



**The Chinese University of Hong Kong
Department of Biomedical Engineering**



Graduate Seminar – PhD Oral Defence

Student : Mr. SHU Jing
Supervisor : Prof. TONG Kai Yu Raymond
Date : 13 July 2023
Time : 2:00 pm
Venue : ERB 1122, William M W Mong Engineering Building (Computer Room)

Title: Flexible Robotics and Their Applications in Stroke Rehabilitations

Stroke is a prevalent and debilitating worldwide health issue that can cause significant disabilities. Rehabilitation is a crucial component of stroke care, and the integration of robotic therapy into traditional rehabilitation approaches has the potential to improve therapist efficiency and effectiveness by eliminating the labor-intensive aspects of physical rehabilitation. In comparison to conventional rehabilitation robots driven by rigid mechanical actuators, flexible robots offer the potential to create complex structures and functions for rehabilitation purposes, making them widely applicable in stroke rehabilitation, particularly for limb rehabilitation. To achieve better rehabilitation outcomes, the sensing systems for flexible robots are also crucial for controlling rehabilitation robots. This seminar focuses on introducing flexible robotics and their applications in stroke rehabilitation, including sensing technologies developed for flexible hand rehabilitation robots, flexible actuators for limb rehabilitation robots, and the specific applications of flexible actuators in ankle and wrist rehabilitation robots.

***** ALL ARE WELCOME *****

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