

THE KPZ UNIVERSALITY CLASS AND EQUATION

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The Gaussian central limit theorem says that for a wide class of stochastic systems, the bell curve (Gaussian distribution) describes the statistics for random fluctuations of important observables. In this talk I will look beyond this class of systems to a collection of probabilistic models which include random growth models, polymers, particle systems, matrices and stochastic PDEs, as well as certain asymptotic problems in combinatorics and representation theory. I will explain in what ways these different examples all fall into a single new universality class with a much richer mathematical structure than that of the Gaussian.