Institut für Physik

Theoriekolloquium

_____

Am **26. April 2018** um **14.15 Uhr** in **W2 1-143** hält

Herr Alexandre Krajenbrink (Paris)

einen Vortrag mit dem Titel

A bottom-up approach to the Kardar-Parisi-Zhang equation for interface growth: recent developments

In this talk, I will review the celebrated Kardar-Parisi-Zhang (KPZ) equation (>3400 citations for the original paper!), show that it describes a variety of systems through experimental observations (interface growth, chemical reaction fronts…). Starting from scratch, I will discuss the different techniques commonly used in the physics literature to study the KPZ equation (the mapping to the directed polymer, the replica method, the quantum delta Bose gas, the Fredholm determinant and its cumulant expansion) and show how they allowed to obtain exact solutions in 1+1 dimensions. Finally, I will describe recent developments on the large fluctuations through exact short-time solutions along with recent numerical progress.

This talk is made to be accessible to non-specialists and will tackle at the same time theoretical and computational aspects of the KPZ equation.

Interessierte sind herzlich eingeladen.

gez. Prof. Dr. Alexander Hartmann