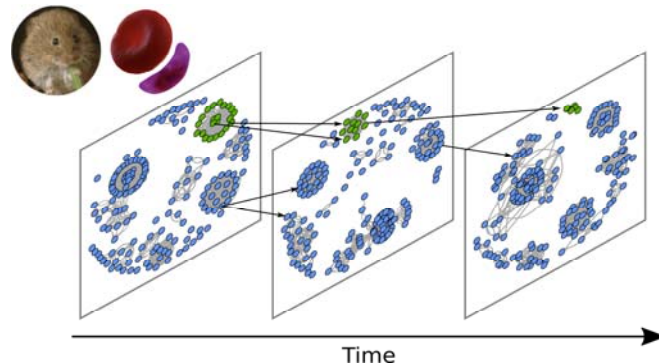




Ben-Gurion University of the Negev
Jacob Blaustein Institutes for Desert Research
The Swiss Institute for Dryland Environmental and Energy Research
Mitrani Department of Desert Ecology

Seminar

Shai Pilosof



Department of Ecology & Evolution,
University of Chicago

Tuesday, January 2, 2018, 12:00

Seminar Room, Old Administration Building

Participants are invited to meet the seminar speaker at the MDDE meeting room immediately after the seminar (~ 13:00). Please bring your lunch; snacks will be provided.

Structure and Dynamics of Highly-Dimensional Ecological Systems

Ecological systems are inherently multi-dimensional. For example, they vary in space or time or interconnect to form networks of species networks. However, description of ecological networks has been typically limited to one dimension, in part due to methodological challenges in analyzing multi-dimensionality. In this talk, I will present a framework to analyze networks with more than one dimension, namely Ecological Multilayer Networks. I will use this framework to explore two examples of temporal multilayer networks: (1) the community structure of host-parasite interactions; and (2) the genetic structure of the malaria parasite. While these two examples differ in their underlying theory, types of data and questions, they emphasize the commonalities between the evolutionary ecology of species communities and pathogen populations. They unite to show that considering higher dimensions in general and temporal dynamics in particular, can profoundly change our understanding of ecological systems.