

12th Dayton Engineering Sciences Symposium

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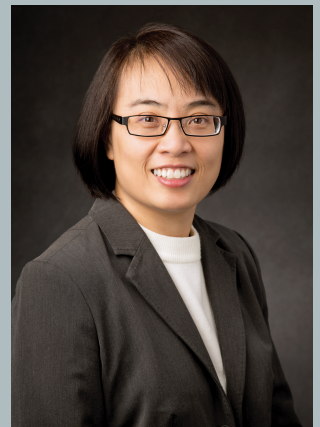
Wright State University, Student Union

<http://www.asmedayton.org/DESS/DESS.htm>

“Bio-Mechatronics: Using Technology to Improve Movement of People with Disabilities”

Professor Elizabeth Hsiao-Wecksler, PhD

*Director of the Human Dynamics and Controls Lab
University of Illinois Urbana-Champaign*



Prof. Hsiao-Wecksler is a leader in locomotion biomechanics and assistive device design with a focus on investigating and improving movement control and function in able-bodied and disabled populations. Her research group uses methods from design, control theory, mechatronics, pneumatics and soft robotics, musculoskeletal biomechanics, and movement analysis. The HDCL's interest in assistive device development stems from a desire to improve function, mobility, and the quality of life of persons with disability. To address these areas, the HDCL has been involved in the development of pneumatically powered orthotic devices for the upper and lower extremities and multi-speed wheel systems for manual wheelchairs in conjunction with IntelliWheels, Inc., a Champaign, IL start-up that she co-founded. Her recent work has been supported by the National Science Foundation, National Institute of Health, and US Department of Homeland Security. She holds degrees in Mechanical Engineering from Cornell University (BS), Rochester Institute of Technology (MS), and the University of California – Berkeley (PhD).