

# DESIGNING FOR DIVERSITY: SENSOR-BASED MODELING IN SELF-TRAINING SYSTEMS

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## ABSTRACT

Although recent advances in wearable and biosensing technologies have enabled users to monitor their biosignals continuously in any place, the utility of incorporating the sensing technologies into work environments remains uncertain. Limited consideration of multiple demographic, environmental, and physiological factors simultaneously in the work environment has been reported. Also, there is a lack of mathematical models that can explain and predict human performance accurately, reliably, and in real-time using multiple physiological responses. This talk introduces the Human and Systems (HAS) lab's recent exploration of modeling and predicting personalized work performance using biosignals within the application domain of the self-training system. The findings provide the potential to design work systems for diverse user populations utilizing biosensors.

## DATE/TIME



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## SPEAKER BIO

Ji-Eun Kim is an assistant professor in the Department of Industrial and Systems Engineering at the University of Washington, Seattle. Her research spans the fields of human performance modeling, neuroergonomics, and cognitive engineering, with the primary goal of designing work systems that better accommodate individual differences. The major application domains of her research include self-training and healthcare systems. She holds a Ph.D. in Industrial Engineering from the Pennsylvania State University, an M.S. in Cognitive Psychology from Korea University, and a B.S. in Biology from Sogang University.