Título: "Network effects on coordination in asymmetric network games"

Abstract: In many situations individuals prefer to coordinate with others but they differ on their preferred action. In this talk I will present both theoretical and experimental results on different aspects of such a problem of coordination in asymmetric games. One aspect that has often proven to be important in understanding the decision behavior of individuals or agents in these problem is network structure. I will introduce the first results on equilibria on random networks, and then I will discuss experiments in a setting in which interactions are exogenous and in one in which individuals choose links that determine the interactions, showing how the exogenously and the endogenously formed structures and different and that endogeneity leads to segregation, difficult to understand theoretically. In the second part of the talk I will review computational studies predicting that exogenous network structure has a crucial influence on behavior. I will discuss those behavioral predictions in the light of an experiment showing that the less 'random' the network structure, the better the experimental results are predictable by the computational models. In particular, there is an effect of network clustering on the heterogeneity of convergence behavior in the network. We also found that degree centrality and having an even degree are important predictors of the decision behavior of the subjects in the experiment. We thus find empirical validation of predictions made by computational models in a computerized experiment with human subjects.

References:

- [1] Heterogeneous network games: Conflicting preferences. P. Hernández, M. Muñoz-Herrera, and A. Sánchez, Games and Economic Behavior 79, 56–66 (2013)
- [2] Equilibria, information and frustration in heterogeneous network games with conflicting preferences. M. Mazzoli and A. Sánchez, Journal of Statistical Mechanics: Theory and Experiment, 113403 (2017)
- [3] Integration and diversity. S. Goyal, P. Hernández, G. Martínez-Canovas, F. Moisan, M. Muñoz Herrera, and A. Sánchez, submitted (2019)
- [4] An experimental study of network effects on coordination in asymmetric games. J. Broere, V. Buskens, H. Stoof, and A. Sánchez, Scientific Reports 9, 6842 (2019)