



Four SIUE faculty are presenters at SIU Technology and Innovation Expo

by Doug McIlhagga

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CHICAGO - Four Southern Illinois University Edwardsville faculty members will be presenters at the 8th annual [SIU Technology and Innovation Expo](#) Thursday, Oct. 13 in Chicago.

The Expo will bring innovators and entrepreneurs from across the SIU System to Chicago's 1871 innovation incubator in Chicago's Merchandise Mart for an afternoon speed pitch and networking event. Presenters will range from researchers seeking research and development (R&D) collaborations to companies seeking commercialization partners.

SIUE faculty participating in the Expo include:

Serdar Celik, PhD, associate professor in the Department of Mechanical and Industrial Engineering in the School of Engineering (SOE). His topic is *smaller, more efficient cooling devices with magnetic refrigeration*. Celik's combined-loop magnetic refrigerator uses magneto caloric materials that can be heated or cooled by applying or removing magnetic fields. He is seeking industrial R&D partners from companies in the consumer appliance and commercial equipment markets to help move his invention closer to commercialization.

Sohyung Cho, PhD, associate professor in the Department of Industrial Engineering in the SOE. His focus is novel surgical instruments. Cho redesigns surgical instruments to make them easier to use, more effective and also technology-enabled. Attendees will learn more about motion-sensor-embedded laparoscopy instruments, ergonomic design in surgical tools and a new isolation syringe system for lipoaspirate.

Andy Lozowski, PhD, associate professor in the Department of Electrical and Computer Engineering in the SOE. His presentation will show a *"superdiode" with superior efficiency and voltage characteristics*. Diodes are fundamental building blocks of power electronics systems. Despite the many different types of devices, there is currently no single diode that can match the voltage requirements of many battery and solar systems efficiently and safely. Lozowski's "superdiode" microcircuit can operate effectively in these systems while reducing diode-related power loss by an order of magnitude and eliminating overheating events. He is seeking potential licensing and R&D partners.

Michael J. Shaw, PhD, professor in the Department of Chemistry in the College of Arts and Sciences. He will demonstrate the low-cost programmable potentiostat. The digital potentiostat is a common piece of measurement and control equipment in research, testing and educational applications. These instruments can cost thousands of dollars each, making them inaccessible to many potential users. The sensitive, versatile programmable potentiostat may offer reduction in cost. Increased access to this equipment can catalyze innovation and learning.

Expo sponsors include: Rational Vaccines, Dentons, Husch Blackwell, Moller Family Foundation, Gateway Foundation, The NCERC at SIUE, SIU Research Park, Breakthru Beverage Group, Barnes & Thornburg LLP, Language SI, Marathon Pharmaceuticals LLC, Bluff City, CenTrust Bank, Fred Weber, Inc., iBio Institute and AKA Media.

There is no cost to attend, although space is limited. To register, click [here](#).

[Southern Illinois University Edwardsville](#) provides students with a high quality, affordable education that prepares them for successful careers and lives of purpose. Built on the foundation of a broad-based liberal education, and enhanced by hands-on research and real-world experiences, the academic preparation SIUE students receive equips them to thrive in the global marketplace and make our communities better places to live. Situated on 2,660 acres of beautiful woodland atop the bluffs overlooking the natural beauty of the Mississippi River's rich bottomland and only a short drive from downtown St. Louis, the SIUE campus is home to a diverse student body of more than 14,000.