HEALTH DATA SCIENCE FOR IMPACT

A 3-day, online workshop on cutting-edge methods for practice and policy-relevant research on tomorrow's clinical and public health problems

WHO SHOULD ATTEND:

Independent researchers, faculty, students, and staff interested and/or actively engaged in clinical or population health research

WHAT'S INCLUDED:

14 transdisciplinary lectures from eminent local and international academics that bridge novel statistical methods (estimating effects of clinical interventions, policies, and complex exposures such as infectious disease and climate change) to applied considerations (imperfect data, policy goals, algorithmic bias, research ethics)

WHY:

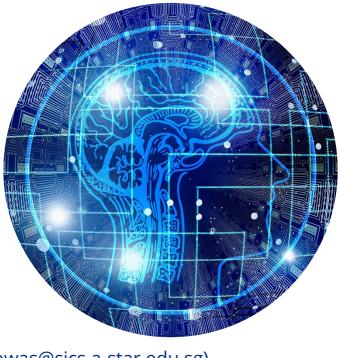
To increase awareness of challenges and strategies to conducting policy-relevant health data science; facilitate access to skills and resources such as computing code; build & strengthen networks for local and regional health data scientists

Enrolment is FREE (Registration Required)

WHEN:

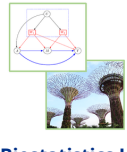
16-18 Mar 2021
08:00-15:15 SGT
Singapore

Click here to REGISTER



Hosted by:

Singapore Institute for Clinical Sciences
SICS



Biostatistics Unit

Contact Person: Jacqueline Siow (tp-siowas@sics.a-star.edu.sg)

Additional Information

Each day will consist of 4 to 5 one-hour standalone lectures delivered by live video conference. Participants are encouraged to attend all modules but are welcome to attend as many or few as they wish. While topics are interspersed across the three days, they roughly follow by the following themes:

Day 1: Introduction to advanced methods for learning health effects and patient prognosis
Day 2: Big data for population-level exposures and personalized treatment
Day 3: Complex exposures and infectious disease modeling

At the beginning of each day, there will be a brief overview of the modules of the day. At the start of days 2 and 3, there will be an optional informal session to recapitulate and synthesize the lectures of the previous day.

No prerequisites are required for this workshop and all attendees will leave with a greater appreciation of novel approaches and concepts to tackle challenges in clinical and population health. That said, those with at least some familiarity with quantitative research and data analyses and some experience in statistical programming (i.e. in R software) may benefit more from the methods-oriented modules, as code will be provided.

SGT	Tuesday, 16 March	Wednesday, 17 March	Thursday, 18 March
08:00 - 08:30	Welcome Speech	Recap/Chat (Optional)	Recap/Chat (Optional)
08:30 - 09:30	Efficient machine learning for treatment effects - Paul Zivich (UNC)	Model-free intervention effects by incremental propensity scores - Edward Kennedy (CMU)	Intervention effects under heterogeneous mixing, herd immunity, and other forms of interference - Jade Benjamin-Chung (UC Berkeley)
09:30 - 09:45	(15 min break)		
09:45 - 1045	Addressing bias by robust machine learning of policy effects - Angela Zhou (Cornell University)	Accounting for policy goals in targeted learning - Xinkun Nie (Stanford University)	Biomarkers to learn heterogeneous treatment effects - Youssef Oulhote (Umass / Harvard)
10:45 - 11:00	(15 min break)		
11:00 - 12:00	Simulation of population intervention effects - Margarita Moreno-Betancur (Unversity of Melbourne)	Effects of air pollution, climate, and other macro-environmental exposures - Tarik Benmarhnia (UC San Diego)	Modeling cost-effectiveness measures in vaccination models - Mu Yue (NUS / SUTD)
12:00 - 13:00	Lunch Hour		
13:00 - 14:00	De-biasing treatment effect estimates using –omics as negative controls - Jonathan Huang (SICS)	Ethical issues in big data for health research and policy - Vicki Xafis (NUS)	Infection disease modeling with imperfect data - Hannah Clapham (NUS)
14:00 - 14:15	(15 min break)		Closing Remarks
14:15 - 15:15	Learning patient prognosis from emergency department data - Liu Nan (Duke-NUS)	Learning of personalized treatment regimens from repeated individual measures - Bibhas Chakraborty (Duke-NUS)	