

INDUSTRIAL and SYSTEMS ENGINEERING NEWSLETTER Spring 2022



Welcome to the spring edition of the Auburn University Department of Industrial and Systems Engineering Newsletter. The conclusion of spring semester brought many accomplishments which we are excited to share.

Our online graduate cohort partnerships have continued to grow. We recently signed an agreement with science and technology leader Leidos to facilitate the professional development and education of Leidos employees through our online graduate programs. The agreement was signed at the Samuel Ginn College of Engineering Graduate Engineering Research Showcase which was held at the U.S. Space and Rocket Center in Huntsville in March. More than 275 alumni and Huntsville industry representatives, as well as 150 Auburn

graduate students and faculty, attended the event.

Spring semester online graduate enrollment continued to remain the highest in the College of Engineering, with 139 students and 19 graduates. U.S. News and World Report recently named our program the 14th best ISE online graduate program in the country.

Industrial and Systems Engineering faculty, staff, and students continue to excel. During spring semester, Dr. Richard Sesek was presented with three awards for excellence in teaching and mentoring, and the department's student services coordinator, Branden Farmer, was awarded as an outstanding advisor by Auburn University and was also recognized with a regional advising award. Dr. Mark Schall was named the Daniel F. and Josephine Breeden Endowed Professor.

Among the numerous student awards included Andrew Kauffman's Outstanding Master's Student award from the graduate school and The INFORMS (Institute for Operations Research and the Management Sciences) Student Chapter at Auburn University was recognized with a national Student Chapter Annual Award. Three graduate students were also recognized for outstanding projects in the biannual Simio Student Competition, which is overseen by Dr. Jeff Smith. Paul Longenecker won first place in the competition, while students Julia Bitencourt and Michail Katsigiannis placed in the Honorable Mention category.

Please read more about our latest achievements below and thank you for continuing to support the Auburn University Department of Industrial and Systems Engineering.

John L. Evans

Charles D. Miller Chair Professor & Department Chair



<u>Creative</u> <u>mentorship award</u> <u>highlights unique</u> <u>student-faculty</u> <u>partnership</u>

When Auburn University student Neil Hudson changed his major from aerospace to industrial and systems engineering, he had a 1.97 GPA. He

was beginning to wonder if he was meant to be an engineer. Richard Sesek, the Tim Cook Associate Professor in the Department of Industrial and Systems Engineering, had Hudson in his Occupational Safety and Ergonomics class during his first semester as an ISE student. When Sesek learned of Hudson's home project of rebuilding an old tractor, the two began having lengthy discussions after class. Sesek recognized Hudson's potential. The two resurrected Sesek's EZ-Stick[™] project and their collaboration earned them the Mark A. Spencer Creative Mentorship Award from the Samuel Ginn College of Engineering.

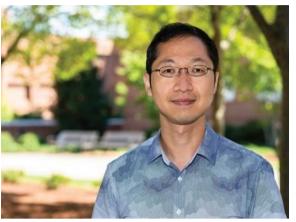


ISE student services coordinator wins regional advising award

Branden Farmer, student services coordinator for the Auburn University

Department of Industrial and Systems Engineering, was recently recognized with the Excellence in Advising award from the National Academic Advising Association (NACADA) in the New Advisor category.

Farmer has been employed with Auburn University since 2012, serving in numerous roles. He joined the Department of Industrial and Systems Engineering in 2020 and serves as the primary academic advisor for more than 300 students. He was also recently recognized with the Outstanding New Advisor award during the 2022 Auburn University Provost Advising Awards Ceremony on March 24.



ISE assistant professor leads NSF grant to transform the distributed additive manufacturing industry

Jia (Peter) Liu, Auburn University assistant professor of industrial and systems engineering, is the principal investigator of a multi-disciplinary team of scientists that was awarded a \$498,762 grant by the National Science Foundation for their project, "FMSG: Cyber: Federated Deep Learning for Future Ubiquitous Distributed Additive Manufacturing."

As a global shift to distributed manufacturing embodies a forward-thinking prospect of localized on-demand production, a flexible supply chain and high energy efficiency and sustainability, the adoption of additive manufacturing (AM) in a distributed manufacturing paradigm maximizes the potential of freeform production and supply chain participation.



<u>Samuel Ginn</u> <u>College of</u> <u>Engineering,</u> <u>Leidos establish</u> <u>educational</u> <u>partnership</u>

The Auburn University Samuel Ginn College of Engineering and Leidos, a FORTUNE® 500 science and technology leader, recently signed a memorandum of understanding (MOU) creating a new educational partnership.

The MOU will facilitate the continued professional development and education of Leidos employees through various degree programs and learning formats available through the Samuel Ginn College of Engineering. The MOU includes an academic program of courses leading to credit-bearing certificate programs, engineering discipline-specific master's degrees and a Master of Engineering Management (MEM) degree offered through the college.

The partnership was established as part of the Auburn University Department of Industrial and Systems Engineering and Engineering Online and Continuing Education's commitment to growing graduate programs through industry partnerships, such as the agreement with Radiance Technologies signed in 2020.



<u>ISE student takes</u> steps toward astronaut aspirations

Auburn University junior Jordan Carraway has big plans. Her goal is to one day become an astronaut, but first, she plans to fly as a pilot for the Air Force and win the title of Miss America.

Carraway, who is studying industrial and systems engineering, recently took a step closer to her dream of becoming an astronaut when she was accepted into Project PoSSUM (Polar Suborbital Science

in the Upper Mesosphere), a program hosted by the International Institute of Astronautical Sciences. The program took place at Florida Institute of Technology from Jan. 25-29.



<u>Tiger Motors Lab</u> hosts GE Aviation training session

The Industrial and Systems Engineering Department's Tiger Motors Lab, commonly

referred to as the "Lego Lab," hosted a twoday Lean Systems training course for GE Aviation to assist in improving the

company's operation by focusing on Lean Systems implementation. The training, which took place Feb. 3-4, is part of an annual process improvement grant which involves both classroom and hands-on activities in the lab.

"We are assisting GE by placing a graduate student within their operations three days per week, advising on approach and training their organization," said Tom Devall, director of Tiger Motors Lab and auto manufacturing initiatives for the Department of Industrial and Systems Engineering. "Lean activities in the lab included Standardized Work, Just In Time material flow, Error Proofing strategy, Cellular Manufacturing, Continuous Improvement and 5S."



<u>ISE graduate</u> <u>student recognized</u> <u>as outstanding</u>

<u>master's student</u>

Andrew Kauffman, a graduate student in the Department of Industrial and

Systems Engineering, was recently recognized as one of Auburn University's outstanding master's students for 2021-2022.

"Your selection brings credit to the quality of the record you have established at Auburn University and reflects exceptional and positive credibility on your advisor and department," George T. Flowers, dean of the Auburn University Graduate School wrote in an email to Kauffman. "We are all proud of your accomplishments!"

Kauffman graduated from the US Coast Guard Academy in 2009 with an undergraduate degree in civil engineering. He has worked for the United States Coast Guard (USCG) as a pilot since 2012 and is currently pursuing a Master of Industrial and Systems Engineering as a full-time student.



ISE and Radiance cohort partnership

has first graduate

The Auburn University cohort partnership between the Samuel Ginn College of Engineering's Department of Industrial and Systems Engineering and Radiance Technologies in Huntsville, Ala., has seen its first successful graduate.

Stephen Schnelle, an electrical engineer at Radiance, graduated with a Master of Engineering Management degree through the Department of Industrial and Systems Engineering in December.

Schnelle said the cohort program provided him with an excellent opportunity to develop his confidence, communication skills and leadership skills, which strongly complement his technical background.

"I enjoyed the Master of Engineering Management program and learned quite a bit," he said. "The classes varied significantly with regards to focus on softer or technical skills. As such, while I learned things in all of them, I found the ones such as Project Management, Organization Leadership, Human Factors and Marketing/Consumer Theory offered the most benefit to me. On the other hand, the quality of all of the courses was excellent, allowing for all students to have personalized benefits from the program."



ISE alumna finds passion through helping others

Auburn University 2017 alumna Jasmyne Brown fell in love with Auburn's campus during visits for cheer competitions in middle school and high school. Her aunt and

godmother was an Auburn engineering graduate and she knew it was where she belonged. "Although she passed away when I was younger, she made a major impact on my life," Brown shared. "I always looked up to her and wanted to follow in her footsteps at Auburn University." After taking a career exploration class at Auburn, industrial engineering was at the top of her list. After learning more about the program, Brown realized it could combine engineering, business, and her passion for helping others through healthcare.

Brown is currently a management engineer at Emory Healthcare in Atlanta, Ga., while also working to obtain a Master of Business Administration through Troy University.



Student Services Update

The Auburn University Department of Industrial and Systems Engineering had an outstanding Spring 2022 graduating class. Many graduates accepted job offers before even gaining their diploma and will soon bring the skills they learned in our department to prestigious companies such as Mercedes-Benz U.S. International, United Launch Alliance, and Northrop Grumman.

Five of our seniors (pictured above from left to right: Noah Mecikalski, Ritik Patel, Layla Araiinejad, Rachel Collins, and Liana Wood) were nominated by the department for Outstanding Student of the Year for academic excellence. We are proud to announce that Liana Wood was awarded the title for the department and was also awarded the overall title for the Samuel Ginn College of Engineering.

We celebrated the seniors with an end-of-the-year event during which the Senior Design class presented projects after problem-solving with companies throughout the semester based on Six Sigma methodology: design, measure, analyze, improve and control. The projects were evaluated by our Alumni Council and faculty members and were presented awards based on the overall project and presentation.

The winning Senior Design presentation was a group of students who designed a training system for machines in the Tiger Motors and CNC labs. Group member Caroline Duke said the group enjoyed that the project had a direct impact on campus. The main lesson she came away with is that the problem one starts with may not be a complete picture.

"It takes a lot of communication, questions, and failed attempts to understand what solution is possible and what ultimately helps the customer," Caroline said.

We are thrilled to travel to Pamplona, Spain, this summer for the study abroad program through which students will have the opportunity to work on team projects for Spanish companies. We are also looking forward to getting to know a new group of ISE freshmen this summer through Camp War Eagle and can't wait to see what the next year holds for our amazing students!



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