THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

AMA Seminar Series on Young Scholars in Optimization and Data Science

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Topic
Multimodal Data Integration for Precision Oncology

Date| Time
2 April 2024 (Tuesday) | 15:00 – 16:00 (HK Time)

Venue
HJ303, Main Campus

Abstract
Artificial intelligence (AI), especially deep learning with large-scale training datasets, has dramatically advanced the recognition performance in many domains including speech recognition, visual computing and natural language processing. Despite its breakthroughs in above domains, its application to precision oncology remains yet to be explored, where large-scale fully and high-quality annotated datasets are not easily accessible. In this talk, I will share our recent progress on multimodal data integration for precision oncology through the lens of information theory, including cross-modal consistency, multimodal alignment and knowledge decomposition, with versatile applications to disease diagnosis, treatment response prediction, prognosis, etc. Challenges and future directions will also be discussed.

ALL ARE WELCOME