THE UNIVERSITY OF CHICAGO | THE COMMITTEE ON COMPUTATIONAL AND APPLIED MATHEMATICS

COLLOQUIUM

ANTONIO (TUCA) AUFFINGER

Department of Mathematics
Northwestern University

Dimension Reduction Methods for Data Visualization

THURSDAY, February 23rd, at 4:00 PM
Jones 303, 5747 S. Ellis Ave. Chicago, IL 60637

ABSTRACT

The purpose of dimension reduction methods for data visualization is to project high dimensional data to 2 or 3 dimensions so that humans can understand some of its structure. In this talk, we will overview some of the most powerful and popular methods in this active area. We will then the focus on two algorithms: Stochastic Network Embedding (SNE) and Uniform Manifold Approximation and Projection (UMAP). Here, we will present rigorous results that establish an equilibrium distribution for these methods when the number of data points diverge in the presence of pure noise or with a planted signal.

Organizers:
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