Société mathématique du Luxembourg
Mathematical Society

UNIVERSITÉ DU LUXEMBOURG

RMATH | MATHEMATICS RESEARCH UNIT

Mathematics Colloquium

of the University of Luxembourg

in cooperation with the
Luxembourg Mathematical Society

Tuesday 14 June 2016, at 4 pm **Campus Kirchberg, Room B02**

Prof. Dr. Francesco Caravenna

Università degli Studi di Milano-Bicocca, Italy

Francesco Caravenna is Associate Professor of Mathematics at the University of Milano-Bicocca.

In the last ten years he has made several fundamental contributions to the study of the scaling limit of random polymers and other disordered systems. He is the recipient of the prestigious "G. Fubini Prize 2011".

Scaling and Universality in Probability

The notion of "scaling limit" refers to a situation where a family of discrete models converges (in a suitable sense) to a continuum model. A crucial feature is that the continuum model is typically "universal", i.e. it is insensitive to the fine details of the discrete models from which it arises. A classical example is provided by Brownian motion, which is the scaling limit of all random walks with finite variance.

Scaling limits and universality are key topics in probability theory and in statistical physics. In this talk, I will present a selection of results, both classical and modern, that convey the main ideas and give the flavour of the topic.

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