ATHENS *Pr*OBABILITY COLLOQUIUM

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Math Dept, University of Athens

"**Inhomogeneous models of last passage percolation**"

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Abstract:

One of the central models that fall into the Kardar-Parisi-Zhang (KPZ) universality class is last passage percolation with independent and identically distributed exponential weights. It can also be viewed as a much studied one-dimensional particle system called the Totally Asymmetric Simple Exclusion Process, or TASEP.

In this talk we will discuss two generalisations of this particle system, one where particles jump at different (deterministic) rates in each location and one where particles jump no longer on the line but on a Galton-Watson tree. In both generalisations the model exits the class of the exactly solvable models and it is not necessarily true that it remains in the KPZ class. If there is time, we will also discuss a connection to the PDE theory of scalar conservation laws with discontinuous coefficients.

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