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

Applicant: Diodato Ferraioli

Home institution: Sapienza Università di Roma

Home country: Italy Host: Ioannis Caragiannis

Host institution: University of Patras

Host country: Greece

Dates: from 19-01-2014 to 25-01-2014

Reference: ECOST-STSM-IC1205-190114-037911-37911

During my STSM to the University of Patras (Italy), I worked together with my host Ioannis Caragiannis on strategic issues of opinion formation. The term "opinion formation" refers to the process which the voters follow in order to determine which vote to cast in an election that takes place openly in a social network. In this case, one might prefer to express a different opinion compared to his internal belief in order to be close to the expressed opinions of his neighbors in the social network. The work continue the joint research project that we initiated recently during the STSM of Ioannis Caragiannis to the University of Salerno (Italy). During that STSM, we started cooperating together with Giuseppe Persiano and Enzo Auletta from the University of Salerno and Clemente Galdi from the University of Naples.

During my STSM to Patras, we focused on understanding at which extent the social network can influence the outcome of one election. In particular, we found that for almost any graph it possible that a set of beliefs in which a certain opinion is minority can evolve to an equilibrium profile in which this same opinion becomes majority.