We are in the middle of a transition year for Chemical Engineering. Many of you may have learned that Dr. Rashid Hasan and Carol Horabik have made career changes. Dr. Hasan was recruited away to Texas A&M Petroleum Engineering and Carol changed career focus moving to Jacobs Engineering in Greenville South Carolina (I see a trend towards warmer climates … and a longer golf season). We wish each of them well in their new adventures.

We are fortunate to bring new faces and areas of expertise to the department. Dr. Guy Sanders has been with us as a term faculty member with teaching responsibilities. We are pleased to welcome him as a tenure track assistant professor. He will continue to teach courses in his area of expertise of bioengineering and modernize our biochemical engineering minor. Dr. Zhihua Xu joined our faculty as an assistant professor. Dr. Xu strengthens our depth in material science and engineering. He will also develop courses in mineral processing. We also welcome Dr.s Lisa Wulff and Sarah Wang, with expertise in environmental engineering and polymers. We look forward to developing additional electives to compliment the current offerings.

Our faculty continue to be recognized for our outstanding contributions to teaching and research. Congratulations to Dr. Steven Sternberg, the 2012 recipient of the H.T. Morse Award for Teaching. This is the most prestigious recognition for teaching bestowed by the University of Minnesota on a faculty member.

Our graduates continue to find great careers across the country. We appreciate our alumni who champion our program and recruit our students for internships and full-time positions.

Please read on to learn more about exciting news from UMD Department Head Update

Special points of interest:
- New Faculty 2012/2013
- Visiting student from Scotland
- First graduate of the MEng Program
- Duane Long’s retirement
- Dr. Keith Lodge’s promotion

Congratulations 2011/2012 Graduates

Fall 2011—Jeffrey Clusiau, Dung Le, Kyle Lemke, Jed Peterson.


May/Summer 2012—Jennifer Oppold
Congratulations 2012/2013 Graduates

Fall 2012—Kevin Huseby, Muhammad Kasim, Charles Knilans, Briana Madenjian, Jesse Reinschmidt, Jessica Sheehan, Steven Wenzel


AIChE: The Year in Review 2011/2012

It was another great year in the world of Chemical Engineering at UMD. The fall pick-nick was a great success with great weather, great food and a lot of students and faculty attending. The winter banquet was held at Grandma’s Sports Garden and also had a great turnout. This spring, the new elections for AIChE officers was held. The new president for the UMD student chapter of AIChE is Jake Klym and the vice president will be Joe Mattson. The secretary will be Eghun Augadijuand, the treasurer will be Devon Heteen and the ever so important activity’s coordinators will be Nora Mayer and Boris Brnic. The spring banquet was also a great success. This will be the largest graduating class to date for the UMD Chemical Engineering department, which provided for a historical number of senior gifts along with many great laughs and memories.

AIChE Fall 2011 Picnic
fed to the fuel cell thereby eliminating the storage step of hydrogen which has been a hindrance in the development of hydrogen energy. The project involved three phases. The first phase involved the development of a new solvent that can withstand the harsh winters of Mid West and at the same time it was economically feasible to develop and use. The second phase of the project involved experimentation under various different temperature and pressure conditions, this was done to understand the reaction kinetics between sodium borohydride and the solvent. The final step involved the development of a prototype for field testing. The prototype has been developed for a 40W fuel cell, and it is under the process of testing.

This idea was also used for a senior design project, which focused on the up scaling of this process for a 1MW fuel cell based power plant.

Neil Armstrong once said “Research is creating new knowledge.” The results of research will not be visible today but the effort of researchers will be used by our future generations. Our students are highly prized across campus as undergraduate researchers and have worked on projects in chemistry, civil engineering and mechanical engineering departments.
Faculty Awards

J. Moe Benda receives 2012 SCSE Teacher Award

Moe Benda, ChE Instructor and Director of the Iron Range Graduate Engineering Education Program was recognized for his outstanding efforts to teaching in the Swenson College of Science and Engineering.

Moe came to the ChE department in January of 2010 with over 20 years of industrial experience and is a Lean 6 Sigma Blackbelt. As an Instructor, Moe has shown a commitment to students and a marked propensity to facilitate learning – along with this award he was also nominated for the 2012 Outstanding Faculty through the UMD Student Awards program.

In his first year, Moe created and delivered two Master’s level courses in Chemical Engineering: ChE 5193 Lean 6 Sigma - Process Optimization and Advanced Process Control; and ChE 5250 - Advanced Process Control. In his second year, he revitalized ChE 4612 Hazardous Waste Process Engineering and incorporated a graduate level component to it, ChE 5612. And in collaboration with the department of Mechanical and Industrial Engineering he incorporated Quality Management (EGMT 5160) into the ChE 5193 course.

Sensitive to the needs of his students, he provides flexibility while delivering these courses to multiple locations (Virginia, Hibbing, Itasca and Duluth) through face to face instruction, Moodle and Interactive TV (ITV).

With students at all of these locations, several challenges exit: from exam proctoring to homework submission and feedback. He was able to overcome these and other challenges through advanced delivery methods, alternating lecture locations and his fun style of teaching.

Within the courses, Moe has been able to provide unique experiences. For example: as part of a professional organization, TPPEN (Twin Ports Process Excellence Network) he was able to host students at St. Mary’s Hospital for review of their lean process excellence system embedding the importance and portability of principles and concepts learned in class. He is involved in other organizations as well that he draws from: Engineers Club of Northern Minnesota and the Society for Mining, Metallurgy and Exploration.

And for students outside of his normal courses, he has provided guest lectures to: UMD’s Labovitz School of Business MBA students, Intro to Engineering students, and area community college, high school, middle school and grade school students.

Moe has shown great dedication to UMD’s current and prospective Chemical Engineering students and to the life-long learning process.

Dr. Steven Sternberg receives 2011-12 Distinguished Teaching Award-Morse Alumni Award

Dr. Sternberg, “Steve,” was honored by receiving the Horace T. Morse University of Minnesota Alumni Association Award for Outstanding Contributions to Undergraduate Education. This honor is awarded to exceptional candidates nominated by collegiate units in their quest to identify excellence in undergraduate education.

Dr. Sternberg has worked in the Chemical Engineering Department at the University of Minnesota Duluth since 1999, moving from the University of North Dakota. He helped create the Environmental Science program (2005) and was the first director of the program. He maintains the environmental engineering minor in the Chemical Engineering Department, and hopes to expand it someday. He currently teaches courses in Material and Energy Balances, Material Science and Engineering, Chemical Reaction Engineering, and Pollution Control Technologies.

Dr. Sternberg is a registered Professional Engineer and has been awarded the Minnesota Society of Professional Engineers Professionalism Award (2004), the Saiki Foundation Award for Graduate Teaching Excellence, (1999) and the UMD-SCSE College Outstanding Advisor Award (2009). His current scholarly activities include writing a textbook “Air Pollution: Engineering and Science,” exploring the use of aquatic plants for heavy metal bioremoval from surface and waste waters, and creating a device for low-temperature off-grid power generation.
**Faculty News**

Carol Horabik left the department in June 2012. She has moved to South Carolina to take a position with Jacobs Engineering. We wish Carol the best of luck. Carol made several contributions to the department during her six years on our faculty. She brought a “real-world” depth of experience to her classes, as well as a personal touch when advising students. Before Carol left she sent out an email to her students sharing a few words of wisdom:

1) “Hold yourself up to the highest ethical standards. There is nothing anyone can take away from you if you deal honestly, fairly and safely in your work. You will always be able to hold your head high and will earn the respect, trust and cooperation of others.”

2) “You are never too old to keep learning and keep yourself up to date. The natural action for most people is to resist change when something has always worked in the past and is ‘good enough.’ As engineers we are supposed to make it better and you will probably find it to be ‘fun’ to try and implement new technology.”

**Dr. Michael Rother** as a research fellow at the University of Minnesota Super Computing Institute.

**Dr. Keith Lodge**

We extend our congratulations to Dr. Lodge, who was awarded the rank of Full Professor in recognition of his contributions in the area of environmental chemistry and engineering education. Professor Lodge has made significant advances in engineering education pedagogy, particularly in the area of hands-on laboratory instruction in our particle technology and process control courses.

**New Faculty 2012/2013**

**Xiao-Yan Wang, Ph.D. Assistant Professor**

Ph.D. in Chemical Engineering, National University of Singapore, Singapore

M.Eng. in Chemical Engineering, Tianjin University, Tianjin, China

B.Eng. in Chemical Engineering; Minor in Mechanical Engineering Tianjin University, Tianjin, China

**Lisa Wulff, Ph.D. Assistant Professor**

Ph.D. in Civil Engineering; environmental emphasis, University of Missouri (Mizzou)

M.S. Environmental Engineering, University of Missouri—Rolla (Now Missouri University of Science and Technology)

B.S. Chemical Engineering, University of Missouri—Rolla

**Zhihua Xu, Ph.D. Assistant Professor**

Ph.D. in Materials Science & Engineering, University of Tennessee, Knoxville

M.S. in Materials Science & Engineering, Chinese Academy of Sciences, Shanghai, China

B.S. in Chemical Engineering, Tianjin University, Tianjin, China
Engineering Day

In the fall of 2011 and 2012, Omega Chi Epsilon members, along with other engineering volunteers, gave an opportunity for young individuals who were aspiring to learn more about engineering at the University of Minnesota Duluth. A whole day was dedicated to showing high school and junior high students a more hands on approach to the variety of engineering majors offered on campus. They were able to experience what it might be like to be a chemical, civil, mechanical, and electrical and computer engineer. Experiments were conducted and demonstrations were held in all of the different parts of the school allowing for not only an insight into engineering but into the layout of a college campus. At the end of the day, students had the opportunity to ask a panel of college engineering students about their experiences as a UMD engineering student. Feed back from the visitors gave our student tour guides high marks for the presentation and knowledge about the field of chemical engineering and the opportunities available to our graduates!

Student and Alumni Notes

Recent graduates have gone on to many different fields. Zeke Alveraz, Kevin Huseby, Erik Svensson, and Mitch Woitalla all took jobs with Cargill. Kjirsten Bauer is working for General Mills. PJ Fish and Al reich are working at Barr Engineering. Bob Franzwa, Brad Just, and Blake Rustad are now working for 3M. Deedra Bowman is working for CHS. Jeana Dillon, Abdi Mohammad, and Bethany Klemestrud will be attending Michigan Technological University. Gibran will be attending Texas A&M University. Sam Jacobs will be doing a Co-op at Hutchinson Technologies. Brandon Jones will be working at US Steel. Muhammad Kasim will be doing a Co-op at Verso Paper. Charlie Knias will be working at Tundra Companies. Mat Koppang will be working for Nol-Tec. Abigail Kosowski will be working at Schlumberger. Briana Madenjian will be doing an internship at Tundra Companies. Jessie Sheehan will be working at Medtronic. Sam torgerson will be working at Hutchinson Technologies. Zach Padelford is now with Emerson Process Management-Rosemount Inc and an inside Sales Engineer. Anupreet Parmaer is with Genencor, part of Dupont, and recently married Amit who works with Cisco. Despite the warm California weather, she misses Minnesota (at least the school days). Alan Johnson (Class of ‘97) is Purchasing and Logistics Manager for EBA&D.

Dan Palo is back in Minnesota working with Barr Engineering with a focus on mineral processing.

“Do not go where the path may lead; go instead where there is no path and leave a trail” - Ralph Waldo Emerson
Congratulations to our first Graduate with a Master of Engineering in Chemical Engineering

April Ekholm graduated on May 10th completing her Master’s degree with a Minor in Engineering Management. She currently works in Two Harbors as a process engineer in the pelletizer at Cliffs Natural Resources in the Technical Services department. April was able to complete her degree while living on the Iron Range through the Iron Range/UMD Graduate Engineering Education Program. This program is based out of Virginia, Minnesota and provides opportunities for folks to live and work on the Range and still attend UMD. Students have access to UMD’s world-class education via face-to-face instruction or over ITV with classes offered at the areas several community colleges: Mesabi Range Community and Technical College, Hibbing Community College, and Itasca Community College.

The Degree: The Master of Engineering is a professional degree tailored to the working individual – all classes can be taken in the evenings and completed in as little as two years. The Master of Engineering (MEng) degree offering began in 2009 with specializations in Civil Engineering, Chemical Engineering, Electrical & Computer Engineering, Industrial Engineering, and Mechanical Engineering. As a result of this new Degree, the Chemical Engineering department introduced several new graduate classes: Air Pollution Control, Transport Phenomena in Wells and Pipelines, Process Optimization, Process Control, Hazardous Waste Processing and Biochemical Engineering. The Iron Range program also offers a Master of Science in Engineering Management (MSEM) and a Master of Science of Environment Health and Safety (MEHS).

More information is available at: http://www.d.umn.edu/scse/degrees/ironRange/index.html or by calling the program director, Moe Benda at (218) 749-7776.

Visiting Student from Scotland—Fraser J Bodie

I arrived in Duluth from the United Kingdom in Mid-February for a four and half research project to complete my Masters in Chemical Engineering from the Loughborough University. The American University experience was like nothing I had experienced before. I immediately felt welcomed into the UMD experience mainly thanks to my housemates (Shane Ouist, Matt Koppang, and Sam Clark). My first week consisted of the watching the Bulldogs beat Colorado at hockey, a few games of broomball, and a couple of nights out at Gmas (Grandma’s).

The first week definitely set the tone for the rest of my trip and I got involved in as much as I could. By joining the rugby team I got to travel all over the state, some of the highlights being in St. Cloud and Mankato. It truly is an amazing state and my only regret is not to see more of it.

The Chemical Engineering Departments was incredible at accommodating me and I would like to thank Dr. Keith Lodge, without him I wouldn’t have had such an amazing opportunity. I would highly recommend any study abroad program it truly was an incredible experience and I will definitely be back in Minnesota soon.
ChE Student Highlights 2011/2012

Hey everybody! My name is Gibran Hashmi and I am currently in my fourth year of Chemical Engineering. Chemical Engineering at UMD has been more than just a rewarding experience for me. Here I have had the chance not only to enroll in one of the best undergraduate chemical engineering programs in the nation but at the same time UMD has given me the opportunity to make the most of my college education. An well-rounded college education is highly beneficial and I have experienced that first hand with my internships, research experiences and extra-curricular activities. I interned this past summer at August Schell Brewing Company in New Ulm, MN. The experience taught me a great deal about working in the food industry and the challenges associated with it. At the same time I was able to apply my engineering skills to come up with some creative solutions to their waste water and energy conservation problems. Currently I am working at Sappi Fine Paper in Cloquet and contributing my skills in a different industry. Both my internships taught me a great deal and gave me the background that companies often look for when hiring after graduation. Besides industry experience, the Chemical Engineering Department at UMD provided ample opportunities for me to conduct some research during my stay. I took part in two UROP (Undergraduate Research Opportunity Program) research projects and one sponsored research project in the Northland Advanced Transportation Research Lab. My research experiences gave me a better understanding of some of the high level concepts of fluid mechanics and thermodynamics that will help me get ready for Graduate School.

Wishing to make a mark outside academics and industry, I also took part in several extra-curricular activities at UMD polishing my leadership and communication skills. This is my second year as president of Tau Beta Pi, an engineering honor society. Last year I was elected Vice President of the International Club at UMD and this year I was elected as treasurer of student chapter of the American Institute of Chemical Engineers. I have also served as president of the UMD Muslim Students Association. All these experiences added to my well-rounded education at UMD.

I would strongly encourage you to take part in internships, co-ops, or research experiences and avail yourself of the opportunity to learn and exhibit leadership qualities.

Gibran Hashmi

Hey All! My name is Bethany Klemetsrud and this is my last year in the Chemical Engineering program at UMD. Thinking back to my freshmen year it’s crazy to see how much I’ve learned and how I have been able to make the Chemical Engineering Department feel like home. Even though Chemical Engineering isn’t the easiest major out there, it has been rewarding to see how Chemical Engineers are able to solve day-to-day problems. This summer I was accepted into the Research Experience for Undergraduates (REU) program at UMD. Thinking back to my freshmen year it’s crazy to see how much I’ve learned and how I have been able to make the Chemical Engineering Department feel like home. Even though Chemical Engineering isn’t the easiest major out there, it has been rewarding to see how Chemical Engineers are able to solve day-to-day problems. This summer I was accepted into the Research Experience for Undergraduates (REU) program at Washington University in St. Louis and was able to see how chemical engineers use their skills to research solutions to environmental and energy problems. I found that the skills I had acquired over the past three years are useful for solving real problems.

Part of the REU was spent in China and Hong Kong where I was able to see firsthand how Chemical Engineers are working on these problems at a local level and global level. We toured and met with various energy companies in Hong Kong and saw how they are using Chemical Engineering applications to reduce emissions and find cleaner, renewable sources of energy. We were also able to meet with various Chemical Engineering professors in China and Hong Kong and see how the skills they learned as an undergraduate are being used every day in their own research. I encourage you to take the time and see what research opportunities are out there.

Bethany Klemetsrud
ChE Student Highlights 2012/2013

Emily Campion

It’s amazing what we can do with our training in chemical Engineering. My name is Emily Campion. Last summer I participated in an internship at Goddard Space Flight Center where I helped develop a Planetary Protection Database. The database stores the results of sample swabs and wipes taken to measure the number of bacteria on planetary spacecraft. I wrote a user manual for the database that was emailed to NASA’s Planetary Protection Officer, the European Space Agency’s Planetary Protection Officer, and the head microbiologist at JPL! For my work I received the Pat Gary Award of Excellence in the Computer Science Category NASA Summer 2012 Poster Session. I also received the John Mather Nobel Scholars Award with a grant to present research anywhere, so I really want to do some good chemical engineering research before I graduate.

During my stay at NASA I had multiple opportunities to expand my knowledge about science, engineering, and space. I discussed the second law of thermodynamics and the formation of galaxies with a Nobel Prize winning astrobiologist, John Mather, and I attended a lecture by an international space station astronaut, Daniel Burbank. At the Goddard Visitor Center, I stood alongside scientists and engineers who worked on the Sample Analysis of Mars instrument as I watched live footage of the JPL control room when Curiosity landed on Mars. Very cool!

Hello. My name is Jake Klym. I am a senior in Chemical Engineering at UMD. Last year I worked as an engineering coop student at Cargill in Sidney, OH from January to August 2012. The Sidney plant processes soybeans to oil extraction. The oil is used in a variety of food and chemical products. Within the first couple of months my role was to become familiar with each department in the process so I could begin working on improving the efficiency. However, due to management change, I became responsible to manage projects left behind by transferring supervisors. As an engineering intern, I had the exciting opportunity to take charge of a major drag conveyor repair in which a major crane operation was needed. Both supervisory work and safety measures were needed for the crews/contractors consisting of 3-4 people during the operation. I was also given responsibility for a major feed tank operation in which the way the meal was transferred/dealt with was changed. This project took approximately 3 months to plan, implement, execute, and complete. During the installation phase, I led a 4-man crew everyday making sure permits were signed and installation remained on pace all while reporting to management how the installation was coming along. Lastly, during the plant shutdown I managed various installations and repairs within the extraction/cooling process including new valves, sand, and hydro-blasting shell and tube heat exchangers, and installed a chemical system for a water cooling tower system. I never imagined that I would gain so much experience as a student. UMD Chemical Engineering prepared me for success now and in the future.
Duane Long ‘s Retirement

Duane Long retired from UMD on May 24, 2013. He was in the Chemical Engineering Department for 27 years.

Duane was our first and only lab services coordinator from our program’s inception and has been critical to the department’s success. He has made many contributions to UMD’s mission of teaching, service, and research.

We had a farewell party that was attended by university and Duluth community members. Our former department head Dianne Dorland was present to welcome Duane into the ranks for retirement. We wish Duane the best. He will surely be missed.

UMD Students win big at Conference on the Environment

UMD Chemical Engineering and Environmental Science students took the second and third place prizes at the 26th Annual Conference on the Environment’s annual Environmental Challenge. The competition, held in Brooklyn Center, Minnesota, is sponsored by two of the leading regional organizations of environmental professionals: Air & Waster Management Association—Upper Midwest Section, and the Central States Water Environmental Association—Minnesota Section.

This year’s challenge was to develop a plan for a small Minnesota city to remove phosphorus from the city’s wastewater releases and to achieve a 20% reduction in total water use. The teams competed on three elements: 1) written solution submitted prior to the conference, 2) table-top presentation at the conference, and 3) formal presentation at the conference.

The second place prize ($800) was awarded to Hirsi Ali (ChE), Joseph Balmer (ChE), and Ben Egelske (ChE). The third place prize ($500) went to Kyle Block (ChE), Linnea Henkels (ESci), Andrew Mickelson (ESci), and Aaron Ostlund (ESci).
Allan S. Rudeck, UMD Chemical Engineering Class of 1994, was inducted into the Swenson College’s Academy of Science and Engineering on September 30, 2011. Al is currently Vice President for Strategy, Planning and Asset optimization at Minnesota Power, an Allete Company. Al was honored for his leadership and service to his community, the profession, and the University. Al has been an advocate for the advancement of engineering and technology in his numerous roles at Minnesota Power and the communities they serve. He has advanced opportunities for all trades and crafts, contributed significantly through collaborative workforce development groups, led major economic development projects, and established some world class environmental awareness and performance metrics. He takes time to support continued education of all peers and coworkers, as well as offers help and support to those he leads. Beyond his many accomplishments in the industry, Al has been a leader in the community participating on levels ranging from community volunteer to city councilor.

Swenson Academy of Science and Engineering

Scholarships 2011/2012

Chemical Engineers have always fared well amongst the engineering students at University of Minnesota Duluth. This was reflected at the engineering scholarship banquet held in September 2011. Quite a few chemical engineers secured excellent scholarships generously offered by the local industry and the alumni of UMD. These students included Gibran Hashmi and Charles Knilans, who were awarded the Roy La Bounty and Samuel & Ardis Beard Scholarships respectively. Shane Oquist received a scholarship from the Duluth Engineers Club; Philip Fish received one from Tate & Lyle, and Cliffs Natural Resources awarded one to Christopher Lofgren. Meredith Olson got Mary Ann and Jerry Ostroski Engineering Scholarship and Tyler Klingfus received one from AICHE. Joseph Mattson secured Baria Memorial Scholarship. The Alumni Scholarships went to Muhammad Kasim and Ryan Dinesen. Enbridge Energy Partners awarded a scholarship to John Hill and two Builder Engineering Scholarships were awarded to Andrew Paulsen and Doug Eli. The Department of Chemical Engineering at UMD heartily congratulates all these students who were honored at the banquet and expresses their gratitude to all the benevolent donors who make it possible every year to appreciate the accomplishments of our students.
2011/2012 Co-ops and Internships

Over the past year, we have had several students who have had either an internship or Co-Op. Here is a list of just some of the students and where they worked.

Jake Kylin – Cargill, Sidney OH
Jake worked at Cargill in Sidney, OH from January to August of 2011. Within the first couple months his role was to become familiar with each department in the process so he could begin working on bettering the process’s efficiency. He was put in charge of a major drag conveyor repair in which a major crane operation was needed. He was also put in charge of a major feed tank operation in which the way the meal was transferred/dealt with was changed, which took approximately 3 months to plan, implement, execute, and complete. During the plant shutdown Jake was put in charge of managing various installations and repairs within the extraction/cooling process including the installation of new valves, sand and hydro-blasting shell and tube heat exchangers, and installing a chemical system for a water cooling tower system. Jake learned a lot from his experiences and looks forward to possibly working for Cargill in the future.

Joe Mattson – Sappi Paper Mill, Cloquet MN
Joe was hired at Sappi Fine Paper in Cloquet in December of 2010 as a technical services intern. He was given weekly assignments which require sampling of different aspects of the chemical pulping process (i.e. the fiber line and recovery boiler). On top of these weekly duties, he was also given projects and a role on problem solving teams. His biggest project entailed the trialing of new screens in the fiber line (the pulping part of the mill). He was required to work closely with process engineers and vendors, and also to independently test the screen performance and determine statistical significant of the results. The project was very rewarding and gave him experiences in industry operations.

Abhishek Shah—United Taconite
Cliffs Natural Resources, Forbes, MN

Abigail Kosowski—LasX Inc., White Bear Lake, MN

Al Reich—Charter Films, Superior, WI

Andrew Luberda—Sappi Paper Mill, Cloquet, MN

Ben Boyum—Boise Paper, International Falls, MN

Blake Rustad—3M, East St. Paul, MN

Bob Franzwa—3M, Maplewood, MN

Brad Just—Verso Paper, Sartell, MN

Brandon Jones—MN Power, MN

Bri Madenjian—General Mills, Minneapolis, MN

Charlie Knlans—Tundra Co., White Bear Lake, MN

Chris Lofgren—LHB, Duluth, MN

Deedra Bowman—Me Global, Duluth, MN

Devon Hetteen—Eka Chemical, Duluth, MN

Erik Svensson—United Taconite Natural Resources, Forbes, MN

Gibran Hashmi—Schell’s Brewery, New Ulm, MN

Jesse Sheehan—Medtronic, Minneapolis, MN

Kenny Kruger—Caterpillar Global Mining, Chisholm, MN

Kevin Huseby—Cargill, Fayetteville, NC

Kjirsten Bauer—Tate and Lyle, Duluth, MN

Mat Koppang—LHB, Duluth, MN

Mitch Woitalla—Cargill, Gainsville, GA

Nora Mayer—Verso Paper, Sartell, MN

Phillip Fish—Soil Engineering Testing, Richfield, MN

Sam Torgerson—Boise Paper, International Falls, MN

Shane Oquist—Land O Lakes, Montrose, MN

Zeke Alvarez—Cargill, Savage, MN
2012/2013 Co-ops and Internships

Over the past year, we have had several students who have had either an internship or Co-Op. Here is a list of just some of the students and where they worked.

- **Abhishek Shah**—United Taconite Cliffs Natural Resources, Forbes, MN
- **Abigail Kosowski**—LasX Inc., White Bear Lake, MN
- **Al Reich**—Charter Films, Superior, WI
- **Andrew Luberda**—Sappi Paper Mill, Cloquet, MN
- **Ben Boyum**—Boise Paper, International Falls, MN
- **Blake Rustad**—3M, East St. Paul, MN
- **Bob Franzwa**—3M, Maplewood, MN
- **Brad Just**—Verso Paper, Sartell, MN
- **Brandon Jones**—MN Power, MN
- **Bri Madenjian**—General Mills, Minneapolis, MN
- **Charlie Knilans**—Tundra Co., White Bear Lake, MN
- **Chris Lofgren**—LHB, Duluth, MN
- **Deedra Bowman**—Me Global, Duluth, MN
- **Devon Hetteen**—Eka Chemical, Duluth, MN
- **Erik Svensson**—United Taconite Cliffs Natural Resources, Forbes, MN
- **Gibran Hashmi**—Schell’s Brewery, New Ulm, MN
- **Jesse Sheehan**—Medtronic, Minneapolis, MN
- **Kenny Kruger**—Caterpillar Global Mining, Chisholm, MN
- **Kevin Huseby**—Cargill, Fayetteville, NC
- **Kjirsten Bauer**—Tate and Lyle, Duluth, MN
- **Mat Koppang**—LHB, Duluth, MN
- **Mitch Woita**—Cargill, Gainsville, GA
- **Nora Mayer**—Verso Paper, Sartell, MN
- **Phillip Fish**—Soil Engineering Testing, Richfield, MN
- **Sam Torgerson**—Boise Paper, International Falls, MN
- **Shane Oquist**—Land O Lakes, Montrose, MN
- **Zeke Alvarez**—Cargill, Savage, MN
- **Cody Shaffer**—CESL, Ltd., Richmond, BC, Canada
- **Matthew Kleinhaus**—CESL, Ltd. Richmond, BC, Canada
- **Eric Coletta**—Domtar, Nekosha, WI
- **Benjamin Egelske**—Navaspectrum Inc., Schaumberg, IL
- **Robert Wallant**—Domtar, Nekkosa, WI
- **Boris Brnic**—Buckman Laboratories, Memphis, TX
- **Meredith Olson**—Northern Tier Energy, St. Paul Refinery, St. Paul Park, MN
- **Devon Hetten**—Cargill, Savage, MN
- **Ehsun Angadjivand**—3M, St. Paul, MN
- **Muhammad Huzaifa Kasim**—Verso Paper, Sartell, MN
- **Eric Serantoni**—Monsanto, St. Louis, MO
- **Andrew Pauelsen**—Cargill, Blair, NE
- **Phillip Fish**—Soil Engineering Testing, Inc.
Chemical Engineering Scholarship Recipients 2012/2013

Back Row: Alex Fisher, Andrew Paulson, Christopher Larson, Dane Jenson, Ryan Dinesen, Joseph Mattson, Casey Milesko
Front Row: Robert Wallant, Doug Eli, Joseph Glaser, Meredith Olson, Emily Campion, Ehsun Angadjivand, Devon Hetteen, Kyle Lytten

Chemical Engineering is Well Represented In the University Honors Program
We continue to attract outstanding students to chemical engineering. Although the curriculum is rigorous and leaves little time for extracurricular activities, our talented majors find time to round out their UMD Chemical Engineering experience by qualifying for the campus honors program. This program gives students additional opportunities to develop leadership and scholarship through service and research. Congratulations to Emily Campion, Connor Elsner, Douglas Fortney, Drew Johnson, Christopher Larson, Tyler McLaughlin, and Alexander Ristow.

Industrial Advisory Committee

Mike Ausmus—Tate and Lyle
Errin Brungardt—NewPage
Amy Jesperson—Verso Paper Co.
Amy J. Krohn—3M
Josh Skelton—Allele/MN Power
Senja Lopac—Assay Development Beckman Coulter, Inc.
Jack Swanson—Cleveland Cliffs
Jason Howland

Trent Pemblie—Cargill
Brian Ball—Medtronic, Inc.
Anita Heinemann—Cargill
Paul C. Brunfelt, P.E.
Jeff Hagen—3M
James Jarvi
Sarah Mattila
Tim Bauer
Stephanie Nelson—Cargill

Denise Albrecht, CSP—3M
Tony Kramer—Ecolab
Alan E Nelson—Dow Chemical Co.
Jill Jensen—UOP—A Honeywell Co.
Special Thanks to Samuel & Ardis Beard
Samuel & Ardis Beard Scholarship

Samuel and Ardis (Peterson) Beard grew up in northern Minnesota and met at UMD. Mr. Beard graduated from UMD with a BA degree (chemistry major, mathematics minor). Mrs. Beard studied Biology while a student at UMD. Mr. Beard then received a BS degree in Chemical Engineering from the University of Washington. He later received an MS degree in Management from MIT.

Mr. Beard's entire career was spent working in the nuclear industry, first as a chemical engineer and finally in various management positions. He retired as President, Chairman of the Board and Chief Executive Officer of Exxon Nuclear Company, Inc., (at that time an Exxon Corporation wholly owned affiliate).

Mr. and Mrs. Beard established this endowed scholarship with the hope that promising students will be motivated by this scholarship to seek a career in Chemical or Nuclear Engineering.

Dr. William Krossner Chemical Engineering Scholarship

Dr. Krossner is a retired mental health care physician in Duluth with a soft spot in his heart for chemical engineering that stems from his love of math, chemistry, and physics. Dr. Krossner has generously funded a new scholarship for students engaged in original research that requires significant mathematical modeling and analysis.

Cliffs Natural Resources

Bob Bolf and Carl Kerschen presented each of the engineering departments with scholarships. Also pictured are Jiann-Shiou Yang, Sarah Wang, Penny Morton, Carrie Sutherland, and Ryan Rosandich.

We are grateful to our industrial sponsors for their generous support of our students and interest in their success!

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The Department of Chemical Engineering strives for nationally recognized excellence in engineering education and research by using modern, hands-on, and active learning experiences to prepare undergraduate students for professional success, and to hold paramount the safety, health and welfare of the public and protect the environment in performance of their professional duties.

The mission of the Department of Chemical Engineering is to produce chemical engineers with a strong foundation of technical, communication, teamwork, and problem-solving skills required for professional success, consistent with the following objectives.

- Pursue careers where they apply their engineering and problem-solving skills
- Pursue advanced studies or other forms of continuing education, and
- Value their UMD chemical engineering education and endorse the program and its students.