



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

LIFS Seminar Series

**Organization and Function of the 3D
Genome in Human Disease**

by

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Abstract:

A large number of genetic variants associated with human diseases are found in non-coding DNA and may contribute to illness by affecting gene regulation, but a mechanistic study of these variants has been hindered by a lack of information of their potential regulatory targets. In order to overcome this limitation, we recently generate maps of long-range chromatin interactions centered on 19,539 promoters in 27 human cell/tissue types, and use this information to infer putative target genes of candidate *cis*-regulatory sequences throughout the human genome. These promoter-centered chromatin interaction maps corroborate target genes of genetic variants defined in previous genome-wide association studies, predict new target genes of many disease-associated genetic variants, and contribute novel insights into a broad spectrum of human traits and diseases. In this talk, I will discuss how we utilize 3D genome (chromatin interaction) maps to infer the functional consequences of important genetic variants in various human diseases.

Date : **20 October 2017 (Friday)**
Time : **4:00 p.m.**
Venue : **Lecture Theatre C**
**The Hong Kong University of Science
& Technology**
Clear Water Bay, Kowloon

(Host faculty: Prof. Danny Leung)

All are Welcome!!