COST Action IC1205 on Computational Social Choice: STSM Report
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I spent one week at CREM, which has a long tradition in research devoted to voting and elections (W1 of the Action).

With Vincent Merlin we started to work on the mixed electoral systems. These systems combine majority (or plurality) rule at the district level with some kind of proportional rule at-large. The influence of a vote can arise from two sources: either at the district level, either at the global level. The question of a citizen's power has therefore to be adapted in this context: the classical power indices cannot be applied in a straightforward way. We have progressed on the formalization of the problem

I gave a seminar on Tuesday 25, entitled "to approve or not to approve: this is not the only question".
Abstract
This paper proposes a voting rule that belongs to a large class of voting systems, called "range voting" or "utilitarian voting", where each voter rates each candidate with the help of a given evaluation scale and the winner is the candidate with the highest total score. In approval voting the evaluation scale only consists of two levels: 1 (approval) and 0 (non approval). However non approval may mean disapproval or just indifference or even absence of sufficient knowledge for evaluating the candidate. In this paper we propose a characterization of the dis&approval voting that allows for a third level in the evaluation scale. The three levels have the following interpretation: 1 means approval, 0 means indifference, abstention or do not know and -1 means disapproval.

This seminar leads to interesting discussions. In particular,
- Isabelle Lebon participated in 2012 to an experiment during the 2012 French Presidential elections. One method tested in the experiment was exactly the rule presented in the seminar. Discussion about the theoretical properties and the practical behaviour in the experiment was discussed. This may lead to future collaboration.

- Fabrice Valognes worked on what can be referred to as the rule of k-names. Each voters can approve k candidates out of the n possible candidates. The winning candidate(s) are those who receive the maximal numbers of approvals. It may be worth exploring the relations between this rule and the rule presented in the seminar.

In brief this week was very fruitful in terms of discussion and work