

# PIZZA WITH THE PROFS

Wednesday, May 22, 2019

12:00 pm - 1:00 pm

Sunlife Town Hall

Grand River Hospital

Freeport Campus



**DR. JAMES TUNG**

## **SHOULD WE WORRY ABOUT AUTOMATION AND ARTIFICIAL INTELLIGENCE IN REHABILITATION? LESSONS FROM RESEARCH CONDUCTED AT THE UW NEURAL AND REHABILITATION ENGINEERING (NRE) LAB**

**DR. JAMES TUNG**

The Neural and Rehabilitation Engineering Lab focuses on the advancement of human movement research methods and development of assistive technology for independent mobility and rehabilitation. With a scientific background in neuroscience, biomechanics, and rehabilitation, Dr. James Tung works closely with investigators and clinicians in human movement control, with an emphasis on ambulatory measurement to understand complex mobility patterns in real-world conditions. Drawing on technical knowledge in automation, robotics, and artificial intelligence (AI), Dr. Tung's technical contributions include developing novel measurement approaches related to human mobility, locomotion, and postural control. These contributions have led to innovations in neuromotor screening tools, robotic mobility aids, wearable sensor systems, and prosthetics design. Innovations are supported by knowledge translation activities through active collaboration with medical scientists, practitioners, and industry.

### **ABSTRACT**

With the age of Automation and Artificial Intelligence (AI) upon us, these powerful tools are actively being explored to advance rehabilitation care. In this talk, Dr. Tung introduces on-going research projects using automation and AI tools at the UW NRE Lab and examines the potential implications on the delivery and practice of rehabilitation care. In particular, anticipated benefits and pitfalls associated with these advances on the scope of practice will be discussed.

To attend RSVP via Eventbrite  
Questions? Please contact [parisa.hamilton@uwaterloo.ca](mailto:parisa.hamilton@uwaterloo.ca) or  
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