The Hong Kong Polytechnic University
Department of Applied Mathematics

AMA Distinguished Seminar Series in Data Science and Machine Learning

Genes, Brain, and Us

By

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Yale University

Abstract

Many human conditions, including cognition, are complex and depend on both genetic and environmental factors. After the completion of the Human Genome Project, genome-wide association studies have associated genetic markers such as single-nucleotide polymorphisms with many human conditions and diseases. Despite the progress, it remains difficult to identify genes and environmental factors for complex diseases - the so-called geneticist's nightmare. Furthermore, although the impact of these discoveries on human health is not shock and awe, "drugs with support from human genetic studies for related effects succeed from phase I trials to final approval twice as often as those without such evidence." Therefore, it is important and promising, while challenging, to identify genetic variants for complex human health-related conditions.

This talk is not intended to provide a comprehensive review of massive progress of related methods and discoveries. Instead, I will focus on some of the work that many of my students assisted me in over the past several years.

Biography

Dr. Zhang published over 340 research articles and monographs in theory and applications of statistical methods and in several areas of biomedical research including epidemiology, genetics, child and women health, mental health, substance use, and reproductive medicine. He is a fellow of the American Statistical Association and a fellow of the Institute of Mathematical Statistics. He was named the 2008 Myrto Lefokopoulou distinguished lecturer by Harvard School of Public Health and a Medallion Lecturer by the Institute of Mathematical Statistics. In 2011, he received the Royan International Award on Reproductive Health. Dr. Zhang was the president of the International Chinese Statistical Association in 2019. He serves as the editor of the Journal of the American Statistical Association - Applications and Case Studies. He was selected to deliver 2022 Neyman lecture by the Institute of Mathematical Statistics.

Date: 22 August 2022 (Monday)
Time: 9:30-10:30 (Hong Kong Standard Time GMT +8)
Venue: Online Talk via Zoom (Meeting ID: 985 9584 0993)
Speaker: Prof. Heping Zhang, Yale University
Host: Prof. Xingqiu Zhao, The Hong Kong Polytechnic University
Click to join:
https://polyu.zoom.us/j/98595840993?pwd=SGU1Tjd5Wm1FNTl3UVJZWEhBVytaUT09

Click to join (Zoom)

＊ ＊ ＊ ALL ARE WELCOME ＊ ＊ ＊

For enrolment, please send your name and email to wai-yan.moon@polyu.edu.hk on or before 21 August 2022