Learning and the Topology of Social Networks

Omer Tamuz
Weizman Institute of Science

Tuesday, February 12, 2013
008 Kemeny, 4:00PM
Tea is at 3:30 pm in 300 Kemeny

Abstract

We consider a group of Bayesian Economic agents who, given independent measurements of a binary "state of the world", estimate the state by repeatedly observing the best estimates of their neighbors in a social network.

We show that the question of whether or not the agents learn the state of the world depends on the topology of the social network. In particular, we identify a geometric "egalitarianism" condition on the social network graph that guarantees learning in infinite networks, or learning with high probability in large finite networks.

Joint work with Elchanan Mossel and Allan Sly.

This talk should be accessible to graduate students.