COST Action IC1205 on
Computational Social Choice:
STSM Report

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I was hosted for a week and a half by Prof. Procaccia at Carnegie Mellon University. During this fruitful period, we considered two problems related to voting under conflict of interests.

In the first problem, we consider a scenario in which the set of voters and the set of candidates coincide. De Clippel *et al.* [JET 2008] studied the following question: if a set of collaborators wish to divide credit among themselves, can they do so in a way that is both impartial and unanimous? I.e. is there a way to aggregate input from the collaborators, where each collaborator specifies her opinion regarding the relative contribution of the other collaborators, that is both impartial (each collaborator's share does not depend on her own input) and unanimous (if all inputs are consistent, then the output is consistent with them as well)? Holzman and Moulin [Econometrica 2013] asked whether a committee can elect one of its members in a way that is impartial and satisfies some other desirable properties. In contrast to both of these questions, we considered the problem neither of division of share nor of electing a single member, but rather of ranking contributors by merit (producing a complete ordering of the contributors); we note that an impartial mechanism for any of the former problems does not imply an impartial mechanism for the latter, in the sense of each collaborator's ranking not depending on her own input. We worked both on possibility/impossibility/axiomatization results, as well as on optimization of the quality of the decision under constraints such as impartiality.

In the second problem, we considered a scenario in which, while the set of voters and the set of candidates are disjoint, some voters have a commonly-known conflict of interest with respect to some of the candidates. In this case, it is natural to search for a way to ignore the information supplied by voters about the candidates regarding whom they are conflicted; in other words, we looked for mechanisms that allow the specification of abstentions. Once again, we considered possibility/impossibility/axiomatization results under various scenarios.