

Institute for Applied Mathematics, Bonn University

## Oberseminar Stochastik

Thursday, 18 October 2018, 16:30

Lipschitz-Saal (LWK 1.016)

**Guillaume Barraquand**

CNRS and École Normale Supérieure

## **Exact solution of the KPZ equation on the positive reals**

The Kardar-Parisi-Zhang (KPZ) equation is a stochastic non-linear PDE, introduced in physics to model the fluctuations of rough interfaces arising in various contexts: growth of bacteria colonies, propagation of fire, deposition of material, ... . We will explain how to compute exactly the distribution of the solution of the KPZ equation on the half-line  $\mathbb{R}_+$  or the whole line  $\mathbb{R}$ , through an exactly solvable statistical mechanics model, the six-vertex model.