



UC3M-ICMAT Seminar – 2014/2015

Applied Probability and Statistics

The Self Consistent Expansion – the structure below the surface

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12h00, ICMAT, *Aula Gris I*

In this seminar various results for the Kardar–Parisi–Zhang (KPZ) equation using the Self-Consistent Expansion will be presented. We will begin with an introduction to the field of surface growth and the KPZ family of equations, with various questions of interest such as the roughness of those interfaces and the bulk structure below them. We will then describe the Self-Consistent Expansion in the context of a single degree of freedom in order to gain insight into the more interesting case of Langevin field equations such the KPZ system. We will describe results for the static and dynamic correlation functions and the physical information they carry. Some comparison with existing methods such the Dynamic Renormalization Group approach will be discussed, as well as future potential applications of the self-consistent expansion.

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