

NORTHWESTERN INSTITUTE ON COMPLEX SYSTEMS PRESENTS

Wednesdays

@NICO

Modules and Statistical Models of Complex Networks



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Wednesday, January 14, 2009

12:00 – 1:00 PM

Chambers Hall Lower Level Classroom, 600 Foster Street

In complex systems, individual components interact with each other giving rise to complex networks, which are neither totally regular nor totally random. Because of the interplay between network topology and dynamics, it is crucial to characterize the structure of complex networks.

The focus of most research on complex networks has been on global network properties. While global properties may sometimes provide useful insights, their relevance hinges strongly on the homogeneity of the networks. However, most real world networks display a marked modular structure, which means that, rather than being homogeneous in their connectivity, nodes tend to establish many more connections with a subset of the nodes in the network than with the remaining nodes. In my talk, I will discuss how incorporating modularity into our models can help us gain greater insights on the structure of complex networks.

NICO Coffee Hour will follow for questions, networking, and collaboration.

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