Seminar Announcement

Friday, October 4, 2019
12:00 pm – 1:00 pm
Olin Engineering, Room 202
Marquette University

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Abstract

“Advancing Neurorehabilitation for Children and Infants with Stroke: Non-invasive Brain stimulation to Assess Modulate the Developing Brain”

Stroke occurring at or around the time of birth, termed perinatal stroke, often leads to a diagnosis of cerebral palsy, a condition associated with permanent impairments in movement, sensory, and cognitive function. Despite the increased neuroplastic state of the developing brain after perinatal stroke relative to adult stroke, the outcomes after perinatal stroke are still not optimal, as about 50% will experience some form of movement disability. The best rehabilitative therapies currently available for children with perinatal stroke are time-intensive and are not necessarily tailored to each individual. In this presentation, I will first describe how we use non-invasive techniques such as MRI and transcranial magnetic stimulation to understand how the brain has developed and reorganized after perinatal stroke, providing potential biomarkers to assess responses to therapy. Then I will share our lab’s unique work in exploring novel combined therapies of rehabilitation and non-invasive brain stimulation to influence brain circuits that are essential for recovery of movement function. Finally, I will describe my future research plans, which involve identifying the role of non-invasive stimulation for neurorehabilitation therapies in people with neurological injury across the lifespan.

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Olin Engineering is located at 1515 W. Wisconsin Ave, Milwaukee, WI. Parking is available in Structure 1 on 16th Street between Wisconsin Ave. and Wells Ave.