COST Action IC1205 on Computational Social Choice: STSM Report

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Voting Decision in a Social Network

We consider an election in which voters decide their vote in a social network by maximizing agreements with friends. In particular, the vote expressed by each voter does not only depend on the voter's internal preferences but it is influenced by the intention of vote of the voter's friends, proportionally to the strength of their relationships.
We assume that each voter can vote for k candidates out of m, as it happens for approval-based voting rules. We study the efficiency of the pure Nash equilibria of the game by providing tight bounds to the price of anarchy with respect to two different social welfare functions: MAX, which is the maximum happiness among all voters, and SUM, that is the total happiness of all voters. We characterise these bounds as a function of the voters' stubbornness level, i.e., his attitude to disagree with his friends.