Advancing Human Safety and Ergonomics through Sensing and Simulation

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Abstract: The way we work and interact with our world is evolving with rapidly expanding technologies. Ergonomics and human factors must be innovative in order to meet these new challenges. Ergonomics and Safety are scientific disciplines used to engineer better solutions to address the complex relationship between people and their environments. Goals include the reduction of musculoskeletal disorders, worker errors, and physical strain and exhaustion through the study of engineering, biomechanics, human factors, anthropometry, industrial design, and user-interface design. We can use wearable sensors, robotics and computational musculoskeletal models to enable greater knowledge of exposure, injury risk and prevention. This presentation will highlight examples of how research from the Ergonomics and Safety Lab at the University of Utah is using a variety of techniques and methods to develop technologies to safely and efficiently interact with our ever changing world.

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