



State-Of-The-Art Robot Donation Amplifies SIUE Mechatronics And Robotics Engineering Program

by Megan Wieser

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EDWARDSVILLE – A new, state-of-the-art, industry-grade robotic arm donated by H-J Family of Companies will advance hands-on learning, teaching and research in the Southern Illinois University Edwardsville's School of Engineering (SOE) as it develops future industry-leading automation experts.

“The School of Engineering is grateful for the brand-new robot gift from H-J Family of Companies,” said SOE Dean Cem Karacal, PhD. “This generous gift will surely help us better educate the next generation of automation experts for technology companies located in our region and beyond. The new robot will complement the other robotic devices we are planning to install in our new robotics lab. We look forward to strengthening our partnership with H-J Family of Companies through internships, student design projects and applied research collaborations.”

The SOE's mechatronics and robotics engineering program is one of only a few such programs in the U.S. with a focus on automation and robotics, it develops engineers who have the interdisciplinary knowledge necessary to oversee the design and development of intelligent devices from start to finish.

H-J founder and owner Jim Shekelton was inspired to donate the robotic device after having toured the program's Mechatronics Lab in 2020.

“I was very interested in supporting this lab and knew a donation of a robot would be a welcome addition to the program,” Shekelton said. “Supporting the new lab not only supports SIUE and the students learning about robotics, but also the future of engineering and manufacturing, which ultimately supports the H-J Family of Companies.”

According to Nima Lotfi, PhD, assistant professor in the SOE Department of Mechanical and Mechatronics Engineering, the new arm is a substantial equipment upgrade. Notably, the new arm came with a complete set of components, including sensors to monitor and coordinate tasks, with an additional vision system.

The robot was installed in early October and is being used in Lotfi's robotics classes, primarily his course on Robotics, Dynamics and Control.

“This is a fundamental class in the mechatronics and robotics program,” Lotfi explained. “The majority of the class has a heavy theoretical focus. I plan to use this arm to expose students to real-world robots. This interface is what students will see in industry.”

The SOE's new robotics lab is in development, with an anticipated opening in spring 2022.

For more information on the SOE's mechatronics and robotics engineering program, visit siue.edu/mechatronics.

The [H-J Family of Companies](#) is a worldwide manufacturer and supplier in the transformer, switchgear, and breaker industry. Starting in 1969 with only 800 square feet and a few machines, H-J has grown through the years to over 400 employees and over 350,000 square feet of manufacturing space. H-J currently has offices in Brazil, Canada, China, Colombia, India, Mexico, Spain, and headquarters in High Ridge, Missouri, USA. Over the years H-J has added tin-plating lines and one of the highest tech foundries in the world. H-J has taken the next step in its extensive customer support program with the development of an independent high voltage test laboratory. This allows further advancement of product offerings through high quality research and development. The H-J Family of Companies offers quality products of international reputation.

The [School of Engineering](#) offers one of the most comprehensive and affordable engineering programs in the St. Louis region with eight undergraduate degrees, five master's degrees and two cooperative doctoral programs, all housed in a state-of-the-art facility. Students learn from expert faculty, perform cutting-edge research and participate in intercollegiate design competitions. Companies in the metropolitan St. Louis area provide students challenging internships and co-op opportunities, which often turn into permanent employment. All undergraduate programs are accredited by their respective accreditation agencies.