POLITECNICO DI TORINO

DISMA Dipartimento di Scienze Matematiche G. L. Lagrange

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Online seminar

Tuesday November 09 at 16:30
Hosted on: Zoom


## Grzegorz A. REMPALA

the Ohio State university


# Modeling a new pandemic with an old equation
# 2020-21 Ohio statewide SIR models for COVID-19

Prof. Bibbona introduces the seminar.


**Abstract**

The COVID-19 pandemic has inspired much work on mathematical models of epidemics over the past 18 months. In particular, the classical ODE model of susceptible-infected-recovered (SIR) and its modifications have been frequently used for various predictions and statistical analysis of the epidemic dynamics.
In this talk, I will describe the specific SIR-type model developed by OSU in March 2020 to help the Ohio Governor's office with planning for pandemic response. In particular, I will explain model's probabilistic interpretation and its connection with the popular Sellkie algorithm for constructing trajectories of non-Markovian epidemics.


**Biography**

Grzegorz A. Rempala is Professor of Biostatistics and Mathematics at the Ohio State University. He was the Interim Director of MBI from September 2016 to December 2017.
In the mathematical sciences, he is interested in classical probability theory, mathematical statistics, and the theory of stochastic complex systems. In the biomedical and life sciences, he is interested in computational genomics and bioinformatics, as well as mathematical epidemiology.
Grzegorz A. Rempala is a grantee of the National Sciences Foundation and the National Institutes of Health and the elected fellow of the Collegium of Eminent Scientists of Polish origin at the Kosciuszko Foundation in New York. He is also a recipient of several research and service awards from both Polish and US institutions.