We are happy to announce the following Departmental seminar at the Graduate School of Business Administration

Speaker:
Prof. Rosa Figueiredo  
Université d'Avignon

Title:
Evaluating balancing on social networks through the efficient solution of graph clustering problems

Abstract:
One challenge for social network researchers is to evaluate balance in a social network. The degree of balance in a social group can be used as a tool to study whether and how this group evolves to a possible balanced state. On the one hand, the solution of clustering problems defined on signed graphs can be used as a criterion to measure the degree of balance in social networks. For example, this measure can be obtained with the optimal solution of the correlation clustering problem, as well as a variation of it, the relaxed correlation clustering problem. However, solving these combinatorial optimization problems is no easy task, especially when large network instances need to be analyzed. On the other hand, classical well studied community detection algorithms designed to process only positive links could also be applied to evaluate balance in a social network, resulting in easier optimization problems. We study the relevance of negative links for graph partitioning problems related with structural balance. We first discuss the efficient solution of some clustering problems defined on signed graphs and then we compare the solutions obtained with the ones obtained by a classical community detection algorithm. For this purpose, we extract and analyze a collection of signed networks representing voting sessions of the

Tuesday, October 31, 2017, 14:00  
Room 11, Building 504