COST Action IC1205 on Computational Social Choice: STSM Report

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During the above-mentioned period I was hosted by Britta Dorn at the University of Tuebingen, Germany. In the course of my STSM-stay, I was working with Britta Dorn, Jérôme Lang, Sebastian Scheckenburger and Janosch Doecker, the latter two being members of Britta Dorn's team of researchers at the University of Tuebingen.

The content of this STSM was to consider a simplified variant of the group activity selection problem. We considered the setting in which each member of a group of agents has preferences over a set of activities. Respecting constraints over activities (which could, for instance, restrict the number of agents that can be assigned to specific activities, allow only for a limited number of activities to be used, or require balancedness) the goal would be to find a "good" assignment of agents to activities.

We took into account different notions of what could be such a desirable assignment, including the concepts of individual rationality, envy-freeness, and stability (e.g., individual stability and core stability). In addition to considering the question whether or not such desirable assignments exist, an interesting task is to find such an assignment that maximizes the total number of agents assigned to some activity.

In addition to elaborating the setting and its relation to the existing literature, we were able to derive easiness- and hardness results for some of the considered problems already.