

SG_Seminar

Spread of Two Linked Social Norms on Complex Interaction Networks

Dr. Mayuko Nakamaru

Tokyo Institute of Technology

Abstract

We study the spread of social norms, such as rules and customs that are components of human cultures. We consider the spread of two social norms, which are linked through individual behaviors. Spreading social norms depend not only on the social network structure, but also on the learning system. We consider four social network structures:

1. Complete mixing, in which each individual interacts with the others at random,
2. lattice, in which each individual interacts with its neighbors with some probability and with the others at random
3. power-law network, in which a few influential people have more social contacts than the others, and
4. random graph network, in which the number of contacts follows a Poisson distribution.

Using the lattice model, we also investigate the effect of the small-world phenomenon on the dynamics of social norms. In our models, each individual learns a social norm by trial and error (individual learning) and also imitates the other's social norm (social learning). We investigate how social network structure and learning systems affect the spread of two linked social norms.

Reference: Nakamaru, M. and Levin, S. A. (2004) Spread of two linked social norms on complex interaction network. *Journal of theoretical biology* 230, 57-64.

When? Wednesday, February 21, 2007, 17.30-18.30

Where? ETH Kreuzplatz, KPL K14