



The **Ontario Institute for Cancer Research** is a proud partner of **CIHR STAGE** and jointly presents:



Dr. Nilanjan Chatterjee

Bloomberg Distinguished Professor
Department of Biostatistics, Bloomberg
School of Public Health
Department of Oncology, School of Medicine
Johns Hopkins University

Complex Model Building for Precision Medicine using Summary-Level Information from Big Data Sources

Friday
April 6, 2018
12:00 – 1:00 pm

Daniels Hollywood Theatre
The Hospital for Sick Children
Room 1246, First Floor, Black Wing
555 University Avenue, Toronto, ON

Abstract

Extraction of information from rich and diverse datasets through summary-level statistics, as opposed to individual level data, can be appealing because of various practical and ethical considerations. In this talk, I will describe statistical methods for building complex models using summary-level information in two distinct applications. One involves assessment of genetic architecture of complex traits by modeling of effect-size distributions using association statistics available from large genome-wide association studies. The other involves development of a generalized meta-analysis framework for unified model building using information on parameters from disparate, but possibly overlapping, sub-models fitted to different studies. Implications for future precision medicine efforts towards disease prevention will be discussed for both applications.

CIHR STAGE is a training program in genetic epidemiology and statistical genetics, housed at the University of Toronto Dalla Lana School of Public Health, and funded by the Canadian Institutes of Health Research through the Strategic Training Initiative in Health Research Program. Seminars are sponsored by The Hospital for Sick Children; the Lunenfeld-Tanenbaum Research Institute of Mount Sinai Hospital; the Ontario Institute for Cancer Research; the McLaughlin Centre of the University of Toronto; the Ontario Cancer Institute of the University Health Network; and the CIHR Institute of Genetics.

Photography Disclosure: Photographs and/or video may be taken of participants at **CIHR STAGE** events. These photos/videos are for the Program's use only and may appear on its website, in printed brochures, or in other promotional or reporting materials. By attending **CIHR STAGE** events, you accept the possibility that you may be videotaped or photographed. If you have any concerns, please inform us by sending an e-mail to patricia.nguyen@utoronto.ca

SEMINAR
International Speaker

