

Adaptive Networks: An Emerging Research Theme on State-Topology Coevolution in Complex Networks

Hiroki Sayama

Collective Dynamics of Complex Systems Research Group
Binghamton University, State University of New York
sayama@binghamton.edu

Adaptive networks are a particular class of dynamical networks whose topologies and states coevolve over similar time scales. Many real-world complex networks are adaptive networks, including social networks, transportation networks, neural networks and biological networks. This presentation provides a brief overview of the recent rise of research on mathematical/computational modeling and analysis of such networks and discusses current and future research directions.

Bibliography

- [1] Gross, T. & Sayama, H. (ed.), 2009, Adaptive Networks: Theory, Models and Applications, Springer/NECSI Studies on Complexity Series, Springer.