

For favour of posting

DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE
THE UNIVERSITY OF HONG KONG

Departmental Seminar

Professor S. Joshua Swamidass

Department of Pathology and Immunology
Division of Laboratory and Genomic Medicine
Translational Bioinformatics, Institute for Informatics Medicine
Washington University in St. Louis
USA

will give a talk
entitled

DEEP LEARNING IN BIOLOGY

Abstract

A collection of new approaches to building and training neural networks, collectively referred to as “deep learning,” is attracting attention in science. Our group has been using this approach to solve fundamental problems in chemistry and biology for several years now. Here, we will examine two case studies of deep learning: (1) in cancer genomics and (2) drug metabolism. In cancer genomics, a new approach to was able to identify the driver mutations that cause cancer with higher accuracy. Surprisingly, deep learning models did not used labeled training data, but was able to more accurately identify cancer drivers than method that do use labeled training data. In drug metabolism, deep learning models aggregate and summarize heterogeneous, multiscale data to elucidate the mechanisms by which some drugs become toxic, and others are rendered safe. Although deep learning requires high expertise to use effectively, it can solve complex problems that were once out of reach.

on

Wednesday, October 31, 2018

(Refreshments will be served from 10:45 a.m. outside Room 301 Run Run Shaw Building)

11:00 a.m. – 12:00 noon

at

Room 301, Run Run Shaw Building

Visitors Please Note that the University has limited parking space. If you are driving please call the Department at 3917 2466 for parking arrangement.

All interested are welcome