Seminar/Talk

TCS Seminar - Approximating Earth Mover's Distance in Sublinear Time

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Host:

This talk explores the complexity of approximating the Earth Mover's Distance (EMD), a widely used similarity measure for subsets of a metric space. Over the past two decades, the use of Optimal Transport and the corresponding EMD metric have enjoyed significant adoption in the ML community. On the other hand, the complexity of approximating EMD remains unclear.In this talk, we present recent algorithmic results on the trade-offs between approximation and running time for general metrics, as well as for more structured norms like ℓ_1 and ℓ_2. Notably, these results draw from two distinct areas: sublinear-time matching algorithms and high-dimensional computational geometry.This talk is based on joint works with Vincent Cohen-Addad, Rajesh Jayaram, Aviad Rubinstein, and Erik Waingarten.

Thursday, July 24, 2025 11:00am - 12:00pm
Moonstone Bldg / Ground floor / Seminar Room G (I24.EG.030g)

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.