

# “Harnessing big data to understand gene regulation and beyond ”

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**Date :** 23 April 2018

**Time:** 11:00am to 12:30pm

**Venue:** Meeting Room 2-130, 1/F, Block 2, To Yuen Building

## Abstract

In this talk, I will discuss some bioinformatics methods that my laboratory has developed to harness big data to address key biomedical questions regarding (1) chromatin-based epigenetic regulation across multiple species, (2) the nature of gene regulatory networks in embryonic development and congenital genetic diseases, (3) cell type identification using large-scale single-cell RNA-seq data, and (4) cardiac performance characterisation using wearable devices.

## Biography

Dr Joshua Ho is the Head of Bioinformatics and Systems Medicine Laboratory at the Victor Chang Cardiac Research Institute (VCCRI). Since 2017 he is also the Acting Head of the Molecular, Structural and Computational Biology Division at VCCRI. Dr Ho completed his BSc (Hon 1, University Medal) and PhD in Bioinformatics from the University of Sydney and undertook postdoctoral research at the Harvard Medical School. His laboratory focuses on developing fast and reliable bioinformatics methods to harness biomedical big data to address challenging questions in genetics, gene regulation, and cardiovascular diseases. His research has attracted significant competitive funding and prestigious awards, such as the Human Frontier Science Program Young Investigator Grant, the NHMRC Career Development Fellowship, the Heart Foundation Future Leader Fellowship, and the NSW Ministerial Award for Rising Star in Cardiovascular Research. He is also the secretary of the Australian Bioinformatics and Computational Biology Society. In his spare time, Dr Ho teaches computer coding and science to schoolchildren, and has developed innovative approaches to introduce artificial intelligence in primary school classes.

Enquiry:

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