ILIA BINDER, University of Toronto

SLE as critical interface limits: power law rate of convergence

This talk explores the rate of convergence of critical interfaces in various lattice models to Schramm–Loewner Evolution (SLE). We present a general framework for establishing power law convergence rates, offering a unified approach applicable across multiple models. As a central example, we examine the exploration process in critical percolation, demonstrating that for any "reasonable" critical percolation model, convergence to SLE is guaranteed and the polynomial rate follows automatically. This result holds unconditionally for critical site percolation on the hexagonal lattice and several of its generalizations, which will be discussed in detail. We further illustrate the applicability of the framework to other models, including the Harmonic Explorer and the Ising model.

This talk is based on joint projects with L. Chayes, D. Chelkak, H. Lei, and L. Richards.