realized the need for research partners with access to patients and patient data,” Reinhardt observes. “As a result, they formed very productive relationships with UI researchers in cardiology, radiology, pediatrics, and other fields, and those collaborations continue to grow. The College of Engineering establishes the Iowa Institute of Medical and Biological Engineering (AIMBE), a unique effort involving the Colleges of Engineering and Medicine. Funding and operation for at least three years is secured from external, non-federal support.

1995
Chandan elected Fellow of AIMBE.
Malcolm Pope named chair of Biomedical Engineering.

1997
Joseph Reinhardt hired (biomedical imaging and image processing).
Park elected Fellow of AIMBE.
David Wilder (spine biomechanics) hired.

1998
Whitaker Foundation Special Opportunities Award given to K.B. Chandran for functional cardiovascular analysis.
Chandan named chair of Biomedical Engineering.

INTERDISCIPLINARY EXPLORATION

“Some of the most exciting avenues we’re exploring today are possible because of the Human Genome Project and the ability to apply advanced computing power to what we’re learning in genetics research,” Reinhardt says. As an example, he cites research by Associate Professor Terry Braun as the kind of interdisciplinary innovation that keeps the UI's biomedical engineering program among the nation's best. Braun, who holds joint appointments in the Department of Biomedical Engineering and the Department of Ophthalmology and Visual Sciences in the Carver College of Medicine, is also director of the UI’s Coordinated Laboratory for Computational Genomics.

“DNA sequencing has been immensely beneficial to our understanding of inherited eye disease, and investigators at Iowa have started to identify many of the genes that can cause vision loss,” Braun says. “By understanding the interplay between the biology of the eye, the different tissues of the retina, and the role that each gene plays in normal operation of vision in the eye, investigators have begun to replace missing or damaged genes in the retina through a process called targeted gene therapy.”

“Our next step is to take skin cells and transform them into photoreceptor cells by turning on the correct sequence of genes—the instructions to make photoreceptor cells. This is the power of the Human Genome Project. It’s going to drive new technology and improve healthcare in ways that we have yet to imagine.”

To further demonstrate the diversity and breadth of the department's interdisciplinary research initiatives, Reinhardt points to several BME faculty members whose research shows considerable promise for alleviating medical challenges ranging from heart disease to clubfoot and wound care:

• Professor Madhavan Raghavan works in the Biomechanics of Soft Tissues Laboratory (BioMOST) within the college’s Center for Computer Aided Design. “We are currently looking at aneurysms, where the arteries balloon over a period of years and, in some cases, can tear suddenly and often cause death or disability,” Raghavan explains. “We study how aneurysms grow and tear using principles engineers use to study similar structures, such as the bursting of an oil-carrying pipe. What we’re learning can help doctors better diagnose the severity of aneurysms and treat aneurysm patients.”

Raghavan’s team also designs and develops devices that can be implanted inside the heart, arteries, or lungs, such as stents and artificial heart valves. (See Manny Villafana story, page 13.)

• Professor Nicole Grosland is continuing the work of an Iowa pioneer: the late Dr. Ignacio Ponseti, whose non-surgical method of treating clubfoot in children is highly effective. Relapse can occur, however, if the child is not able to wear a corrective brace while sleeping, and such braces are difficult to obtain in the developing world. Grosland and fellow researchers in the College of Public Health and Carver College of Medicine set out to fix the problem by developing an innovative solution — the Iowa Brace — whose compro-
ponents are lightweight, safe, durable, potentially reusable, and inexpensive to mass produce. Grosland and her colleagues also founded Clubfoot Solutions, Inc., a nonprofit that seeks to manufacture and distribute the Iowa Brace, ultimately ensuring that every child born with clubfoot will receive effective treatment using the Ponseti Method, anywhere in the world.

Assistant Professor Edward Sander is collaborating with UI colleagues in dermatology to understand the human body’s largest organ: our skin. “As skin ages, the tissue becomes fragile and easily damaged, primarily due to changes in the structure, composition, and mechanics of the dermis,” Sander says. “Similarly, when skin is damaged and the wound begins to heal, changes in the mechanobiology of the tissue can cause fibrosis and scarring. We are combining in vitro experiments with computational models to understand the complex relationships among mechanical environment, tissue composition and structure, and cell activity.” Ultimately, Sander and his colleagues hope to devise innovative therapies to aid wound healing, reduce scarring, and improve the health, appearance, and function of aging skin.

Nicole Grosland hired (musculoskeletal).

• Assistant Professor Edward Sander is collaborating with UI colleagues in dermatology to understand the human body’s largest organ: our skin. “As skin ages, the tissue becomes fragile and easily damaged, primarily due to changes in the structure, composition, and mechanics of the dermis,” Sander says. “Similarly, when skin is damaged and the wound begins to heal, changes in the mechanobiology of the tissue can cause fibrosis and scarring. We are combining in vitro experiments with computational models to understand the complex relationships among mechanical environment, tissue composition and structure, and cell activity.” Ultimately, Sander and his colleagues hope to devise innovative therapies to aid wound healing, reduce scarring, and improve the health, appearance, and function of aging skin.
BEYOND BOUNDARIES

As the lines between disciplines continue to blur, and with ongoing advances in technology, computing power, genetics research, and the potential for economic development, Reinhardt believes his department is primed for further innovation and achievement. BME faculty and students continue to partner with industry, government, and peer institutions on a wide array of projects with real-world impact.

The latest example: The UI’s inclusion in the new $320 million national consortium to advance U.S. digital manufacturing and design. At the UI, the effort will be led by Karim Abdel-Malik, professor of biomedical engineering and director of the UI’s Center for Computer Aided Design. “We’re very excited about this project,” Reinhardt says. “It’s a fantastic opportunity for our faculty and students to be involved in a cutting-edge initiative with national and international impact.”

Looking ahead, Reinhardt is particularly encouraged by the caliber of BME students and their entrepreneurial spirit. One recent project evolved through the Iowa Medical Innovation Group, an interdisciplinary UI program designed to introduce students to medical device and technology development. BME students Ben Berkowitz (BSE 2010, MS 2012), Zihan Zhu (BSE 2013), Blake Martinson (BSE 2013 in Mechanical Engineering), and Vince Hahn (MBA 2013) created the Iowa Smart Switch (patent pending), a small device for use by patients who are physically unable to speak or use standard nurse-call switches. In 2013, the team formed a company called Iowa Adaptive Technologies, which has now begun clinical trials of the device at—where else?—University of Iowa Hospitals and Clinics.

An aerial map of the UI campus reveals how the biomedical engineering program, so closely linked with the UI’s medical center, has been able to turn synergy into success. As biomedical engineering enters its fifth decade at Iowa, charting the program’s future will require nothing less than a map of the world.

BME AREAS OF RESEARCH FOCUS

Biomedical Imaging
Biomaterials
Cardiovascular Biomechanics
Genomics, Bioinformatics, and Systems Biology
Human Modeling & Simulation
Musculoskeletal Biomechanics
Mechanobiology
Professor K.B. Chandran (second from left) and his team focused on the fluid dynamics of mechanical heart valves. Pictured are: (l to r) Sarah Vigmostad, assistant professor; Chandran; H.S. Udaykumar, professor; and graduate students Vijay Govindarajan and Paul Jermihov. (Photo by Jim Heemstra, provided courtesy of IIHR)
The history of biomedical engineering at Iowa is not simply a litany of names and dates; it is a narrative of people and relationships shaped by thoughtful, visionary leaders. Among those talented leaders is Lowell Battershell Endowed Chair of Biomedical Engineering Krishnan B. Chandran, whose wise mentoring of students and peers has helped create and grow the department during his 36-year tenure at Iowa, including nine years as departmental executive officer.

When the Greek hero Odysseus left for the Trojan War, he asked his friend Mentor to care for the intellectual and moral development of his son, Telemachus. In his own mentoring of less experienced students and colleagues, Chandran likewise has offered his support, balancing the wisdom that comes from experience with the intellectual freedom to learn on one’s own.

“As an advisor, he was always available when needed,” says assistant professor of biomedical engineering Sarah Vigmostad who as a graduate student was among Chandran’s advisees. “And yet he also allowed his students the space they needed to navigate through their research as they saw fit. This balanced approach allowed his students to think and work independently, yet with the confidence and comfort of knowing that he would be there for us in times when we became lost or were stuck.”

Chandran notes that the professional success of students and faculty members must be measured beyond research progress and outcomes to include professional behavior.

“Biomedical engineers necessarily have to collaborate,” he says, “and that means learning how to work with and respect the expertise of people in an array of fields, including physicians, lab technicians, and basic scientists. I always encourage our biomedical engineering students to behave with integrity and honesty, much like the standards my own mentors held for me.”

The role of mentor, therefore, links one generation to the next in a way that reinforces and enriches the typical student-teacher relationship. Chandran recalls that during his post-doctoral research at Tulane University, professor of biomedical engineering Y. King Liu strongly encouraged him to write grants and publish. When Liu was recruited to join Iowa’s fledgling Department of Biomedical Engineering in 1978, he negotiated for an associate professorship for his protégé, Chandran.

“He was a role model for me,” Chandran says, “and when I became chair at Iowa, I tried to follow his principles.” Chandran helped young faculty members by positioning them in joint appointments where appropriate and beneficial to their careers. He paid close attention to their progress, not overloading them with teaching or committee work so they could succeed early in their research, publications, and collaborations. And the courses he assigned to them were those most likely to enable them to be successful as teachers.

David Wilder was one of the early-career faculty members Chandran supported. In 1994 Wilder arrived as a visiting associate professor from the University of Vermont along with professor of biomedical engineering Malcolm Pope. When Pope became departmental executive officer (DEO) two years later, Wilder accepted a tenure-track position. Two years later, Chandran became DEO and continued to support Wilder’s professional development to full professor.

And since what goes around tends to come around, other faculty members in the department—including Wilder—now mentor their own students and newer faculty members.

“Students need to be encouraged to follow their creative instincts and their intellectual insights,” Wilder says. “When I work with them, I operate on an intuitive level: I try to have a feel for the challenge at hand and the condition of the student, and then go with my instincts. It’s kind of like ‘engineering standup.’”

Sarah Vigmostad notes that when she was an undergraduate at Iowa, Wilder would ask his students, “Are you surviving, or thriving?”—a question that at once indicated his interest in their professional development and sparked a degree of accountability in them. Chandran accomplished similar results by encouraging students like Sarah to apply to graduate school and by connecting students and faculty members to the broader biomedical engineering community at Iowa and beyond. While DEO, he worked with grad students to form a graduate student chapter of the Biomedical Engineering Student Society and often scheduled time for students to talk with visiting scholars.

As a scholar, teacher, and leader, Chandran has established a legacy of gifted, dedicated scholars, teachers, and leaders at Iowa and elsewhere—individuals who now look to him as a role model of the ideal mentor. Even in retirement, Chandran will continue in this role, mentoring not only his grandchildren near his new home in North Carolina but no doubt also continuing to support and encourage former students and colleagues.
Looking Back and Moving Forward

BIOMEDICAL ENGINEERING ALUMNI

Anniversaries are moments in time to pause and reflect on past beginnings and intervening years. The 40th anniversary of the Department of Biomedical Engineering offers the opportunity to laud and thank those who have worked so hard to build a strong and vibrant leader in the discipline. But anniversaries also are moments to look to the future and how alumni continue to build the legacy of the department both at Iowa and elsewhere.

Professor of Biomedical Engineering Tae-Hong Lim is one of those alumni who is bridging the past and future of biomedical engineering at Iowa. Lim earned a PhD in Mechanical Engineering in 1990, after earning MS and BS degrees at Seoul University. After several stints as a research engineer in hospital settings and faculty positions in the University of Wisconsin System, he was hired as a professor of biomedical engineering at Iowa.

KB Chandran was DEO when Lim rejoined the College, and Lim says he learned “a lot about lifestyle” from Chandran.

“He is very consistent,” Lim says, “and he understands how to relate to colleagues as a leader. He has a true philosophy: be friendly, but stick to the rules. And he always starts from the positive. The negative may need to be revealed, but he always makes people feel they are being taken care of.”

Lim adds that in similar ways, other faculty members at Iowa are excellent role models for current students.

“They have a profound knowledge of engineering, work hard, and are always looking for new ideas,” says Lim, whose research focuses on orthopaedic biomechanics, particularly of the lower spine. “But they still manage to convey to the students that they care about them and will support them in their careers.”

Another Iowa alumnus also has managed to focus attention on developing students while enhancing his research and leadership skills. Since earning three degrees from Iowa (BSE 1985, MS 1986, and PhD 1989), Richard Schoephoerster has risen through the academic ranks from research associate at Florida International University to become the dean of the College of Engineering at the University of Texas, El Paso. He notes the changes in the discipline since he was a student.

“Most early programs were offshoots of mechanical or electrical engineering. But during the 1980’s and ’90’s, biomedical engineering became more quantifiable and focused more on prediction rather than observation and description.”

Richard Schoephoerster (BSE 1985, MS 1986, PhD 1989)
“Most early programs were offshoots of mechanical or electrical engineering,” Schoephoerster says, “so they had an applied bent. But during the 1980s and ’90s, biomedical engineering became more quantifiable and focused more on prediction rather than observation and description.”

He adds that the Human Genome Project and a rise in the importance of proteins in biological research also substantially impacted the field of biomedical engineering, which now, he says, “is more like applied biology. When I began my career, most of us focused on mechanical devices to replace dysfunctional organs. Now we look at genetics and systems of cells. In my research today, I am interested in how to manipulate or even regenerate tissue.”

Although clearly on the cusp of biomedical engineering’s future, Schoephoerster also hearkens back to his time at Iowa. “My education had a tremendous impact on me,” he says. “At each step of the way, my advisor K.B. Chandran convinced me that I was capable of doing research. He gave me confidence.”

Schoephoerster adds that he also had to earn the confidence of his mentors by demonstrating responsibility and independence—characteristics he leveraged as a teacher, researcher, and academic leader. During his 17 years at FIU, he launched and directed the Cardiovascular Engineering Center and the Biomedical Engineering Institute. The latter was transformed into full-fledged department status in 2003, and Schoephoerster was appointed the Founding Chair. During a mere five years, he established the BS, MS, and PhD programs at FIU.

In 2007 Schoephoerster left Florida International to become dean at the University of Texas, El Paso. He continued in a “building mode” and during the first four years of his tenure the student body grew by 25 percent to 3,000 students, including 500 graduate students. In addition, the annual research budget almost doubled to more than $15 million.

Schoephoerster notes that Iowa continued to help aim him toward success even after he had graduated. “KB [Chandran] in particular helped me transition into a faculty position,” Schoephoerster says. “He helped me understand how to negotiate for a strong position, including how to build a resume, be a productive faculty member, and write successful proposals. I owe everything to him and my time at Iowa.”
Manny Villafana has achieved success far beyond the dreams of “a kid from the Bronx,” as he describes himself. The seeds of his success can be found in the lessons of his youth: hard work, self-reliance, and the value of education.

Education took center stage at the College of Engineering commencement on May 17, when Villafana received an Honorary Doctor of Science degree to recognize his contributions to biomedical device development, biomedical engineering, civic leadership, and student success.

“We had no money in my family and very little schooling,” Villafana says. “I went to a great high school, but I had to pay my way and learn things on my own. So I’ve always been an advocate for education. This honorary degree from the University of Iowa is a super big deal to me.”

A serial entrepreneur, Villafana has founded several companies whose products have revolutionized the medical device industry. They include Cardiac Pacemakers Inc., which introduced the long-life lithium iodine pacemaker, and St. Jude Medical, which introduced the bileaflet mechanical heart valve. In 2007, Villafana launched Kips Bay Medical — his seventh IPO — which develops alloy mesh technology for use in coronary artery bypass surgery.

How did a kid from the Bronx find his way to Iowa? Credit Professor K. B. Chandran. “K. B. was interested in studying the fluid dynamics of the St. Jude valve, and we began working together in 1976,” Villafana recalls. “He was very instrumental in demonstrating the superior dynamics of the St. Jude valve to the rest of the world.”

Villafana’s ties to the College of Engineering strengthened when he met his wife, Elizabeth, a UI Tippie College of Business graduate and daughter of a UI engineering alumnus. When the couple married, rather than a traditional wedding gift, Villafana chose to honor Elizabeth’s late father, creating the Howard J. Elder Computing Lab in the College of Engineering. Villafana has continued his generous philanthropic support for the college, and also enjoys working with students in the UI’s John Pappajohn Entrepreneurial Center.

His early collaboration with UI biomedical faculty members continues today. “I’m working now with Professor Raghavan on bypass grafting. It’s a really exciting project, and it’s typical of what I’ve found at Iowa over the years,” Villafana says. “People here are consistently collaborative and successful. Working together, the College of Engineering and the University’s medical center have created a wonderful breeding ground for innovation.”
Student Services Adds New Staff to Ensure Student Success

The Engineering Student Services (ESS) Office (formerly Student Development Center) added two new staff members last fall and redefined current staff roles to best accommodate the record undergraduate enrollment as well as ensure student success. Keri Hornbuckle, associate dean for academic programs, oversees the center.

Megan Allen has been appointed registrar for the College of Engineering. She is in charge of transfer credits, degree audits and provides final clearance for graduating students.

Amy Brewster joined the College last October as director of global experiences and academic advisor. As an advisor she works with first-year, undeclared and transfer students. She coordinates the College of Engineering Honors Program and leads the development and support of global experiences, including learning abroad and support for international students.

Scott Coffel, director of the Hanson Center for Technical Communication, and his peer consultants are available to assist students with everything from writing scholarship thank-you letters, to reports, presentations, and resumes. Good communication skills are essential to the future engineer and assistance is available to all students.

Kelli Defosse fills several important roles in the office: director of professional development, coordinator of the Grand Challenge Scholars Program, advisor to Theta Tau and support for all student organizations. She connects students and employers through the college’s co-op & internship program, engineering career fairs, on-campus interviewing and other career-related programs and networking opportunities. She counsels students on resume writing, negotiating, interviewing and other career search strategies.

Rebecca Machen also joined the College in October as director of tutoring. The College of Engineering tutoring is free to all College of Engineering students. Over forty tutors work Sunday through Thursday nights assisting students in all engineering majors. As an academic advisory she counsels with first-year, undeclared, first-generation collegiate, and transfer students.

Nancy Schneider serves as director of academic advising and retention. She provides individual coaching to develop strategies for improving academic performance for all students on probation. Nancy also coordinates the two-day off campus Student Leadership retreats.

Scott Hansen serves as the anchor for five of these key people. He greets all visitors, answers multiple phone lines, schedules appointments, and provides administrative support to all of the above personnel and their charges (tutors, peer advisors, student organizations). He is knowledgeable about Engineering Student Services and the College and manages to maintain a very calm demeanor in this very active, diverse environment.

Sonka Appointed Associate Dean

Milan Sonka, professor and departmental executive officer of electrical and computer engineering and director of the Iowa Institute for Biomedical Imaging, was appointed associate dean for graduate programs and research in the University of Iowa College of Engineering, effective January 15, 2014.

In his new role, Sonka will provide creative leadership to promote excellence in engineering graduate education and research. This includes achieving strategic planning goals in these areas, developing interdisciplinary research opportunities with colleagues across campus, and collaborating with Engineering departmental executive officers and research center directors to foster excellence in graduate education and research.

“Milan Sonka brings an impressive record as a productive researcher and an effective administrator to his new role, Alec Scranton, Engineering dean, said. “He has authored more than 400 research publications, and has built research collaborations with colleagues from across campus. He has successfully lead large research initiatives on campus and around the world, and is a visionary and creative problem solver.”

“As the departmental executive officer of electrical and computer engineering, Sonka has displayed strong leadership skills, a commitment to diversity, and the ability to successfully implement positive changes,” Scranton added.

Sonka, who joined the college in 1990 as visiting assistant professor, has served as departmental executive officer since 2008. He also holds faculty appointments in applied mathematical and computational sciences, ophthalmology and visual sciences, and radiation oncology.
1970’s

**Michael Cady** (BSIE 1977) if founder of Resurgent Consulting, LLC.

**Mitchell Pratt** (BSME 1977) and Joan Pratt were featured in the **Baton Rouge Advocate** as an LSU/UI divided house for the Outback Bowl.

1980’s

**Kelly Coffield** (BSE 1985) is president of Cobham Life Support, Davenport, IA.

**Ryland Eichhorst** (BSME 1980) retired from the John Deere Construction Division in Dubuque, Iowa after 33 years. His last position was Manager, Global Product Integration. During his career he had the opportunity to travel to Japan, Korea, Russia, Brazil, China and India.

**Scott Evans** (BSE 1983) is business development manager for Arrow Electronics, Denver, CO.

**Barbara Sines** (BSIE 1980) has been appointed vice president-POC at Siemens Healthcare Diagnostics, Norwood, MA. Sines is a member of the college’s Distinguished Engineering Alumni Academy and a member of the college’s Engineering Advisory Board.

1990’s

**Steve Maddocks** (BSE 1991) is factory manager at H.J. Heinz, Cedar Rapids, IA.

**Tim Reynolds** (MS 1992) is senior product engineer of travelere information systems at Trapeze Group, Cedar Rapids, IA.

**Mike Traetow** (BSE 1999) is plant manager, underground division, Vermeer Corporation, Pella, IA.

2000’s

**Avery Bang** (BSE 2007, BA 2007) was awarded an honorary degree at Clarkson University’s 121st commencement on May 10. Bang is CEO of Bridges to Prosperity.

**Samatha Lane** (BSE 2005, MBA 2010) is a contracts manager at Stryker Performance Solutions in Chicago, IL. Stryker is a medical device corporation and her focus now is to spearhead a new division. Lane has served on the Young Alumni Advisory Board for the College and now serves on the UI Alumni Association Board of Directors.

**Jennifer Leitisch** (BSE 2000) was named to the 2014 Denver Business Journal’s 40 under 40 list. Leitisch is employed with Prologis, Inc. as corporate responsibility manager.

**Marcelo Mena-Carrasco** (MS 2003, PhD 2007) has been appointed to a cabinet post in the administration of Chile’s president Michelle Bachelet. He is the undersecretary of the environment.

2010’s

**Frank Attore** (BSE 2011) works for The HON Company, Muscatine, IA.

**Jerry Stone** (BSE 2010) is an operations team leader II at General Mills in Carlisle, Iowa. As floor manager he oversees the production, packaging and shipment of a number of different Betty Crocker flours and products. While a student, he was an officer in the National Society of Black Engineers (NSBE), and participated in the Multi-Ethnic Engineering and Science Association tutoring program.

Distinguished Engineering Alumni Academy members **Bob Moulds** (BSME 1970) and **William Ashton** (BSCE 1962, MS 1963) were featured Hometown Hawkeyes, an university information source for state legislative and other state government officials. Moulds’ Hometown Hawkeye profile is available at [http://www.engineering.uiowa.edu/alumni-friends/honor-wall/distinguished-engineering-alumni-academy-members/bob-moulds](http://www.engineering.uiowa.edu/alumni-friends/honor-wall/distinguished-engineering-alumni-academy-members/bob-moulds)


1930’s

**Leonard G. Parks** (BSEE 1935, MS 1937) of Spokane, WA, January 9, 2014.

1940’s

**Robert T. Bell** (BSCE 1947) of Munster, IN, November 28, 2013.

**Norman W. Bermender, Jr.** (BSChE 1948) of Sparks, NV, February 13, 2013.

**Charles K. Hurst** (MS 1940) of Ottawa, Ontario, Canada, November 17, 2013.


**Melvin W. Naylor** (BSEE 1942) of Elizabethtown, KY, September 11, 2011.

1950’s


**Donald W. Hall** (BSCE 1950) of Cedar Rapids, IA, December 30, 2013.


**Emmett Laursen** (PhD 1958) of Tucson, AZ, October 17, 2013.


**Charles F. Rolf** (BSEE 1951) of Saint Peters, MO, December 27, 2013.


**Emil J. Sedlak** (BSChE 1950) of Endicott, NY, August 17, 2013.

1960’s

**Donald C. Kaplan** (BSEE 1966) of Gill, MA, December 26, 2013.

**Claude W. McDowell** (BSEE 1960) of Evansdale, IA, December 7, 2009.

**Nicholas J. Nigro** (PhD 1965) of Austin, MN, December 22, 2013.

1970’s

**Curt J. Amelon** (BSCE 1971) of Kalona, IA, January 10, 2014.

**Gilbert A. Janes** (BSCE 1972) of Iowa City, IA, November 20, 2013.


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Save the date!

OXE 30th Anniversary Celebration
September 5–6

Party after the Parade
October 10

Homecoming Tailgate Open House
October 11

Family Weekend Tailgate Open House
November 1

www.engineering.uiowa.edu/alumni-friends