Probability Seminar

Title: The periodic directed landscape

Speaker: Dominik Schmid (University of Augsburg)

Date: Wed 25th November 2026 at 2:00PM

Location: N0.20 - Science North

Abstract: The Kardar–Parisi–Zhang universality class is a central topic in mathematical physics and probability theory. In this talk, we discuss the conjectural scaling limit of periodic models in the Kardar–Parisi–Zhang universality class: the periodic directed landscape. We establish the convergence of periodic exponential last passage percolation to the periodic directed landscape and give a variational characterization of the periodic KPZ fixed point, recently constructed by Baik, Liao, and Liu. We also establish the convergence of periodic asymmetric simple exclusion processes to periodic KPZ fixed points, coupled through the same periodic directed landscape. A key ingredient is a gluing technique for combining overlapping directed landscapes, which may be of independent interest. This is based on joint work with Amol Aggarwal and Ivan Corwin.