



Probability Seminar

Title: The stationary (2+1)-dimensional AKPZ equation

Speaker: Fabio Toninelli (Vienna)

Date: Wed 9th December 2020 at 3:00PM

Location: Online

Abstract: The AKPZ equation is an anisotropic variant of the celebrated (two-dimensional) KPZ stochastic PDE, which is expected to describe the large-scale behavior of (2+1)-dimensional growth models whose average speed of growth is a non-convex function of the average slope (AKPZ universality class). Several interacting particle systems belonging to the AKPZ class are known, notably a class of two-dimensional interlaced particle systems introduced by A. Borodin and P. Ferrari. The AKPZ equation has been conjectured to have the same large-scale behavior as the stochastic heat equation with additive noise (2d-SHE). In this talk, I will show that this is not really true: in fact, the stationary equation is not invariant under diffusive rescaling (as the 2d-SHE is), not even asymptotically on large scales, as the diffusion coefficient diverges (logarithmically) for large times. [Based on joint work with G. Cannizzaro and D. Erhard]

Zoom Link: <https://ucd-ie.zoom.us/j/83491228915?pwd=WWV3ZkNGNzVXdGxLRlR0dkdMYUtMZz0>

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