



THE UNIVERSITY OF
CHICAGO

THE COMMITTEE ON
COMPUTATIONAL AND
APPLIED MATHEMATICS

COLLOQUIUM

YAIR SHENFELD

Applied Mathematics
Brown University

Discrete Diffusion Models and Measure Transport on Ordinal Structures

THURSDAY, November 12th at 4:00 PM
Jones 303, 5747 S. Ellis Ave. Chicago, IL 60637

ABSTRACT

Finding good ways to transport between two probability distributions is a task which naturally arises in Generative Modeling and in Probability and Analysis. In diffusion models the goal is to transport noise to the data distribution, and then reverse the process in order to get new samples. In probability and analysis, the goal is to transfer properties from canonical distributions to more complex ones. In this talk I will focus on both problems in the context of distributions on ordinal structures, and show how new constructions lead to optimal bounds for ultra log-concave distributions, as well as for competitive and scalable discrete diffusion models.

Organizers:

Guillaume Bal, Department of Statistics (CCAM), guillaumebal@uchicago.edu & Nisha Chandramoorthy, Department of Statistics (CCAM), nishac@uchicago.edu, Eitan Levin, Department of Statistics (CCAM), sanzalonso@uchicago.edu

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