



Faces, places and changes of 2014



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Dear Alumni and Friends,

2014 was a busy year for the department. Our centennial celebrations continued throughout last spring. I was hoping to keep the centennial banners up on the building and just update the number each year... 101, 102, etc., but the folks in facilities vetoed that idea. I feel a bit sad that all the centennial events are now behind us, but it was a delight to be a part of it and meet so many wonderful alumni and friends as we celebrated 100 years of chemical engineering at Iowa State.

Our newsletter is coming out a bit later than usual this time, but thanks to the recent hiring of a new communications specialist in John Burnett-Larkins (pg. 13), it is now in your hands instead of still sitting on my desk. We have several other new faces in the department. Kathy McKown joined us as fiscal officer and Bellinda Hegelheimer as assistant for our graduate program (pg. 13). We are also delighted to introduce three new faculty members who joined us last fall: Matthew Panthani, Wenzhen Li, and Yue Wu (pg. 5). They are bringing us exciting new research activities, teaching expertise, and energy. We have also said goodbye to several long time staff members (pg. 13) and faculty, including Pete Reilly, who retired in the spring of 2014 (pg. 19).

We continue to be very proud of our faculty and their successes (pp. 6-8). Laura Jarboe, the Karen and Denny Vaughn Faculty Fellow, was promoted to associate professor with tenure. Senior Lecturer Stephanie Loveland was awarded the Superior Engineering Teaching Award. Surya Mallapragada, former department chair and the Stanley Chair in Interdisciplinary Engineering, won the D.R. Boylan Eminent Faculty Award for Research. Several of our faculty members are leading exciting new research and educational ventures, including Eric Cochran's work developing polymers from biorenewable feedstocks (pg. 7) and Balaji Narasimhan's leadership of a Presidential Initiative that is developing new nanovaccines (pg. 8).

The department is also delighted to celebrate in some of the accomplishments of our alumni (pp. 9-10). Once again, CBE made a strong showing among ISU awards, including the much deserved Order of the Knoll Campanile Award to Mike (B.S. ChE '59) and Jean (B.S. Zool. '60) Steffenson, a Professional Achievement Citation in Engineering (PACE) award to John Kaiser (M.S. ChE '87), and the Anson Marston Medal to Dale Fridley (B.S. ChE '58). We also welcome two new members to the CBE Hall of Fame this year with Dr. Joe Cuning (Ph.D. ChE '65) and Dr. Judson M. Harper (B.S. ChE '58, M.S. and Ph.D. Food Tech '60 and '63). Dr. W. Mark Saltzman (B.S. ChE '81) who won the 2013 PACE award, was elected into the Institute of Medicine, which is the health arm of the National Academy of Sciences. Congratulations all! Read more about these award winners and about other CBE alumni who are succeeding in graduate school, academics, and industry. Our advisory council continues to be an active and vital group of alumni. This year we see the departure of two long-serving members and the addition of four new faces (pg. 12). Thanks to all of you for your commitment and service.

The theme for this year's newsletter is "faces, places and changes of 2014." It has indeed been an eventful year. We continue to see unprecedented enrollment growth in the department. Thanks to our largest freshman class

ever (at nearly 220 students) our undergraduate enrollment is now just a few shy of 800 students. Our graduate population is increasing also, with nearly 70 M.S. and Ph.D. students in chemical engineering. This growth is exciting as it reflects the quality, desirability, and affordability of our program. These numbers, as well as other departmental metrics, are highlighted in our "By The Numbers" summary (pg. 4).

The tremendous support we receive from our alumni impacts so many things that makes CBE at ISU a special place to work and learn. It has allowed us to renovate and add new facilities including the Mike and Jean Steffenson Student Services Center (pg. 18) and our Reginald R. and Jameson A. Baxter Computing and Collaboration Lab (pg. 11). Alumni giving allows us to support the research and teaching efforts of our new faculty, equip their research labs, and support them as they strive to bring in external funding to finance their research endeavors. As noted on our "By The Numbers" page, last year the department was able to provide over \$105,000 in graduate fellowships and nearly \$370,000 in undergraduate scholarships, the majority of which came from alumni giving. Our 2014 graduate fellowship awardees can be seen on pg. 16, and a listing of our scholarship winners is given on pp. 20-21. Thanks to all of you who have contributed this year (pp. 22-23) and have given previously.

Let me conclude with a brief synopsis of one of the more memorable, and also harrowing, events of 2014. Early in the morning (around 5:30 a.m.) on May 30, 2014, I was sitting at my kitchen table at home enjoying a cup of coffee, when the phone rang. Let's just say that my plans for the day (and the rest of the summer) were about to take a dramatic turn. On the line was an officer from the ISU police who said, "Dr. Hillier, Sweeney Hall is on fire." I hopped up, jumped in my car, and rushed down to campus. Much of the rest of the story is highlighted on pg. 17. Thankfully, no one was hurt and the extent of structural damage to the building was small. However, a fire on the roof, right near the air handling systems, makes quite a mess in the rooms below. Much of the 1994 wing of Sweeney Hall, which contains research labs, faculty and graduate student offices, and our undergraduate teaching labs, received a significant amount of water and a thick coating of heavy, black soot. Quite a number of the faculty, staff, and graduate students spent much of the summer helping to "right the ship." Things were nearly back to normal by the time classes began again in August. I am thankful to have that episode behind us, and look forward to a "fire-free" 2015.

My best wishes to all of you for a happy, healthy and productive 2015. I hope you enjoy reading our belated 2014 version of ActiveSite. Please send me any comments or suggestions you have for future issues of our newsletter, or just to say hello. I would be delighted to hear from you. Go Cyclones!

Andrew C. Hillier
Wilkinson Professor and Chair
Department of Chemical and Biological Engineering



The generosity of Reginald and Jameson Baxter, strong supporters of Iowa State, makes CBE's new Baxter Computing and Collaboration Lab possible. This major asset to CBE students is now open.

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CBE students and staff enjoy the new Mike & Jean Steffenson Student Services Center, another significant addition to Sweeney Hall, made by possible by a generous donation.

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Flames erupt at Sweeney Hall in a blaze that results in significant soot and water damage to the interior of CBE's home.

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CBE's Cochran is a key partner in constructing a bio-based polymers pilot plant.
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CBE professor Balaji Narasimhan, with the help of a scientific "dream team," works to develop nanovaccines to fight disease.
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Passing: CBE honors the memories of student Tong Shao and oldest living alumnus Robert Cooper.
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IOWA STATE UNIVERSITY

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Facilities

Sweeney Hall:

- 42,721 sq. ft. total space
- 17,926 sq. ft. research labs
- 9,160 sq. ft. teaching space
- 1,044 sq. ft. computer labs
- 8,948 sq. ft. office space
- 1,615 sq. ft. conference space



Center for Biorenewable Chemicals (CBiRC):

- 18,853 sq. ft. (research labs and office space)

Enrollment (Fall 2014)

- Undergraduate: 794
- Graduate: 69

Scholastic Achievement

- Avg. comp. ACT Score (undergrad): 28
- Avg. GRE Score (graduate)
Verbal: 153 (out of 170)
Quantitative: 159 (out of 170)
Analytical: 3.71 (out of 6)



Degrees Awarded (2013-14 academic year)

- B.S.: 103
- M.S. & M.E.: 4
- Ph.D.: 13



by the numbers

Department Faculty

- 10 Professors
- 6 Associate Professors
- 5 Assistant Professors
- 2 Adjunct Professors
- 3 Senior Lecturers
- 1 Distinguished Professor
- 2 University Professors
- 1 Endowed Chair Holder
- 7 Endowed Professorships
- 3 Faculty Fellowships



Research

- Direct Research Expenditures: \$8.85M (FY 2014)
- New Research Awards, FY 2014+FY 2015, to date: \$2,417,902
- Referred Journal Publications: 134
- Invited Presentations: 59
- Contributed Presentations: 88



Scholarships & Fellowships

- Undergraduate scholarships (awarded in 2013-14): \$369,000
- Graduate fellowships: \$105,846



Rankings

(U.S. News & World Report)

- Undergraduate: 15th public, 22nd overall
- Graduate: 20th public, 31st overall (of 126 programs nationally)



Three new faculty members hired**Matthew Panthani***Applying nanomaterials to solar technology*

While he was earning his Ph.D., Matthew Panthani found a new way to use spray paint—to advance solar cell research.

Panthani, who is now the Herbert L. Stiles Faculty Fellow in Chemical Engineering at Iowa State, attended the University of Texas at Austin for his Ph.D. in chemical engineering. Initially interested in nanomaterials, his adviser encouraged him to join a new project researching solar cells.

Solar cells, which are traditionally made from silicon, are an expensive renewable energy technology. “Silicon is great for a lot of applications, but if you want solar energy to be really widespread, you need to reduce the cost. So we are trying to make inexpensive solar cells using solution-based nanomaterials,” he said.

Panthani says solution-based nanomaterials are created during a chemical reaction in a beaker. The reaction, he explains, creates a stable “ink” of nanomaterials that could allow for inexpensive and rapid printing of solar cells compared to the slow, energy-intensive process used for silicon. Formerly a postdoctoral researcher, he says being a professor offers a rewarding career. “I have the opportunity to do things that are on the cutting edge of technology and fundamental science. I also get to teach, so that’s something that I’m looking forward to here.”

**Wenzhen Li***An interest in fuel cells and spreading knowledge*

With parents who are a zeolite expert and a laser engineer, Wenzhen Li, CBE’s Richard Seagrave Associate Professor of Engineering, has been interested in research from a young age.

Unlike his parents, however, Li’s top research focus is how to advance biorenewable-powered fuel cells. Traditional fuel cells use hydrogen to deliver electrical energy, but Li plans to convert chemical energy in biorenewable fuels into electricity and chemicals via fuel cells. His work has been heavily cited by fuel cell and electrocatalysis researchers.

His interest in fuel cells came after learning more about using biomass to generate electricity. He said, “I think energy is very important to our modern society. We cannot only rely on nonrenewable fossil fuels and resources.” In the future, Li wants to see at least one of his discoveries from his lab in use in real-world products.

Prior to Iowa State University, Li was an associate professor of chemical engineering at Michigan Technological University. Li likes teaching chemical reaction engineering class for undergraduates and graduates because it’s very close to, and able to stimulate, his research.

Passing on knowledge to students is also gratifying for Li. “I am happy to see students learn classic kinetics knowledge and modern tools for chemical reactions from a senior chemical engineer, to see the important knowledge pass to the next generation of chemical engineers.”

**Yue Wu***Ignited by a passion in chemistry and nanomaterials*

When Yue Wu was younger, he started a small fire on his apartment balcony, creating a spark in chemistry and research that has been burning since.

Wu has joined Iowa State as the Herbert Stiles Associate Professor of Chemical and Biological Engineering, and enjoys working with other faculty on a variety of projects. Prior to Iowa State, Wu was a tenured associate professor at Purdue University’s School of Chemical Engineering.

His research focuses on nanomaterials, which are nanometer-sized materials that exhibit unusual electrical properties compared to the regular sized material. Nanomaterials also have unique characteristics, such as significantly decreased thermal conductivity.

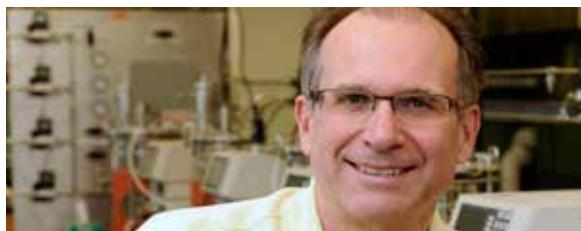
Wu breaks up his research into two goals: The first involves creating new semiconductor nanomaterials and molecules to convert waste heat into electricity (to reduce waste); and energy storage, specifically creating nanoparticles that can be used for advanced batteries. Wu explains that the anode electrode in a typical cell phone battery is made from graphite, which can be charged over and over. However, the capacity of the battery is fairly low.

“The material we have developed for the advanced battery has very high capacity, almost four to five times higher capacity [than graphite]. We actually can do a very fast charging/discharging,” he said, adding that the battery could be charged within four minutes.



Qun Wang

Qun Wang, an adjunct assistant professor in CBE, received two awards to help establish the scientific foundation of intestinal stem cells (ISCs) research and change how ISCs are used in translational therapy for intestinal disorders. The first award is the Cyclone Research Partnership Award, which will support research that aims to characterize how various types of nanoparticles are transported across intestinal tissues grown from ISCs. The findings can help develop better drug/vaccine oral delivery systems. Wang was also selected for the McGee-Wagner Interdisciplinary Research Award to explore ways to reduce chronic intestinal inflammation through the use of ISCs.



Robert Brown

Anson Marston Distinguished Professor Robert Brown has been awarded patents for two new technologies. The first is a process for recovering bio-oil from the pyrolysis of biomass as fractions, increasing its usefulness in fuel manufacturing and other biobased products. The second technology uses one of the bio-oil fractions to produce an asphalt substitute from biomass, which is currently manufactured from petroleum. Brown serves as Gary and Donna Hoover Chair in Mechanical Engineering, director of Iowa State's Bioeconomy Institute, and professor of chemical and biological engineering and of agricultural and biosystems engineering.



James Hill

James Hill has been involved in several research projects recently, including analyzing the turbulent flow in a vortex reactor using stereoscopic particle-image velocimetry. Hill also serves as member of the governing board of the Council for Chemical Research and chair of the Fellows Council of AIChE. As chair, he organized a session at the AIChE annual meeting in San Francisco, prompting an NSF-funded workshop about the shift in faculty expertise in ChE departments.



Brent Shanks

Brent Shanks is a co-founder of Glucan Biorenewables, LLC, which received a SBIR (Small Business Innovation Research) Phase I grant as well as signed a joint development agreement with a major multinational chemical company. Shanks also served as a session leader for the DOE-BER Bioenergy Workshop in June 2014, and he was invited to speak to the Biomass Research and Development Technical Advisory Committee (DOE/USDA) in August 2014.



Stephanie Loveland

Stephanie Loveland, senior lecturer, received the Iowa State University Superior Engineering Teaching Award in fall 2014. This award recognizes an engineering college faculty member for

superior performance in undergraduate, graduate or extension teaching. Loveland oversees the undergraduate teaching labs, and she serves as the lab safety officer and chair of the safety committee for the department.



Laura Jarboe

Laura Jarboe was recently promoted from assistant to associate professor of chemical and biological engineering. Her research focuses on improving biorenewable fuel and chemical production through microbial biocatalysts. Jarboe also serves as faculty at the National Science Foundation Engineering Research Center for Biorenewable Chemicals (CBiRC).



Surya Mallapragada

Surya Mallapragada was awarded the D.R. Boylan Eminent Faculty Award for Research from the College of Engineering for her academic excellence in research and exemplary contributions to understanding in a field of specialization. She researches smart polymeric biomaterials and bioinspired nanocomposites, as well as neural tissue engineering. Mallapragada serves as Stanley Chair in Interdisciplinary Engineering and professor of chemical and biological engineering.



Construction of the pilot plant for bio-based polymers continues to progress, with completion slated for spring of 2015. Individuals involved in the project are shown in the bottom photo at the official groundbreaking.



Eric Cochran

Eric Cochran, associate professor of chemical and biological engineering, is working to make the future of pavement more sustainable by using biorenewable material.

His research involves scaling-up and commercializing Iowa State University patent-pending elastomeric materials using vegetable oils and other biorenewable feedstocks that can be used for a variety of applications.

In this case, he's teaming up with ISU civil engineering professor R. Chris Williams, who started a project in 2010 to create a biobased pavement using oils from the fast pyrolysis of biomass. Cochran's elastomeric materials are being used to help create a high-performance asphalt modifier made from biorenewable polymers.

He says the work is important from a number of perspectives, especially economically. "The materials we are making are cost competitive with petrochemical counterparts, and the feedstock materials are domestically sourced and could be produced anywhere in the country."

In the future, Cochran plans to continue working with biorenewable polymers, as he believes there is a lot of opportunity to reinvent the field. Historically, many polymers were developed in the early 1900s, but now, very few oil-based polymers are discovered.

Cochran believes his research could change the field. "I saw a chemical process for dealing with biobased feedstocks that the rest of the community had overlooked. There was a great opportunity to be the first person to incorporate new feedstocks into high-performance formulations, such as block copolymers, that had not yet been accessible to the bioplastics field."

Cochran's research is funded by a number of grants, each using his knowledge to meet certain demands. The USDA is working with Cochran to develop polymers that can be used as adhesives, including rubber cements, pressure sensitive adhesives and structural adhesives. The Regents' Innovation Fund is supporting efforts to combine Cochran's process for polymerizing vegetable oils with other commercial processes; this work will greatly accelerate the rate at which the biopolymers can be developed to a 100,000 kiloton per year facility at full commercial scale. Finally, Cochran is working with industry partners on research to be performed at the BioCentury Research Farm, in a new \$5 million biopolymer demonstration facility that will produce up to 500 kilograms of polymers daily for an asphalt modifier.

In addition to research, Cochran also teaches several chemical engineering classes, including computational methods for chemical engineers, chemical engineering for thermodynamics, heat and mass transport, and polymers and polymer engineering.

In a partnership between Iowa State University's Chemical and Biological Engineering (CBE) and Civil, Construction and Environmental Engineering (CCEE) Departments, an industrial scale pilot plant for bio-based polymers derived from vegetable oils has taken shape at ISU's BioCentury Research Farm. Eric Cochran, CBE associate professor, teamed with CCEE's Gerald and Audrey Olson Professor of Engineering R. Chris Williams to develop the plant, which is located on Iowa State University property between Ames and Boone.

Narasimhan, “Dream Team” battle disease with development of nanovaccines



With new diseases, the return of old diseases and disease epidemics all seeing a significant rise worldwide, the fight against them has become a significant

battle; and an Iowa State Chemical and Biological Engineering professor is leading a group ready to charge into that battle, armed with new tools and a new philosophy.

Vlasta Klima Balloun Professor Balaji Narasimhan is heading up a project that is developing nanovaccines – with the goal of one day establishing a national nanovaccine research center. “The diseases we have vaccines for today are the low-hanging fruit. And so people get sick,” said Narasimhan. “But we can’t just keep treating these new and re-emerging diseases. That’s too expensive. We have to prevent them.” Nanovaccines are based on that very principle – that disease should be prevented from ever taking hold in the first place. They are based on tiny particles that can send pathogen-like signals to immune cells. They can boost a person’s immune system response to diseases and can therefore prevent disease.

Narasimhan has put together a broad team of university, medical school, research hospital, national laboratory and industry researchers to design nanovaccines that target such diseases

as tuberculosis, malaria, biodefense pathogens and cancer. “This is truly one of the dream teams working on vaccine research anywhere in the world,” said Narasimhan.

The team’s research plans received a three-year \$4.5 million grant from Iowa State’s Presidential Initiative for Interdisciplinary Research. University President Steven Leath established the initiative to build research teams capable of competing for large research grants and making major discoveries. Narasimhan’s group includes 21 researchers from Iowa State, along with officials from the National Animal Disease Center, NewLink Genetics Corp. and PK Biosciences Corp.

Working closely with the Iowa State College of Veterinary Medicine, the staff and students in Narasimhan’s lab are producing biodegradable polymer nanoparticles that mimic the size and chemistry of pathogens to trigger appropriate immune responses in the body. Nanoparticles can also be loaded with medicines and used to slowly deliver drugs to fight off diseases such as brain ailments, lung problems and cancer.



Narasimhan and members of his “dream team” of researchers, recipients of a \$4.5 million grant, are combatting disease through the development of nanovaccines.

Robert “Bob” Cooper, oldest living CBE alum, passes away at age 96

Robert Hamilton “Bob” Cooper (BS, ChE ‘39), the oldest living alumnus of the Iowa State University Chemical and Biological Engineering Department, passed away November 8, 2014 in Corpus Christi, Texas at the age of 96.



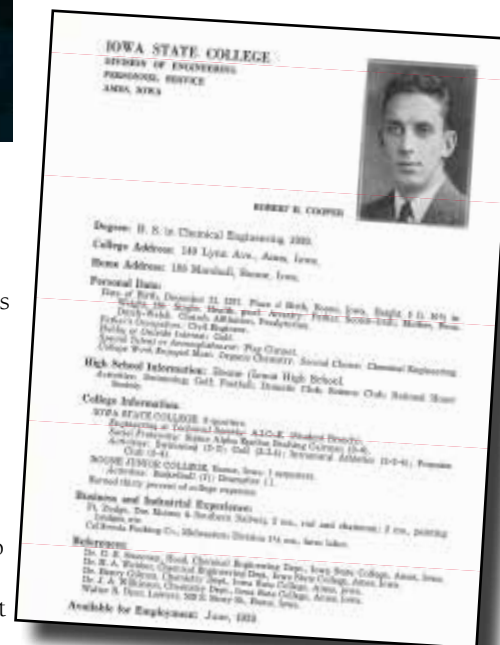
Bob was born in Boone, Iowa in 1917 and completed his degree in chemical engineering at Iowa State in 1939. While enrolled at Iowa State he was active with the student branch of AIChE and was a member of Sigma Alpha Epsilon fraternity.

After his graduation he moved to Charles City, Iowa and was employed by Dr. Salsbury’s Laboratories as a chemical engineer, where he worked in various positions until he retired in 1984 as vice president of manufacturing. Cooper was an advocate for ISU chemical engineers while at Dr. Salsbury’s, and hired graduates of the department, at least two of whom, Wayne Bartelt and Wallace Hladkey, also spent their entire careers at the company.

Cooper was active in the American Society of Chemical Engineers and became a fellow in that organization, a distinct honor. In the 1960s Cooper was instrumental in establishing the Iowa Section of the American Institute of Chemical Engineers, and was an early chair of the Iowa Section.

In May of 2014 he attended his 75th graduation reunion at Iowa State.

Dr. George Burnet, Anson Marston Distinguished Professor Emeritus in CBE, said Cooper’s daughter played a significant role in getting her father here for the reunion activities, “because it’s something he had always wanted to do for some time and his daughter badly wanted to make it possible.”



Cooper’s bio sheet, prepared prior to his 1939 graduation from Iowa State, shows his involvement in many activities and organizations both inside and outside of chemical engineering.

Such information sheets were prepared for each CBE graduate in years past.



John Kaiser (M.S. ChE '87)

John Kaiser received a 2014 Professional Achievement Citation in Engineering (PACE) award from the College of Engineering. The PACE award recognizes Kaiser's superior and eminent technical and professional achievements and creativity. Kaiser is the global director of cocoa and chocolate process technology for Mars Chocolate, the leading chocolate manufacturer in the world. He leads a global, multi-cultural science and technology team, has produced 13 U.S. patents, and is the recognized subject matter expert for chocolate making within Mars.



Mike (B.S.ChE '59) and Jean (B.S.Zool '60) Steffenson

Mike and Jean Steffenson received the 2014 Order of the Knoll Campanile Award from the ISU Foundation. This award is the most prestigious for lifetime giving, recognizing the extraordinary, long-time support of an individual or couple who have had a significant and inspiring impact on Iowa State University. The Steffensons have extensively supported multiple facets of the university for decades, including the Mike and Jean Steffenson Professorship, the James L. and Katherine S. Melsa Professor of the College of Engineering, and the Sweeney Hall Renovation Fund, as well as scholarship support. They are members of the Cyclone Club, the Order of the Knoll, and life members of the Alumni Association, and have served as Iowa State University Foundation Governors since 1992. *Read more about CBE's Mike and Jean Steffenson Student Services Center on page 18.*



W. Mark Saltzman (B.S.ChE '81)

W. Mark Saltzman was recently elected to the Institute of Medicine, the health arm of the National Academy of Sciences. He was one of 70 new members and 10 foreign associates recognized for outstanding professional achievement and commitment to service. Saltzman works as a professor at Yale, serving as Goizueta Foundation Professor of Biomedical Engineering in the chemical and environmental engineering and physiology department. After getting his undergraduate degree at Iowa State, he attended Massachusetts Institute of Technology (S.M.) and Harvard (Ph.D.).

Saltzman's research focuses on creating safer and more effective medical and surgical therapy, specifically by inventing new methods for tissue engineering and drug-delivery. He has garnered more than 250 research papers, three textbooks, two edited books and 15 patents. He was awarded the Professional Achievement Citation in Engineering from Iowa State's College of Engineering in 2013. The Institute of Medicine, which now has a total of 2,012 members, is both an honor organization and an advisory organization. Members of the institute are expected to volunteer on boards, committees and work on special projects. Being elected to the organization is considered one of the highest honors in the fields of health and medicine.

Ganesh Sriram (Ph.D. ChE '04)

Ganesh Sriram was promoted to the rank of Associate Professor with tenure in the Department of Chemical and Molecular Engineering, A. James Clark School of Engineering, at the University of Maryland. Sriram, who joined the department in 2008, is director of the school's Metabolic Engineering Laboratory, which specializes in systems biology, metabolic flux analysis and gene regulatory network analysis, especially of eukaryotes.

The group's work has many potential applications in commodity fields such as food, fiber, therapeutics, and renewable feedstocks, with an emphasis on sustainable resources.

Among many accomplishments at the Clark School are leading a collaboration to investigate carbon-concentrating mechanisms that make algal photosynthesis more efficient; being part of a collaboration that received a \$3.2 million grant from the NSF to engineer popular trees into high-yield crops for biofuels; acting as the co-PI on a project that received a \$1.9 million grant from the NSF to acquire a superconducting nuclear magnetic resonance (NMR) spectrometer for solving complex problems in biology and medicine; being named the 2011 Maryland Outstanding Young Engineer by the Maryland Science Center; and editing a book on plant metabolism. He is a Keystone Professor in the Clark School's program of excellence in early engineering education and part of efforts to improve student retention.

After earning bachelor's and master's degrees in chemical engineering from the Indian Institute of Technology, Bombay, he earned his Ph.D. at Iowa State, working in the lab of Dr. Jacqueline Shanks.



CBE Alumni Hall of Fame: Dr. Joe Cuning and Judson Harper

The CBE department inducted two new members into the CBE Alumni Hall of Fame, honoring their valuable contributions to the profession.



Dr. Joe Cuning

Energy and vision capture the essence of Dr. Joe D. Cuning's career and commitment to exploratory, long-range fiber research. Cuning spent 28 years with DuPont, where he held worldwide responsibility for non-woven products; he also formed a consulting firm for the textiles research and development community in 1991.

Cuning graduated from Iowa State's chemical engineering program with his Ph.D. in 1965. He continues his connection with Iowa State, from being awarded the College of Engineering's Professional Achievement Citation in Engineering to serving on the Iowa State University Foundation's Board of Governors.



Judson Harper

Judson M. Harper completed all of his degrees at Iowa State, graduating with a B.S. in ChE in 1958 and an M.S. and Ph.D. in Food Technology in 1960 and 1963, respectively. He worked six years for General Mills before joining Colorado State University in 1970.

Colorado State honored Harper in 2002, when he was designated Emeritus Professor of Chemical and Biological Engineering. Harper retired from the university in 2004. During his time at CSU, he served as faculty and head of Agricultural Engineering. He then became Vice President of Research, where he oversaw 20 years of significant expansion in the university's research programs. He was also interim president from 1998-99. Harper is an expert in the extrusion processing of foods, and he has authored two books, extensively published and internationally consulted on the subject.



Dale Fridley (BSChE '58)

Dale Fridley, retired technology vice president of basic chemicals and intermediates for ExxonMobil Chemical Company, received the **Anson Marston Medal** from the College of Engineering in 2014. The Marston Medal recognizes Fridley for outstanding achievement in advancing engineering science, technology or policy having national and international impact.

Fridley began his career at ExxonMobil as a technical support and operating supervisor and rose through the ranks to positions including refinery technical manager, feedstock and fuels manager, high-density polyethylene venture executive, and technology manager. During his tenure ExxonMobil grew into one of the largest and most profitable international chemical companies and became an industry leader in applying technical improvements and in integrating chemicals and refinery operations. At retirement Fridley managed almost 50 percent of ExxonMobil's technology activities.

He received a PACE Award from Iowa State's College of Engineering in 1994 as well as a proclamation and plaque from the mayor of Baton Rouge, LA for his contributions to the community. He was also an inductee in the Chemical and Biological Engineering Centennial Hall of Fame in 2013. Upon his retirement ExxonMobil named a street at a Baytown, TX complex "Fridley Drive."

Luke Roling: Pursuing opportunities in chemical engineering



When Luke Roling, 2011 alumnus in chemical engineering, came to Iowa State for a campus tour in high school, he loved everything—from the green space to the College of Engineering's excellent reputation. His mind was made up instantly as to where he would graduate.

His choice of major an easy one as well. He was always good at math and chemistry, making chemical engineering a natural fit. As he furthered his education, his decision was confirmed. "I realized how many opportunities are available in this field," he said.

Outside the classroom, Roling was active in the Honors Program,

Engineering Student Council and Freshman Leaders in Engineering. He adds that he's still in contact with many of his friends from these groups today.

Roling also participated in the Government of the Student Body, serving as president during the 2010-2011 term. He says his time in office taught him many things about university administration and things not typically seen as an undergraduate student.

This knowledge, as well as the tough coursework in the chemical and biological engineering department, prepared him for his next adventure—earning his Ph.D. in chemical engineering at the University of Wisconsin-Madison. His research focuses on making fuel cells more viable for mainstream applications.

Roling graduates in 2016 and plans to teach and research at a university in the future. He added, "I would love to return to Iowa State!"

Reginald and Jamie Baxter: Acknowledging and supporting educational institutions



After Reginald Baxter graduated from the University of Arkansas with his undergraduate degree in 1948, getting a master's in chemical engineering was next on his to-do list. So, he began looking at the top chemical engineering universities in the country to find the right one to attend.

He discovered what he was looking for at Iowa State and wrote to the head of the chemical engineering department, Grover Bridger, to inquire about the program and learn about available fellowships. Bridger promptly wrote back and offered Baxter a fellowship, which he eagerly accepted.

During his time at Iowa State, Baxter worked on a project involving phosphate ore deposits in South Africa for twelve months. His research, which focused on data analysis and how to optimize the ore mining of the deposit, would prove useful later in his career when he worked with fertilizer.

In 1949, Baxter earned his master's degree and headed into the oil business, where he spent twenty years spanning the globe in several positions, including project engineer, project manager, senior management and management consultant.

Baxter then switched gears and started working at First Nitrogen Corporation in Louisiana to build an ammonia plant. After the plant was built, his work was so impressive he was

offered the position of vice president of manufacturing at CF Industries with instructions to establish the company as a fertilizer manufacturer. Baxter continued to climb the corporate ladder at CF Industries and ascended to the CEO position, where he stayed for 14 years until taking early retirement.

As time passed, it was clear he was not ready for retirement, so he founded Baxter Industries, Inc., with his wife, Jamie, who has a strong background in finance. The couple provided consulting services for companies that were experiencing financial difficulty and in need of turnaround assistance. They later bought a potassium products company, which they "turned around" and operated for 19 years. They sold the company in 2011.

After three tries, Baxter has finally retired and now actively supports the institutions he says have contributed to his success. In addition, he enjoys golf and painting landscapes.



Reginald Baxter holds many fond memories of life in old Sweeney Hall (built in 1929) when he was pursuing his master's degree.

Fond Memories: Reginald Baxter, who received his master's in chemical engineering in 1949, has many memories of Iowa State. He fondly remembers Sweeney Hall, where he spent most of his time during his studies. "It holds a warm place in my heart," he said. "Dr. Sweeney was an enduring inspiration to me thorough out my career, and I am forever grateful for having studied with him."

Because of this, Reginald and his wife Jamie decided that supporting renovations to Sweeney Hall, specifically the computer lab, was a worthwhile endeavor. Jamie said, "I am proud to be able to support Iowa State. It's an extraordinarily fine institution that shapes the lives and future of young people in a very positive way."

In addition to supporting these renovations, the couple also contributes to scholarships for out-of-state-graduate students studying in the College of Engineering.

Baxter Computer Lab is major addition for students

Reginald and Jamie Baxter's generosity toward Iowa State University has included funds to establish a large computer laboratory for chemical and biological engineering students.

Located in the remodeled portion of the Sweeney Hall basement, the Reginald R. and Jameson A. Baxter Computing and Collaboration Lab features a large array of computers, complete with software specifically designed for engineering courses. In addition to the computer workstations, which can accommodate more than 20 students at one time, the lab also includes collaboration areas for easy discussion of projects and assignments.



CBE students enjoy access to advanced computer systems and a comfortable space for work and study in the Baxter Computing and Collaboration Lab in Sweeney Hall.

CBE Advisory Council welcomes four members, bids farewell to two

The Chemical and Biological Engineering Department's Advisory Council welcomes four new members. Two outgoing members are also honored for their service. The Advisory Council is composed of professionals from around the nation who contribute their expertise to the department.

Incoming Members

Eric Fasnacht (B.S. ChE '89)



Eric Fasnacht joined the council in 2014. He currently holds the position of plant manager for Archer Daniels Midland (ADM) at one of the country's largest corn processing facilities in Cedar Rapids, IA. He has served as ADM's engineering school leader for Bradley University and now Iowa State. He continues to demonstrate a focus on team building and an interest in developing engineering leaders for the future.

Eric is an Iowa State alumnus and received his B.S. in Chemical Engineering in 1989. In 2011, he was selected to participate in ADM's CEO-led Harvard Business School Executive Development Program.

He began his career with ADM in 1989, working in the company's oilseed division. While there he worked as a process engineer, maintenance engineer, project engineer and engineering manager. In addition to engineering, Eric has worked in the management side of ADM, serving as plant manager and regional manager for ADM's specialty oilseed processing of soft seeds.

Kenneth L. Garrett (B.S. ChE '64)



Kenneth L. Garrett had an exceptional 30 years with AT&T culminating in his position as senior vice president responsible for AT&T's networks in a period of unprecedented growth and transformation. In mid-career he was selected by AT&T and Massachusetts Institute of Technology for a Sloan

Fellowship at MIT. Following retirement from AT&T he established a successful consulting practice, provided leadership to three LLC's investing venture capital in start-ups, and made service to others a priority through significant volunteer leadership in non-profit organizations. With tremendous success in industry, the CBE department also honors Kenneth for his investment in Iowa State student success.

John Kaiser (M.S. ChE '87)



John Kaiser received a 2014 Professional Achievement Citation in Engineering (PACE) award from the College of Engineering. The PACE award recognizes Kaiser's superior and eminent technical and professional achievements and creativity. Kaiser is the global director of cocoa and chocolate process technology for Mars Chocolate, the leading chocolate manufacturer in the world. He leads a

global, multi-cultural science and technology team, has produced 13 U.S. patents, and is the recognized subject matter expert for chocolate making within Mars.

He received an M.S. in Chemical Engineering from Iowa State in 1987.

Mark Lashier (B.S. ChE '85, Ph.D. ChE '89)



Mark Lashier, executive vice president of olefins and polyolefins for Chevron Phillips Chemical Company, received a B.S. and Ph.D. in Chemical Engineering from Iowa State in 1985 and 1989, respectively.

In 2013 he received a Professional Achievement Citation in Engineering (PACE) Award from the ISU College of Engineering. The PACE Award recognizes Lashier's superior and eminent technical

and professional accomplishments and creativity. Lashier has produced 12 U.S. patents. He is especially noted for his economic development efforts in Singapore, where he was awarded by President S. R. Nathan.

Outgoing Members

Peter Hemken (B.S. ChE '77)



Peter Hemken is Vice President (retired December 2011), DuPont Company, and Founder and President, Strategy Development Partners LLC.

Strategy Development Partners LLC provides consulting services for small and medium-sized businesses and not-for-profit organizations in central Iowa. Hemken is

a highly experienced general manager and former senior executive of the DuPont Company with 35 years of experience in all areas of business development and growth, as well as restructuring and turnaround situations.

Prior to his retirement from the DuPont Company he managed strategy and business development programs for the agriculture-related businesses of DuPont, including Pioneer Hi-Bred. Previously he was vice president and general manager of DuPont BioMaterials and led the scale-up and commercialization of the Bio-PDO technology and expansion of the Sorona® renewably sourced polymer business.

Hemken graduated with distinction from Iowa State University in 1977 with a BS degree in chemical engineering and is a 2003 recipient of the Iowa State College of Engineering Professional Achievement Citation in Engineering Award. He earned an MBA degree from the Robins School of Business at the University of Richmond in 1982.

Robert A. (Bob) Lane (B.S. ChE '68)



Bob Lane is Vice President (retired 1998), Shell EP International Ventures, Inc. In 1964 he was accepted into the engineering college at Iowa State University and in 1968, graduated with a B.S. in Chemical Engineering.

Upon graduation Bob began a 30-year career with the Shell Companies in New Orleans, LA. He was

primarily involved with Shell's offshore and onshore oil and gas exploration and production businesses throughout the United States. He also held several senior positions in Shell corporate strategic planning in Houston, TX and London, England.

After electing to retire from Shell, Bob became the chief operating officer of Sonat Exploration, a large independent exploration and production company located in Houston. He served in this role and other responsibilities involving both onshore and offshore operations until 2000, when Sonat Inc. was sold to El Paso.

He is former chairman of The Gus Archie Memorial Scholarship committee, which is affiliated with the Society of Petroleum Engineers, American Institute of Mining, Metallurgical and Petroleum Engineers. He also is former chairman of the Board of Directors of PushAmerica, the national service organization of Pi Kappa Phi Fraternity. He is chairman of the Shell Offshore Pioneers Reunion Committee and a member of Houston's ARE (Active Retired Executives).

CBE welcomed three new staff members in 2014.....



Bellinda Hegelheimer
Graduate Program Assistant

Bellinda Hegelheimer joined the department in January and is responsible for managing all aspects of the department's graduate program. Hegelheimer received her bachelor's in economics (1994) and master's in higher education (1998) from the University of Illinois at Urbana-Champaign. She also has an ABD in curriculum and instruction (2009) and a bachelor's in French (2012) from Iowa State University.



Kathy McKown
Program Coordinator

Kathy McKown joined CBE in July and is responsible for managing the department's financial and operating affairs, including grants, post-award contracts and gifts. McKown graduated from Union University with a Bachelor of Science and from the University of Tennessee, Knoxville, with a Master of Library Science. Kathy previously worked for the University of Tennessee in collaboration with the Oak Ridge National Laboratory.



John Burnett-Larkins
Communication Specialist

John Burnett-Larkins became part of CBE in December, 2014 and will lead the department's many communication functions, including writing and layout and design of publications; maintaining the department's web page and social media communication; writing feature stories about CBE undergrads, graduates and faculty for department and university use; and department photography needs.

This is John's first job experience with Iowa State, after spending many years in various aspects of the communication business in the private sector, including marketing, public relations and broadcasting. He has also worked for Iowa State for many years as an announcer, lending his voice to the Cyclone Marching Band and Cyclone volleyball, gymnastics and softball. He also hosts the Ames Municipal band concerts each summer and works part-time at KASI radio in Ames.

.....and said farewell and good luck to departing staff members

CBE would like to recognize the following faculty and staff members who have recently left the department. We appreciate all their hard work and will miss them!

Jody Danielson left CBE in May 2014 and is now an assistant director with Facilities, Planning and Management at Iowa State.

Linda Edson took early retirement in December 2013. She is enjoying spending time with her family.

Chris Neary left CBE in April 2014 and is still on campus working as the communications specialist in civil, construction and environmental engineering.

Peter Reilly, Anson Marston Distinguished Professor Emeritus, retired in April 2014. See page 19 for a story about Reilly's important contributions to the department.



Fall 2014 CBE graduates enjoyed the Pre-Commencement Reception held at the Scheman Center. Joseph Arentson (top, center), contributed the senior address. A total of 31 undergraduate and nine Ph.D./M.S./M.E. degrees were conferred.

Continuing a family legacy



For chemical engineering sophomore Andrew Northrup, choosing a college after high school was simple. After all, he hails from a family of Cyclone graduates.

The Cyclone legacy goes back three generations, Andrew says, but with a few twists and turns, alternating on different sides of the family.

It starts with his great grandfather, John Northrup. John went to ISU where he received his chemical engineering degree in 1931. After graduation, Andrew says his great grandfather became an industrial chemist and managed a chemical production plant.

The legacy then skipped a generation in the Northrups, but started on his mother's side with her father, Jerry Loupee. Loupee received his degree in chemical engineering from Iowa State in 1962.

Andrew's father Jon Northrup continued the Iowa State tradition by studying at ISU for his animal science degree. Many of his relatives have also graduated from the university.

"You could say it's sort of the family's preferred school," he grinned.

After high school, Andrew decided he, too, wanted to study at Iowa State, and taking after his Grandpa Jerry, become a chemical engineer.

Growing up, Andrew was naturally inquisitive—a trait both sides of his family encouraged, especially his Grandpa Jerry. "If I ever had a question, he always had an answer," Andrew said.

Jerry worked for Hercules Powder Company, which produced chemicals and munitions during the Cold War.

Andrew's mom and grandpa often told him stories of their adventures traveling overseas, from Pakistan to Taiwan for example, to inspect plants and test products and equipment.

These stories, along with an affinity for chemistry and engineering, inspired Andrew's choice of major.

"My grandpa had a pretty interesting life and experiences, and I want to share in some of that."

Andrew adds that he has always been more of a problem solver—a key trait found in engineers—than a problem maker.

Currently a sophomore at Iowa State, he has a full class load this semester, but he still finds time to relax and enjoy his life as a college student.

Student uses experiences of adapting to new environment to help others

As a first-generation Latina student, chemical engineering senior Alma Marquez came to Iowa State knowing she would have to adapt to a new environment. Thankfully, she says, learning communities gave her a network of peers and resources to make that transition a little easier.

Marquez shared her experiences at a national convention in Washington, D.C., on Sept. 16, 2014.

At the convention, 11 universities from across the country formed the University Innovation Alliance, an organization aimed at helping low-income and first-generation students graduate with college degrees.

University leaders and officials presented retention programs and discussed ways to better meet student needs.

Representing Iowa State with Senior Vice President and Provost Jonathan Wickert, Marquez talked about being a participant and peer mentor in ISU's learning communities.

"One of the main challenges low-income and first-generation students face when entering college is the lack of academic preparation," she said. "Students like myself have a lot of trouble adjusting to the class dynamics, performing well on exams and actually asking for help—and many of us do need the help."

To address this issue, ISU has 80 learning communities designed to help students succeed.



The LEAD Living and Learning Community, for example, encourages participants to take advantage of college resources, such as career services. It also teaches skills on networking.

"One of my favorite assignments in LEAD required us to take a professor out to coffee," Marquez said. "It taught me how to build relationships with my professors and get tips on how to be a better student."

After returning from Washington, Marquez continues to work with university leaders and students who are involved with the University Innovation Alliance.

"I can see myself helping students from other universities further develop their existing retention programs through my own experience in ISU's learning communities," she said.

No excuses, no limitations for undergrad Ralston



With two kids and a ten-year career under her belt, Dianna Ralston is not like most college students. However, the

senior in chemical engineering believes anyone can do what she did.

“For someone who feels like they can’t finish school because they’re divorced, there’s no money, they have kids to take care of—there’s always a way if you have the desire and drive,” Ralston said.

Originally from Marshalltown, Iowa, Ralston came to Iowa State for a degree in biochemistry after graduating from high school. She also completed coursework in management information systems, but she left the university in her early twenties.

She’s had many careers throughout her life, including a jewelry maker and supplier in Los Angeles, research technician in a biochemistry lab, and a factory worker in the manufacturing of air conditioning units. But

she was still left feeling unfulfilled. That’s when she decided to go back to college.

“To be successful in anything, you have to fail because that’s the only way you know that you can get back up and prevail. That’s how you learn. It gives you the strength and drive to finish goals. Once you’ve failed and realized it’s not the end of the world, you are no longer limited by that fear,” she said.

Now, Ralston is pursuing a chemical engineering degree, which she chose based on her experience in large-scale operations; not to mention the challenge the program presented. “It was the most interesting degree I read about. I know there’s a lot of competition out there, and that’s what made me want to finish in this field. I knew that if I accomplished this, there’s nothing that I can’t achieve,” Ralston said.

In the future, she plans to work as a process engineer and return to school a third time to earn her master’s in business administration. “I want to get back into the business side of things. I just like to have my hands on everything. I love learning and working with people,” she added.



Students, family members and CBE faculty celebrated at social events surrounding the spring and fall 2014 graduation ceremonies. Terry King, provost and vice president for academic affairs at Ball State University (above, right) spoke at the spring 2014 awards banquet. King was a former department chair of CBE and is an ISU alumnus.

Chemical engineering senior named Cargill Global Scholar



As a brain cancer survivor and high school valedictorian, Augustine Villa, a senior in chemical engineering, has already achieved so much in his 21 years of life.

He now has one more accomplishment to add to his list—being a Cargill Global Scholar.

The Cargill Global Scholars program introduces students to leadership through training modules as well as mentoring and coaching from Cargill employees. Scholars are also

given the opportunity to network with Cargill businesses and employees, along with other undergraduate students.

Villa, along with Hieu Nguyen (economics) and Lissandra Villa Huerta (journalism, political science), were selected from Iowa State as 2014 Cargill Scholars.

He applied for the program after learning about it from Hillary Kletscher, a 2012-2013 Cargill Global Scholar and student in agricultural and biosystems engineering.

“Hillary had nothing but good things to say about the program. As I read more about it, more benefits and reasons to apply became evident to me, and I continued to get more excited,” he said.

He says every aspect of the program provides valuable lessons and connections. “Even the application process was a professional development experience, as it encourages students to think about their future and goals,” he said.

Being part of the Cargill Global Scholars program aligns well with Villa’s career plans to work internationally, which is one big reason he was drawn to engineering.

“I saw engineering as a major where I would be able to apply my skills toward solving real-world problems and improving the lives of others in a meaningful and measurable way. I also chose engineering because of the flexibility it presents; as an engineer I could work in virtually any industry or country in my future.”

GRADUATE STUDENTS

Congratulations to these Fall '14 graduate students who have received CBE fellowships; and thank you alumni for funding them!

**Frederick Martinson Chemical
Engineering Scholarship Fund**



David Williams

**M.A. Larson Fellowship
in Chemical Engineering**



Pratyush Mishra

**Sweeney Family
Memorial Fellowship**



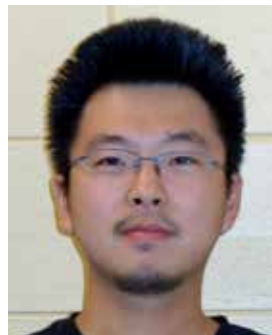
Ji Qi

**Leading the Bioeconomy
Graduate Fellowship**



Yan Cheng

**M.A. Larson Fellowship
in Chemical Engineering**



Yang Qiu

**George W. Parrott Centennial
Graduate Fellowship**



Rainie Nelson

**Reginald R. and Jameson A.
Baxter Graduate Fellowship**



Neeva Benipal

**Presidential Scholars
Fellowship**



Umar Hamdeh

**George W. Parrott Centennial
Graduate Fellowship**



David Chadderdon

**Reginald R. and Jameson A.
Baxter Graduate Fellowship**



Sean Kelly

**Presidential Scholars
Fellowship**



Adam Mullis

**Edward W. and Joyce C.
Backhaus Scholarship**



Xiaotong Han

**Loren and Donna Luppess
Graduate Fellowship**



Carmen Lopez

**James Katzer Energy
Fellowship**



Fang-Yi Lin

**Hans Buehler
Scholarship**



Lili Zheng

**Lanny A. Robbins Endowed
Graduate Fellowship**



Miguel Chavez-Santoscoy

**James Katzer Energy
Fellowship**



Wei Zheng

**Diane Brandt
Scholarship for Women**



Kirsten Davis

Chemical and biological engineering grad student aims to conquer limits with Ph.D.



Joseph Petefish (pictured, with his wife) a chemical engineer from Chippewa Falls, Wisconsin, chose to pursue his Ph.D. at Iowa State University for the world of opportunities that come along with a doctorate degree in his field.

The doctorate degree will definitely come in handy if Petefish decides to teach someday, but for now, he says the technical credentials will allow him to take any position his career might present to him.

Being halfway between his own hometown and his wife's hometown of Manhattan, Kansas, Iowa State was a good fit for him geographically after completing his undergraduate degree at the University of Minnesota. He was also intrigued with the work being done here, as well as the opportunity to work with his major professor, Andrew Hillier, professor and chair of chemical and biological engineering.

"I really liked the Iowa State faculty, especially in the chemical engineering department," says Petefish, who has also worked with Ian Schneider, assistant professor of CBE, and Eric Cochran, associate professor of CBE. "There are lots of smart people who are also relatable human beings. You might be surprised at how many places can't say that."

For more than four years, Petefish was on a research team with Hillier, making optical sensors based on surface plasmon resonance. Another part of the research group focused on interesting applications of electrochemistry in catalysis and nanotechnology.

Petefish now works for W.L. Gore & Associates in the Medical Products Division.

Gore's medical devices are made, in part, from expanded PTFE, which Petefish describes as a polymer that can be processed into microstructures that, when combined with the chemical properties of the material, are fit for use in several medical applications.

BUILDING NEWS

Fire! CBE deals with an unexpected challenge as flames erupt at Sweeney Hall



May 30, 2014 started out like most summer days on the Iowa State campus; that is, until the fire alarms went off in Sweeney Hall. At 5 a.m. firefighters arrived at Sweeney, responding to a blaze that had broken out on the roof of the building.

The fire was concentrated near a mechanical penthouse containing an emergency generator on the roof of the 1994 wing of Sweeney Hall (pictured, left). A 100 x 50-foot section of roof was directly damaged from the flames; however, thanks to the

quick work of emergency responders, the fire was extinguished within just an hour and a half. Thankfully, no one was in the building when the fire started, and no injuries occurred.

Although there was limited structural damage to the building, the heavy black smoke from the burning roofing material and the water used to extinguish it found its way down into the building, coating a large portion of the interior surfaces. This included faculty and student offices (pictured, right) conference rooms, and both teaching and research labs.

Clean up began immediately. Water removal was followed by five weeks of cleaning of soot, replacing carpet and ceiling tiles and cleaning of hallways, labs and offices. A company was

brought in to clean and restore research equipment, although a number of instruments were damaged beyond repair.

Sweeney Hall was closed to the public for seven weeks. Many who occupied the building were displaced during the cleanup. The advising staff, 10 faculty, 30 graduate students and several postdoctoral researchers were moved to other campus locations. Research activities were relocated to other labs on campus, or delayed until cleaning was complete. Four classes being taught in Sweeney and their 62 students were also moved elsewhere for the summer.

By the end of July, Sweeney Hall was starting to look normal again, and the building was reopened to the public. According to Andrew Hillier, professor and chair of chemical and biological engineering, the price tag for recovery is approaching \$2.5 million. Nevertheless, there were some positives to come out of the setback. "Everyone in the department really pulled together as we faced this crisis," Hillier noted, "and Sweeney Hall is now nearly as clean as when it was first built." The chemical and biological engineering department would like to thank all of the ISU teams from around campus for the assistance they provided during the cleanup process. Hillier added, "The university as a whole was extremely helpful and everyone worked very hard to get the building back in operation as quickly as possible."



Growing student enrollment inspires a new student services space

Chemical engineering enrollment across the nation is at an all-time high. Nowhere is this more evident than in the Department of Chemical and Biological Engineering at Iowa State, which has seen its undergraduate population grow to nearly 800 students in 2014.

"In order to provide the best possible experience for these students, we have made significant investments in building and facilities upgrades," said Andy Hillier, CBE department chair. One recent example of these upgrades is the construction of the Mike and Jean Steffenson Student Services Center.

The new space, which opened in the last year, was made possible thanks to the generous support of Mike and Jean Steffenson. Mike, a '59 graduate in chemical engineering, and Jean, a '60 graduate from the zoology program, decided to sponsor the space upon the recommendation of former department chair, Surya Mallapragada. "We asked Surya what the department priority was that fit in our budget. She described the student services center as her highest priority, and we said, 'Okay, let's do it,'" Mike said.

Chemical and biological systems engineering academic adviser Shannon Grundmeier believes this project was necessary to enhance the advising experience for students. "We needed to improve communication and consistency within the academic advising experience," she explained. "Students were underserved by the original space given the very limited seating and ineffective layout."



The generosity of Mike & Jean Steffenson made the new Student Services Center a reality. See more about the Steffensons and their ties to CBE on page 6.

The Mike and Jean Steffenson Student Services Center now houses all of the undergraduate and graduate support staff members as well as three academic advisers. The renovated center offers numerous benefits, including increased collaboration and support between students and advisers, a welcoming area for current and prospective students, and a centralized place for undergraduate and graduate students to receive advising-related information.

Chemical engineering students appreciate the change. Lucas Dunshee, senior in chemical engineering, commented, "The new student advising center has more capacity to help students at once and has a more welcoming environment."

William McNamara, senior in chemical engineering, agreed with Dunshee, "The new student center means a step toward keeping Sweeney up to date. These types of renovations show the department cares about its students."

Grundmeier believes the Mike and Jean Steffenson Student Services Center, "provides a 'home' to the staff members who support the students enrolled in our undergraduate and graduate programs. The environment is more welcoming to students, faculty, and staff members alike and is a very positive change for the CBE department."



The Student Services staff proudly serves CBE undergrads and graduates. Pictured are (left to right); Brenda Kutz, DeAnn Pitman, Shannon Grundmeier, Bellinda Hegelheimer and Jenny Gibbs.



The Mike & Jean Steffenson Student Center features a spacious, comfortable and welcoming atmosphere for CBE students coordinating their planning and scheduling needs. "These types of renovations show the department cares about its students," said senior William McNamara.

Former chemical engineering professor celebrates 90th birthday



Colleagues, family and friends joined Anson Marston Distinguished Professor Emeritus George Burnet Feb. 3 in Sweeney Hall to celebrate his 90th birthday. A native Iowan, Burnet was born on Jan. 30, 1924.

Burnet started his Iowa State career as an undergraduate in 1942 and returned to Ames after military service in World War II to earn his B.S. in chemical engineering in 1948. He then earned M.S. and Ph.D. degrees from Iowa State in 1949 and 1951.

Burnet joined Iowa State's faculty in 1956 after working at Commercial Solvents Corp. He

served on the faculty for the next 39 years, advocating for research and education. He held various leadership posts, including national president of the American Society for Engineering Education from 1976-1977, as well as interim dean of Iowa State's College of Engineering and department head of the university's chemical engineering department from 1961-1978. He retired as Anson Marston Distinguished Professor Emeritus in 1995.

Burnet has long been a supporter of Iowa State University. Most recently, he played a key role in helping to organize the Department of Chemical and Biological Engineering (CBE) Centennial Celebration. In September 2013, he was inducted to the CBE Alumni Hall of Fame Inaugural Class. He also co-authored the centennial's signature publication, "The First 100 Years of Chemical Engineering at Iowa State University."

Burnet now lives in Ames, and he maintains an active presence in Sweeney Hall. He is a lifetime member of the Iowa State University Alumni Association and a member of the Iowa State University Foundation W. M. Beardshear Society.

Remembering ChE student Tong Shao



ISU student Tong Shao passed away September 26, 2014 after being reported missing September 17. She was studying chemical engineering and had accepted an internship with Dippin' Dots. She was an excellent student with a 3.7 grade point average, a good friend, and a caring roommate, according to James Dorsett, director of International Students and Scholars at Iowa State University.

The Chinese Students and Scholars Association held a memorial service for 250 people on the south lawn of the campanile October 3. Shao's roommate, Zhiyi Sun, remembered Shao as a "creative cook who cooked eggs in a mug" and "an expert League of Legends player."

The end of one adventure and the beginning of another for retired professor Peter Reilly



Anson Marston Distinguished Professor Emeritus Peter Reilly may have retired from Iowa State, but his legacy continues to have a lasting impact.

Reilly received his A.B. in chemistry from Princeton University in 1960 and his Ph.D. in chemical engineering from the University of Pennsylvania in 1964.

After receiving his Ph.D., Reilly worked as a research engineer for DuPont for four years, and then he spent six years at University of Nebraska-Lincoln.

He came to Iowa State in the fall of 1974 to teach and research as a professor of chemical engineering.

At ISU, he studied enzymes—proteins produced by living organisms that accelerate chemical reactions. His research

focused on amylases and cellulases, which are enzymes that can convert the starch and cellulose found in plants into glucose.

Reilly also played an important role in setting up two exchange programs at the university. One program partnered with the University of Glasgow in Scotland from 1984 to 2002. The second program collaborated with the Ecole Polytechnique Fédérale de Lausanne and the Université de Lausanne in Switzerland, which, 30 years later, continues to this day.

"I've been able to send many students from Iowa State to study abroad, and we've had many international students come study here," he said. "It's an eye-opening experience, for those going abroad in either direction, to see the differences from country to country."

After serving 40 years at Iowa State, Reilly retired in the spring of 2014. However, he continues to publish papers and manage ISU's exchange program with Lausanne.

Reilly is also spending more time abroad, serving on a number of doctoral committees in countries such as Sweden and India. He also gives presentations on his research at international conventions—most recently traveling to Colombia.

Even in retirement, Reilly continues to do his life's work.

UNDERGRADUATE SCHOLARSHIPS CONGRATULATIONS TO ALL OUR AWARD-WINNING STUDENTS!

Anthony Abbate

Ross White Engineering Scholarship

Jackson Achen

Engineering Student Program Support

Tina Akinyi

Eugene Devere Travis Scholarship

Reem Alkhalil

Lois and Manley Hoppe

Michelle Ampuero

Nicholas L. Reding/Monsanto Scholarship in Engineering

Austin Anderson

Chemical Engineering Scholarship Fund

Nathan Anderson

Engineering Student Program Support

Steven Anderson

Chemical Engineering Scholarship Fund

Laura Appelen

Chemical Engineering Scholarship Fund

Joseph Arentson

Glenn A. and Mary Ellen Antwood

Robert A. & Jacklyn R. Lane

Maria Arevalo

Chemical Engineering Scholarship Fund

Faye Assmann

Robert O. and Marie E. Dierks

Mitchell Atneosen

Larry J. McComber

Ian Baer

Koch Discovery Scholarship

Seth Baetzold

Chemical Engineering Scholarship Fund

Amanda Balaskovits

Engineering Student Program Support

Jessica Bangen

Gretchen L. Bruffy Gerald and Barbara Montgomery

Scholarship in Chemical and Biological Engineering

Carter Barnes

Engineering Student Program Support

Jordan Barr

OPPD Nuclear Engineering Scholarship

Kevin Basemann

Chemical Engineering Scholarship Fund

Andrew Berg

Chemical Engineering Scholarship Fund

Victoria Bertram

Engineering Student Program Support

William Black

Manley R. Hoppe

Mitchell Boge

Chemical Engineering Scholarship Fund

Kelsey Brandt

Ana and Ed McCracken Engineering Scholarship

Devan Bridson

Engineering Student Program Support

Abigail Bruen

Marion and Andrew Pontius

Lucas Bruene

Chemical Engineering Scholarship Fund

Philip Bui

Dr. Owen A. Heng Chemical and Biological Engineering

Scholarship Fund

Kaitlin Burdick

Engineering Student Program Support

Kelsey Burt

Edward W. & Joyce C. Backhaus Scholarship in Chemical and Biological Engineering

Molli Butler

Chemical Engineering Scholarship Fund

John Caputo

Maurice & Ruth Larson Scholarship (Oviedo)

Chadwick Morris Memorial Scholarship (Oviedo)

Matthew Carroll

Alpha Chi Sigma

A. Douglas & Helen Steffenson

Joseph Cicchese

Skogen-Hagenson

Alison Clark

Lois and Manley Hoppe

Erica Clark

Engineering Student Program Support

Logan Clark

Manley R. Hoppe

Ryan Clark

Lois A. & James David Waters

Joshua Claussen

Gretchen L. Bruffy

Iver Cleveland

Engineering Student Program Support

Kelci Coates

Robert O. and Marie E. Dierks

Benjamin Cool

Engineering Student Program Support

Andrew Costic

Eugene Devere Travis Scholarship

Bryan Cote

Chemical Engineering Scholarship Fund

Caterpillar Foundation

Tyrel Cradic

Roderick Seward, Flossie

Ratcliffe & Helen M. Galloway

Paige Dettman

Mike and Jean Steffenson Scholarship

Shannon DeWitte

Engineering Student Program Support

Nolan Dickson

Ralph S. Millhone Endowed Presidential Scholarship

National Merit Scholar

Jordan Donner

Nicholas L. Reding/Monsanto Scholarship in Engineering

Grace Elonen

Engineering Student Program Support

Joshua Evans

Engineering Student Program Support

Dakota Even

LyondellBasell Futures in the Chemisphere Scholarship

Paul Faronbi

Stuart M. Totty

Kenneth R. Nimmo

Chelsea Fleitman

Nicholas L. Reding/Monsanto Scholarship in Engineering

Allie Flessner

Nicholas L. Reding/Monsanto Scholarship in Engineering

Andrew Fogerty

Roderick Seward, Flossie Ratcliffe & Helen M. Galloway

Matthew Fontillas

Edwin John Hull

Joshua Francois

Nicholas L. Reding/Monsanto Scholarship in Engineering

Casey Frank

Building a World of Difference Renewable Energy Scholarship in Engineering

Elizabeth Frank

Engineering Student Program Support

James Frank

Edward W. & Joyce C. Backhaus Scholarship in Chemical & Biological Engineering

Matthew Frankenhoff

Van A. Mensing Memorial

Jennifer Freeland

Ralph S. Millhone Endowed Presidential Scholarship

Nathan Fricke

Roderick Seward, Flossie Ratcliffe & Helen M. Galloway

Colin Fry

Koch Discovery Scholarship

Prerana Ganguly

Tau Beta Pi Scholars Program

Chemical Engineering Scholarship Fund

Mackenzie Garlock

Skogen-Hagenson

Michael Garvey

Engineering Student Program Support

Brian Gates

Nicholas L. Reding/Monsanto Scholarship in Engineering

Jacob Gentile

Nicholas L. Reding/Monsanto Scholarship in Engineering

Stuart M. Totty

Justin Glasper

Engineering Undergraduate Scholarships-Intl

Christina Goeddel

Ralph S. Millhone Endowed Presidential Scholarship

Sam Grant

Mary and Axel Peterson

Amber Graves

Engineering Student Program Support

Mason Green

Engineering Student Program Support

Sandra Greenwood

Erwin and DeLoris Whitney

Paul Gregory

Chemical Engineering Scholarship Fund

Teresa Grzan

Engineering Student Program Support

Ryan Gunckel

Barbara L. Ferre Ratcliffe & Helen M. Galloway

Scholarship in Engineering

Michael Gunther

Chemical Engineering Scholarship Fund

Caterpillar Foundation

Jacob Haan

Jerrold S. & Mary R. Ferre

Nicholas Hale

Chemical Engineering Scholarship Fund

Alex Hall

Marty E. Blaylock Opportunity in Engr. Scholarship

Cody Hancock

Ralph Luebbers Mike and Jean Steffenson

Scholarship

Quinn Hanson-Pollock

Nicholas L. Reding/Monsanto Scholarship in Engineering

Jayde Hapgood

Roderick Seward, Flossie Ratcliffe & Helen M. Galloway

Leslie Harder

Nicholas L. Reding/Monsanto Scholarship in Engineering

John Harlow

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Rebecca Harmon

Griffen Family Mike and Jean Steffenson

Scholarship

Joseph Harper

Roderick Seward, Flossie Ratcliffe & Helen M. Galloway

Maya Harris

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Zackary Heien

Chemical Engineering Scholarship Fund

Matthew Hendrickson

Chemical Engineering Scholarship Fund

Caitlyn Herndon

Nicholas L. Reding/Monsanto Scholarship in Engineering

Eric Hessing

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Ryan Hill

Robert O. and Marie E. Dierks Mary and Axel Peterson

Rose Hoffman

Larry J. McComber

Grant Hopkins

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Maia Hove

Engineering Student Program Support

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Grady Hugunin

Nicholas L. Reding/Monsanto Scholarship in Engineering

Angelica Iacobucci

Lawrence E. Burkhart

Ashley Iannuzzelli

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Tristan Inglett

Building a World of Difference Renewable Energy Scholarship in Engineering

Engineering Student Program Support

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Nicholas L. Reding/Monsanto Scholarship in Engineering

Christopher Isely

Gretchen L. Bruffy Edwin John Hull

Bradley Jackson

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Tanner Jaeger

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John Janiga

Erwin and DeLoris Whitney

Carolyn Jennrich

Skogen-Hagenson

Alexandra Jeppesen

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Colin Jernberg

A. Douglas & Helen Steffenson

Peter Joers

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Stephen E. Simon

Courtney Johnson

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John Jordan

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Yongrae Kim

Chemical Engineering Scholarship Fund

Callie Kirkengard

Chemical Engineering Scholarship Fund

Megan Kleckler

Engineering student Leadership Development

Alexandra Klodt

Nicholas L. Reding/Monsanto Scholarship in Engineering

Kayla Knipping

Ross White Engineering Scholarship

Joseph Koelbl

Engineering Student Program Support

Georgia Kolf

UNDERGRADUATE SCHOLARSHIPS (continued)

Nicolas Miranda-Bartlett
Engineering Student Program
Support

Boniface Mkini
Chemical Engineering
Scholarship Fund

Megan Mohar
Nicholas L. Reding/Monsanto
Scholarship in Engineering

Andrew Moon
Nicholas L. Reding/Monsanto
Scholarship in Engineering

Michael Moreton
Mary and Axel Peterson
Scholarship

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Erwin and DeLoris Whitney
Scholarship

Rachel Morris
Donald H. Beisner in Honor of Dr.
Morton Smutz

Alexandria Mullally
Roderick Seward, Flossie
Ratcliffe & Helen M. Galloway

Brett Nashleanas
Roderick Seward, Flossie
Ratcliffe & Helen M. Galloway

Alyssa Nease
Skogen-Hagenson

Alissa Nelson
Nicholas L. Reding/Monsanto
Scholarship in Engineering

Kendall Neuberger
Nicholas L. Reding/Monsanto
Scholarship in Engineering

David Nguyen
Maurice & Ruth Larson
Scholarship (Oviedo)
Chadwick Morris Memorial
Scholarship (Oviedo)

Blake Nichting
Erwin and DeLoris Whitney
Scholarship

Russell Novotny
Chemical Engineering
Scholarship Fund

Sittinon Nuethong
Chemical Engineering
Scholarship Fund

Alicia O'Donnell
Lois and Manley Hoppe

Lucas Oglesby
Roderick Seward, Flossie
Ratcliffe & Helen M. Galloway

Kelley Okoren
Chemical Engineering
Scholarship Fund

Jason Pals
Chemical Engineering
Scholarship Fund
Eastern Iowa American Society
for Quality Control Scholarship

Molly Parsons
Ralph S. Millhone Endowed
Presidential Scholarship

Sara Parupsky
Skogen-Hagenson
Adele B. & Charles W. Irwin
OPPD Nuclear Engineering
Scholarship

Connor Pearson
Patricia Werner Merten
Memorial Scholarship Fund

Megan Peters
Mary and Axel Peterson
Scholarship

Erica Peterson
Marion and Andrew Pontius
Scholarship

Tanner Phelps
H. Stuart Kuyper

Hannah Pinnt
Chemical Engineering
Scholarship Fund
Eugene Devere Travis
Scholarship

Madelyn Plain
Chemical Engineering
Scholarship Fund

Deon Ploessl
Nicholas L. Reding/Monsanto
Scholarship in Engineering
Kenneth L. Garrett Scholarship
in Chemical & Biological
Engineering

Samuel Podobinski
Nicholas L. Reding/Monsanto
Scholarship in Engineering

Joshua Potvin
Nicholas L. Reding/Monsanto
Scholarship in Engineering

Pamela Quek
Chemical Engineering
Scholarship Fund

William Rabe
Nicholas L. Reding/Monsanto
Scholarship in Engineering

Andrew Radencich
Chemical Engineering
Scholarship Fund

Tobias Rains
Chemical Engineering
Scholarship Fund
Maurice & Ruth Larson
Scholarship (Oviedo)

Chadwick Morris Memorial
Scholarship (Oviedo)

Grace Rapp
Clarence H. Ford Engineering
Scholarship Fund

Cameron Redshaw
Engineering Student Program
Support

Brian Regan
Shepard Family Scholarship in
Chemical Engineering
Lyle J. & Marcia L. Higgins

Eli Reiser
Chemical Engineering
Scholarship Fund

Ryan Renbarger
Chemical Engineering
Scholarship Fund

Samantha Reyes
Tau Beta Pi Scholars Program
Scholarship

Deere Foundation Engineering
Scholarship Program

Zachary Rice
Edwin John Hull

Grace Ricker
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Scholarship in Engineering

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Support

James Robinson
Chemical Engineering
Scholarship Fund

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Larry J. McComber

Wayne Ruble
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Scholarship Fund

Kelly Rudnicki
Paul Emerson Morgan

Paige Ruggle
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Robert A. & Jacklyn R. Lane

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Alpha Chi Sigma

Samantha Sauerbrei
Kenneth & Mary Heilman
Roderick Seward, Flossie
Ratcliffe & Helen M. Galloway

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Austin Schladetzky
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Scholarship in Engineering

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Scholarship Fund

Alicia Schnoebelen
Chemical Engineering
Scholarship Fund

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in Chemical & Biological
Engineering

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Scholarship in Engineering
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Scholarship Fund

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Chemical Engineering
Scholarship Fund

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Scholarship

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Scholarship Fund

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Scholarship Fund

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Gerald and Barbara Montgomery
Scholarship in Chemical and
Biological Engineering

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Scholarship in Engineering
Eugene Devere Travis Scholarship

Alyson Straube
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Scholarship Fund

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Scholarship in Engineering

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Ralph Luebbers
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Scholarship Program

Yee Tan
Chemical Engineering
Scholarship Fund

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Ratcliffe & Helen M. Galloway

Rick Telsrow
Chemical Engineering
Scholarship Fund

Tarah Temen
Engineering Student Program
Support

Allias Thomson
Harry Oakley Price

Amber Tieman
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Scholarship in Engineering

Anh Tran
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Scholarship Fund

David Trudeau
Chemical Engineering
Scholarship Fund

Erika Vaassen
Barbara L. Feroe

Sonia Valdez
Chemical Engineering
Scholarship Fund

Shawn Van Bruggen
Chemical Engineering
Scholarship Fund

Hannah Vanevery
Kenneth & Mary Heilman

Augustine Villa
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Allyson Walsh
Engineering Student Program
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Erica Walsh
Engineering Student Program
Support

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Erika Weimer
Hans Buehler

Elizabeth Wells
A. Douglas & Helen Steffenson
Caterpillar Foundation

Elizabeth Welu
Marty E. Blaylock Opportunity in
Engr. Scholarship

Jacob White
Marty E. Blaylock Opportunity in
Engr. Scholarship

Ellen Wick
Nicholas L. Reding/Monsanto
Scholarship in Engineering
Engineering Undergraduate
Scholarships- Intl

Daniel Wiegel
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Scholarship in Engineering

Elizabeth Wilson
Lois and Manley Hoppe

Rachel Wiltgen
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Scholarship in Engineering

Jianing Wu
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Scholarship

Thomas Zeman
Donald H. Beisner in Honor of Dr.
Morton Smutz

Aaron Zoellner
Engineering Student Program
Support



Graduate students Ting Wei and Joseph Petefish received the Chemical and Biological Engineering Graduate Student Research (Wei) and Teaching (Petefish) Excellence Awards and were honored in early 2014. Ting Wei (top photo, center) is shown with department chair Dr. Andy Hiller and professor Dr. Jacqueline Shanks. Petefish is shown with Hillier in the bottom photo. See a story about Petefish on page 17.

INDIVIDUALS

Russell (BSChE'82) & Sally Abarr
Elizabeth Abbott-Sirrine
(BSChE'92) & Oakley Sirrine
James Achen
Michael Addison (BSChE'69)
Tetteh Akiti (PhDChE'01)
Raymond Albert (BSChE'42)
Beverly Allphin
Michael Ancil (BSChE'08)
Timothy (BSChE'73) & Sandra
Anderson
Ronald (BSChE'68) & Keitha
Anderson
Joyce Backhaus
Yun Bai (PhDChE'01)
& Ping-Hua Feng (MSChE'01)
George (MSChE'95, PhDChE'98)
& Tina Barac
John Barghusen (PhDChE'57)
Jon (BSChE'60) & Lidia
Barkman
Robert (PhDANALYTChem'83)
& Jacquelyn (FAMSV'80)
Barron
Vasfi (BSChE'75, MSChE'77)
& Pauline Basaran
Michael Baudino
(MSBioMedEng'81)
Reginald (MSChE'49) &
Jameson Baxter
Thomas (BSChE'68) & Judy Benda
David (BSChE'71, MSChE'73) &
Lynda Bergeson
Robert Berkland (BSChE'70)
& Lucy Do
Ann (BSIE'99) & Nathan
(BSChE'99) Bibus
Charles Block (BSChE'66)
Ronald (PRFChE'62, BSChE'63)
& Mary Blough
Mark Boeckmann (BSChE'81)
Richard (BSChE'61) & Linda
Boettcher
Carol Bohnenkamp (BSChE'81)
Leona Borchers
Howard Borgman (BSChE'50)
Michelle (BSChE'90) & Brad
Borman
Jeffrey (BSChE'76) & Jean
Boyce
Allan (BSChE'62) & Joy
Boyken

Andrea (MSChE'89) & Gail
Bozzano
John (BSChE'56) & Corrine
Briggs
Brian (BSChE'60) & Mary
Brunsvold
Phuoc & Lyn Bui
Robert (BSChE'62) & Patricia
Bush
Harvey Bushby (BSChE'57)
Joshua (BSChE'10) & Tabitha
Buyert
Richard (BSPsyCh'49) &
Fredda Ellen Caplan
Jody Carroll
Jim (BSChE'43) & Mary
Challas
Edward (BSChE'49) & Roberta
Chase
Maynard (BSChE'66) & Judith
Chaussee
Tan (BSChE'76) & Li-Fong Chen
Michael (BSChE'78) &
Barbara Chihak
William Claeys (BSChE'75) &
Kathy Townley
J. Coates (BSChE'44)
Jerry (BSChE'56) & Sally
Cochran
Leo (BSChE'64) & Carol Coffey
Robert Cohen (MSChE'52)
Jack (BSChE'48) & Peggy Comp
Charles (BSChE'73) & Teresa
Connell
Josh (BSChE'73) & Gail Cooper
Cheryl Cornell
Gregory Cottingham (BSChE'56)
Harold (BSChE'49, MSChE'52,
PhDIE'57) & Susan Cowles
Jon (BSChE'83) & Christine Coy
William (BSChE'63, MSChE'67,
PhDChE'69) & Karen Louise
Cramer
John (BSChE'60) & Katherine
Cronk
Alan (MSChE'79) & Debra
Crowther
Richard (BSAerE'57) &
Marilyn Culley
Joe (BSChE'58, MSChE'62,
PhDChE'65) & Patricia
Cunning
David (BSChE'75) & Elizabeth
Cushman

Robert (MSChE'66) & Roselee
Dallman
Shuvra Das (MSME'87,
PhDAerE & ME'91) &
Mitali Chakrabarti (PhDChE'91)
Jay Davenport (BSChE'49)
Patrick DeHaven
Linda (BSChE'83) & Wesley
(BSCeramicE'81) Demmon
Michael (BSChE'01, PhDChE'06)
& Amy (BSChE'01, PhDChE'06)
Determan
Robert (BSChE'56) & Marie
Dierks
Ronald (BSChE'68) & Chotima
Doofe
Deepak Doraiswamy
Michael (BSChE'70, MSChE'71)
& Pamela Downing
Walter Drobot (PhDChE'53)
Alfred Drumm (BSChE'64)
Kevin (BSChE'86) & Lisa Duffy
Erik (BSChE'00) & Annabel
Edwards
Gabrielle (BSChE'95) & Jason
(BSChE'95) Egli
Thurman & Anne Eldridge
Jacob Epstein (BSChE'11)
Gregory Ernst (BSChE'04)
David (BSChE'61) & Susan Eyre
George (BSChE'59, PhDChE'64)
& Dianne Farris
Dennis (BSChE'61, PhDChE'64)
& Faye Fear
Steven (PhDChE'88) & Lisa Finke
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& Margaret Flaugh
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Fleming
Earl (BSChE'46) & Bernice A
Franzen
Peter (BSChE'97) & Angela
(BSChE'98) Fuhrken
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Funderburk
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& Fintian Zheng
Kathy & Kenneth Garrett
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Damon & Teresa Gehrels
Robert (BSChE'52) and
Jeanne Gerwig
Charles & Kathleen Glatz

Harry (MSChE'67) & Sara
Glidden
John Gobel (MEngrChE'68)
Robert Goldberg & Mary Moller
John (PhDChE'64) & Lynne
Golden
Dennis Grant (BSChE'62)
Adam (BSChE'99) & Elizabeth
Gravert
James (BSChE'60, PhDChE'65)
Gray
Robert (BSChE'56) & Barbara
Green
George Griffiths (BSChE'62)
Jeff Grimley
Gary & Karen Guetzo
Barbara Gulasy
Richard Gulasy
John & Cynthia Gunckel
Ronald Haas (MSChE'83)
Randy (BSEE'72, MSNucE'73,
PhDNucE'78) & Mary
Jane (MSBiomedE'76,
PhDBiomedE'80) Hagenson
Richard (BSChE'64) & Ellen Hall
Robert (BSChE'54) & Elizabeth
Hall
Kelly Hammar (BSChE'89) &
Kirk Stulen
Risdon (PhDChE'67) & Lyla
Hankinson
Johnnie Hanson (BSChE'73)
David (BSChE'57 Heckmiller
DeAnne (BSChE'83) & Keith
Hellyer
Frank Helmer (BSChE'59)
Peter (BSChE'77) & Pamela
Hemken
Catherine Heng
Gary (BSChE'69) & Connie
Hildebrand
Sidney Hillier
Eric Hockett (BSChE'73) &
Jane Doyle
Kurt (BSChE'91) & Nancy
Hoefler
Vincent (BSChE'79) & Karen
Hoellerich
James Holcomb (BSChE'65)
Charles (BSChE'85) & Sharon
Holland
K.C. (BSChE'59, MSChE'61,
PhDChE'62) & Koon Hong
Kevin (BSChE'84) & Ruth

Hoogeveen
George (BSChE'69) & Linda
Hopkins
Casey Houston (BSChE'00)
Kristina Houston
Melissa (BSChE'95) & Scott
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Walter (BSChE'58) & Marie
(BSHHEq'58) Inkhofer
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Nancy Irvine
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Michael (BSChE'76) &
Barbara Jackson
John Jansma (BSChE'48)
Donald (BSChE'60) & Linda
Jayne
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Jensen
Ronald Jensen (BSChE'75) &
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Lewis & Suzanne Jester
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& Judy Johnson
Gary Johnson (BSChE'77)
Herbert Johnson (BSChE'61,
MSChE'64, PhDChE'69)
Jack (BSChE'81) & Carol
(BSChE'80) Johnson
James (BSChE'54) & Ann
Johnson
Lance (BSChE'82) & Cindy
Johnson
Steve & Denette Johnson
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Robert (BSChE'64, MSChE'69,
PhDChE'71) & Pauline Kaiser
John (MSCE'87) & Colleen
Kaiser
Sandeep Kakade (MEN
ChE'11)
Amy Karlsson (BSChE'03) &
Christopher Jewell
Kenneth (BSIE'68) & Sharon
Katzner
Harold (BSChE'51, MSChE'56)
& Nancy Kaufman
Tommy (BSChE'60) & E. Lynn
Kearns
Alice Keene (BSChE'05)
John (MSChE'89) & Ellen

Kelzenberg
Robert Kematich (PhDPhysCh'84)
& Aiyakrishnan Meenakshi
Terry (BSChE'75) & Kathleen
King
Bryan Kinnamon (BSChE'69)
& Susan Waller
William (BSChE'61) & Judy
Kirby
Donald (BSChE'54) & Susan
Kjerland
Daniel (BSChE'62) & Karen
Klemmensen
John (BSME'76) & Anita
Knudtson
Raphael (BSChE'70) &
Theresa Ko
Michael Koller
Robert (BSChE'83) & Angela
Krall
Karl (BSChE'00) & Anne Kraut
Robert (BSChE'77) & Robin
Krueger
Gene (BSChE'59) & Marilyn
Kruger
Todd Kruse (BSChE'99)
Joseph (BSChE'67) & Nancy
Kubec
Kevin (BSChE'79) & Jane
Kutsch
Paul & Pauline Landis
Robert (BSChE'48) & Louise
Langerhans
Gregory Langin (BSChE'97)
Ronald (PhDChE'63) & Donna
Lantz
Mark Larson (BSChE'75) &
Donna Kottwitz
Huu (BSChE'75, MSChE'77) &
Ngoc-Minh Le
Steven (BSChE'67) & Mary
Le Mott
William Lehfild (BSChE'78)
Charles (BSChE'62) & Bonnie
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Mark & Jean Lieser
Todd (BSChE'79) &
Mella Little
Mark Litwinow (BSChE'98)
Bruce (BSChE'60, MSChE'62)
& Diane Long
Gregory (BSChE'70) & Jody
Lorimer
Deepak (MSChE'89, PhDChE'92)

& Beth (MSAerE &
MechE'90)
Lumba
Loren (BSChE'72) & Donna
Luppes
Jason (BSCE'99) & Melissa
(BSChE'99) Lyons
Brenda Mann (BSChE'91) &
Jordan Gerton
David (BSChE'70, PhDChE'73)
& Diane Marsh
John (BSChE'61) & Cheryl
Marsh
Edward (BSChE'60) & Judith
McCall
Jon McCarty (BSChE'69) &
Amy Klein
Joseph McCauley (BSChE'65,
MSCE'73)
Roy (BSChE'71) & Linda
McConkey
John (BSChE'57) & Margaret
McDonald
Phil McDonald (BSDistSt'79,
BSChE'86)
Thomas (BSChE'49) &
Frances McElherne
James (BSChE'63) & Mary
McFarland
Bryan (BSChE'63) & Karin
McGinnis
Edward (MSChE'64) & Helen
(MSFoodNut'67) Mead
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Timothy (BSChE'81) & Teri
Meyer
Scott (BSChE'82) & Elizabeth
Micek
Richard (MSBiomedE'76,
PhDEE'79) & Diane Miles
Stanley & Merrilee Morris
Surajit (MSChE'77) &
Sharmila Mukherjee
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Peter (MSChE'76) and
Darlene Munk
Lawrence (MSChE'65) &
Patricia Murdoch
Larry (BSChE'63) & Susan
Nelson
Robert (BSEngOp'80) & Lisa
(BSChE'82) Nesbitt
Bruce (BSChE'72) & Marcia

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Kristine Olson (BSChE'92)
Nick (BSChE'49) & Dorothy Orlich
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Sally Parrott
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Terry (BSChE'61) & Mary Patton
Allen (BSChE'54) & Marilyn Pearson
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Richard (MSChE'68) & Fran Perry
Robert Petersen (BSChE'50)
Aaron (BSChE'00) & Lindsay Peterson
Reid (BSChE'88) & Lisa Peterson
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Mark Pipal (BSChE'73) & Constance Rice
Fakhri (MSChE'76) & Nasima Poonawalla
Alden Presler (BSChE'48, MSChE'55, PhDChE'56)
John Pyles (BSChE'50)
Charles (BSChE'62) & Jeanette Quiner
Sandhya & Sankar Raghavan
Richard (MSChE'67) & Jennifer Rahn
Joan Ranallo (BSChE'74)
Dale (MEngrChE'69) & Marnae Ranta
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