

Seminar

"Discover human functional capabilities and ensure person-environment fit from a biomechanics perspective"

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abstract

As a growing public health problem, falling injuries and other work-related injuries account for a significant share of the world-wide injury burden. Older adults and individuals with mobility impairments are especially vulnerable to injuries especially when the environmental demands substantially surpass their functional capabilities. The first part of the presentation will enlist critical environmental hazards and introduce prevention solutions developed in my recent research. By incorporating knowledge in motion analysis, biomechanics, wearable technology, and inclusive design, the proposed injury prevention solutions were iteratively refined and evaluated to help vulnerable populations better perform daily activities. The second part of the presentation will focus on the improvement of physical mobility following injuries. Advanced technology, such as virtual reality, mobile robots, and wearable sensors, were applied to better design assistive devices and rehabilitation training programs. This presentation will also discuss research opportunities and foreseeable challenges in injury prevention and rehabilitation. Furthermore, potential applications of the research framework and approaches in other domains will be included.

biosketch

Yue Luo is currently pursuing her Ph.D. degree in the Department of Industrial and Systems Engineering (ISE) at the University of Florida (UFL). Her research interests include injury prevention and rehabilitation promotion in the contexts of occupational and domestic-living environments, with an emphasis on disadvantaged populations. She received her M.S. degrees in Biomedical Engineering and Industrial and Operations Engineering from the University of Michigan in 2017 and 2019, respectively. Yue Luo was a recipient of the Certificate for Outstanding Achievement from UFL College of Engineering, as well as the Harold D. Haldeman, Jr. Graduate Fellowship from the ISE Department at UFL. She was also awarded the Arnold M. Small Memorial Award for Outstanding Student Paper and Travel Award for First Year Graduate Students from the Human Factors and Ergonomics Society (HFES). She served as the newsletter editor of HFES Aging Technical Group and is now helping with the formation of the HFES Student Chapter at UFL.



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Seminar is free and available via
[Zoom Video Conferencing Link](#)

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