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

COLLOQUIUM

YUEHAW KHOO

Department of Statistics (CAMI)
University of Chicago

Scientific Computing for Statistical Mechanics and Quantum Systems

THURSDAY, October 13, at 4:00PM
Jones 303, 5747 S. Ellis Ave. Chicago, IL 60637

ABSTRACT

We develop tensor-network approaches for solving high-dimensional partial differential equations with the goal of characterizing the transition between two states in a statistical mechanics system with high-accuracy. For this purpose we also develop novel generative modeling techniques without any optimization based on tensor-networks. If time permits, we also briefly touch on the development a divide-and-conquer convex optimization method for determining the ground state of a quantum system.

Organizers:
Jeremy Hoskins, Department of Statistics (CAMI), jeremyhoskins@statistics.uchicago.edu & Yuehaw Khoo, Department of Statistics (CAMI), ykhoo@galton.uchicago.edu

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