IMSE SEeks to Revolutionize Industrial Engineering Education
ALUMNI INVITED TO RECONNECT AT OPEN HOUSE 2016

Every year, Kansas State University’s engineering departments show off their creativity and accomplishments at the College of Engineering Open House. Festivities for 2016 are scheduled for Fri., April 15 and Sat., April 16. This year marks the 94th year of the College of Engineering Open House. Students aren’t the only ones excited for the event. The IMSE department looks forward to welcoming alumni back to campus as well. The department will host activities including a luncheon for returning alumni where they can reconnect with classmates, meet fellow alumni, and engage with students and faculty. All alumni, family and friends are invited to attend the Open House events, view the student displays, tour the engineering complex and visit vendor booths. Activities will be available for all ages and interests. The Sat., April 16 luncheon will be from 11:30 – 1:00 in a new location: Rathbone Hall, Room 204. For more information or to RSVP, call 785-532-3720 or email imse@k-state.edu.

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ALUMNI CONNECTIONS

I am excited to celebrate and share our accomplishments with you through our Alumni Connections newsletter. The IMSE department continues to grow — both in size and through the accomplishments of our faculty, students and alumni community. In this issue, we introduce new members to our faculty and staff, and applaud our student organizations, who continue to impress us with their initiative and leadership. We salute the generosity and success of Vietnam veteran and alumnus James Stonehocker. We reminisce with Ardis Elks Kimmel, the first female graduate of the industrial engineering department at Kansas State University, while recognizing the excellence of current women in the program.

Yet our focus is on the future — big changes are underway, and with them will come more opportunities for alumni engagement than ever before. Currently, we are preparing to relocate the IMSE offices to Rathbone Hall, where we will enjoy bigger offices and more space to support our growing student body. The move is scheduled for the end of the spring semester. Even greater changes are on the horizon for our academic program. In December, we submitted a proposal to the National Science Foundation that outlines a plan to truly revolutionize our already great undergraduate curriculum.

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Leveraging our excellent faculty and alumni network, we want to focus on developing students’ individualized industrial engineering identities. Structurally, we hope to expand our Manufacturing Systems Design and Analysis course into a curricular production spine. Students will be able to explore their interests and integrate their course topics in a real manufacturing system as early as their sophomore year.

In addition, we hope to continue enhancing programs such as the Professional Academy Mentor Program — which has already grown to include more than 65 mentor/mentee pairs. With these changes, we hope to better prepare our students for careers after college and create a more inclusive environment for underrepresented student populations.

Our greatest strength lies in our people and the community formed among alumni, students, faculty and staff. We’ll need all of these groups to be successful in our endeavors.

As you read these pages, I hope you find a reason to engage — whether that’s through simply sharing your expertise, joining the professional academy or advisory council, mentoring students or making a donation. Go Wildcats!

Brad Kramer
Professor and Department Head
IMSE SEeks To REVOLUTIONize INDUSTRIAL ENGINEERING EDUCATION

Industrial engineers are programmed to optimize. Whether you’re talking about production systems, supply chains, humanitarian services, healthcare systems or any of the other numerous places IEs are found, we work to make everything better. Now, the IMSE department at K-State is focusing on the same principles of continuous improvement inward as it seeks to revolutionize its industrial engineering program.

“We have a great program today,” said Bradley Kramer, IMSE department head, “but we think we can make it even better.”

In 2014, the National Science Foundation launched a new funding program called Revolutionizing Engineering Departments, or RED. Key objectives include attracting more students into engineering programs, increasing diversity, and better connecting “T-shaped engineers” who have both deep technical knowledge and broad professional skills.

The program offered the perfect stimulus for IMSE faculty and supporters to promote their ideas for an improved curriculum. They first began developing their revolutionized curriculum last year, putting together a RED proposal for 2015. Though the first proposal was unsuccessful, their ideas have since gained momentum. Working with alumni and experts in student diversity and engineering education, the department developed a second proposal last fall.

The proposed educational revolution centers upon the formation of students’ individualized industrial engineering identities.

“Research shows that having a solid engineering identity is a critical aspect of persistence among all students, and especially those from underrepresented groups who are more prone to feelings of isolation,” Kramer said.

Yet, for a number of reasons, the industrial engineering identity proves elusive for many students. Students often come into the program with a limited idea of what industrial engineering is. As they progress in their degree and the myriad of applications for an IE degree unfold, their identity can become even harder to pinpoint.

“It’s a blessing and a curse,” said Bryce Huschka, 2007 IMSE graduate. “IEs are in high demand, but you really have to search inside yourself and figure out what you find purpose in.”

The new program will be designed to help students do just that.

Revolutions, however, are never easy, and implementing these changes will require alumni, faculty and students to act as shareholders of this educational mission. One of the largest structural changes includes expanding the concept of the manufacturing systems design and analysis, the MSDA course, in which students design and manufacture a product. Alumni often cite MSDA as the most valuable experience of their academic career. Previously, MSDA was a one-semester course for seniors. Now, IMSE wants to turn MSDA into a more continuous production system. Seniors will take the class over two semesters, and students will be able to participate in the production system as early as their sophomore year.

Faculty will be able to use this “core production systems spine” as a laboratory for other classes, providing students with real problems to explore and real people to work with.

“It fits in perfectly with our educational goals,” Kramer said. “If we can expose students to a real production system early in their education and allow them to explore it over and over again from different perspectives, they can start to understand where they’re going to fit.”

Huschka, a member of the IMSE advisory council, added that this production spine would be more consistent with how things happen in industry.

“Instead of having a business entity that happens in industry.”

While faculty and students will work toward this change on a daily basis in classes and advising, alumni will also be critical to the department’s mission. Several, including Huschka, have already been involved in developing the proposal. Kramer said the IMSE faculty will continually seek alumni input in defining learning objectives and structuring the program.

Alumni can also serve as direct contacts to IMSE students through the IMSE Professional Academy. “I hear from a lot of alumni who want to get involved but aren’t sure how,” Huschka said. “The academy makes it easy to exchange time and money with the university and have it make an impact.”

The academy mentor program offers a formal way of connecting students with professional alumni members who can offer advice on professional development, career options and more from industry leaders.

More than 60 students are currently engaged in the program, which is still relatively new. Kramer’s goal is to expand the program to pair every IMSE student with a mentor.

“Our hope is that these connections and practices will not only help students form their identities while they’re here, but that they will continue on after graduation,” Kramer said. The grant, if awarded, would bring the department nearly $2 million. “The thing is, we have enough people engaged who are willing to make this happen regardless of whether we get the NSF grant,” Kramer said. “It might take longer, but we can start making changes.”

The NSF will announce the RED grant recipients this summer.

JOIN THE REVOLUTION

Alumni support and generosity is critical to the success of this project. Here are three key ways you can make a difference:

1. Speak out. Provide input and industry perspective on the industrial engineering identity.

2. Reach out. Help the faculty design courses, especially a new sophomore-level class, that will focus on developing the industrial engineering identity.

3. Donate. In order to implement the core production system spine, the IMSE department will need to significantly renovate the manufacturing labs. The goal is to raise $1 million. Alumni and industry members are currently developing a fund designed specifically to support the curricular revolution.
James Stonehocker earned an industrial engineering degree from Kansas State University, but he took an unconventional path to graduation.

In 1968, halfway through his K-State education, academic struggles brought his progress to a screeching halt. Around that time, the U.S. Army called him to serve in the Vietnam War. His military service was ultimately the wake-up call he needed.

“There was a night in Vietnam I wasn’t sure if I was going to make it home,” he said. “That night, I told myself, ‘If I make it home, I’m absolutely going back to school and I’m going to focus.’”

That’s exactly what he did, finishing his degree in 1977 with a lot of guidance from Frank Tillman, then head of the department of industrial engineering. During his second stint at K-State, Stonehocker even served as president of the American Institute of Industrial Engineering student chapter.

He developed a passion for leadership, reflected in his work at General Motors, Frito-Lay and then as chief operating officer for Odom’s Tennessee Pride Sausage Inc.

“I was very fortunate coming out of K-State,” Stonehocker said. “I know the engineering program and Dr. Tillman made a huge difference for me.”

Stonehocker recently expressed his gratitude by supporting the College of Engineering’s 108,000-square-foot addition to the Durland-Rathbone-Fiedler complex. The space will facilitate activities such as instructor recordings for K-State online and distance students.

Stonehocker wanted to support flexible, remote learning to make a difference for students like him and to thank K-State for changing his life.

“I look at what I got out of K-State and it’s unbelievable. Talk about a return on your investment,” he said. “I wanted to give back to something that had such an impact on me.”

The Stonehockers lent their support by gifting stock, which is one of the many ways K-State alumni are investing in Innovation and Inspiration, the $1 billion campaign to advance Kansas State University. To learn more about this historic campaign and how you can support fundraising priorities for the College of Engineering, please visit inspire.k-state.edu/engineering or e-mail engineering@found.ksu.edu.

The IMSE Professional Academy is designed to facilitate ongoing relations between alumni and students, while also benefiting members by sponsoring fun events and professional networking opportunities.

Since its inception in 2012, the group has more than tripled in size. It has offered tremendous support to the department. This year, the academy supported five students with scholarships and plans to do the same next year. Many members participate in the academy’s mentor program, in which alumni are paired with current students to offer advice and guidance in professional development. As the department works to restructure the industrial engineering program (see story on page 2), the academy is expected to play an increasingly important role in IMSE’s success.

For more information on the academy and other ways to get involved, contact the IMSE department at 785-532-5606 or imse@k-state.edu.

IMSE PROFESSIONAL ACADEMY

Officers:
Immediate past president: Dave Dohrmann
President: Chris Althoff
Membership chair: Michelle Schlie
Treasurer/Secretary: Jim Lee
Mentoring program committee: Steve Johnson, Susan Van Houten and Amy Marsino

Student engagement programs lead: Jeff Hopkins
Alumni events chair: Ryan McGillare

Members:
Nadali Benne
Sara Cask
Bob Davis
Kathryn Davis
John English
Doug Geh
Kyle Grall
Perry Henry
Patrick Hessini
Heath Hild
Jeff Hopkins
Kerry Kaiser
Todd Lakin
Jim Lee
Larry Loomes
Brandon Mals
Meghan McNally
Mark Miller
Anita Ranhotra
Justin Selph
Larry Stecker
Tony Verha
Julie Vak
Ken Ward
Brian Zerr

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Brandon Mals
Meghan McNally
Mark Miller

INNOVATION INSPIRATION
Deandra “Dee Dee” Cassone has been hired as an associate professor in the IMSE program at Kansas State University Olathe. Cassone specializes in decision science, which develops innovative solutions for management to use when making data-driven decisions about complex problems. The field provides structure for systematic thinking based on logical principles, decision-making methods, data analytics and modeling to provide guidance for decision-making in multi-faceted situations.

Cassone has more than 25 years’ experience in consulting, technical and management roles. She also served as a graduate adjunct professor in systems engineering at Missouri University of Science and Technology. She has published two books and four e-books, as well as a number of articles and refereed papers. Her work in building structured decision-making models has resulted in 12 business process patents.

“Dr. Cassone’s presence at K-State Olathe creates a great opportunity to engage partners in greater Kansas City to advance education, collaborative research and outreach efforts,” said Ralph Richardson, interim dean and CEO of K-State Olathe. “Interactions with K-State’s College of Engineering, local industries and the surrounding school systems open doors that have not been present before.”

Cassone is overseeing the campus’ IMSE programs. Students can now take courses toward earning master’s degrees in industrial engineering and operations research at K-State Olathe. She also is working to tailor program offerings in the greater Kansas City area. The target audience is around 76,000 engineers, mathematicians, statisticians, business and financial analysts, and scientists, with the goal of providing program offerings to enhance career skills and decision making.

“The focus of the Olathe campus is on development and delivery of industry-driven academic programs and industry collaboration,” Cassone said. “This provides an environment for innovation and an opportunity to provide value to the Kansas City community and K-State. I believe the analytical tools and structured decision-making methods taught in industrial engineering provide real value in developing solutions to problems that businesses face today.”

Cassone earned her bachelor’s, master’s and doctoral degrees in industrial engineering from Kansas State University.

For more information about the industrial engineering program in Olathe, visit http://olathe.k-state.edu/graduate-programs/industrial-engineering/index.html.

**BRUMMER HIRED AS PROJECT COORDINATOR**

The IMSE department was excited to welcome Lacey Brummer to its staff last November as a new project coordinator. Originally from Nebraska, Brummer earned her B.A. in English from the University of Nebraska at Kearney before coming to Kansas State University to complete her M.A. in English in 2015. She gained a variety of writing and design experience during her educational career.

In her role as project coordinator, Brummer oversees the department’s marketing, events and alumni communications. As the department continues to grow its alumni engagement, Brummer hopes to enhance alumni networking through outreach, online communities and on-campus events. She also serves as the graduate coordinator, supporting faculty and students with their programmatic needs.

Brummer can be reached at lbrummer@ksu.edu or 785-532-3720.
Two women with math degrees bring passion and creativity to IMSE master’s program.

Megan Menth and Brooke Etizen, photo of two women with math degrees.

Finding a niche in operations research

Being close to her home and offering the small community feel she was used to were icing on the cake.

Menth, in contrast, never saw herself as an engineer. “I considered so many different careers,” Menth said, “but the one constant was that I wanted to help people.”

Menth knew little about industrial engineering, but she was drawn to the field after discovering Heier Stamm’s research on humanitarian logistics. “I knew I’d be taking a big leap,” Menth said, “but it felt like something I could get excited about and succeed in.”

And succeed she has, along with Etizen. The two women became fast friends when they met at K-State, impressing faculty and fellow students with their creativity and initiative.

“They both have this knack for seeing the technical aspects of a problem and communicating it very clearly,” Heier Stamm said. Menth is especially well-known for her aesthetically pleasing and understandable diagrams.

Working toward their master’s degrees helped them grow in confidence as they discovered new possibilities and applications for their already strong analytical skills. “As an undergrad, I don’t think I realized how much I didn’t know,” Etizen said. “Now I’ve developed a much greater thirst for knowledge — there’s so much I want to learn.”

Last summer, Etizen received the Council of Supply Chain Management Professionals, or CSCMP, Kansas City – Heartland Roundtable Scholarship. In the fall, she earned a graduate teaching assistantship through the math department at K-State, where she taught calculus.

Menth is currently focusing on her thesis project, working with Heier Stamm to study the educational and protection needs of children affected by the Nepal earthquakes.

Part of her research involved surveying humanitarian response personnel about their decision-making processes in the field.

“Having that first-hand data is exciting not only for her project but for projects that will follow,” Heier Stamm said. Menth is also leading the charge among OR students in researching humanitarian logistics.

She presented her research in December at the Winter Simulation Conference in Huntington Beach, California.

Their professor and classmates have little doubt that Etizen and Menth will be very successful in their careers.

“They just have a drive to them,” said Ph.D. student Anne Grego-Nagel. “It’s exciting to see such strong and dynamic women in our master’s program.”

Etizen completed her degree in December, and in January began working as a business analyst for Deloitte Consulting.

“She was a great student,” said her adviser, Todd Easton, IMSE associate professor. “— hard working, bright, sociable and of course a great athlete. Her only disappointment is that he couldn’t convince her to stay and get her Ph.D.”

Menth plans to graduate this spring. Someday, she aspires to work for the U.N. or another relief organization. Jobs in humanitarian logistics are sparse and highly competitive, but Heier Stamm thinks she’ll have plenty of opportunities.

“I expect her to get a great job offer — or multiple job offers — out of her thesis project,” Heier Stamm said. “She’ll have great opportunities in public health or healthcare.”
The Kansas State University chapter of the Institute of Industrial Engineers, or IIE, hosted the 2016 IIE South Central Regional Paper Conference Feb. 25 -27. More than 150 students from 11 universities attended the event.

Throughout the conference, I heard both students and faculty complimenting our IE chapter and student leaders for the great job they did,” said Brady Kramer, IMSE department head. “They truly thought the conference was an outstanding experience.”

Students IE members had been planning the event for months to ensure attendees would gain valuable learning experiences — and have fun doing it. Activities ranged from a volleyball tournament to company tours at Foot Locker, Frito-Lay, Hill’s Pet Nutrition and Mars Chocolate.

“We were excited to host this year,” said Malgorzata Rys, IMSA professor and faculty adviser for IIE. “The conference always offers good networking opportunities, but our students also gained a valuable experience in planning and organizing. I think they had a lot of fun with it.”

The cornerstone of the conference was a technical paper competition. Two B.S. IE students from K-State, Sarah Newell and Mary Lynn Griebel, competed. The first place prize went to Ian Giese from Oklahoma State University. Competition from the University of Arkansas and the University of Missouri came in second and third, respectively.

The competition was judged by three K-State graduates: Luke Muggig, operations researcher for the RAND Corporation; Ryan McGuire, vice president of pricing at JB Hunt Transport, Inc.; and Cliff Welborn, associate professor at Middle Tennessee State University.

Alumni Brian and Meaghan Moore, Shayne Wahlmeier and Anita Ranhotra hosted professional workshops for the conference-goers, covering the topics of logistics, project management and professional development.

The conference concluded with a banquet on Saturday night. K-State alumnus Justin Salmins was featured as a keynote speaker. Salmins, IE ’96, is vice president of supply chain management for Textron Aviation. In 2015, he was awarded the Professional Progress Award for IMSE.

The generosity of many IMSE alumni was critical in the conference’s success. Individual sponsors included Chris Althoff and Jamie Yates, Bob and Kim Copple, Sara Delraven, Jeff and Janet Hopkins, Chuck and Connie Sheppard, Susan VanHouten, Tony and Denise Veth, and Ken and Beth Ward.

Additional support was provided by Hallmark, Accenture, Textron Aviation, Frito-Lay, Mars Chocolate, Inveryon, K-State Student Governing Association, IMSE Professional Academy, K-State College of Engineering, KC Senior Chapter of IE and the IMSE department.

Conference committee heads:
Entertainment—Adan Ronnebaum, Ian Ostenberg
Judges/speakers: Courtney Fauckett, Alonso Tallamantes
Food/banquet—Jessica Nicholson, Katelyn Ford
Facilities: Wyatt Vandevel
Fundraising: Bryce Garver, Abbie Hilliard
Communication: Sarah Newell, Hannah Frith
Tours: Drew Ewing
Photographer—Larissa Dettmer
K-State’s chapter of the Society of Manufacturing Engineers is open to all K-State students interested in machining and manufacturing. Led by faculty adviser and instructor, Timothy Deines, the organization maintains around 15 students every year. Last fall, members traveled to the annual Fabtech Exhibition in Chicago and toured several manufacturing facilities on the way, including Harley Davidson, Ford Motor Co., and Boeing. They also attended the annual Spring Manufacturing Career Fair at Illinois Institute of Technology in Chicago. In addition, they participated in community service projects and completed a tool box build for the local chapter of the Boys & Girls Club.

Sponsored by the College of Engineering, the Engineering Ambassadors promote engineering as a profession as well as opportunities available at Kansas State University. Ambassadors visit high schools and participate in on-campus events to promote the college. New members are selected every spring based on academic standing and leadership skills.

Of the 22 students added to the organization this year from the College of Engineering, four represent IMSE. Amy Prieb, sophomore from Osage; Jordan Kishi, freshman from Fairway; Lindsey Hagemeyer, freshman from Manhattan; and Wyatt VanDePol, freshman from Spring Hill, will join the 18 other IMSE ambassadors currently serving in the organization.

Society of Manufacturing Engineers

ALPHA PI MU

K-State’s chapter of Alpha Pi Mu, the industrial engineering honor society, is designed to recognize IE students who have demonstrated academic excellence. 2015-2016 officers: President: Jessica Altman Vice president: Bryson Garver Secretary: Joseph Siedel Treasurer: Garrick Devin Members: Emily Collins Larrison Detmer Nathan Fisher Katelyn Ford Austin Junker Alex Novell Sarah Reisel Jessica Nicholson Tucker Sykora Almos Talamanca

B.S. Industrial Engineering

Sufyan Al Qubati, Saudi Arabia
Fahad Alhijabi, Saudi Arabia
Hoor Al Shihabi, Kuwait
Abdulaziz Al Shammari, Kuwait
Jessica Aschbrenner, Topeka
Monsef Barn, Saudi Arabia
Jami Reitz, Menomonie, Wis.
Christian Center, Hutchinson
Lanting Cai, China
Tayvion Collins, Valley Center
Garrick Devin, Lawrence
Nathan Fisher, Manhattan
Blake Fulbright, Wichita
Jordan Gutch, Easton
Patrick Hahn, Hutchinson
Benjamin Hecht, Lawrence
Storm Jackson, Pomona
Jing Jin, China
Rachel Klassen, Halstead
Kyle Kleen, Manhattan

B.S./M.S. Industrial Engineering

Ryan Aeschliman, Manhattan
Thomas Bolton, Overland Park
Landon Davis, Leavenworth
Dylan Johnson, Manhattan

Andrew Klothmann, Prairie Village
Elicia Loganbill, Berryton
Joshua Max, Leawood
Samuel Martin, Hutchinson
Matthew Mickman, Leawood
Sean McKenzie, Lenexa
Michael Mitchell, Kansas City
Shi Lin Ng, Malaysia
Hannah Niederee, Winfield, Kan.
Thomas Ortiz, Topeka
Srinu Perumal, Manhattan
Luke Rayfield, Overland Park
Colton Sheffer, Overland Park
Glenn Sipes, Shawnee, Kan.
Kadi Thomsen, Lenexa
Hannah Toftevik, Bel Air
Zachary Torkelson, Topeka
Ryan Walden, Olathe
Zhang Zhang, China

Master of Science in Industrial Engineering

Haam Alkatami, Saudi Arabia
Ameen Alshammari, Kansas City, Mo.
Muhammad Alshammari, Amman, Jordan

Master of Science in Operations Research

Lafayette Brown, Milford, Conn.
Gary Castleberg, Leavenworth
Christopher Collins, Fort Leavenworth
Lance Stratton, Leavenworth
Brooke Stimson, Westport

Master of Science in Engineering Management

Trevor Ault, Poolesville, Calif.
Barry Brandt, Bloomington, Minn.
Scott Durand, Redwood City, Calif.
Susan Leipfert, Everett, Wash.

Ph.D. in Industrial Engineering

Timothy Mugg, Santa Monica, Calif.
Mark Nguyen, Adelver
Xiaoxu Song, China
Zhengshui Shi, China
Mohammed Obaidat, United Arab Emirates
Chair: Jeff Kerbs, Walmart
Vice Chair: Bryce Huschka, ExxonMobil
Council Past Chair: Michelle Schlie, Frito-Lay

Members:
Chris Althoff, Invoyent, LLC
Kristine Amy, ExxonMobil
Catherine E. Boltz, Honeywell
Reuben Burch, FedEx
Patrick Caldwell, Advanced Ceramics Manufacturing
Jay Christensen, Logistics Engineering
Sara Coash, Hallmark Cards
Kelly Foster, Hormel Foods Corp.
Darren Haverkamp, Hill’s Pet Nutrition
Patrick Hessini, CHS, Inc.
Dan Janatello, Blue Cross Blue Shield of Kansas City
Lori Jester, Carpujects Hospira
Kerry Kaiser, J.B. Hunt Transport, Inc.
Simeon O. Terry, Austin Commercial, L.P.
Anthony J. (Tony) Veith, Spirit AeroSystems, Inc.
Susan Van Houten, HD Supply, Inc.
Brian Zerr, American Express