

RUTGERS - CAMDEN MATH SEMINAR

12 - 1PM, FRIDAY JULY 22ND

ZOOM MEETING ID: 963-4691-5937; PW: 948282

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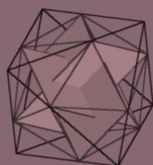
Dr. Ilaria Dorigatti

Imperial College



Title: Understanding SARS-CoV-2 transmission in the early phases of the COVID pandemic.

Abstract: On 21st February 2020, the first Italian COVID-19 death was detected in the municipality of Vo', a small town near Padua. At the time, the University of Padua conducted two sequential molecular swab surveys in the Vo' population (February & March 2020) which were then followed by 3 serological surveys (May & November 2020, and June 2021). In this talk, I will present the statistical and mathematical models developed in the early phases of the pandemic around the data collected in Vo', to understand the epidemiology of SARS-CoV-2 (Lavezzo et al, Nature, 2020), quantify heterogeneities in transmission and the effectiveness of interventions (Dorigatti et al, Nature Communications, 2021) as well as antibody dynamics and neutralization reactivity in the absence and presence of vaccination (Lavezzo et al, Genome Medicine, 2022). I will also present the results of a recent analysis investigating the effects of different testing policies on variant emergence, where we show that surveillance using molecular testing is necessary to detect and reduce the transmission of an antigen test escaping variant which was detected in Veneto in 2020 (Del Vecchio et al, Research Square).



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