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AGCO Seminar

Speaker: Gustavo Angulo, UC.

***Title*:** Robust Admission via Two-Stage Stable Matching under Ranking Uncertainty

Abstract:

The Bachillerato Inicia UC program offers a pathway for students from Chilean technical high schools to articulate into undergraduate programs at Pontificia Universidad Católica de Chile. Upon applying, candidates rank up to three preferred programs. However, articulation is determined only after one year, based on their academic ranking within the cohort - a value unknown at the time of admission.

This setting gives rise to a two-stage admission problem with downstream matching constraints and exogenous uncertainty. The challenge is to select a feasible subset of students to admit, respecting the order of applicant scores, while guaranteeing that, under any realization of final rankings, each admitted student can be matched to one of their declared preferences, respecting program capacities.

We formalize this as a two-stage stable matching problem under ranking uncertainty and design an algorithm that characterizes the set of robustly admissible candidates. The model ensures articulation guarantees that are consistent with declared preferences and capacity constraints. We present implementation results from the 2024 and 2025 admission cycles. Joint work with Matías Giddings and Pablo Marshall.

***When*:** April 30, **3:00 pm - 4:00 pm.**

***Where*:** Sala de Estudio Raúl Devés, 1er piso edificio Raúl Devés, Campus San Joaquín, UC, Avda. Vicuña Mackenna 4860.