



# CoCo Seminar Series

## Fall 2016

### Recent Trends in Network Science

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**Wednesday September 7th, 2016**  
**8:30-9:30am Engineering Building H-9**  
**(Knoll-MacDonald Commons / Watson**  
**Commons)**



Network science keeps expanding its theoretical and application fronts in various directions. In this talk, I will provide my own view of what the recent trends are in this field, solely based on my personal experiences of being involved in several international conferences and communities. Specifically, I will review some of the recent exemplar work in the following topics in network science: (1) detecting multiscale structures and hierarchies, (2) constructing higher-order models, (3) interaction between dynamics *on* and *of* networks (coevolution), (4) understanding network resilience and failure, (5) applications to neuro and brain science, (6) applications to marketing and finance, and (7) network science and education. An emphasis will be laid on the first four topics, which are applicable to the analysis of structure and dynamics of social networks in particular.

Dr. Hiroki Sayama is Associate Professor of Systems Science and Industrial Engineering and Director of the Center for Collective Dynamics of Complex Systems at Binghamton University. His research interests include complex dynamical networks, human and social dynamics, artificial life/chemistry, and interactive systems.

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