

# Mathematical Methods and Modeling of Biophysical Phenomena

IMPA, Rio de Janeiro, November 30<sup>th</sup> to December 5<sup>th</sup>, 2017

Ricardo Mañé Auditorium

Hour	Friday, 1
09:00 - 09:30	Registration
09:30 - 10:00	Opening Ceremony
10:00 - 11:00	<b>Jean Clairambault</b> (INRIA - UPMC) <i>Tumour growth and drug resistance: an evolutionary view with perspectives in therapeutics</i>
11:00 - 11:20	Coffee Break
11:20 - 12:20	<b>Fabio Chalub</b> (Universidade Nova de Lisboa) <i>The Kimura Equation</i>
12:20 - 14:00	Lunch
14:00 - 15:00	<b>Chiara Mocenni</b> (Università di Siena) <i>Bridging self-games and cooperation in evolutionary games on networks</i>
15:00 - 16:00	<b>Max O. de Souza</b> (UFF) <i>Fixation: The Fingerprint of Evolutionary Processes</i>
16:00 - 16:30	Coffee Break
16:30 - 17:30	<b>Alberto Pinto</b> (Universidade do Porto) <i>Evolutionary vaccination dynamics</i>
17:30 - 18:30	Poster Session

# Mathematical Methods and Modeling of Biophysical Phenomena

IMPA, Rio de Janeiro, November 30<sup>th</sup> to December 5<sup>th</sup>, 2017

Ricardo Mañé Auditorium

Hour	Saturday, 2
10:00 - 11:00	<b>Jan Haskovec</b> (KAUST - Saudi Arabia) <i>Discrete and continuum modeling of biological network formation</i>
11:00 - 11:20	<b>Coffee Break</b>
11:20 - 12:20	<b>Maria-Rita R D'Orsogna</b> (California State University) <i>The mathematics of crime</i>
12:20 - 14:00	<b>Lunch</b>
14:00 - 15:00	<b>Nicolas Vauchelet</b> (Université Paris XIII) <i>Mathematical modeling of the spatial spread of Wolbachia to control Dengue</i>
15:00 - 16:00	<b>Lilium Cesar de Castro Medeiros</b> (UNESP) <i>Individual Based Models Applied to Epidemiology</i>
	<b>Alexandre Ferreira Ramos</b> (USP – EACH) <i>Stochastic model of contact inhibition and the proliferation of melanoma in situ</i>
16:00 - 16:30	<b>Coffee Break</b>
16:30 - 17:00	<b>Nuno Miguel Melo Crokidakis Peregrino</b> (UFF) <i>Consequences of social pressure in epidemic spreading coupled with opinion dynamics regarding vaccination</i>

# Mathematical Methods and Modeling of Biophysical Phenomena

IMPA, Rio de Janeiro, November 30<sup>th</sup> to December 5<sup>th</sup>, 2017

Ricardo Mañé Auditorium

Hour	Monday, 4
10:00 - 11:00	<b>Uri Ascher</b> (Univ. of British Columbia) <i>Numerical Methods in Visual Computing: what we can learn from each other</i>
11:00 - 11:20	<b>Coffee Break</b>
11:20 - 12:20	<b>Sébastien Benzekry</b> (Université de Bordeaux) <i>Mathematical modeling and prediction of metastasis</i>
12:20 - 14:00	<b>Lunch</b>
14:00 - 15:00	<b>Lisa Maria Kreusser</b> (University of Cambridge) <i>An Anisotropic Interaction Model for Simulating Fingerprints</i>
15:00 - 16:00	<b>Camille Pouchol</b> (Univ. Pierre et Marie Curie) <i>Asymptotic analysis of some selection-mutation models</i>
	<b>Mezache Mathieu</b> (INRIA) <i>An oscillatory kinetic model for the prion agregation process</i>
16:00 - 16:30	<b>Coffee Break</b>
16:30 - 17:00	<b>Cécile Carrère</b> (Univ. Pierre et Marie Curie) <i>Modelling tumoral heterogeneity for chemotherapy optimization</i>

# Mathematical Methods and Modeling of Biophysical Phenomena

IMPA, Rio de Janeiro, November 30<sup>th</sup> to December 5<sup>th</sup>, 2017

Ricardo Mañé Auditorium

Hour	Tuesday, 5
10:00 - 11:00	<b>Diogo A. Gomes</b> (KAUST - Saudi Arabia) <i>New numerical methods for time-dependent mean-field games</i>
11:00 - 11:20	<b>Coffee Break</b>
11:20 - 12:20	<b>Rita Ferreira</b> (KAUST, SA) <i>Stationary mean-field games with congestion</i>
12:20 - 14:00	<b>Lunch</b>
14:00 - 15:00	<b>Nancy Rodriguez</b> (University of North Carolina) On the global existence and qualitative behavior of solutions to a model for urban crime
15:00 - 16:00	<b>Dietmar Oelz</b> (WPI Austria) Mathematics of molecular motor dynamics: Cellular morphogenesis and tug-of-war
16:00 - 16:30	<b>Coffee Break</b>
16:30 - 17:30	<b>Diane Peurichard</b> (INRIA) <i>Modelling tissue self-organisation and the fate of injury outcome</i>
17:30 - 18:00	<b>Simone de Almeida Delphim</b> (UNIFAP) <i>Numerical modelling for the economic costs of biological invasion</i>