

# DISTINGUISHED LECTURE SERIES 2022/23

## BIOINFORMATICS CHALLENGES IN COMPLETE GENOMICS AND METAGENOMICS

1 JUN 2023 (THU)

10:00 – 11:00 AM (HKT)

Cheung Ching Lan Diana Memorial Lecture Theatre  
WLB204, Shaw Campus, HKBU /

Online via Zoom

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#### Abstract:

Even though the first draft human genome was generated two decades ago, many biomedically important regions (such as centromeres) represented the terra incognita of the genome sequencing until recently. The long-read DNA sequencing technologies are now transforming genome sequencing toward generating complete genomes and metagenomes. They also raised novel bioinformatics challenges that represent the key bottlenecks for the ongoing large-scale genomics and metagenomics projects. I will describe some bioinformatics challenges in complete genomics/metagenomics, discuss the recently developed approaches for their solution, show how these approaches bring us closer to the goal of complete genome/metagenome sequencing, and illustrate some applications of these approaches in metagenomics-based search for novel antibiotics.

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