

**AGCO Seminar.**

**Speakers:** Thiery Théophile, ETH.

**Title:** Beating Greedy Asymptotically for Weighted k-Matroid Intersection

**Abstract:** Greedy is one of the most widely used algorithmic paradigms, both in practice and in theory. Its success is classically explained by matroid theory: whenever the underlying optimization problem has a matroid structure, Greedy is optimal.

Greedy also extends to problems involving multiple matroids, but its performance guarantee deteriorates to  $1/k$ , where  $k$  is the number of matroids. For Weighted k-Matroid Intersection, Greedy has long been the asymptotically best-known algorithm. In this talk, I will survey recent progress that improves on Greedy for Weighted k-Matroid Intersection and related problems. The talk is aimed to be self-contained to introduce the main algorithm behind these improvements while presenting the necessary background. I will leave enough to discuss a few open problems that I am interested in.

This talk features works with:

- Euiwoong Lee (U. Mich), and Ola Svensson (EPFL).
- Neta Singer (EPFL).
- Neil Olver (LSE) and Neta Singer (EPFL).

**When:** Mar 18, 03:00 pm - 4:00 pm.

**Where:** Sala de Seminario von Neuman, 7th floor, CMM, Av. Beauchef 851, Torre Norte.