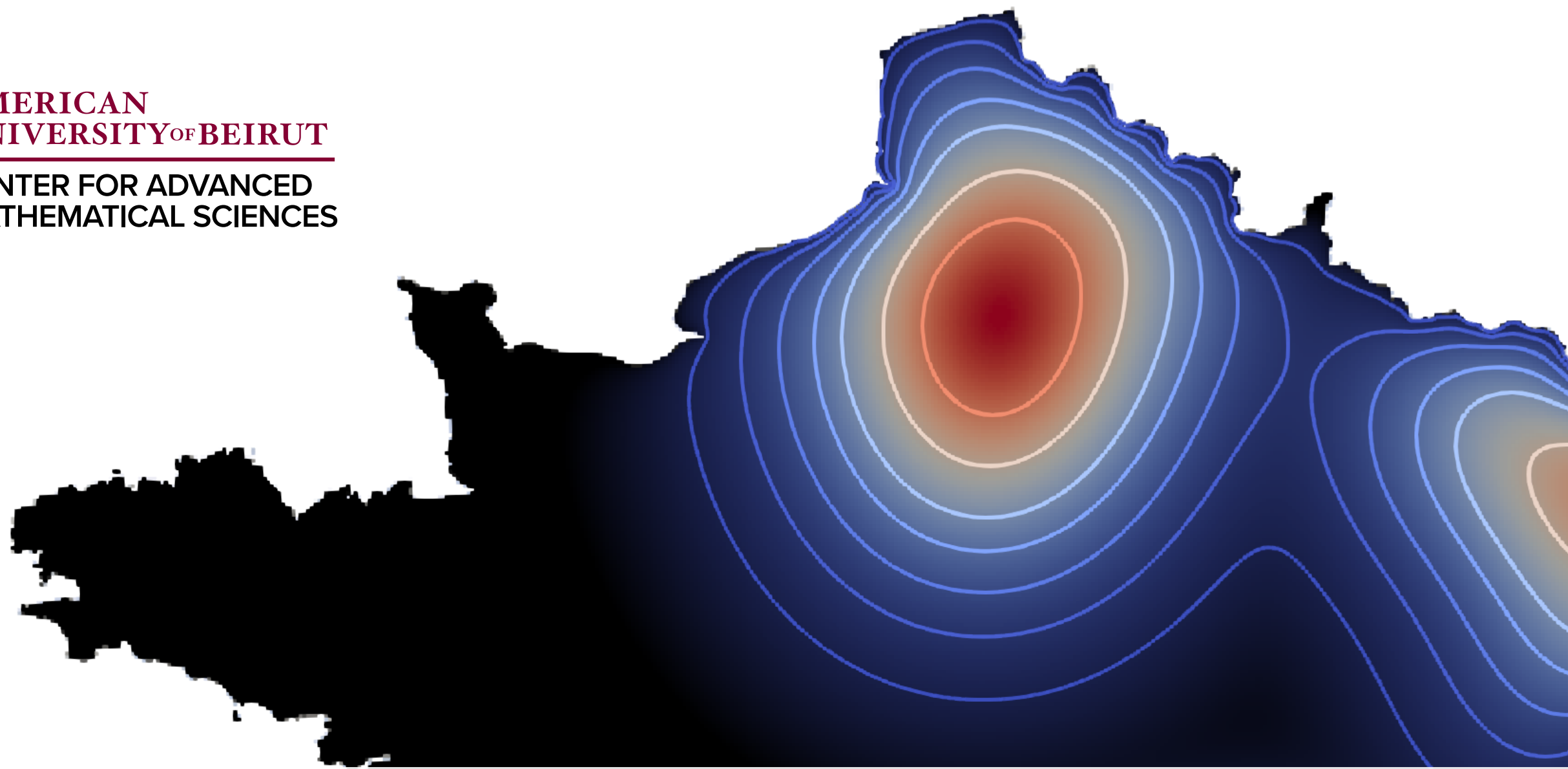




AMERICAN
UNIVERSITY OF BEIRUT
CENTER FOR ADVANCED
MATHEMATICAL SCIENCES



MATHEMATICAL BIOLOGY

INFLUENCE OF ENVIRONMENTAL AND SOCIAL CHARACTERISTICS IN SIR EPIDEMIC MODELS

TUESDAY, SEPTEMBER 27, 2022

5:00 pm (Beirut time) | **ONLINE**

The covid-19 epidemic has highlighted the importance of mathematical modeling. These models have been used quite heavily to attempt to predict the state of the epidemic, and to implement strategies to contain the disease, with more or less success.

In a second step, we question the environmental and social underpinnings of these epidemic models by introducing the weight of social and space. A new SEIR metapopulation model will be discussed. We will show that this model can simulate successive waves, and then what are the socially differentiated reactions of the population according to their environment and social characteristics.



YOUCEF MAMMERI

Jean Monnet University, France

Youcef Mammeri is a Professor of Applied Mathematics in Camille Jordan Institute, Jean Monnet University (France). Among his many collective responsibilities, he was the head of the Applied Analysis A3 team and the head of the Master degree in Modeling for Biology and Health. He is a member of the French mathematical society, French applied and industrial mathematical society, and European mathematical society. He is the recipient of several grants and PI for three ongoing projects funded by NRA, CNRS and Campus France. His research interests include modeling in life sciences, analysis of nonlinear PDEs and scientific computing with applications to multiple disciplines such as ecology, medicine, and biochemistry.