

AGCO Seminar

Author

Alfredo Torrico

GaTech.

Title

Robust Submodular Maximization: Offline and Online algorithms.

Abstract: In this work, we consider the robust submodular maximization problem subject to a matroid constraint in the offline and online setting. In the offline version, we are given a collection of k monotone submodular functions and matroid on a ground set of size n . The goal is to select one independent set that maximizes the minimum of the submodular functions. Given the complexity of the problem, we design a bi-criteria approximation algorithm that returns a set that is the union of a logarithmic number of independent sets. In the online version of the problem, we receive a new collection of functions at each time step and aim to pick an independent set in every stage. We measure the performance of the algorithm in the expected regret setting. Again, we present a bi-criteria approximation algorithm which gives a (nearly) optimal approximation as well as regret bounds. Our result rely crucially on modifying the Follow-the-Perturbed-Leader algorithm of Kalai and Vempala.

Where: Republica 779B, Sala P3, 3rd floor.

When: Wednesday, January 03, 14:00.