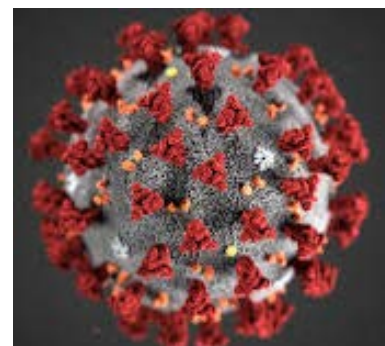# Centre for Disease Modelling
Canada-China Distinguished Lecture
Mathematics and COVID-19

How safe is re-opening? Real time modelling and resurgence risk in COVID-19

With

Dr. Caroline Colijn
Mathematics and Statistics
Simon Fraser University

Saturday May 30, 2020
8:30 pm – 9:30 pm (EST)
See announcement and Webinar information
at http://cdm.yorku.ca

Abstract: As re-opening begins, it is essential to understand the risk that it brings. We have developed a model of COVID-19 based on the well-known SEIR framework, but accounting for social distancing among a portion of the population that is able and willing to participate. We use a Bayesian approach to fit the model to data from several Canadian provinces, and other jurisdictions. In this talk I will discuss the idea of current and re-opening risk, with reference to the probability that a jurisdiction is at or near the critical threshold, the likely impacts of increase the contact rate in the general population by a fixed percent, and the case burden that this is expected to cause. I will comment on how we might frame the risk of re-opening borders between jurisdictions. Finally, I will comment on the data needs of modelling and on key unknowns that remain.

Dr. Colijn is a Professor & Canada 150 Chair in Mathematics for Infection Evolution and Public Health at Simon Fraser University. Caroline seeks to build mathematical and statistical tools to make the best possible use of the rich data available from sequencing technologies. The ultimate aim is to improve infection control.

Panelists: Julien Arino (UManitoba), Jacques Belair (UMontreal), Jingan Cui (BeijingUCivilEng&Archit), Meng Fan (NENormalU), Jane Heffernan (YorkU), Zhen Jin (ShanxiU), Michael Li (UAlberta), Wei Lin (FudanU), Wendi Wang (SouthwestU), James Watmough (UNewBrunswick), Yanni Xiao (Xi'anJiaotong U), Huaiping Zhu (YorkU)

Organizers: Centre for Disease Modeling (CDM), Chinese Society for Mathematical Biology (CSMB)

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