

Disease Ecology from Perspectives of Physics

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Malaria transmission is not known to occur

Malaria transmission occurs in some places

Malaria transmission occurs throughout

Abstract

Here I will review my recent works [1-14] on modeling interacting contagious dynamics, for example coupled SIR or SIS dynamics, in mean field approximations and also on different random generated or empirical complex networks. I show and discuss how our recent results have been improving our understanding and prediction of epidemic dynamics and disease ecology while raising new questions and challenges in physics of critical phenomena.

Also I will briefly discuss SARS-COV-2 from the perspective of disease ecology and present my recent studies on "behavioral responses to the COVID-19 spread"; which focus on the analysis and modelling of empirical data including testing strategies, air traffic, urban mobility, inequality (socio-economic classes), news spread, etc. in Iran or USA or globally.

https://www.skyroom.online/ch/schoolofphysics/colloquium

