

**AGCO Seminar**

**Speaker:** Boris Epstein, GSB, Columbia University

**Title:** Selection and Ordering Policies for Hiring Pipelines via Linear Programming

**Abstract:**

Motivated by hiring pipelines, we study three selection and ordering problems in which applicants for a finite set of positions must be interviewed or made offers to. There is a finite time budget for interviewing or making offers, and a stochastic realization after each decision, leading to computationally-challenging problems. In the first problem, we study sequential interviewing and show that a computationally-tractable, non-adaptive policy that must make offers immediately after interviewing is near-optimal, assuming offerees always accept their offers. In the second problem, we assume that applicants have already been interviewed but only accept offers with some probability; we develop a computationally-tractable policy that makes offers for the different positions in parallel, which can be used even if positions are heterogeneous and is approximately optimal relative to a policy that can make the same amount of offers not in parallel. In the third problem, we introduce a model where the hiring firm is tightly time constrained and must send all offers simultaneously in a single time step, with the possibility of hiring over capacity at a cost; we provide nearly-tight bounds for the performance of practically motivated value-ordered policies. All in all, our paper takes a unified approach to three different hiring problems, based on linear programming. Our results in the first two problems generalize and improve the existing guarantees in the literature that were between  $1/8$  and  $1/2$  to new guarantees that are at least  $1-1/e \approx 63.2\%$ .

**When:** August 16, 3:00pm.

**Where:** Sala de Seminario John Von Neuman, CMM, Beauchef 851, torre norte.

