

Seminar

Mr. Joshua Pickard

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Topic

Hypergraph Dynamical Systems

Date | Time

22nd March 2024 (Friday) | 9:30 am – 10:30 am (HK Time)

Mode of Delivery

Online via Zoom

Meeting ID | Password

890 4257 0113 | 0322

Zoom Link

<https://polyu.zoom.us/j/89042570113?pwd=Up5MsXcwoMGh0JuJb8C0y7abuPxx0S.1>

Abstract

Hypergraphs are higher order networks that facilitate the representation of multiway structures and data such as those commonly found in engineered, communications, or biological systems. The multiway interactions of hypergraphs lend themselves to polynomial or tensor based dynamical systems. Determining the observability and controllability properties for large hypergraphs remains an active challenge, and in this talk, we will discuss our recent work to determine the observability and structural controllability conditions of these systems based on tensor analysis and how we are applying these methods to time course biological data.

ALL ARE WELCOME