

Seminar AGCO

Speaker: Ulrike Schmidt-Kraepelin, Technische Universität Berlin, Alemania.

Title: Popular Branchings and Their Dual Certificates.

Abstract: Let G be a digraph where every node has preferences over its incoming edges. The preferences of a node extend naturally to preferences over branchings, i.e., directed forests; a branching B is popular if B does not lose a head-to-head election (where nodes cast votes) against any branching. Such popular branchings have a natural application in liquid democracy. The popular branching problem is to decide if G admits a popular branching or not. We give a characterization of popular branchings in terms of dual certificates and use this characterization to design an efficient combinatorial algorithm for the popular branching problem. When preferences are weak rankings, we use our characterization to formulate the popular branching polytope in the original space and also show that our algorithm can be modified to compute a branching with least unpopularity margin. When preferences are strict rankings, we show that “approximately popular” branchings always exist.

This is joint work with Telikepalli Kavitha, Tamás Király, Jannik Matuschke, and Ildikó Schlotter.

Wednesday, Jun 02, 14:30 hrs (Chilean time).

Link: <https://zoom.us/j/93628970125?pwd=L1l6cTVXOVY4Rmh6MllnR2FHanRWUT09>