

SEMINAR SERIES

Supported by The Department of Biomechanics and
The Center for Research in Human Movement Variability (MOVCENTR)



Turning Towards Understanding and Improving Rotational Human Maneuvers

Featuring Dr. Antonia Zaferiou
Stevens Institute of Technology



Friday, Nov. 3 | 10:00 am – 11:00 am | BRB 167

PRESENTATION ABSTRACT

Up to half of the steps taken during walking outside of a laboratory are not part of straight-line gait, and turns are especially common. The ability to perform agile maneuvers like turns is a fundamental skill that challenges balance as we navigate our environment or swiftly perform athletic maneuvers. While some balance-impaired populations struggle to turn, at the other end of the spectrum, the elite performance of athletes and dancers often relies on their abilities to turn with ease. This talk will introduce overarching turning mechanics and how athletes, young, and older adults generate and control the requisite momenta during different types of turns. The presentation will also introduce how generating rotational momenta can present conflicts with balance maintenance and the recent development of music-based biofeedback towards improving older adult balance during turns.

ABOUT DR. ZAFERIOU

Dr. Zaferiou received her BE in Mechanical Engineering from The Cooper Union and MS and PhD in Biomedical Engineering from the University of Southern California. After her doctoral studies, she was a postdoctoral researcher in the Department of Mechanical Engineering at University of Michigan. Before joining Stevens Institute of Technology, she directed a biomechanics lab in the Department of Orthopedic Surgery at Rush University Medical Center. Her research has been funded by an NSF CAREER grant, the Interdisciplinary Rehabilitation Engineering Research Career Development program (NIH-funded K-12 program), and a Major League Baseball.

more info at cobre.unomaha.edu

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