Special Issue

On Synergies Between Chemical Reaction Networks, Mathematical Epidemiology and Population Dynamics

Message from the Guest Editor

Deterministic and stochastic chemical reaction networks (CRNs), biological interaction networks (BINs), mathematical epidemiology and virology, population dynamics, and other similar fields have long shared common preoccupations, including multi-stationarity, stability, bifurcations and chaos, and optimal control, for deterministic models. Furthermore, all these fields focus on essentially non-negative ODEs (at the deterministic level). At the stochastic level, one common preoccupation is the appearance of exceptionally large values, also called extreme risks. The purpose of this Special Issue is to create bridges between these fields by informing researchers about the language and tools they employ, their major issues, and their status quo.

Guest Editor

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