

AGCO Seminar

Speaker: Javier Cembrano, TU Berlin, Alemania

Title: Impartial Selection with Additive Guarantees via Iterated Deletion..

Abstract: Impartial selection is the selection of an individual from a group based on nominations by other members of the group, in such a way that individuals cannot influence their own chance of selection. We give a deterministic mechanism with an additive performance guarantee of $\$O(n^{\{(1+\gamma)/2\}}\$$ in a setting with $\$n\$$ individuals where each individual casts $\$O(n^{\{\gamma\}}\$ nominations, where $\$\gamma \in [0,1]\$$. For $\$\gamma=0\$$, i.e., when each individual casts at most a constant number of nominations, this bound is $\$O(\sqrt{n})\$$. This matches the best-known guarantee for randomized mechanisms and a single nomination. For $\$\gamma=1\$$ the bound is $\$O(n)\$$. This is trivial, as even a mechanism that never selects provides an additive guarantee of $\$(n-1)\$$. We show, however, that it is also best possible: for every deterministic impartial mechanism there exists a situation in which some individual is nominated by every other individual and the mechanism either does not select or selects an individual not nominated by anyone.$

This is joint work with Felix Fischer, David Hannon, and Max Klimm.

When: November 23, 15:00 hrs.

Where: Sala de Seminario John Von Neuman, CMM, Beauchef 851, Torre Norte, Piso 7.

