OMNI-RÉUNIS Super-Spreader Seminar Series

This seminar series is intended to provide OMNI-RÉUNIS HQPs a platform to present their research, promote their ideas, share their research experiences, and establish connections among the various branches of the network.
**This seminar will be hosted via Zoom
on Thursday December 15, 2022 from 11:00-12:00 EST.**

Register here and join us!

SEMINAR 5

AN INVESTIGATION INTO COMPLIANCE WITH SOCIAL DISTANCING AND VACCINATION FOR COVID-19

PRESENTER- JETA MOLLA

Dr. Jeta Molla is a postodc at York University, and she was part of the interdisciplinary team at Aalto University involving scientists from academia and health institutes from across the Nordic region to support preparedness and decision making for COVID-19. Her research focuses on mathematical modelling of infectious diseases as well as numerical analysis and simulations of stochastic PDEs. Her current research is on coupling human behavior models with disease dynamics to better understand how social and epidemiological conditions together influence the course of a pandemic.

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ABSTRACT

AN INVESTIGATION INTO COMPLIANCE WITH SOCIAL DISTANCING AND VACCINATION FOR COVID-19

Human behaviour plays an important role on the efforts to control the transmission of the COVID-19 virus since the effectiveness of mitigation measures depends on the compliance to NPIs and vaccine acceptance. People are most likely to adapt protective behaviour when mortality or the perception of risk is high, and resume normal life as the perceived risk declines. In this study, we employ a deterministic compartmental model of COVID-19 transmission and vaccination which takes into account different levels of social distancing and waning immunity gained either from infection or vaccination. We investigate the impact of vaccine hesitancy and non-compliance to social distancing on the disease progression. Our results show that when a percentage of the population does not comply with social distancing and refuses to get vaccinated, the number of infections increases significantly compared to the scenario in which the whole population complies to mitigation policies and takes the vaccine.