



# **SIUE's Onal Receives Hoppe Research Professor Award**

by Megan Weiser

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EDWARDSVILLE - The Southern Illinois University Edwardsville Graduate School has presented its 2020-22 Hoppe Research Professor Award to the School of Engineering's Sinan Onal, PhD, an assistant professor in the Department of Mechanical and Industrial Engineering

The Hoppe Research Professor Award recognizes and supports faculty members whose research or creative activities have the promise of making significant contributions to their fields of studies. The award supports a significant portion of a faculty member's larger research agenda for a two-year period. Recipients are expected to produce published scholarly works and externally sponsored grants.

Onal's latest research endeavor, entitled Gait Alterations in Children with Autism Spectrum Disorder (ASD), uses the University's state-of-the-art motion capture and analysis system, along with kinematic, kinetic and electromyography data to investigate whether the gait cycle or muscle activity in children with ASD is distinct from that in other children.

"Identifying gait alterations in this population will not only offer new insights into ASD, but also will have important implications for treatment planning," Onal explained. "For instance, an assessment-based and individually tailored exercise program may improve gait patterns and coordination, thus increasing the physical activity and quality of life for children with ASD. This would result in improved long-term functionality, as well as reduced healthcare costs."

The research project is a collaborative undertaking involving support from Elizabeth McKenney, PhD, associate professor in the Department of Psychology, Bryan Smith, PhD, associate professor in the Department of Applied Health, and Sohyung Cho, PhD, professor in the Department of Industrial Engineering.

"Dr. Onal was the lead researcher on the National Science Foundation grant award that created the motion capture analysis lab," said Jerry Weinberg, PhD, associate provost for research and dean of the Graduate School. "His research study of children with ASD is exactly the kind of impactful, multidisciplinary project that the National Science Foundation had in mind when it created the program that provides the funds."

"We have assembled a great research team possessing all of the skills necessary to successfully complete this project," Onal explained. "Our multidisciplinary approach takes advantage of the latest advancements in engineering, kinesiology and psychology. This offers a more comprehensive investigation into gait deviations in children with ASD than has been previously conducted."

“This is a complex and challenging issue,” he added. “The successful completion of this project will help to improve the health and life quality of children with ASD.”

Onal notes the planned establishment of a comprehensive research center at SIUE for children with ASD that would substantially aid in his team’s future research efforts.

A loan fund was established in 1976 through the SIUE Foundation by Joseph W. Hoppe, because he believed in SIUE’s mission and the value of faculty research. Four years later, the Hoppe endowment became the basis for the Hoppe Research Faculty Award. In 1999, the award was transformed with the help of SIUE academic deans into the current Hoppe Research Professor award program.

By preparing the next generation of leaders in a knowledge-based economy, SIUE’s Graduate School fulfills the region’s demand for highly trained professionals. Graduate school offerings include arts and sciences, business, education, engineering, nursing and interdisciplinary opportunities. SIUE professors provide students with a unique integration of theoretical education and hands-on research experiences. Students can obtain graduate certificates or pursue master’s degrees, and be part of a supportive learning and rich intellectual environment that is tailored to the needs of adult learners. The Graduate School raises the visibility of research at SIUE, which ranks highest among its Illinois Board of Higher Education peers in total research and development expenditures according to the National Science Foundation. Doctoral programs are available in the Schools of Education (Ed.D.) and Nursing (DNP). The School of Engineering and the Department of Historical Studies feature cooperative doctoral programs (PhD), and the College of Arts and Sciences features an Environmental Resources and Policy cooperative PhD.