

Dimitri Faure, IDP-Orléans: A quick introduction to singular stochastic PDEs

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The same way one can randomize an ODE by adding a finite-dimensional noise term, one can randomize a PDE by adding an infinite-dimensional noise term. Stochastic PDEs are, however, most of the time not well-posed due to the presence of ill-defined non-linear terms in their expressions. To have a fruitful notion of solution for singular stochastic PDEs, one needs to add diverging counter-terms to the equations, a procedure called renormalization. In this presentation, we will give a quick introduction to all these concepts.