香 港 大 學
THE UNIVERSITY OF HONG KONG

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HKU Med LKS Faculty of Medicine School of Public Health 香港大學公共衞生學院

APRU GLOBAL HEALTH CONFERENCE 2019

PRE-CONFERENCE WORKSHOP

Workshop 3

Date: 17 November 2019 (Sunday)

Time: 1300-1600

Venue: to be confirmed

Title: Bioinformatics: Genome browsing, machine learning and pathway analysis

Language: English

Target Audience: Researchers and investigators who are interested in high-throughput '–omics' data analysis

Workshop Description

Recent advances in high-throughput technologies allow researchers to address many research questions. Large volume of data resulting from such technologies presents both great opportunities and challenges. To address these challenges, statisticians and bioinformaticians have made considerable efforts to develop methods and tools for analysing these big data sets. This workshop will cover how to 1) utilize some of these tools to browse and interpret large volume of genomic sequencing data, and 2) incorporate pathway information and machine learning methods in analysing these big –omics data. Some examples will be worked through to illustrate some tools in this promising field.

Learning objectives:

1. To gain experience with genome browsing
2. To describe machine learning methods for –omics analysis
3. To conduct pathway analysis and interpret its output

Bio sketch of the chair

Dr Herbert Pang is a biostatistician and bioinformatician at the School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong (HKU). He obtained his PhD in Biostatistics from Yale University in 2008 and BA in Mathematics and Computer Science from the University of Oxford in 2002. His primary research interests include big data, biomarker discovery in clinical studies, cancer genomics, classification, data science, design and analysis of clinical trials, machine learning, meta-analysis, metagenomics, multi-omics data integration, predictive models, and translational medicine. Dr Pang has published over 90 methodological and translational peer-reviewed research articles on statistics, genetics, genomics, bioinformatics, and clinical trials.