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Department of Medicine
Channing Division of Network Medicine

Channing Network Science Seminar

July 19 (Wednesday), 2017, 12:30pm @ 5th floor conference room



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Toward the Evolution of Modularity

Abstract: Modularity is an important aspect of many natural and engineered systems, but computational simulations of evolution tend to produce nonmodular systems. In this talk, I examine environmental and biological-process-inspired methods for promoting the evolution of modularity, both within different levels of abstraction and in terms of hierarchical organization, and use their interactions with each other to develop more general ideas about how modularity emerges in evolution. In addition, I discuss potential mechanisms and applications, and place these results in the context of other literature on the evolution of modularity.

Bio: Jessie is a PhD candidate in Computer Science with Additional Specialization in Quantitative Biology in the Department of Computer Science (with a concentration in artificial life) at Brandeis University. She was an IGERT fellow in Geometry & Dynamics for her first two years at Brandeis. Her research interests include bio-inspired computation, agent-based modeling, network science, computational biophysics, data science, and applications to biomedical, ecological, and social problems. Her dissertation work focuses on the evolution of modularity.

Hosted by Yang-Yu Liu