Friday 5 June 2015
13h30
UT3 Paul Sabatier, IRIT, Salle des Thèses

Umberto GRANDI
Team LILaC - IRIT (France)

Social Algorithms

Abstract: Is it possible to find a stable allocation of students to university programmes? How to divide fairly the grade of a group project between the individual students? Can we design an election in which voters have an incentive to report their truthful opinions? Many of these and similar questions were given answers and formal treatment in the field of economics during the past fifty years. However, the practical feasibility of these methods and all questions related to their implementation have most often been neglected. In recent years, motivated by the economics-based approach to the modelling of artificial agents and by the sudden availability of a large quantity of data concerning human preferences and decisions, researchers in artificial intelligence started to contribute to these problems. What if, for instance, the perfect decision mechanism exists, but the computation of its result takes so much time that the method is practically infeasible? In this talk we focus on a selection of such “social algorithms”, presenting their classical formulation and the associated computational studies that have been developed in research fields such as computational social choice and algorithmic game theory.