Doctoral Program in Epidemiology and Translational Sciences

Network Modeling for Infectious Disease Dynamics

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This workshop will introduce new tools for network-based mathematical modeling of infectious disease transmission dynamics with the EpiModel software package in R (www.epimodel.org). Participants will learn the statistical methods of exponential random graph models (ERGMs) for modeling and simulating dynamic networks using easy-to-collect empirical data, then how ERGMs are used within EpiModel's infectious disease simulation engine.

During this interactive workshop we will fit models and run epidemic simulations to investigate how network, biological, and demographic parameters impact epidemiological outputs for basic disease types (SI/SIS/SIR).

December 1, 2016
2:30 pm to 5:30 pm
MH-1406

We would appreciate RSVPs so we can ensure the appropriate room capacity

http://bit.ly/2fengrR

Participants are recommended to bring a laptop with R and Rstudio installed. While prior knowledge and experience with programming in R may be helpful in getting the most out of the interactive exercises, it is not a prerequisite and workshop code can be run by R beginners. Additionally, while the content is focused on infectious disease, the same methods may be used to model social diffusion and related "contagion" processes across networks, so those interested in agent-based modeling more broadly are encouraged to attend.

Sponsored by the UCSF PhD program in Epidemiology and Translational Science

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