

AGCO Seminar

Speaker: Svenja Griesbach, U Chile.

Title: Deterministic Impartial Selection with Weights.

Abstract:

In the impartial selection problem, a subset of agents up to a fixed size k among a group of n is to be chosen based on votes cast by the agents themselves. A selection mechanism is impartial if no agent can influence its own chance of being selected by changing its vote. It is α -optimal if, for every instance, the ratio between the votes received by the selected subset is at least a fraction of α of the votes received by the subset of size k with the highest number of votes.

We study deterministic impartial mechanisms in a more general setting with arbitrarily weighted votes and provide the first approximation guarantee, roughly $k/2n$. When the number of agents to select is large enough compared to the total number of agents, this yields an improvement on the previously best-known approximation ratio of $1/k$ for the unweighted setting. We further show that our mechanism can be adapted to the impartial assignment problem, in which multiple sets of up to k agents are to be selected, with a loss in the approximation ratio of $1/2$.

This is joint work with Javier Cembrano and Maximilian J. Stahlberg

When: July 2, 3:00 pm - 4:00 pm.

Where: Sala de Seminario John von Neumann, 7th floor, CMM, Av. Beauchef 851, torre norte.

