

Seminar AGCO

Speaker: Victor Verdugo, Universidad de O'Higgins.

Title: Apportionment Mechanisms under Parity Constraints and the case of Chile and a new Political Constitution.

Abstract: How many seats should be allocated to each political party in an election? This question has a long and rich history, and plays a fundamental role in order to ensure appropriate levels of representation in the parliaments. We consider this question in the presence of types (e.g. men and women), where apart from ensuring proportionality at the party level, we also have to find an allocation which is paritary for the types. We consider two different approaches: one of them, with a greedy/local search paradigm, corresponds to a mechanism recently approved in the chilean parliament (March 2020) to find the representatives of the constitutional assembly with the goal of designing a new political constitution for Chile (election to happen in April 2021); the other one is based on the idea of integral biproportionality, introduced by Balinski and Demange in the late 80's. We analyze both mechanisms from an axiomatic and quantitative point of view. We also provide new results regarding integral biproportional solutions and the fair share, a.k.a matrix scaling solution, which represents the ideal (but not necessarily implementable) fractional biproportional solution.

Joint work with Claire Mathieu (CNRS & IRIF, France)

November 18, **14:30 hrs** (Chilean time).

Link: <https://zoom.us/j/93139273671?pwd=VWE1NEplWjRsWFJxSnRnNVVVRMIZEUT09>