TITLE: Belief revision based on evidence and trust in social networks

We study the process of belief formation and doxastic influence based on evidence and trust in social networks. In our multi-agent setting, the agents' beliefs are formed by taking into account the strength of their own private evidence, the strength of their friends' evidence, as well as the trust that the agents have in their friends (and in themselves) as a reliable source of information. Our formal approach brings together two ingredients: 1) the setting of 'justification models', a formal qualitative representation of an agent's beliefs, evidence and justification [1] and 2) the work on belief dynamics and doxastic influence in social networks [2]. In this talk we use results from dynamical systems to characterize the conditions of doxastic stability in the social network in the long run. This presentation is based on joint work with A. Baltag and F. Liu.

[1] Virginie Fiutek, Playing with Knowledge and Belief, PhD thesis, ILLC, 2013.

[2] Fenrong Liu, Jeremy Seligman, and Patrick Girard: Logical Dynamics of Belief Change in the Community, Synthese, Volume 191, Issue 11, pp 2403-2431, 2014.