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Dear members of the IEM family,

I am writing to let you know that I will be taking the Associate Dean of Academic Affairs position in the College of Engineering, Architecture and Technology at Oklahoma State University, effective July 1st.

I have served in my role as Head of the School of Industrial Engineering and Management since August 2013 for nine years and would like to take this opportunity to look back and note the several major accomplishments we have achieved together, in large part due to your enthusiasm, involvement, and participation.

- **Rankings:** We have significantly improved our rankings in the public graduate programs in industrial/manufacturing systems category from the low 30’s in 2013 to the low 20’s. We were ranked #22 last year. Our online MS ETM program is ranked #12 among public universities and #17 overall!

- **Enrollment and Degrees granted:** We have significantly increased enrollment in the undergraduate program from 125 in 2012 to a peak of 209 in 2019. Our numbers have since dropped to a low of 148. However, the number of degrees granted has increased from about 25 to an average of 45 in the past three years.

- **Diversity metrics:** For two years in a row, we had more women than men in our freshmen class. IEM has hired a diverse pool of faculty over the past eight years, including women and minority.

- **Floor renovation:** IEM’s home has been completely refurbished and our footprint has expanded by 40%. IEM now occupies the entire third floor of Engineering North with state of the art classrooms, meeting spaces, offices, and lounges.

- **Student placement:** IEM students are sought after by a variety of industries and companies ranging from Amazon, Apple, Applied Materials, ArcBest, Boeing, ConocoPhillips, Dell, Delta, Devon Energy, Dish Network, Disney, DHL, ExxonMobil, FedEx, Home Depot, JB Hunt, Koch Industries, Microsoft, Netflix, Nordam, Southwest, Tesla, Textron Aviation, Walmart, to Webco, and many, many others.

- **Accreditation:** Our program was successfully reaccredited in 2016 and is very likely to be reaccredited again this summer.

- **Endowment:** Our endowment which was $2 million is now at $7 million, including estate gifts. Two new endowed chairs were created.

- **Scholarship:** Ten new scholarships were created. IEM awards approximately $50,000 in scholarships each year.
• **Faculty Hiring:** IEM has hired 15 new faculty in the past nine years. Three of those have been promoted to Associate Professor. Two more Associate Professors were promoted to Professor.

• **Research Grants:** IEM faculty have garnered one AFOSR grant, one DoE grant, one NIH grant, two ONR grants, seven NSF grants, and an additional three NSF CAREER grants.

• **Scholarship:** IEM faculty publish in some of the best journals in the field.

• **Awards:** Our alumni, faculty, staff, and students, have won several awards internally within CEAT and OSU and externally in IISE and INFORMS.

Despite all these significant accomplishments, there is more work to do. Our graduate student population has declined and needs to be strengthened. Research expenditures need to keep pace with the other schools in CEAT. Endowments need to get closer to our $20 million goal.

I have gotten to know many of you professionally and personally and I will always cherish that relationship.

It is amazing to see the continued commitment of our alumni towards their alma mater. You have invested your time, effort, and money to advance IEM. Your support in the renovation of IEM’s home, scholarships, and endowed professorships have been instrumental in transforming the student experience.

IEM faculty work hard day in and day out, always putting our students first. Before COVID, during COVID, and post COVID, they have shown through their work how much they care about our students. For many of our faculty, it is not a job, but a cause they are pursuing - to educate the next generation of engineers and leaders.

The emeriti faculty have played a major role in the success of our school in the past, but they continue to offer their advice, wisdom, time, and talent when it is needed most. I have benefitted in my job in large part because of what you have done in the past and what you continue to do.

IEM staff is among the best I have seen in the 34 years I have spent in higher ed in four universities. Our staff works efficiently and effectively to ensure the needs of all other constituencies are met, is the invisible hand that plays a critical role largely out of the limelight, but always with a smile.

Our students remind us all why we chose this profession and make us proud each and every day. They are the leaders of tomorrow and I will be waiting to see and cheer as they accomplish big things in their lives to make the world a more peaceful and prosperous place for humankind.
In closing, let me say that I am very fortunate to have been a small part of the 100-year journey of IEM and look forward to watching IEM advance and change the world for the better for the next several generations.

Go Pokes!

Sunderesh

**IEM Mission, Vision, and Goals**

**Vision**
To inspire and empower our students to become leaders in a wide variety of industries, improve the quality of life for humankind, and change the world for the better, by making societal systems diverse, effective, efficient, and sustainable.

**Mission**
Continuously and aggressively advance educational and research processes which will attract students who fulfill our vision.

**Educational Goal**
Continue to improve, monitor, and enhance the student recruitment, learning, graduation, and placement processes to produce leaders proficient in theoretical, applied, and technology relevant concepts and practices that have a global reach and global impact.

**Research Goal**
Engage in cutting edge research of global importance to produce innovators and next generation engineering, education, and societal leaders.

**Outreach Goal**
Actively engage in community projects, economic development and service for the greater good. Enhance IEM's image internally within CEAT and OSU, and externally - the world at large.

**Diversity Goal**
Ensure that all school activities promote a diverse, achievement driven and gifted student experience. Administer programs to recognize the diverse challenges of each identity group and improve the retention rate from admission to graduation.
The Next Five Generations

IEM has been fortunate to have had the resources and the support that have made it possible to recruit, train, and produce leaders in our society. To benefit the next five generations, we launched a $20 million by 2020 campaign in December 2014 and have made good progress toward that goal. From $2.4 million in Fall 2013, our endowments (including deferred gifts) have risen to $8 million. The remaining $12 million must be raised in the next few years. The School of Industrial Engineering and Management looks to alumni and friends, like you, who make the next steps in our innovative future possible. We appreciate every donation, big or small, that supports our school. However, we have listed below several priorities for you to make the most impact.

- **Study Abroad Scholarship | $2,000 per student**
  Scholarships can be awarded to up to 12 students

- **Annual contribution to two IEM billboards | $15,000 per year**

- **Sponsorship of IEM networking events | $25,000**

- **Annual sponsorship of student travel | $40,000**
  IISE conferences, INFORMS conferences, commencement lunches, IAB-student luncheons and IEM reception at annual IISE meeting

- **Annual sponsorship of the weekly seminar series with a naming opportunity | $75,000**

- **Endowing a professorship | $500,000**

- **Endowing a chaired professorship | $1,000,000**

- **Naming and endowing opportunity of IEM | $8,500,000**

If you wish to donate, please send a check payable to the “Industrial Engineering and Management Excellence Fund” at Oklahoma State University, 354 Engineering North, Stillwater, OK 74078 or make a gift online by clicking the GIVE button at ceat.okstate.edu/iem.

For more information please contact

**Bryce Killingsworth** – Associate Development Director

Office: 405-385-5623
Cell: 405-385-3497
Email: bkillingsworth@osugiving.com
Student Spotlight

Sam Koscelny
Undergraduate Student

Sam Koscelny is a senior from Owasso, Oklahoma, pursuing his undergrad in Industrial Engineering and Management with minors in Data Analytics and Spanish. In his free time, Sam enjoys playing guitar, exercising, camping, and traveling.

He is currently serving as the IISE President and contributed to the hosting of the 2022 IISE South Central Regional Conference at Oklahoma State University where over 100 students and professionals attended. Furthermore, he works in the Human-Systems Engineering and Applied Statistics (HSEAS) Lab and conducts human factors engineering research. With his lab group, he will present this research at the IISE Annual Conference in Seattle, Washington in May before his summer internship at Koch Industries as a Product Manager.

After graduation, Sam will study abroad in Valencia, Spain at the Universitat de Valenica in the Fall of 2022 before beginning his master’s at Clemson University in Industrial Engineering in the Spring of 2023.

“It's the possibility of having a dream come true that makes life interesting.” – Paulo Coelho, The Alchemist
Kylie Dowers
Undergraduate Student

Kylie Dowers is a senior in Industrial Engineering and Management from Edmond, Oklahoma. She is the daughter of Shawn and Julie Dowers. Kylie is a member of Tau Beta Pi, the Institute of Industrial Engineers, and CEAT Student Council. She also serves on the academic integrity board and as president of Alpha Pi Mu. Kylie was named a Senior of Significance by the OSU Alumni Association. In her free time, she enjoys going on walks outside and hanging out with her friends and family. After graduating in May, she will continue at Oklahoma State in the IEM graduate school program. She hopes to work in healthcare and apply human factors designs to the industry.

“Spread love everywhere you go.” – Mother Teresa

Joshua Pearce
MS ETM Student

Joshua Pearce currently serves as the Chief Information Officer for Deer Creek Public Schools, a large K-12 school district located in Edmond, Oklahoma. He has over 20 years of experience in IT in public education. He currently possesses a Bachelor’s Degree in Organizational Leadership from the University of Central Oklahoma. He will be completing his Master’s Degree in Engineering and Technology Management with a Graduate Certificate in Information Assurance in May of 2022 from Oklahoma State University, joining his wife, Dawn, and children, Alyssa and Andrew, as proud alumni of OSU.

“Any sufficiently advanced technology is indistinguishable from magic.” – Arthur C. Clarke
Kushal Shah
Master’s Student

Kushal Shah is a graduate student in Industrial Engineering and Business Analytics and Data Science at Oklahoma State University. He is currently working as a Data Science Intern at Tesla. He previously served as a president of APICS OSU chapter and is a member of IISE, INFORMS and Alpha Pi Mu. He is from Gujarat, India and he completed his Bachelor’s degree in India. After his graduation in Spring, he will be joining Walmart as a Senior Data Scientist in Sunnyvale, California.

“The way I see it, if you want the rainbow, you gotta put up with the rain.” – Dolly Parton

Jianxin Xie
Doctoral Student

Jianxin Xie was born in Xinyu, a small but quaint town in China. She received her B.S. degree from Southeast University, China, and her M.S. degree from Florida State University, USA. She is currently pursuing a Ph.D. with the School of Industrial Engineering and Management, Oklahoma State University. Her current research interests lie in advanced data analytics, data mining, and physical-statistical modeling with healthcare applications. Aside from her research and course work duties, she also serves as Vice President/Treasurer for the INFORMS student chapter. In her free time, she enjoys playing piano, K-pop dance, photography, board game, and of course, watching Netflix.

Upon completion of her PhD, she plans to find her future career in academia. She has always liked the idea of being a university professor, since she will be not only able to devote herself into developing algorithms that can potentially advance the industry, but also cultivate new generations of researchers and engineers. Another big plan is to have a dog and a cat.

“Don't let others define you. You define yourself.” – Ginni Rometty
Niloufar Daemi is a PhD student from Iran who joined OSU in Fall 2018. She was the president of the INFORMS student chapter at OSU in 2020. Before coming to OSU, Niloufar earned her Bachelor’s and Master’s degree in Industrial Engineering in Iran and after working as an industrial engineer for two years, her passion to learn led her to travel to the United States to start her PhD.

Currently, Niloufar is an intern working with Operations Research team at BNSF Railway company in Fort Worth, TX. She plans to graduate in Fall 2022 and work as an Operation Research analyst where she can propose and lead optimization projects.

In her free time, Niloufar loves reading novels and is especially fascinated by the magical realism genre. She is also passionate about traveling while exploring different cultures.

“Howver difficult life may seem, there is always something you can do and succeed at.” – Stephen Hawking
New Students
We look forward to getting to know all of you and helping you on your way to becoming successful industrial engineers!

**BS IEM**
Salwa Alfuraih  
Jeremy Cook  
Alex Leon-Uscanga  
Banner Penwell  
Makayla Reed  
Noah Ropp  
Steven Ryckeley  
Lindsay Sanford  
Seth Thibodeau  
Zoe Ward

**MS IEM**
Ayokinle Adu  
Haripriya Hosur  
Varun Joshi  
Bala Jithender Kakumanu  
Lakshmi Ganesh Kancharla  
Thanmai Nalajala  
Siddhesh Pathak  
Aditya Rane  
Emmanuel Yanyue

**MS ETM**
Abrha Amare  
Jared Archuleta  
Vedant Bhadane  
Cash Billups  
Felicia Long  
Jeffrey Pollard

**PhD IEM**
Parisa Vaghfi Mohebbi  
Ziyang Zhang
Graduates

We would like to congratulate the following IEM students for their hard work and dedication in completing their degrees in Summer and Fall 2021.

**BS IEM**
- Abduallah Alajmi
- Ghazy Alatteer
- Abdalah Alkdeefy
- Dalal Almusbah
- Ali Ashkanani
- Moraad Bilbeisi
- Bailey Bretz
- Christopher Collin Browning
- Amrit Chugani
- Kaiser Cleburn
- Austin Douglah
- Matthew Edgeller
- Jackson Fife
- Margaret Goodin
- Maryam Husain
- Manas Kakade
- Nicholas Loy
- Madison Ohman
- Kaylyn Wells
- Abbie Winchester

**ETM Certificate**
- Brooks Dow

**MS ETM**
- Brandon Alexander
- Patrick Alland

**MS IEM**
- Courtney Baukal
- Portel Bellamy
- Dejanae Berry
- Matthew Curran
- Bolton Ferda
- Jonathan Girod
- Mark Ivey
- Nicholas Jayjock
- Katey Luster
- Justin Pascoe
- Eric Poythress
- Cecilia Margarita Prado
- John Mark Price
- Vignesh Raghuraman
- Stephanie Shaulis Garrett
- Brenda Shumate
- Bennett Stuppy
- Kathryn Szmergalski

**PhD IEM**
- Harshal Kaushik
- Mohammad Javad Naderi
- Hao Pan
Hello OSU IEM Family!

The Industry Advisory Board (IAB) is dedicated to supporting IEM through participation in the accreditation process, helping our curriculum meet the current needs and trends of industry, and mentoring students and senior design projects. In February, we held our Spring meeting in Stillwater and spent time with students and faculty. After getting great feedback from the students last year, we turned our focus to the faculty and their perspective of the department. During our faculty social, we talked about:

- Engagement of the students and faculty
- Curriculum updates and alignment with industry needs
- Explored opportunities for IEM and other Alumni to support current research and teaching

It's always good to return to Stillwater, especially when we get to see the great progress the department is making towards our strategic plan. We met with Dean Tikalsky and Dr. Heragu, enjoyed a lunch with students, and joined the senior design presentations. We recognized three Board members retiring from the board, Ashley Estes, Stephanie Royce, and Jack Watts, for their contributions to the Industry Advisory Board. We also elected a new Vice-Chair, Zach Roberts, who will serve in that capacity for two years, before assuming the role of Chair.

With the retirement of three board members, we are looking to add new members to the IAB in the Fall of 2022. If you or someone you know is interested, please reach out to Zach Roberts: zach.roberts@jbhunt.com.

With warm regards,

The OSU IEM Industrial Advisory Board
<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
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<tbody>
<tr>
<td>Brian Adams</td>
<td>Textron Aviation</td>
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<tr>
<td>Kevin Doeksen</td>
<td>American Airlines</td>
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<tr>
<td>Ashley Estes</td>
<td>Great Plains Manufacturing</td>
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<td>Michael Foss</td>
<td>CoachFossLLC</td>
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<td>Jack Goertz</td>
<td>Tandems, Ltd</td>
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<td>Frank Groenteman</td>
<td>TMAC</td>
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<td>Steve Kiester</td>
<td>Bell Flight</td>
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<td>Mark Lewis</td>
<td>PwC</td>
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<tr>
<td>Ed Pohl</td>
<td>University of Arkansas</td>
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<tr>
<td>Zach Roberts</td>
<td>J.B. Hunt Transport Inc.</td>
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<tr>
<td>Stephanie Royce</td>
<td>Oklahoma State University</td>
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<tr>
<td>Tom Saunders</td>
<td>Pioneer Natural Resources</td>
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<td>Brenda Shumate</td>
<td>DCP Midstream</td>
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<td>Jack Watts</td>
<td>Portola Company</td>
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IAB Spotlight: Zach Roberts

Zach Roberts has served on the Industrial Advisory Board since 2019. He graduated from Oklahoma State University with an Industrial Engineering & Management degree in 2013 and has worked for J.B. Hunt Transport since. As a Logistics Engineer Zach helped develop and enhance many of the metrics that are used to manage and monitor performance in the company’s Intermodal division. Zach is currently working in Northwest Arkansas as the Director of the Temperature Controlled Intermodal division at J.B. Hunt. He has a strong desire to help students get ready for their careers and looks forward to volunteering as a Sr Design mentor each year. He has served as the Outreach Committee Chair since 2020 and will be transitioning to Vice Chair Fall of 2022. Outside of work and the IAB Zach loves spending time mountain biking, golfing and hanging out with his wife, Mallori, and daughter, Hadley.
Scholarships & Endowed Professorships

Endowed undergraduate scholarships provide the foundation for excellence and growth of our program. They offer the ability to fund undergraduate students and their enrichment activities with certainty, a critical element in our strategic plan to improve the student experience and create impact. Undergraduate and graduate scholarships provide the opportunity to recruit and retain top student talent.

Undergraduate Scholarships

• Braun Engineering Scholarship
• William L. Cain Industrial Engineering Endowed Scholarship
• Ken and Lynn Case Scholarship
• Robert G. Herod Endowed Engineering Scholarship
• Ron and Diana Orr Endowed Scholarship
• Kent and Sheryl Powers Endowed Scholarship in Industrial Engineering and Management
• Cynthia Renee Travis Endowed Scholarship
• The Cowboy Academy Leadership Endowed Scholarship
• Woodson Family Trust Scholarship
• S.D. and B.W. Yeigh Scholarship for Women in Engineering

Graduate Scholarships

• Leland Blank '70 and Sallie Sheppard Graduate Fellowship in Industrial Engineering and Management
• Lynn E. Bussey Scholarship
Endowed Chairs & Professorships

Endowed Chairs and Professorships provide perpetual funding to attract and retain the highest-quality faculty with the best minds, the most-creative researchers and the most-engaged teachers with national and international recognition. The recognition honors outstanding, distinguished and influential professors who inspire, enhance, and challenge students for greater learning. These endowed positions provide crucial support for scholarly and research pursuits which, in turn, raises the quality, recognition, and reputation of Oklahoma State University.

Endowed Chair
- Donald and Cathey Humphreys Chair in Industrial Engineering and Management

Endowed Professorship
- Wilson Bentley Professorship in Industrial Engineering and Management

Legacy Gifts for Endowed Chairs & Professorships

Legacy gifts for Endowed Chairs and Professorships enable donors to create a powerful philanthropic legacy by making estate gifts towards the hiring and retention of world class faculty in the School of Industrial Engineering and Management for years to come. These endowed positions are crucial for recruiting and retaining the highest-quality faculty with the best minds, the most-creative researchers and the most-engaged teachers with national and international recognition.

Endowed Chair
- Ken and Lynn Case Endowed Chair in Industrial Engineering and Management
- Jack L. and Susan D. Goertz Chair in Engineering

Endowed Professorship
- Rick and Sandra Webb Endowed Professorship in Industrial Engineering and Management
MASTER OF SCIENCE IN
INDUSTRIAL ENGINEERING & MANAGEMENT

For engineering or science graduates seeking to specialize in supply chain management, logistics, optimization, and analytics

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Also available online for working professionals!
Awards and Honors

Sarah Bishop
MHEFI Bastian Family Scholarship

Keaton Carter
MHEFI Material Handling Education Foundation Honor Scholarship

Raegen Daigle
MHEFI Protective Guarding Manufacturers Association Honor Scholarship

Alie Lory
Lynn E. Bussey Scholarship

Josh Linholm
MHEFI The Robotics Group Honor Scholarship

Emma Wilson
MHEFI Conveyor & Sortation Systems Honor Scholarship

Sam Koscelny
IIESE James W Barany Student Award for Excellence

        Bailey Family Memorial Scholarship

        CEAT Saint Patrick’s Award
Remembrance

We are saddened to announce the passing of M.S. IEM alumnus, G. Lowrance Hodge. Lowrance retired from the U.S. Naval Reserve in 1987 with the rank of Captain after four years Active Duty and 28 years as a “Weekend Warrior”. His civilian career included the Ethyl Corporation, Dow Chemical, and several years as a Director in Management Services for the accounting firm of Arthur Young and Company. Later, he was the Senior Vice President of Manufacturing Operations and Engineering for Mary Kay Inc. until his retirement in 1997.

CEAT Awards

Sam Koscelny
*Industrial Engineering and Management*
Outstanding Senior Student

Zhangyue Shi
*Industrial Engineering and Management*
Outstanding Graduate Student

Dr. Manjunath Kamath
CEAT Excellent Teacher Award

Zhangyue Shi
*Published in INFORMS Journal on Optimization*

Niloufar Daemi
*To be published in Journal of Intelligent Manufacturing*
IISE Honors

Ian Giese
IISE Outstanding Early Career IE in Business/Industry Award

Dr. Sunderesh Heragu
IISE Fred C. Crane Distinguished Service Award

Steve Kiester
IISE Fellow

Ayşe Doğan
IISE Graduate Research Award

Kaustuvi Thapa
1st Place, IISE South Central Region Conference Paper Presentation
Alumni Spotlight: Ian Giese

Tell us a little bit about yourself:
I grew up in Minnesota and graduated from Oklahoma State in December 2015 with a bachelor of science in IEM and a minor in Food Science. I currently live in Emporia, KS, where I will be starting a role as an Industrial Engineer III for Tyson Fresh Meats in April. I enjoy playing disc golf, riding my bicycle, and going to trivia, along with attending events hosted by the town. I am also the IISE Greater Kansas City Chapter President.

How has your IEM degree helped you?
My degree in IEM helped develop communication and problem solving skills that have been useful in every step of my career. I may not have encountered a career problem from every class in my degree, but every career problem I have encountered needed communication and problem solving that were needed to be successful in class.

What aspects of your OSU affiliation while you were a student stand out?
As an OSU student I was fortunate to participate in several organizations that provided opportunities in leadership roles. I was in the Residence Halls, Toastmasters, and most importantly, IISE. These organizations gave me a foundation for organization and working in groups for success, while also trying to bring together new events. My first opportunity was bringing the IISE Six Sigma Green Belt course to the University, which enrolled 50 participants the first year. This carried on to my professional career, as I organized an All-Kansas Conference that brought together the two professional and two student chapters of the state in the central location of Emporia. These organizational leadership positions have been experience to lean on when working on project teams in industry.

What has motivated you to stay engaged with OSU, years after graduation?
I was raised to believe in giving back whenever possible. There were many people before me who contributed significantly to my success because they donated to the university or came back to provide mentorship. I believe carrying that tradition forward will provide opportunities for today’s students to further the field of Industrial and Systems Engineering. To grow this opportunity further, we are founding an Early Career Alumni Council to fill the gaps between graduated students and the IAB and Cowboy Academy. We are looking forward to seeing where this
can lead to connections between alumni and the university in the near future.

**What do you think the future holds for the IEM student?**
The future is an open door of possibilities for an IEM student. The skills learned are transferable to any industry, because all of them are looking for the next way to run more efficiently and effectively. Attendees from the initial Early Career Alumni Council calls were all in different industries, from healthcare to manufacturing, logistics, warehousing, accounting, oil and gas, software, and some were in different fields within those industries. Companies today are looking for people who want to develop into a variety of areas so they have a broad understanding of the industry, and Industrial and Systems Engineering students are best suited to meet that challenge because of the broad range of topics they learn about in their degree.

**List one or two highlights of your career:**
In my most recent role, I had several amazing opportunities within the engineering team. I was able to help drive the production output of an existing line by 25% by analyzing the equipment and working with operations on the process flow. I also used the analysis of that line to provide input to the design of a new machine, which improved safety and ergonomics, reduced manpower and cycle time, and increased control of product quality.

**Why is international exposure important for today’s engineers? How would they benefit from availing of study abroad opportunities?**
Today's engineers benefit from international exposure because of how interconnected the supply chain is and will become in the near future. By learning about new cultures now, today’s engineers can understand the best way to communicate to each person or team they will be involved with in their work. It is rare for any product now to be made in a silo of a single location from start to finish. International exposure is also enriching in an engineer's personal life. I credit much of my personal development to experiences abroad that helped me break out of my comfort zone by communicating with people from the places I visited.
Recent Events

Tulsa Area Alumni Meet and Greet- Tulsa area IEM alumni recently gathered in the home of Mike and Carolyn Barlett for hors d'oeuvres and networking.

Highlights from the Bell Ringing during the Spring Industrial Advisory Board meeting.
New Faculty

Paritosh Ramanan is a Postdoctoral Fellow with the Georgia Institute of Technology in Atlanta, Georgia. He got his Ph.D. in Computational Science and Engineering with a Minor in Operational Research from the H. Milton Stewart School of Industrial and Systems Engineering at Georgia Institute of Technology in Atlanta, Georgia in 2020. In 2018, he was awarded the Sam Nunn Security Program Fellowship for research at the intersection of cybersecurity in critical infrastructure and public policy. Prior to his Ph.D., he earned a Masters in Computer Science from Georgia State University in Atlanta, Georgia in 2015 and obtained his Bachelors in Information Systems from Birla Institute of Technology and Science (BITS) Pilani in 2013. His research pertains to decentralized optimization, federated machine learning and analytics with a focus on computational performance, privacy and security in the context of distributed paradigms such as high-performance computing and blockchain.

Akash Deep will be receiving his Ph.D. from the Department of Industrial and Systems Engineering at the University of Wisconsin-Madison. He obtained his B.Tech degree in Production and Industrial Engineering from the Indian Institute of Technology Roorkee, India. He also has a M.S. in Statistics from the University of Wisconsin-Madison. His research broadly belongs to the realm of industrial data analytics, focusing specifically on methods for predictive analytics for intelligent maintenance, data-driven operations planning for production systems, and monitoring and anomaly detection of service processes. During his Ph.D., he has served as the lead researcher for several industry-sponsored projects. He is a recipient of the E. Wayne Kay Graduate Scholarship from the Society of Manufacturing Engineers (SME), the Vinod K. and J Gail Sahney Graduate Student Scholarship, and two summer scholarships from India and Germany. His work is published in several high-quality journals within quality, statistics, and reliability including IISE Transactions and IEEE Transactions.
Srikanthan Ramesh is a doctoral candidate in the Industrial and Mechanical Engineering Ph.D. program at the Rochester Institute of Technology, New York. As part of the Center for Additive Manufacturing and Multifunctional Printing, his research focuses on droplet- and extrusion-based additive manufacturing techniques including material development, process modeling, and inter-disciplinary mechanical and biomedical applications. His research interests include bio-additive manufacturing (bio-AM), tissue engineering, biomaterials, surface engineering of biomaterials, and process monitoring in bio-AM. His research efforts have been acknowledged through several awards, including the 2018 Research Excellence Award from Iowa State University, the 2018–19 Gilbreth Memorial Fellowship from the Institute of Industrial and Systems Engineers (IISE), and others. Before moving to New York, he received his M.S. in Industrial and Manufacturing Systems Engineering from Iowa State University and B.S. in Mechanical Engineering from Amrita University, India.
Dr. Juan Borrero, assistant professor in the School of Industrial Engineering and Management, received a CAREER award from National Science Foundation (NSF) in the amount of $500,000.

This Faculty Early Career Development Program (CAREER) grant supports research that will investigate theoretical and computational approaches to commit or defer problems with decision-making hierarchies. Problem settings in vaccine design, disaster response, and smuggling prevention, among others, involve decision-makers observing a system evolving over time who periodically decide whether to commit non-renewable resources, or defer their use, to optimize the system's overall performance. The evolution of the system is subject to randomness and its performance may depend on other decision makers, about whom there may be incomplete information, who seek to optimize their own performance. The research supported by this award seeks to determine what rules should guide commit or defer decisions in these settings, how and to what extent the decision-maker should use the information feedback observed, and how to computationally find the commit or defer decisions in specific problem settings. The educational activities include the creation of an online game to teach fundamentals of multistage decision-making to K-12 students.

Standard commit or defer problems (CDPs) assume a single decision-maker and cannot model problems that involve multiple decision-makers, e.g., a Leader and a Follower, who interact in a hierarchical manner. This project will establish a mathematical and algorithmic framework to solve hierarchical CDPs. The framework will improve our understanding of real-life CDPs and their practical requirements. The project will simultaneously address a number of technical challenges. First, the Leader may face global resource constraints, such that the resources spent in one period, cannot be replenished in future periods; second, the Leader's performance depends on the optimal actions of the Follower; and third, the Leader learns about the uncertain parameters of the Follower's problem by observing their reaction to the Leader's actions. By using approaches at the interface of hierarchical and online optimization, the project will rigorously establish the manner by which commit or defer decisions should be made in hierarchical settings under uncertainty. Furthermore, the project will use tools from mathematical programming and probability to uncover how and to what extent the decision-maker should use the information that is learned, and then formulate and solve for optimal or near optimal policies in large instances of relevant applications.
OSU’s Master of Science in Engineering and Technology Management is a rigorous degree program designed specifically for experienced engineers and scientists who are interested in accelerating their management careers. The curriculum combines academic coursework with the latest business practices and can be tailored to meet each student’s needs. MS ETM students learn to apply proven evaluation concepts and implementation strategies to fast-moving, technical management decisions that make the difference in both career and business success.

- Available 100% online or on campus
- Military friendly
- Flexible curriculum
- Affordable and cost effective
- Ranked #12 among public universities (U.S. News and World Report)

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The Cowboy Academy

The Cowboy Academy Vision
For graduates to achieve their most valued and rewarding careers!

The Cowboy Academy has been busy. In December 2021, the TCA Board voted to use some of the TCA funds that have been collected to create The Cowboy Academy Leadership Endowed Scholarship, with an initial funding of $50K. This endowment will provide a $2,000 scholarship annually to the individual who best meets the criteria established by the TCA Board of Directors. We will be adding to this endowment each year, and as the endowment grows, we’ll have more funds available to be awarded as scholarships. The Board believes this is an excellent use of the funds provided by the Academy members’ annual contributions and will help the Academy meet its overall goals of improving the program.

How can each member of the Academy help? Simple, by getting involved! The TCA is an honors and service organization, and each member is invited to become more involved with the Academy. You can volunteer to help with one of our active committees by contacting the chair and volunteering. We also have standing committees to select the next class of inductees and for identifying the next slate of officers for the Board. We invite all TCA members to consider running for a board position. If interested, don’t hesitate to let us know.

Our active committees are meeting regularly to discuss ways to enhance the IEM program at OSU. Below is a brief summary of each committee and their goals:

Center of Excellence – Chaired by Jon Womack (womack.jon@gmail.com). The COE is working hard to bring a closer relationship between the school and local industries. They are currently working with Sunderesh to add a faculty member – with TCA’s help – to bridge the gap and also assist with the Senior Design Projects each semester.

Fundraising Committee – Chaired by Mike Bartlett (mike.bartlett.tulsa@gmail.com). The Fundraising Committee is working to bring in more contributions in support of the IEM program at OSU. Our immediate goal is to raise money for scholarships, and also to help IEM become an endowed, named department within the next five generations. If interested in the overall program, check it out on the IEM website at https://ceat.okstate.edu/iem/site_files/docs/the-next-five-generations.pdf.

Career Opportunities/Mentoring Committee – Chaired by Leva Swim (leva.swim@sbcglobal.net). This committee has developed a plan to link mentors to current students and recent graduates. A number of mentors have already been matched with current students, but more mentors are needed and will be welcomed.
**External Visibility/Marketing Committee** – Chaired by Greg Watson (greg@excellence.fi). This committee is charged with marketing the school to prospective students, both at the undergraduate and the graduate levels. They are working with a marketing intern to highlight the benefits to obtaining a degree in IEM from OSU.

Go Pokes!

Jack Goertz
*President, The OSU Cowboy Academy*
The Cowboy Academy

Board Members
Mike Bartlett
Leland Blank
Tom Britton
Brian Eaton
Jack Goertz
Jeff Greer
Frank Groenteman
Mitch Myers
Leva Swim
Gregory Watson
Stacie Wrobbel

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Jaxon Axtell
Tony Bacher
Paul Baker
Michael Bartlett
Terrance Beaumariage
Derek Blackshare
Leland Blank
David Boyer
Shay Braun
Thomas Britton
Neal Buck
Denny Carreker
Kenneth Case
Geoff Clarke
Samuel Combs
Megan Crozier
Jerry Dechert
Johann Demmel
John Doucette
Bill Dueease
Laura Raiman DuPont
Laura Easley
Brian Eaton
John English
Wolter Fabrycky
Phil Farrington
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John Harrington
Dave Hartmann
Gary Hogsett
Don Humphreys
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Stuart Keeton
Ron Orr
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David Pratt
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James Selman
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Brenda Shumate
Ting Nee Su
Jill Swift
Leva Swim
Lyndon Taylor
Silvanus Udoka
Gregory Watson
Randy Watson
Jack Watts
Rick Webb
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Nancy Winchester
Jon Womack
Eric Woodroof
Stacie Wrobbel

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Stephanie Royce
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James Selman
Mark Semkoff
Brenda Shumate
Ting Nee Su
Jill Swift
Leva Swim
Lyndon Taylor
Silvanus Udoka
Gregory Watson
Randy Watson
Jack Watts
Rick Webb
Lawrence Whitman
Marion Williams
Nancy Winchester
Jon Womack
Eric Woodroof
Stacie Wrobbel
US News Rankings

US News and World Report has once again recognized the outstanding quality of IEM’s programs.

The online graduate MS ETM was ranked #12 among public universities for Online Master’s in Engineering Management

US News also ranked IEM #25 among graduate programs in industrial/manufacturing/systems among public universities.
The Institute of Industrial and Systems Engineers (IISE) has had an extremely successful Spring semester! Our organization is a global association committed to connecting students and professionals in the Industrial and Systems Engineering field. No better way to exemplify this commitment to professional development than the chapter’s successful hosting of the 2022 IISE South Central Regional Conference. The IISE Chapter at Oklahoma State University had the great opportunity to host this conference from Thursday, February 25-Saturday, February 26. With an attendance of over 100 Industrial Engineering students and faculty members from the University of Oklahoma, University of Missouri, Texas A&M University, Kansas State University, Wichita State University, University of Texas at Arlington, and Oklahoma State University, this event was an incredible example of the strong commitment to excellence the IISE Chapter at Oklahoma State University maintains.

A special thanks goes out to the generous financial supporters of the conference. These include Phillips 66, ConocoPhillips, Webco, Scott and Beatrice Sink, the College of Engineering, Architecture and Technology, and the IEM Department.

While programming for the conference was IISE’s main priority this academic year, it is not all we had been doing. From April 8-10, the IISE Chapter virtually hosted the IISE Six Sigma Green Belt Certification Course with undergraduate and graduate attendees in the IEM Department. Additionally, the chapter is planning an IISE Pizza and Hangout event in late April to celebrate a tremendous academic year for the chapter. This event will be open to all IEM students and faculty and will serve to engage and impact the students within the department.

After all of the disappointments of 2020-2021, the IISE Chapter officers are proud to say we made a positive impact during the 2021–2022 academic year and believe we are leaving this chapter in a strong and capable position for the future leadership of this chapter for years to come. At this moment, we would like to recognize the students who have worked so hard to continue the tradition of excellence within our organization. The officers this academic year are:

- Sam Koscelny, President
- Kylie Dowers, Vice President
- Emma Wilson, Conference Chair
- Jay Eischen, Treasurer
- Ainsley Kyle, Secretary
- Kent Slater, Events Chair
- Chloe Jones, Recruiting Chair
- Raegen Daigle, Mentorship Chair
- Brenna Rodgers, Merchandise Chair
- Sarah Bishop, Social Chair
- Marco Pina, Communications Chair
- David Schwartz, CEAT Student Council Representative

**Faculty Advisor:** Dr. Chenang Liu

If you would like more information about IISE or want to become a member, please email Sam Koscelny at sam.koscelny@okstate.edu.
Association for Supply Chain Management

The ASCM OSU Student Chapter, formerly known as APICS, aims to provide a learning environment for new supply chain enthusiasts on multiple supply chain operations and management topics. Our goal is to encourage developing expertise within supply chain management, certifications and provide networking opportunities that will create a bridge between academics and the supply chain industrial work environment.

The officers for the 2021-2022 academic year are:
- Prayash Bhattarai, President
- Adwait Chabukswar, Vice President
- Shweta Subramaniam, Secretary-cum-treasurer

Faculty Advisor: Dr. Tieming Liu
Student Chapters

Alpha Pi Mu Industrial Engineering Honor Society

Alpha Pi Mu is an honors society that aims to recognize IEM students that have achieved academic excellence. It holds scholarly activities and fosters an atmosphere to facilitate social interactions between students and faculty. Alpha Pi Mu offers scholarships, volunteer events, and networking opportunities. Members consist of juniors, seniors, and graduate students that have met the academic requirements.

This year, we held in-person initiation in the fall for the first time since the pandemic and welcomed 17 new members. Initiation for the spring is currently being planned. Two new incoming officers are aiding in planning initiation: Emma Wilson, President and Caleb Triplett, Treasurer. We look forward to their leadership in the next year.

We have also selected officers for the 2021-2022 academic year were:

  Kylie Dowers, President
  Sam Koscelny, Treasurer

Faculty Advisor: Dr. Manjunath Kamath
The Institute for Operations Research and the Management Sciences (INFORMS) is the world's largest professional association dedicated to and promoting best practices and advances in operations research, management science, and analytics to improve operational processes, decision-making, and outcomes. The Oklahoma State University Student Chapter of INFORMS is a student lead campus organization focused on promoting student learning and professional advancement with fellow students and faculty within the field of operations research and management sciences. Our goal is to enable students to go beyond the bounds of coursework as they engage in research and extracurricular activities that lay the groundwork for their future as professionals in operation research, supply chain management, advanced manufacturing, human factor, and healthcare. In 2021, INFORMS student chaper was nominated as an Honorable Mention Chapter. Due to COVID-19, we have held hybrid events through the 2021-2022 school year.

- Gathering: A social hour for Ph.D. students and faculty in March 2022.
- Programming workshop: R workshop for both undergraduate and graduate students in the School of Industrial Engineering and Management in April 2022.

The INFORMS student chapter advisor is Dr. Juan Borrero and the Fall 2021 and Spring 2022 student officers are:

Zhangyue Shi, President
Jianxin Xie, Vice President

If you have any questions or would like to connect with the student chapter, please feel free to email Zhangyue Shi at zhshi@okstate.edu
IISE South Central Regional Conference

Our IISE student chapter had the privilege of hosting the 2022 IISE South Central Regional Conference February 24-26. More than 100 students and professionals from Mizzou, K-State, Wichita State, OU, OSU, UT Arlington, and Texas A&M attended. Conference activities included tours of Kicker and Iron Monk, a student paper competition, awards banquet with keynote speaker Michael Foss, a panel and leadership session by Brenda Shumate, and lots of networking opportunities! We are thankful to our IISE chapter for their hard work in putting together this event and we are proud of their success!
**Paper Presentation Winners**

Sam Koscelny, OSU, 3rd Place (tie)
Joshua Maxton, Wichita State, 3rd Place (tie)
Kaustuvi Thapa, OSU, 1st Place
Joyce Chiam Ziyi, Wichita State, 2nd Place

**Panel Discussion with Brenda Shumate, Dr. Katie Jurewicz, Mark Lewis and Dr. Leva Swim**
Research Grants

**Active in 2020-2022**


J.S. Borrero (PI). CAREER: Hierarchical Commit or Defer Problems with Learning: Methods and Applications. $500,000, National Science Foundation (NSF), Grant CMMI 2145553, January 1st 2022-December 31st 2026.

J. Borrero and L. Lozano, Modeling Worst-case Defender-Attacker Problems as Robust Linear Programs with Mixed-Integer Uncertainty Sets, Office of Naval Research, 05/01/19 - 02/30/22, $300,000.

A. Buchanan, CAREER: Parsimonius Models for Redistricting, National Science Foundation, 6/1/2020 – 5/31/2025, $508,000.

A. Buchanan, Imposing Connectivity Constraints in Large-Scale Network Problems, National Science Foundation, 6/15/2017 – 5/31/2021, $258,586.

S.S. Heragu and R. Wilson (PIs), The Conoco Phillips/OSU Data Analytics Collaboration, ConocoPhillips, 7/1/19 - 6/30/25 $675,000.

R. Taylor, S.S. Heragu, and K. Jurewicz, New Product Development Center, Economic Development Administration, 10/8/2020-10/7/2023, $1,000,000.


Y. Shan and C. Liu, "PFI-TT: Intelligent Quality Assurance and Integration Tool for Sewer Inspection Data", National Science Foundation, 02/01/2022 - 01/31/2024, $266,000.
T. Liu, W. Paiva and Ye Liang. “Validating a clinical decision support algorithm developed with big data to diagnose, state, prevent, and monitor a patient’s diabetic retinopathy,” OCAST, 8/1/2018 - 7/31/2021, $90,000.


Journal Publications

Papers published or accepted in 2020-2022


H. Validi, A. Buchanan. The optimal design of low-latency virtual backbones. INFORMS Journal on Computing. Accepted for Publication.


Spring 2022 Senior Design Teams

Graduating Industrial Engineering and Management seniors conclude their academic studies with a capstone course called Senior Design, taken in their last semester. During this course, student teams work as outside ‘consultants’ on real-world problems for clients in the manufacturing and service sectors. The projects provide students the opportunity to apply the theories and tools they have learned to provide clients with innovative solutions to a problem.

**Baker Hughes Team 1:**
Ryne Garrison
Payton Hill
Luke Loughren
Kramer Pascal

Faculty Mentor:
Dr. Tieming Liu

IAB Mentor:
Zach Roberts

**Baker Hughes Team 2:**
Pete Billerbeck
Khanh Do
Emma Ray

Faculty Mentor:
Dr. Joseph Nuamah

IAB Mentor:
Steve Kiester

**Webco Industries Team:**
Ben Burchard
Chris Chesnut
Jay Eischen

Faculty Mentor:
Dr. Austin Buchanan

IAB Mentor:
Mark Lewis
Spring 2022 Senior Design Teams

Zeeco Team:

Jason Abernathy
Mason Feddersen
Kendel Hart
Sam Koscelny

Faculty Mentor:
Dr. Baski Balasundaram

IAB Mentor:
Michael Foss

INTEGRIS Team:

Kylie Dowers
Louisa Ivey
Tyler Wedel

Faculty Mentor:
Dr. Katie Jurewicz

IAB Mentor:
Jack Watts

Mary Martha Outreach Team:

Kim Garcia
William Harrison
Megan Mann

Faculty Mentor:
Bing Yao

IAB Mentor:
Tom Saunders
CEAT Interdisciplinary Teams

Graduating Industrial Engineering and Management seniors have the option to be part of Interdisciplinary Senior Design teams, collaborating with students from other engineering disciplines to solve real-world problems.

Flight Data Retrieval and Management Team:
Ryan Hiatt

High Speed Assembly Tool Team (High Speed Assembly PNG):
Erin Lewis
Laura Singletary
2015-2021 IEM Alumni Donors

$100,000+
Ken & Lynn Case
Mitch Myers
Kent & Sheryl Powers

$50,000+
Leland T. Blank & Sallie Sheppard
Steve W. Herod
Rick and Sandra Webb
Webco Industries, Inc.
Jim & Darlene Woodson

$20,000+
Shay & Donna Braun
Thomas W Britton, Jr
Neal & Lora Buck
Ken & Lynn Case
Stephanie Criner
Sunderesh & Rita Heragu
R. Logen & Jayanthi Logendran
Katherine T McCollum
Sandy & Wolf Yeigh

$15,000+
Jo Ann DeVries

$10,000+
The Cowboy Academy
Brian M Adams
Syam Antony
Charles A Bacher
Michael D Bartlett
Otto E Behunin
Kevin A Doeksen

Laura Easley
Jared A Green
Frank Gregory Jr
Jamie Matlock
Daniel O Navaresse
Lee C. Raney
Dhananjaya K Rao
Gopalakrishnan Satish
Brenda Shumate
Matthew J Williams

$5,000+
Erica D Dekko
Steven J Kiester
Ronald & Diana Orr

$1,000+
Courtney Y Baughter
Kristin L Case
Subodh S Chitre
John C Even, Jr.
Michael Foss
Simran K Gambhir
Ian C Giese
Frank S Groenteman
Bruce A. Lee
John & Judy Lewis
William H Remy, III
Jerry E Ryan
Scott Sink
Katie Speakes
Col (Ret) Richard Thompson
John M Tye, Ill
Marion L Williams
Retirement

At the end of July, IEM’s Laura Brown will be retiring. Laura has been with IEM for nine years and has been the heart and soul of the department. Her care and enthusiasm have touched the hearts of students, faculty and alumni alike.

If you’d like to drop Laura a note of appreciation, you can send it to our office at 354 Engineering North, Oklahoma State University, Stillwater, OK, 74078.
IEM Faculty and Staff

Faculty

IEM Administration
Sunderesh Heragu, Ph.D.
Regents Professor, Head, and Humphreys Chair

Tieming Liu, Ph.D.
IEM Graduate Program Director
Associate Professor

Farzad Yousefian, Ph.D.
Undergraduate Program Director
Associate Professor

IEM Tenured/Tenure-Track Faculty
Baski Balasundaram, Ph.D.
Wilson Bentley Professor

Juan Borrero, Ph.D.
Assistant Professor

Austin Buchanan, Ph.D.
Associate Professor

Terry Collins, Ph.D., P.E.
Associate Professor

Katie Jurewicz, Ph.D.
Assistant Professor

IEM Adjunct/Non-Tenure Track Faculty
Manjunath Kamath, Ph.D.
Professor

Chenang Liu, Ph.D.
Assistant Professor

Joseph Nuamah, Ph.D.
Assistant Professor

Bing Yao, Ph.D.
Assistant Professor

Jennifer Glenn, Ph.D.
Teaching Assistant Professor

Ying Tat Leung, Ph.D.
Adjunct Researcher

Staff

Laura Brown
Administrative Assistant, Senior Financial Assistant

Valerie Quirey
Graduate Programs Coordinator

Myers Turner
Marketing Intern

Lenley Brown
Administrative Support Specialist

Matt Taylor
Undergraduate Advisor