Abstract: Workplace injuries remain as a prevalent and costly problem in our society having incidence rates higher than those of circulatory or cancer diseases. As part of the ergonomic process to deal with workplace injuries, assessing physical demands is important for: understanding and controlling injury risks, developing and testing interventions, and identifying the underlying causes of injury development. Quantifying physical exposures requires monitoring of human body motions (kinematics), external loads (kinetics) applied to the body, and/or muscle activities. Utilization of experimental approaches can generally permit collecting such data. Yet, experimental approaches can be sometimes infeasible and/or challenging; therefore, use of simulation-based methods are sometimes necessary. In this seminar, I will first summarize two ongoing studies about experimental and simulation-based exposure assessments: 1) localized muscle fatigue, and 2) risk of injury in slips, trips, and falls. Potential injury mechanisms involved in a slip event without a fall will be specifically discussed. I will then discuss two ongoing studies about intervention design. Results from recent studies on wearable technologies will be presented as a means to promote improved physical exposure assessments and to relief the physical demand of occupational tasks.

Please join us on

Monday, March 12, 2018
2:00-2:50 pm, Keating Bldg, Room 103
Refreshments will be available at 1:45 pm

Host: Jane Mohler, Ph.D.
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Persons with a disability may request a reasonable accommodation by contacting the Disability Resource Center at 621-3268 (V/TTY).