

## **COST Action IC1205 on Computational Social Choice: STSM Report**

**Applicant:** Marina Bannikova

**Home institution:** University Rovira I Virgili

**Home country:** Spain

**Host:** Orit Kedar

**Host institution:** Center for the Study of Rationality, Hebrew University of Jerusalem

**Host country:** Israel

**Dates:** 23/10/2015 to 13/11/2015

The aim of the visit was to advance in my research of how a decision is taken inside of the parliament depending on the number of parties. My host professor Orit Kedar gave me very interesting comments and suggestions about how to solve the questions I study. She also recommended me to meet with postdoctoral fellow Mattan Sharkansky who helped me to clarify my doubts and gave some new ideas.

I had a chance to present my work “Are parliaments with more parties cheaper to bribe?,” which is written in collaboration with Attila Tasnádi as a result of my STSM in Spring. I obtained an extended feedback from local postdocs and professors. Bezalel Peleg and Zamir Shmuel proposed me some changes in my working papers, which can lead to writing new papers.

My research visit to the Center for the Study of Rationality resulted in a collaboration with local postdoctoral fellow Svetlana Obraztsova and Professor Lihi Dery from Ariel University. In a joint work in progress, we study sequential voting procedure in which agreement must be reached by consensus and there is a strict deadline. This way, we present a game-theoretical framework where at each stage one voter, who is randomly chosen from a set of voters who want to change their initial vote, is allowed this change. If no consensus is reached before the deadline, then there is no winner, and such outcome is the least preferred for every voter. Under this set-up, we study the convergence of the collective decision process, the properties of this convergence, and the associated price of anarchy. We are currently developing the computational experiments required in order to estimate the rate of convergence and compute the price of anarchy.

Also professor Lihi Dery from Ariel University invited me to give a talk at her Department. Local professor Artyom Jelnov showed his interest in the model I presented. Our meeting and detailed discussion resulted in a decision to write a joint paper.

During my visit I attended various seminars and courses which were inspiring and extremely interesting for me. It was a pleasure to visit Center for the Study of Rationality. I am very grateful to the COST action for giving me such a great opportunity. Thanks to your support I was able to progress a lot in my work and start a new papers collaborating with local researchers.