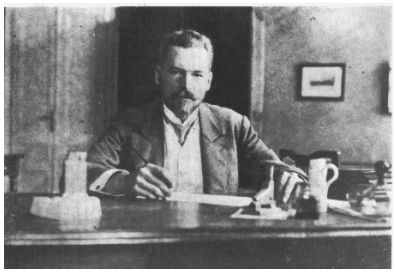

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Dynamics, fractal geometry and the exponents of the Kardar-Parisi-Zhang equation

Wednesday, 21 September 2022 09:55 (45 minutes)

The KPZ equation[1] is connected to a large number of processes, such as atomic deposition, evolution of bacterial colonies, the direct polymer model, the weakly asymmetric simple exclusion process, the totally asymmetric exclusion process, direct d-mer diffusion, fire propagation, turbulent liquid-crystal, spin dynamics, polymer deposition in semiconductors, and etching [2]. We present a short review of the field, some modern problems and perspectives. We discuss as well how a new interpretation of the fluctuation-dissipation theorem[3] allows us to give a solution for the KPZ exponents[4].

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