**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

# Gili Greenbaum

*MDDE*

Tuesday, May 9, 2017, 12:00

Seminar Room, Old Administration Building

This is Gili's Ph.D. summary seminar and refreshments will be served at 11:40.

## Getting a handle on the complexity of genetic population structure

Evolution, ultimately driven by changes in allele frequencies in populations, is affected by the structural configuration of populations, known as population structure. In many natural systems these configurations may be exceedingly complicated, resulting in complex evolutionary dynamics and intricate genetic patterns. In this talk I will discuss how adopting ideas and concepts from complex system theory, and particularly from network theory, can help us better understand genetics, evolution, and ecology in structured populations. I will demonstrate how networks can be used describe population structure, at the inter-individual level as well as at the inter-subpopulation level, to address two important questions in population genetics and molecular ecology: (I) How can we detect and characterize population structure using genetic data, and (II) What are the evolutionary consequences of population structure?