

Graduate Student Research Seminar

Fall 2023

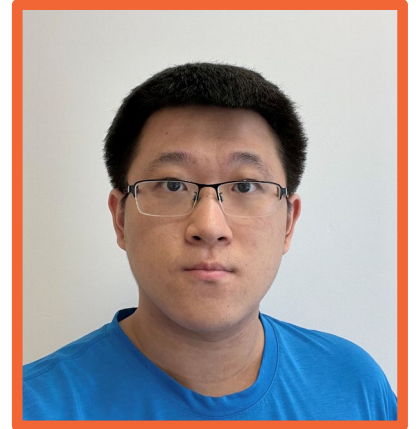
Task-Invariant Control Methods for Lower-Limb Exoskeletons

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Monday, November 20th

3:00 pm (EST) – 132 Fluor Daniel Building



Abstract

Task-invariant approaches are desirable in exoskeleton control design as they have the potential of providing consistent assistance across locomotor tasks. Different from traditional trajectory-tracking approaches that are specific to tasks and users, task-invariant control approaches do not replicate normative joint kinematics, which could eliminate the need for task detection and allow more flexibility for human users. We propose task-invariant control paradigms for lower-limb exoskeletons to assist human walking. We use model-based method and nonlinear disturbance observer (NDO) to capture the human user's walking intention, and design control paradigms based on human user's self-selected motion.



Scan the QR code for more information and a schedule of upcoming speakers!

