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

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Tools for Multimodal Sampling

THURSDAY, October 14, 2021 at 4:00pm
Jones 303, 5747 S. Ellis Ave. Chicago, IL 60637
OR
via Zoom

The task of sampling from a probability distribution with known density arises almost ubiquitously in the mathematical sciences, from Bayesian inference to computational chemistry. The most generic and widely-used method for this task is Markov chain Monte Carlo (MCMC), though this method typically suffers from extremely long autocorrelation times when the target density has many modes that are separated by regions of low probability. We present several new methods for sampling that can be viewed as addressing this common problem, drawing on techniques from MCMC, graphical models, tensor networks, and generative modeling.

Organizer:
Jeremy Hoskins, Department of Statistics, jeremyhoskins@statistics.uchicago.edu
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