

Industrial & Systems Engineering Department



Spring 2024 ISE Newsletter

A Message from the Chair



The mission of the Davidson College of Engineering at San José State University is to enable our students to become socially responsible engineers and leaders in Silicon Valley and beyond through an accessible, world-class education. In fact, local technology firms employ more engineering graduates from the Charles W. Davidson College of Engineering than any other university, and the School ranks 3rd nationally among public engineering programs offering bachelor's and master's degrees, exceeding service academies. I invite you to explore how our Industrial and Systems Engineering Department at SJSU is serving this mission from reading our newsletter.

Dr. Yasser Dessouky
Some highlights: Our faculty and students continue to receive recognition for their efforts as for example: Dr. Ayca Erdogan receiving the College of Engineering faculty award for excellence in teaching and Zhi Zhang winning the Donald Beall Student award for engineering accomplishment, and Tim Li receiving the Distinguished Alumni Award. Two new faculty members have joined the department: Dr. Behin Elahi and Dr. Yue Luo. The new curriculum enhancements to meet today's pressing issues as the department added a new concentration in Operational Analytics for the MS Industrial and Systems Engineering degree. The excellent research the faculty has been conducting. Our senior design projects continue to be sponsored by a variety of industries that reflect our students' employers such as Google, Sanmina, Albertson's, etc. These are few of the many stories in the newsletter with other exciting activities the Department is actively supporting and engaging in.

Thanks to ISE Alums Vy and Timothy Li for Their Day of Giving Challenge

COMPLETE
 Vy and Timothy Li Challenge

If 1000 people make a gift to the Institute of Industrial and Systems Engineers, any College of Engineering project, or another project of your choosing before midnight on February 13th, it will unlock a gift of \$175,000 to Industrial and Systems Engineering at the Charles W. Davidson College of Engineering.

>100%
1065 Donors
Goal: 1000

ISE Launches New MSISE Concentration in Operational Analytics

Within the past 15 years, the job market for industrial and systems engineering graduates has sought more sophisticated additional analytics skills. Companies across all industries incorporate analytics for their daily operations within and across various departments to utilize real-time and offline data generated by sensors, customer behavior and sales, and production. The job requirements for these positions involve forecasting, demand planning, production scheduling, logistics and finance operations – all of which require proficiency in analytics skills at a high level. The MSISE Operational Analytics concentration is designed to provide students with the skills necessary to compete in the demanding job market of industrial and operational data analytics, through a rigorous curriculum that facilitates student learning and competency of solving industrial and systems engineering problems using data analytics methods.

The SAGE- BS +MS ISE- Operational Analytics Program
 The ISE Operational Analytics SAGE Program is also designed to enable qualified students in the BS ISE program to simultaneously complete the requirements for both the baccalaureate and master's degree with a concentration in Operational Analytics. Students can progress from undergraduate to graduate status seamlessly, with a simplified application process and no application fee, and complete both degrees in a year's less time as compared to completing them separately.

[Click here to learn more about Operational Analytics at SJSU](#)

2023-2024 Senior Design Sponsors

Our senior design projects continue to be a highlight of our students' learning experiences. We are deeply grateful to all of the recent sponsors honored below.



Featured Sr. Design Project Sponsor

SANMINA®

Sanmina designs, manufactures, and repairs some of the most complex and innovative optical, electronic and mechanical products in the world.

This spring, Sanmina is sponsoring 3 Senior Design projects for ISE students in its New Product Introduction (NPI) / Quick Turn Facility. We are very grateful to Mr. Venky Atlagirisamy, Plant Manager and Mr. Huy Nguyen, Quality Manager, and their associates at Sanmina. Both have extensive backgrounds in manufacturing innovation that they enjoy sharing with students. One of these projects is described on the linked Gold Pages. **Project Goal:** The primary goal of this project is to improve the productivity of an electric press. The team is currently using SolidWorks to work closely with mechanical engineers from Sanmina's NPI facility to design a new die.

From left: Shirley Ariaga, Caroline Zana, Huy Nguyen, and Mauro Gonzalez

[Click here for more about Sanmina and this project](#)

Dr. Dessouky Chairs International Conference in Dubai

The 50th International Conference on Computers and Industrial Engineering (CIE 50) was held from Oct 30 to Nov 2, 2023 at the American University of Sharjah(AUS).



Her Excellency Sheikha Bodour bint Sultan Al Qasbi, President of AUS, inaugurated the event, which runs from October 30 to November 2 and is organized in collaboration with San Jose State University in the USA. The conference explores the intersection of sustainability and technological innovations, fostering discussions on how digital transformation can enhance industry efficiency, innovation, and competitiveness while upholding sustainability principles. ISE Department Chair Yasser Dessouky, 3rd from right, was CIE50 Chair and serves as Editor in Chief of CIE.

Special Announcement from ISE

Mr. Timothy Li
Winner of the 2024 Charles W. Davidson College of Engineering Award of Distinction

Timothy Li is an ISE alum (BSISE 2003), serial tech entrepreneur, and a strong supporter of the ISE Department. He graduated from ISE at SJSU in 2003. Tim has spent the past 20 years in financial technology focusing on banking and fintech products, while building mission critical platforms for Intel Corporation and JPMorgan Chase. He currently serves on multiple FinTech advisory boards worldwide. Tim is also a professor at the University of Southern California, Viterbi School of Engineering where he enjoys helping hundreds of students build their high tech startups.

Tim joins an illustrious group.

[Click here to view a list of previous awardees](#) [Click here to view Tim Li's Gold Pages](#)

2024 College of Engineering Excellence in Teaching Award

Dr. Ayca Erdogan
 Associate Professor - ISE

Dr. Ayca Erdogan is an Associate Professor and Director of the MS ISE Graduate Program and the MS ISE Program in Operational Analytics. She joined SJSU as an Assistant Professor in 2014. Her research interests are applications of optimization, simulation and predictive modeling related to design and operations of complex systems under resource limitation. Dr. Erdogan Has pioneered the development of new analytics courses in the ISE Department to enrich undergraduate and graduate curriculum in Big Data & Analytics.

[Click here to view Dr. Erdogan's Gold Pages](#)

Link below to view the Complete lists of 2023 - 2024 ISE faculty publications, presentations, awards, and professional activities...
 ...that can be found on separate pages on our Department website.
 Internal grants and activities of note are reported here

View a list of 2023-2024 External Grants and Contracts	View a list of 2023-2024 Refereed Publications and Books	View a list of 2023-2024 Conference Presentations and papers
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The ISE Spring 2024 Faculty Spotlight

Dr. Behin Elahi
 Associate Professor

Dr. Elahi joined the department in Fall 2023 as an Associate Professor. She is an IE graduate from the University of Toledo, and previously served on the IE faculty at Purdue. Her research and teaching interests span many areas, including the application of robotics and virtual reality in manufacturing systems, human-robot interaction and collaboration, and data mining.

Dr. Elahi is already making a difference at SJSU, engaging in many classes and advising many MS students.

[Click here to view Dr. Elahi's Gold Pages](#)

Dr. Yue Luo

Assistant Professor

Dr. Yue Luo joined SJSU in Fall 2023, as an Assistant Professor in the ISE Department. She is the lab director for the Biomechanics and Ergonomics in Environment, Persons Interaction and Collaboration Laboratory (BE-EPIC Lab).

Dr. Luo received her ISE Ph.D. degree from the University of Florida in 2023, and master's degrees in biomedical engineering (BME) and Industrial and Operations Engineering (IOE) from the University of Michigan in 2017 and 2019. Her research focuses on human-centered evaluation in multi-agent systems, assessing physical and physiological interactions between non-human agents (e.g. robotic arms) and human participants using wearable technology

[Click here to view Dr. Luo's Gold Pages](#)

IISE Student Chapter Highlights



Coca Cola Bottling Visits IISE Chapter

Several representatives from the Reyes Coca Cola Bottling (RCCB) production, engineering, and operations excellence teams came to SJSU in November, 2023, with samples! They spoke in detail about the day to day operations tasks of their company. They also covered the lean and six sigma tools that are used at RCCB. The session concluded with some networking time over, of course, some Cokes!

IISE Student Chapter Tours Tesla Plant



IISE club members got the Tesla plant tour and had plenty of time to close their deal in the showroom afterwards.

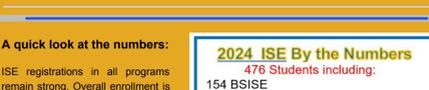
IISE Student Chapter Earns a 2023 Chapter Gold Award!

In addition to the events noted above, and several social outings, in October 2023 the chapter hosted ISE Adjunct Professor Patrick Tam, the Vice President of Operations Excellence at Servicenow, as a guest speaker. Prof. Tam spoke on his career journey and the challenges and opportunities that young engineers face. He also spoke on tools and skills that are essential to growth and leadership.



Student Awards and Recognitions

Interdisciplinary Grad Student Team Wins Campus-Wide Innovation Competition



This past year, this grad student team, comprised of Engineering Management, Software Engineering and Computer Engineering MS students placed **First** in the campus wide **Silicon Valley Innovation Challenge**.

From the SJSU News Center:
 "With an open invitation to students from all nine SJSU colleges, the SVIC received a total of 87 completed applications. Competitors eager to show the benefit of each of their concepts vied for recognition in Best Overall Innovation and Best Elevator Pitch, as well as the Social Impact Innovation Award, Emerging Technology Award and the People's Choice Award."

Our venture, Sequoia, is dedicated to developing an AI-based test prep tool. Our current focus is on developing a product tailored to students in preparing for Online Assessments. These assessments are commonly used to evaluate candidates for specific job positions within various companies. These assessments typically include both behavioral and technical components, and our emphasis currently is on the challenges faced on the technical side. Our AI technology serves as an AI teacher, guiding candidates and helping them achieve their learning goals. Our current focus is on developing a product tailored to assist users in preparing for Online Assessments.

"Our journey began with personal struggles during our student days when we encountered the daunting task of preparing for challenging tests. We received the Best Overall award but only validated our hard work but also fueled our determination to move forward."

The Silicon Valley Engineering Council 2024 Education Award

Deema Saddik
 BSISE Program

For Deema Saddik, an undergraduate student studying Industrial and Systems Engineering, ISE represents the convergence of engineering, technology, and business—a field where she sees endless opportunities to drive systemic improvements. With a keen interest in healthcare, she envisions leveraging her skills to enhance the efficiency and quality of patient care delivery systems, guided by principles of continuous improvement and holistic problem-solving.

[Deema's Gold Pages](#)

The 2024 Don Beall Student Award for Engineering Accomplishment

Zhi Zhang
 MS HFE Program

Zhi completed a bachelor's degree in Psychology from UCLA with a minor in Film Studies. She feels fortunate to have discovered the field of Human Factors/Ergonomics and is passionate about exploring the intersection of human behavior and technology. At SJSU, she is now immersed in user experience with Dr. Huang looking into smart home technology, user acceptance, and automated vehicle takeover warning signal display.

[Zhi's Gold Pages](#)

Spring/Fall 2023 Graduation Recognitions

The Department was proud to learn of the outstanding academic achievements of the following May and December 2023 BSISE graduates:

Summa Cum Laude (Above 3.85 GPA): — Khaled El Droubi - Emma Sundstrom

Magna Cum Laude (Above 3.70 GPA):— Gift Olatunji — Mohammad Rahhal

Cum Laude (Above 3.5 GPA)—Mohammad Alaqraa — Wilson Kosasih - Dao Le - Brian Nguyen - Michael Rumawas - Ali Shihab - Nikko Timbol

A quick look at the numbers:

ISE registrations in all programs remain strong. Overall enrollment is up over the year by 20 students, with BSISE growing by 24 students from its 2021 level, and grad programs remaining relatively steady.

2024 ISE By the Numbers

476 Students including:
 154 BSISE
 322 Graduate students:
 • 47 MS ISE
 • 187 MS Engineering Management
 • 88 MS Human Factors/Ergonomics



Our 2023-24 ISE Alumni Spotlight is on....

[Click below to see their Gold Pages](#)

Ethan Duong **Karen Brouwer** **Nathan Pittman**

Ethan graduated Magna Cum Laude with a BSISE in 2021. He will receive an M.S. in Engineering Management at UCLA in June, 2024. During his master's program, he obtained a full-time position at Jabli as a research and development engineer.

Graduating in 2001 with a BSISE, Karen turned her Cisco internship into a full time position. Later, after completing her MSEM at SJSU, she joined Space Systems /Loral. Since 2014, Karen has been an Engineering Product Specialist in the iPhone group at Apple.

Nathan graduated with a BSISE in 2004. After ISE positions with Owens Corning in Albany, N.Y., the US Postal Service, and Target, he is now the Director of Engineering at Tory Burch LLC. In addition, he has earned an MBA from Syracuse University.

[Ethan's Gold Pages](#) [Karen's Gold Pages](#) [Nathan's Gold Pages](#)

Alumni Social - 2023 Spotlights

Alums: Were you THERE? Join us next October and have a chance to see YOUR photo in the Next Newsletter!

In the Department Advisory Committee (DAC) Spotlight:

Mr. Carson Hibbard

Kaiser Permanente Northern California

Carson Hibbard, BS and MS ISE Alum, is now the Performance Improvement Practice Leader for Kaiser Permanente of Northern California. In this role, he manages a department of Process Improvement Consultants and Project Managers who are seeking and managing projects that focus on improving the care of over 360,000 Kaiser members. He has served on the Department Advisory Council (DAC) since 2019.

[Click to view Mr. Hibbard's Gold Pages](#)

[Click to view the full ISE DAC](#)

In closing, just "one more thing"

Send comments and corrections to the Editor: Louis.Friend@sjsu.edu