THE UNIVERSITY OF CHICAGO

Computational and Applied Mathematics & Statistics Student Seminar

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Angela Wang

Computational and Applied Mathematics
University of Chicago

Multi-component KPZ from microscopic dynamics

Wednesday, October 1, 2025
12:30 PM
DSI, 5460 S University Ave,
Room 105, Chicago, IL 60615

ABSTRACT

We investigate the weakly asymmetric scaling limit of a two-species coupled interacting particle system following exclusion process on the one-dimensional torus. The first-class particles evolve with ASEP, while the dynamics of second-class particles depend locally on the configuration of the first-class. We establish the invariant measure of the microscopic dynamics as a product Bernoulli measure and show that the two height functions weakly converges to the solution of two independent KPZ equations started from narrow wedge initial condition.