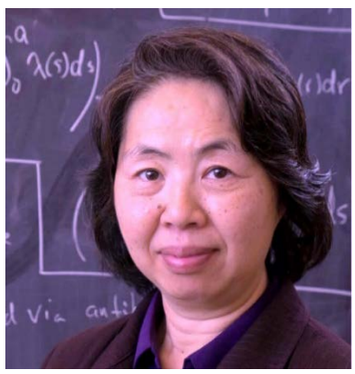
Centre for Disease Modelling
Canada-China Distinguished Lecture
Mathematics and COVID-19

Staggered Release Policies for COVID-19 Control: Costs and Benefits of Relaxing Restrictions by Age and Risk



With

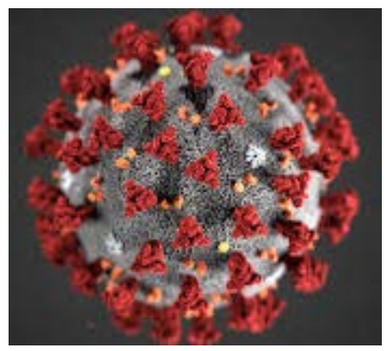
Dr. Zhilan Feng

Mathematics, Purdue University

Math Biology Program, DMS, NSF USA

Friday July 3, 2020

8:30 pm – 9:30 pm (Eastern Time)



Webinar: Connect at https://yorku.zoom.us/j/98615589444?pwd=S1JYcVA0R291blBoZzBnRkhDdW56dz09

Also see announcement at cdm.yorku.ca

Abstract: Lockdown and social distancing restrictions have been widely used as part of policy efforts aimed at controlling the ongoing COVID-19 pandemic. Since these restrictions have a negative impact on the economy, there exists a strong incentive to relax policies while protecting public health. Using a multigroup SEIR model, we explore costs/benefits associated with the sequential release of specific groups based on age and risk from isolation. The results suggest that properly designed staggered-release policies can do better than simultaneous-release policies in terms of protecting the most vulnerable subpopulations, reducing health risks overall, and increasing economic activity. I will also briefly introduce the NSF COVID-19 RAPID DCL.

Zhilan Feng studied mathematics at JilinU and ASU. She was a PDF and visiting fellow at Cornell and Princeton Universities before joining the Dept of Mathematics at PurdueU, where she became Full Professor in 2005. She is currently a program director for the Mathematical Biology program in the Division of Mathematical Sciences at the NSF. She is an editor for JTB, Math. Biosci, SIAP, and Jour Biol Dyn. She is currently the chair of the SMB Math. Epi. Subgroup and has been elected to the SMB Board.

Panelists: J.Arino (UManitoba), J Belair (UMontreal), J Cui (BeijingUCivilEng&Archit), M Fan (NENormalU), J Heffernan (YorkU), Z Jin (ShanxiU), M Li (UAlberta), W Lin (FudanU), W Wang (SouthwestU), J Watmough (UNewBrunswick), Y Xiao (XianJiaotong U), H Zhu (YorkU)

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

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