Syllabus of the course
“Strategic Network Formation and Network Allocation Rules”
(6 hours)

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The course provides an overview of strategic network formation models and network allocation rules. The connections model, the co-author model and their extensions will be recalled. We will discuss stable, strongly stable and efficient structures in this framework, the tension between stability and efficiency, and network formation with transfers. Moreover, models of strategic network formation that take into account positive and negative externalities will be surveyed. Furthermore, we will discuss different allocation rules, their characterizations and non-cooperative foundation of allocation rules. The contents of the course is the following:

1. Introduction, background and fundamentals of network analysis
2. Strategic network formation, pairwise stability, efficiency, strong stability, stability and equilibrium, distance-based utility, connections model, co-author model, tension between stability and efficiency, transfers and network formation, models with negative and positive externalities
3. Network games and allocation rules, cooperative axiomatic approaches and non-cooperative foundation of network allocation rules, Myerson value, position value, component-wise egalitarian solution, flexible network allocation rules, dynamic allocation rules

References


