RUTGERS-CAMDEN
MATH SEMINAR SERIES

12:45PM -1:45PM, APRIL 16TH, 2026

ARMITAGE-124

Cecilia Mondaini
Drexel University

Title: *Multiproposal MCMC strategies under the large proposal limit perspective*

Abstract: Multiproposal MCMC (MP-MCMC) algorithms generate clouds of proposals to efficiently explore the state space and uncover complex target geometries, while leveraging non-trivial parallel computing strategies that can lead to significant improvements over single proposal approaches. While several methods have been proposed involving a large number p of proposals within the MP-MCMC setting, much remains unknown about these algorithms, particularly in the large p-regime. In this talk, I will present on recent results where we propose new MP-MCMC algorithms under various types of proposal and acceptance structures, framed under a general state space multiproposal involutive theory we recently introduced. We rigorously obtain their large p-limit kernels, and also discover new relationships between different MP-MCMC methodologies, particularly ruling out certain existing approaches. This is a joint work with N. Glatt-Holtz (IU), A. Holbrook (UCLA), and J. Krometis (V Tech).

Zoom:

https://rutgers.zoom.us/j/96442897289?pwd=bPsYXaIvu0BuaxSVQxU0VTLnRUSotm.1

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