

Networked Complexity: The Case of COVID-19

Online Conference

June 8–11, 2020

Registration on
<https://bit.ly/2ttg>

Close monitoring of the COVID-19 pandemic provides a blow by blow account of a spatio-temporal process percolating over complex (social)-networks. Efforts to contain the spread of the disease were and remain, for better or worse, explicitly informed by a rich tradition of mathematical models of such processes. This tradition was further enriched in the past couple of decades with the emergence of globally networked virtual societies, and the deployment of fine grained networks of sensors, both enabling the gathering of highly resolved data on the structure of complex networks, and flows over them.

Our online-conference is an occasion for expert reviews of this tradition, then presentations of work-in-progress on the gathering of epidemiological data (technical and ethical challenges), and its modeling (from the coarse grained compartmental, to the fine grained agent based models), with the urgency of COVID-19 mitigation in the air.

Taking place as it does at a cusp in a global pandemic, the meeting is for us at CAMS a timely intervention in a collaboration with the National Center for Remote Sensing (NCRS, CNRS-L) the principle aim of which is to harness big data analytics and complexity theory at the service of national and regional priorities. It draws on local expertise in concerned disciplines (in this case: physics, biology, epidemiology and sociology), and contributions by experts at leading international laboratories in data analytics, and complexity science (e.g. Multiscale and Quantum Physics, Aalto University, Finland; The Bartlett Center for Advanced Spatial Analysis, UCL, London; Center of Complexity Sciences (C3), UNAM, Mexico; The Alan Turing Institute, London; ICTP, Trieste, Italy; etc.).

Organized by:

Sara Najem, Assistant Professor, Department of Physics
Heinrich Dohna, Assistant Professor, Department of Biology
Hiba Sheheitli, CAMS Visiting Researcher
Jihad Touma, Director, CAMS

In collaboration with: