



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY
Division of Life Science

LIFS Seminar

Complex genomic features analysis and phylogenomic relationships reconstruction by multiple alignment of nanochannel-based optical maps

by

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Abstract

Next-generation sequencing (NGS) has been the current state-of-the-art technology for genomic study. However, it could not resolve complex genomic features including subtelomeric ends, acrocentric regions, and copy number variations, leaving a number of “black holes” inside the genome understudied. Despite the technical difficulty, researchers are interested in understanding these complex genomic features because they carry important biological functions. To fill the “black holes” and retrieve the biological messages behind, an emerging technology for genome analysis, optical mapping, is employed. It complements the sequencing-based methods by providing information over very long (>100 kbp) reads. In this seminar, we will describe our recent efforts in developing novel methods for the study of complex genomic features based on multiple alignment of optical mapping data. We will also discuss the potential use of our results in phylogenomic relationship reconstruction and how they further the understanding towards population genomics.

Date : 16 April 2018 (Monday)
Time : 10:00 am
Venue : Room 6573 (6/F., Lift 29/30)
The Hong Kong University of Science &
Technology, Clear Water Bay, Kowloon

All are Welcome!