Mathematics and CS Seminar

Random solutions to deterministic PDEs

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We are mainly motivated by two problems: turbulence and KPZ fixed point, although the only precise results are in the direction of the first problem, and very preliminary also in that case. In both cases the mathematical question is the construction of a random solution, of 2D Euler equations or Burgers equation, with white noise distributed initial conditions, or more generally with almost white noise distributed marginals at every time, with given initial condition. A construction for 2D Euler equations will be given, as a limit of time dependent spatial point processes, precisely interacting point vortices. Several questions, including potential relevance for turbulence, will be discussed. We have moved a few similar steps for Burgers equation, but the picture is still unclear.

Thursday, April 26, 2018 03:00pm - 04:00pm
Big Seminar room Ground floor / Office Bldg West (I21.EG.101)

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