NORTHERN ILLINOIS UNIVERSITY
Department of Industrial and Systems Engineering
College of Engineering and Engineering Technology

ISYE News

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Spring 2025

DeKalb Spotlight: Corn Fest

(Credit: Mark Busch, Shaw Media)

This past year's **Corn Fest** in DeKalb, Illinois, ran from Aug. 23 to 25, attracting thousands of visitors to downtown DeKalb. The festival showcased the town's agricultural roots with its famous Chuck Siebrasse Corn Boil, serving over 30,000 ears of corn for free on Saturday. A diverse lineup of live music, including local acts and headliners, added to the lively atmosphere. Other highlights included the auto show and craft fest, featuring classic cars and local handcrafted items. Food vendors, local businesses and food trucks offered a wide range of dishes, and community support was evident through special deals and fundraisers. Corn Fest 2024 was a vibrant celebration of DeKalb's agricultural heritage and community spirit.

Inside this Issue

Greetings from the Chair

Greetings from the Department of Industrial and Systems Engineering (ISYE) at Northern Illinois University (NIU)! We are excited to share the first issue of our biannual newsletter, which will keep you up to date with all the latest highlights, achievements and updates from our department.

Thanks to our faculty, staff, students and alumni, it has been a successful year during the 2024-2025 academic period. Our department provides many ways for ambitious students to enrich their educations through enhanced curriculum that reflects real-world issues, senior design projects, internships and so on. Our faculty continue to go above and beyond to support student success and engage in cutting-edge research while building national and international reputations for scholarship. Our alumni keep serving as leaders, innovators and civically engaged citizens, making a positive impact on the society.

On behalf of our ISYE faculty and staff, I would like to thank you again for all of the love and support that has been given to our department. As always, we'd love to get connected with you. Please let us know what you are up to, or send us your achievements and success so we can share with NIU ISYE families and friends. We all look forward to even more successes in the years to come.

Go Huskies!

Chang S. "CS" Nam, Ph.D.
Professor and Department Chair

Student Spotlights

Dheeban Kumar
Ph.D. candidate

I am Dheeban Kumar Srinivasan Sampathi, a Ph.D. candidate in the industrial and systems engineering (ISYE) department at NIU. I am currently working on my doctoral dissertation on order acceptance and capacity planning. My journey at NIU has been transformative. The academic training and leadership opportunities have greatly influenced my professional and personal development. The guidance of my advisor, Professor Purushothaman Damodaran, has been crucial in enhancing my technical and professional skills.

My internships at FedEx Freight and Triangle Package Machinery enabled me to apply my skills in practice, leading to enhanced operational efficiencies and cost savings. I was honored to receive the Outstanding Graduate Student Award for the 2020-21 academic year and the IMPACTful OR/Analytics Prize, which reflects the dedication and impact of my academic and professional efforts. I aim to use my expertise in optimization, data analytics and process improvement to tackle real-world challenges and drive meaningful change outcomes.

Angelica Sanyal

My name is **Angelica Sanyal**, and I am a freshman in the ISYE program. Even though the semester has just started, I've already started learning and gaining useful experience through the program.

I am currently working as an undergraduate research assistant under Professors Jaejin Hwang and Niechen Chen. With Professor Hwang, I study gesture coding and augmented reality in STEM education. My research analyzes young children's interactions with AR and social robots during path-finding tasks to enhance their problem-solving skills and inform innovative educational interventions.

With Professor Chen, I am exploring CAD model design and toolpath modeling, where I design machine components in SolidWorks, conduct toolpath planning for CNC machining and collaborate on developing an AI-driven toolpath planning system to streamline manufacturing processes. I am also an active member of the Society of Women Engineers and look forward to supporting the club's efforts to promote STEM to local middle school students through volunteering. I'm eager to keep learning from my professors and research, and I'm excited to contribute to the program as I continue to grow within it.

Bemdoo Dzoho
IISE Student Chapter President

My name is **Bemdoo Dzoho**, and I am a second-year master's student in the ISYE program. Currently, I am in Sumas, Washington, interning in reliability engineering with IKO Pacific Inc.

The courses I have taken have profoundly prepared me for this role. Due to my demanding commitments, I decided to step down as president of NIU's IISE chapter, a position that significantly enhanced my leadership skills.

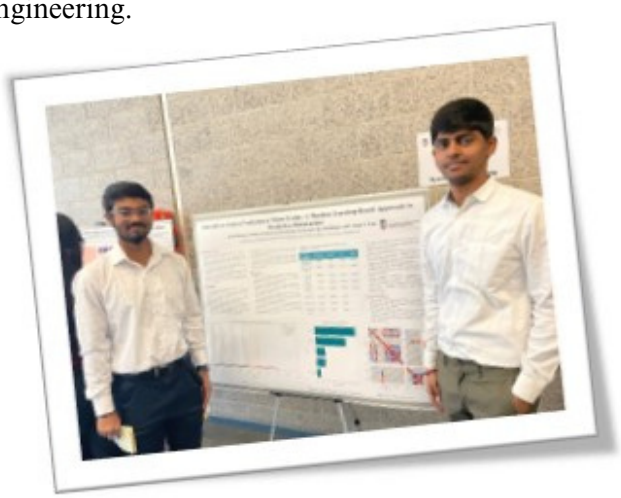
During my tenure, we participated in key events, including STEMFest at NIU, where we showcased projects from our department to children and parents, and the IISE North Central Regional Conference at UIUC, which provided valuable networking opportunities with students and faculty from various institutions. I am excited that we won the bid to host the IISE North Central Regional Conference in 2027, marking NIU's first hosting in over 20 years. This will bring greater attention to our department and NIU as a whole.

Student Spotlights

Name: Josephine McMahon.
Future Plans: Job as a process improvement engineer.
Key Achievements at NIU ISYE: Interned at AAR, focused on supply chain and competitive market analysis, and independently developed work instructions for the ERP system.
What lessons have you learned from NIU ISYE?: Learned to think critically through problems, organize thoughts and use the right tools to find effective solutions in ISYE.

CEET Innovation Showcase

The CEET Innovation Showcase took place Nov. 15 at the Engineering Building at Northern Illinois University, highlighting groundbreaking research and innovation. Graduate students from the Department of Industrial and Systems Engineering, under the supervision of Professors Niechen Chen, Ziteng Wang, Jaejin Hwang and Chang S. "CS" Nam, participated in the event, showcasing their research projects during the poster sessions. The students presented diverse and cutting-edge topics, including advancements in automotive robotics, markerless motion detection for children with autism and AI-driven predictive maintenance systems. They actively engaged with a diverse audience comprising faculty members, industry experts and fellow students, fostering meaningful discussions and receiving valuable feedback. The showcase provided an excellent platform to demonstrate the practical applications and societal impact of their research, reflecting the department's commitment to innovation and excellence in engineering.



NIU STEMFEST Activities

On Sep. 28, our **NIU IISE Student Chapter** participated in STEMFest, hosting two engaging booths for students, parents and our community. One booth highlighted a senior design project featuring a low-cost patient transfer device that assists in moving individuals between a wheelchair and a bed. Attendees showed keen interest in its health care applications, noting its potential to enhance patient care. The second booth showcased 3D printing technology by producing custom NIU Huskie keychains. Both NIU brochures and candies were popular giveaways. This event allowed our NIU IISE chapter to connect with the community and showcase practical engineering solutions.

Pictured above left to right: Sharen Buddha Harikrishna (M.S. student), Professor Jaejin Hwang, Bhaveshkumar Chandrasekaran (M.S. student).

ISYE Senior Design Projects

The ISYE senior design projects are one-semester industry or cooperative projects in which students work in a group to solve a real-world problem or challenge. Mentored by faculty and industry professionals, students develop skills in project planning, budgeting, working as a team and making formal technical presentations. This hands-on, real-world experience reflects our Huskies' innovation, creativity and persistence and is the capstone to their Huskie education.

Spring 2024

Title: A Six Sigma Approach to Analyze and Reduce Scrap for Buckets and Blocks.
Members: Kush Thakkar, Nitish Sathya, Harihaaran Karunambigai, Musa Abusubaih and Jake Novotny.
Faculty Mentor: Purushothaman Damodaran.
Company Sponsor: Freudenberg Household Products.
Goal: Identify the sources for scrap and implement mitigation plans.
Key Outcomes: Sources for defects were identified (mold, transportation, printing, etc.), and solutions were prescribed to minimize the defects.

Title: Fixture Design for welding and assembly operations.
Members: Dhyan Dileesh, Navaneeth Sudheer and Mohammed Razeen Pulikkal.
Faculty Mentors: Niechen Chen and Purushothaman Damodaran .
Company Sponsor: Triangle Package Machinery.
Goal: Develop fixtures for welding and cable assembly operations.
Key Outcomes: Used FEA to design welding fixtures to optimally dissipate heat. Designed novel fixtures for enabling optimal assembly of cable.

Title: Improving kitting operations through standardized cycle time assessment methods.
Members: Betsy Pineda, Matt Cellak and Uzair Rahim.
Faculty Mentors: Purushothaman Damodaran & Gary Chen.
Company Sponsor: Suncast Corporation.
Goal: Develop standard operating procedures and establish time standards for kitting.
Key Outcomes: Developed standard operating procedures and optimal kitting assembly line setups.

Title: Improving Operational Challenges in an Assembly Line.
Members: Vidhun Ramakrishnan, Prithick Sivakumar and Diyaneshwaran Gurusamy.
Faculty Mentor: Purushothaman Damodaran.
Company Sponsor: Werner Co.
Goal: Develop a machine vision based automatic inspection system for final inspection.
Key Outcomes: Developed and implemented a machine vision system to automatically inspect all the parts in a final box assembly and alert the quality inspector of any missing items.

Title: Improving Aurora Specialty Textile Group's Wastewater Filtration System.
Members: Benjamin Hickey, Cole Hensley and David Okic.
Faculty Mentors: Purushothaman Damodaran and Christine Nguyen.
Company Sponsor: Aurora Specialty Textile Group.
Goal: Develop a new filtration system to sustain the daily demand for wastewater filtration
Key Outcomes: Compared and prescribed the best filtration system to achieve the daily demand.

Fall 2024

Title: Improving Process Flow of AB85 Cylinder Assembly Value Stream.
Members: Barbara Westerfield, Fahdah Aljurbua and Geoffrey Tian.
Faculty Mentor: Purushothaman Damodaran.
Company Sponsor: Hydraulic Technologies.
Goal: Design an assembly line such that the material movement within and outside the cell is minimized.
Key Outcomes: Reduction in micro and macro material movement, design of new fixtures to reduce cycle time of certain stations.

Title: Reducing Scrap on Suncasts' P3P Line.
Members: Garrett Cornier and Tim Fahle.
Faculty Mentor: Purushothaman Damodaran.
Company Sponsor: Suncast Corporation.
Goal: Reduce the number of defects detected at the P3P pack line.
Key Outcomes: Root cause analysis for defective units at the pack line, new lighting at the mold, new trimming tools for the operators, overhanging racks for larger sheds.

Faculty Updates

Driving Innovation in Digital Manufacturing: Professor Niechen Chen's Research in Hybrid Manufacturing and Industrial Automation

Professor Chen is a tenure-track assistant professor in industrial and systems engineering, focusing on digital manufacturing, particularly hybrid additive and subtractive manufacturing and industrial automation. He has secured over $1.4M in funding as PI and Co-PI. His research has addressed plasma cutting quality issues for Swenson Spreader LLC, improved processes for Triangle Package Machinery, and supported Werner Co. in transitioning to robotic automation. His work has received support from the Illinois Innovation Network and Illinois Manufacturing Excellence Center, aligning with NIU CEET's motto of bridging practice with theory. Additionally, he has secured NSF funding for his research on an AI-based CAM framework for hybrid manufacturing processes, aiming to advance process planning from human knowledge to artificial intelligence for efficient, objective-oriented planning.

To learn more, see this feature story on our blog.

Advancing STEM Education for Children with Autism: A Biometric and Data-Driven Approach

Professor Jaejin Hwang received the T-RISE Seed Grant for his project, *"Towards Personalized Interventions: Eye Tracking and EEG Analysis in STEM Education for Young Learners with Autism Spectrum Disorders."* Collaborating with Professor Kyu Taek Cho from mechanical engineering and Professor Jeff Chan from special education, this project aims to enhance STEM education for children with ASD. Using eye-tracking, EEG data and machine learning, the research seeks to link these biometric signals to ASD severity, with the goal of developing data-driven assessments for personalized educational strategies. To learn more, see this feature story on our blog.

Pedagogical Innovation in STEM, Professor Christine Nguyen

In collaboration with Professors Kevin Palencia Infante and Ricela Feliciano in the Department of Mathematics at NIU, **Professor Nguyen (co-PI)** received a T-RISE seed grant in July 2024 . The title of the work is *"Culturally Relevant Opportunities for STEM students through Calculus."* The goal is to develop a Calculus I curriculum with question banks aligned with STEM students' interests, aiming to improve retention and reduce the high rates of students receiving a D, F or withdrawing from the course.

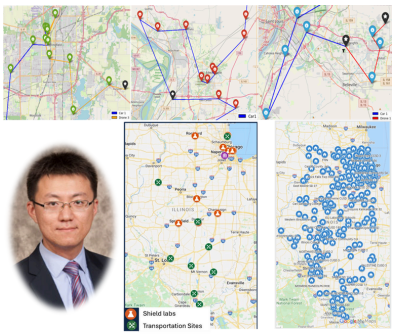
Faculty Updates

Our **Engineers in Residence program** brings a team of experienced faculty members and talented graduate students to your company. They'll help meet a need or solve a challenge you face. You'll increase your productivity, improve customer satisfaction, reduce costs and more. Our students will gain experience applying their technical skills and bridging theory with practice.

For more information, contact CS Nam, Ph.D., at 815-753-8046 or csnam@niu.edu.

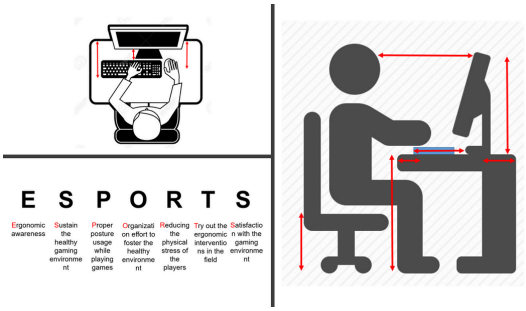
Professor Purush Damodaran (PI) received new funding ($54,999) to improve the repacking operations for Trigo Group. Along with his graduate student, Thrivikram Arella, Professor Damodaran has implemented solutions to streamline the receiving, repacking, storing and shipping operations. Professor Damodaran successfully completed projects funded by DHL, Werner Co. and Chalmers St. Consulting; the total funding exceeded $850K and supported 14 graduate students.

Professor Gary Chen (PI) received $152,632 funding from Mi-Jack Products in August 2024 for a one-year project titled *"Work Instruction and Process Improvement for Mi-Jack."* The goal of this project is to standardize procedures to ensure consistency in operations and improve workflow and productivity at Mi-Jack facilities. Three graduate students are supported by the project.



Professor Ziteng Wang (PI) kicked off a multi-institutional research project, funded by University of Illinois System and Shield Illinois, to produce management strategies and decision-making tools for operating a supply chain that will enable and sustain rapid, massive and reliable disease testing in future pandemics.

Professor Jaejin Hwang (PI) conducted an ergonomics workshop for NIU's esports players, focusing on ergonomic awareness related to gaming postures, setups and health considerations. Professor Hwang and the esports team aim to establish a continuous partnership to promote a healthier and more productive environment for the players.



Professor Christine Nguyen (co-PI) received follow-on funding ($149,999) through MxD to continue her project titled *"Machine Learning-based quality improvement for thermal energy cutting processes."* She has also successfully completed projects funded by DHL and Motorola Solutions Inc. These projects supported eight graduate students.

She has been awarded an NSF grant as a co-principal investigator for the project titled *"S-STEM: Scholarships and Enhanced Mentoring to Promote Equity and Excellence in Science, Technology, Engineering and Mathematics."* The award covers a five-year period, with a total intended amount of $1,999,999.

Selected Recent Publications

We are pleased to announce that the ISYE faculty have recently published groundbreaking articles in high-impact journals across the fields of manufacturing, ergonomics and health science. Their contributions to these disciplines reflect the continued pursuit of excellence in research and innovation. Congratulations to all for this outstanding achievement!

Peer-reviewed Journal Acticles

- Kia, K., **Hwang, J.**, & Kim, J. H. (2024). The effects of target sizes on biomechanical and cognitive load and task performance of virtual reality interactions. *Ergonomics*, 1-15.
- Iyer, H., Reynolds, J., **Nam, C. S.,** & Jeong, H. (accept). Exploring Restaurant Worker Mental Models of Injury and Safety using Pathfinder Networks. *IISE Transactions on Occupational Ergonomics and Human Factors.*
- Choo, S., Park, H., Jung, J-Y., Flores, K., & **Nam, C. S.** (2024). Improving Classification Performance of Motor Imagery BCI through EEG Data Augmentation with Conditional Generative Adversarial Networks. *Neural Networks,* 180, 106665.
- Seebold, P., He, Y., & **Nam, C. S.** (2024). Effects of Looming Audio on Transcranial Magnetic Stimulation Induced Phosphene Perception. *Journal of Neuropsychology*, 18(3): 441-451.
- Ghasemi, Y., Bayro, A., MacDonald, J., Jeong, H., Reynolds, J., & **Nam, C. S.** (2024). Embedding Spatial Augmented Reality in Culinary Training: A Comparative Evaluation of sAR Kitchen and Video Tutorials. *IEEE Transactions on Learning Technologies*, 17, 765-775.
- Huang, J., Pugh, Z., Kim, S., & **Nam, C. S.** (2024). Brain Dynamics of Mental Workload in a Multitasking Context: Evidence from Dynamic Causal Modeling. *Computers in Human Behavior*, 152, 108043.
- Zhang, Q., **Wang**, **Z.,** Huang, M., Wang, H., Wang, X., Fang, S-H. (in press). Collaborative Supply Chain Network Design under Demand Uncertainty: A Robust Optimization Approach. *International Journal of Production Economics.*
- Lu, F., Du, Z., **Wang, Z.,** Wang, L., Wang, S. (in press). Towards Enhancing the Crowdsourcing Door-to-door Delivery: An Effective Model in Beijing. *Journal of Industrial and Management Optimization*.

Refereed Conference Proceedings

- Cho, R., Zaman, M., Cho, K. T., & **Hwang, J.** (2024). Neural Understanding of STEM Activities. In *2024 International Symposium on Computer Science and Educational Technology (ISCSET)* (pp. 1-4). IEEE.
- Ghrayeb, L., Muthuswamy, S., & **Damodaran, P.** (2024), GRASP for makespan minimization of a batch processing machine with unequal ready times. *Proceedings of 51st International Conference on Computers and Industrial Engineering*, Sydney, Australia, Dec 9-11, 2024.
- **Damodaran, P.**, & Muthuswamy, S. (2024). A column generation heuristic to schedule batch processing machines in a two-stage flowshop. *Proceedings of the 51st International Conference on Computers and Industrial Engineering*, Sydney, Australia, Dec 9-11, 2024.
- Nepal, S., Muthuswamy, S., & **Damodaran, P. (2024).** Scheduling batch processing machines in a flow shop with limited waiting time constraints. Proceedings of the IISE Annual Conference and Expo 2024, Montreal, Canada, May 18-21, 2024.
- Srinivasan, D., & **Damodaran, P.** (2024). Order acceptance and detailed scheduling in a job shop with discrete and batch processing machines using heuristics. *Proceedings of the IISE Annual Conference and Expo 2024*, Montreal, Canada, May 18-21, 2024.
- Kim, H., Kim, S., Jun, C., & **Nam, C. S.** (2024). Is What I Think What You Think?: Multilayer Network-Based Group Synchrony Approach. In *Proceedings of the 22nd Triennial Congress of the International Ergonomics Association (IEA 2024)*.
- Kim, S., Seebold, P., & **Nam, C. S.** (2024). Exploring factors associated with trust for intention to use medical robots in human-robot physical interaction. In *Proceedings of the 22nd Triennial Congress of the International Ergonomics Association (IEA 2024).*
- Iyer, H., Reynolds, J., **Nam, C. S.**, & Jeong, H. (2024). Pathfinder Networks: Evaluating Injury and Safety Using Restaurant Workers' Mental Models. In *Proceedings of the Human Factors & Ergonomics Society Annual Meeting*. Sage CA: Los Angeles, CA: SAGE Publications.

Edited Book

- Ponnambalam, S.G., **Damodaran, P.**, Subramanian, N., Davim, J.P., *Recent advances in Industrial and Systems Engineering*, Springer, Singapore (DOI: https://doi.org/10.1007/978-981-97-4700-9). Published in August 2024.
- **Nam, C. S.**, Song, D., and Jeong, H. (Eds.) (2024). Human-Centred Metaverse: Concepts, Methods, and Applications. Elsevier

Alumni News

Micah Volle earned his Bachelor of Science in industrial and systems engineering with a health systems emphasis from Northern Illinois University in 2019, where he completed an impactful internship at Northwestern Medicine's Kishwaukee Hospital and a capstone project focused on improving inpatient room turnaround time. After graduation, he joined Northwestern Medicine as a program coordinator and later as an operations outcomes analyst, optimizing operations for the Regional Medical Group from 2019 to 2022. Inspired by his experiences in health care, Volle pursued medical school, completed his premedicine post-baccalaureate at Northwestern University, earned his EMT certification and worked as an EMT. In 2022, he matriculated into the F. Edward Hébert School of Medicine at the Uniformed Services University of the Health Sciences (USUHS), operated by the Department of Defense to train health care professionals for the Military Health System, where he was commissioned into the Navy. During medical school, Volle married Danielle Volle, a fellow medical student, and is now completing his general surgery core clerkship at Naval Medical Center Portsmouth, anticipating graduation in 2026. He plans to pursue a residency in internal medicine with interests in hospital medicine and critical care.

Daniel Field began his career as a research assistant at WE-LAB, gaining foundational experience in ergonomics research and experimental design, which later helped him secure an internship at Inventus Power, where he engineered workflows and quality control measures for medical and military device production. While pursuing his master's in industrial and systems engineering at NIU, he worked as a aesearch assistant and industrial engineer in residence at Mi-Jack Products, applying coursework in inventory management, layout design and simulation to real-world operations. After graduation, he joined Mi-Jack as a manufacturing engineer, leveraging business intelligence tools and coding solutions for capacity planning. Currently, as a data scientist at Caterpillar, he focuses on inventory management research, developing predictive models and automated processes to optimize inventory control and dealer operations. A two-year project aligning dealer ERP data with Caterpillar parts data significantly improved lead times and customer service, earning a nomination for the Caterpillar Excellence Awards. He owes these accomplishments to the invaluable teaching and guidance of the NIU ISYE department.

Saisurya Mallam earned his master's in ISYE at NIU from August 2014 to December 2015, an experience that was pivotal in shaping his career. NIU offered strong support for international students through ISSS guidance, résumé workshops, career fairs, and cultural events that fostered growth and community. The industry-aligned coursework and supportive professors were key to his success. He received a tuition waiver and teaching assistantships based on his academic performance, earning induction into Alpha Pi Mu Honor Society. After graduation, he worked at Volvo Group North America as a logistics and methods engineer for 4 1/2 years and is now a senior supply chain manager at Amazon. Skills gained at NIU, particularly in warehouse and distribution systems, directly contributed to his career achievements. He holds NIU and ISYE in high regard for their impact on his journey.

Department News

IISE STUDENT CHAPTER

Our IISE chapter at NIU has received multiple awards and recognitions in the past including Gold Award, IISE Chapter Recognition (2014, 2017, 2018) and Most Innovative Chapter Event Award, IISE Chapter Recognition (2019). Professor Gary Chen has been the faculty advisor from 2013 to 2023 and 2024 to present. Professor Jaejin Hwang was the faculty advisor in 2023-2024.

IISE student officers this year are: Sharen Buddha Harikrishna (President), Bhaveshkumar Chandrasekaran (Vice President), Sudheep Kumar (Secretary), and Peter Dioro (Treasurer).

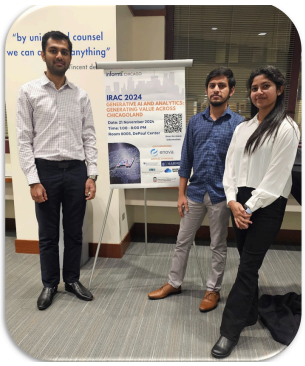
NIU ISYE ALUMNI GROUP

Do you know that the alumni of the NIU industrial and systems engineering department hold annual events? We maintain contact with each other through our LinkedIn page. As a member of our department you are invited to join us. You can keep in touch with other alumni and students as well as learn about events and job opportunities. We look forward to connecting with you.

INFORMS STUDENT CHAPTER

The INFORMS student chapter at NIU has entered its fifth year since 2011, with newly elected student officers. The faculty advisor, Professor Ziteng Wang, is excited about the chapter's planned activities including campany visits, career panels, guest seminars and engagement with INFORMS, Chicago Chapter, and other student chapters in the region.

INFORMS student officers this year are Jack Rissman (president), William Stark (vice president) and Peter Dioro (secretary/treasurer).



Department News

NIU ISYE meet to foster international collaboration

We are pleased to announce our department has newly signed a Memorandum of Understanding (MOU) with four universities in South Korea - Ajou University, Korea University, Kangwon National University, and Seoul National University of Science and Technology - with the intention of forming a long-term collaboration that is beneficial to the faculty and students. A number of initiatives are expected to occur as a result of this relationship, including but not limited to exchanging students, dual degree programs, research collaboration, etc.

Our department has already established successful partnerships with universities in India (PSG, Northcap University, Chennai Institute of Technology (CIT), Amrita University, Kumaraguru College of Technology (KCT), Kalasalingam Academy of Research and Education (KARE) , Vellore Institute of Technology (VIT)) and Columbia (e.g., Universidad de La Sababa).

Master's in Industrial Engineering named among Top 10

NIU College of Engineering and Engineering Technology's master's in industrial engineering program has been named one of the top 10 such programs in the nation by TechGuide.org.
Our students focus on hands-on learning at both the undergraduate and graduate level. Our program was ranked No. 9, coming in just behind of the University of Southern California and just ahead of Lehigh University.
It is the only program from an Illinois university to make the list. Graduates of NIU's industrial and systems engineering program work in a wide variety of industries at companies like Motorola Solutions, Hanes, Ferrara Candy, Molex, Target and UPS.

NIU industrial and systems engineering students focus on hands-on learning at both the undergraduate and graduate level.

2025 Lean Six Sigma Certification

We can help build your knowledge and skills at any point on your professional journey. We offer a range of undergraduate and graduate degrees and certificates. We also offer noncredit Lean Six Sigma training to help you optimize your company's efficiency.

NIU Continuing and Professional Education provides additional noncredit options for advancing your career, including programs in project and facility management and occupational health and safety.
Noncredit programs are held in the Chicago suburbs, Rockford and online. We can also bring the program to your facility.

Join us to eliminate inefficiency from your workplace and advance your career. If you're a professional in health care, manufacturing or a service industry, a Lean Six Sigma certification enables you to increase profitability, prevent project variation and boost customer satisfaction. You'll learn from our expert faculty members who hold Black Belt certificates.

Upcoming Classes

Yellow and Green Belt

Yellow Belt and Green Belt courses are combined for packaged registration and payment.

Jan 18 8:30 AM
Lean Six Sigma - Yellow/Green Belt Workshop

Mar 1 8:30 AM
Lean Six Sigma - Yellow/Green Belt Workshop

Apr 5 8:30 AM
Lean Six Sigma - Yellow/Green Belt Workshop

May 17 8:30 AM
Lean Six Sigma - Yellow/Green Belt Workshop

Sep 20 8:30 AM
Lean Six Sigma - Yellow/Green Belt Workshop

Black Belt

Feb 8 8:30 AM
Lean Six Sigma - Black Belt Workshop

Oct 18 8:30 AM
Lean Six Sigma - Black Belt Workshop

ISYE Department Seminar Series

The Department of Industrial and Systems Engineering at NIU hosts a term-time seminar series, inviting researchers to present their latest findings. All students, faculty and staff are welcome to attend. Seminars will take place in a hybrid format both in person and online unless specified.

Fall 2024

The first seminar was delivered by **Leena Ghrayeb** from the University of Michigan, a proud alumna of NIU's ISYE program, where she earned both her bachelor's and master's degrees. Ghrayeb presented her Ph.D. research on applying operations research to enhance prenatal care. Her talk provided valuable insights into how data-driven models can improve health care outcomes, sparking meaningful discussions among attendees.

The second seminar featured **Professor Hy Kim** from the University of Illinois at Chicago (UIC). Professor Kim, with over a decade of experience in human factors engineering across academia and industry, gave a talk titled "Human-Machine Teaming in Intelligent Transportation Systems." His presentation explored cutting-edge research on the collaboration between humans and machines within smart transportation, highlighting its potential to revolutionize the field.

ISYE Giving

What's your story?

We'd love to hear from you and stay connected. Please share your news and updates to csnam@niu.edu or tmereness@niu.edu.

Make a Gift to the Department of Industrial and Systems Engineering.

Thank you for your support of the NIU ISYE Department. Your contributions make a difference in our department. We are currently seeking financial support for students' scholarly work through prizes, workshops, presentations at conferences and student scholarships. If you would like to contribute financially to the department, please do so through this link:

https://foundation.myniu.com/give.php

Please contact the department chair, with any questions:

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csnam@niu.edu; 815-753-8046

ISYE Advisory Board

The ISYE Advisory Board find new ways to connect to our large, diverse alumni community and to tap their enormous talents to help advance our department's mission. Spotlighting five Advisory Board members:

Seyhun Hepdogan is senior vice president, director of analytics in consumer risk strategies and analytics group at Fifth Third Bank. He is responsible for retail credit risk models including originations, portfolio risk, collections, direct marketing and application fraud model development for auto, credit card, personal loans and small business portfolios. Prior to his Fifth Third Bank experience, Hepdogan held director of model risk positions at Discover Financial Services and at Santander Holdings USA, Hepdogan holds a Ph.D. in industrial engineering from University of Central Florida.

Matt Kroll is principal and founder of Chalmers St. Consulting. Chalmers St. helps companies achieve their growth potential by aligning their operations with their aspiration and engaging their employees to achieve their full potential. Kroll's formal background is in industrial engineering. He earned his bachelor's degree in industrial engineering from Northern Illinois University in 1999. He joined Motorola directly after completing college where he earned both his Black Belt and Master Black Certification. In 2009, he earned his master's degree in business administration from the Chicago Booth School of Business.

Niki Lohmeier is a continuous improvement manager with 25 years of experience in manufacturing. Her journey began with interning at Hamilton Sundstrand in Rockford, Illinois. During her college years, she developed the understanding of process improvements and how to implement the tools to help people. Because of this experience, she was hired at Tempel Steel in the Chicagoland area. She is currently working at Woodward, an aerospace company in Rockford, Illinois.

Joe Trznadel is a senior executive who is equally comfortable on the shop floor or in the board room with expertise in multisite operations with responsibilities for P&L, strategic planning, financial management and vision and strategy. The majority of his career has been spent in the medical device industry. He has been particularly effective in mentoring others, identifying and addressing pain points, strengthening the company foundation, increasing profitability, growing revenues and containing costs.

Emily Bintz resides in Iowa with her family. She graduated from our ISYE department in 2010. Bintz values the human-centered focus of industrial and systems engineering and enjoys applying these principles in her personal and professional life. She also contributes to the field by teaching in the green belt program offered by our NIU ISYE department.