

Pumagrass

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Title: The KPZ Equations & Their Applications

Abstract

When people in probability talk about the KPZ equation, they could either mean the stochastic differential equation named after Kardar-Parisi-Zhang or a quantum dimension relation proposed by Knizhnik-Polyakov-Zamolodchikov. I will briefly explain the two equations, including the ill-posedness of the KPZ differential equation, the directed polymer model linked to this equation, and also the KPZ dimension relation arising from the Liouville Quantum Gravity theory.