



DISTINGUISHED LECTURE SERIES
PRESENTS:

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SINGULAR STOCHASTIC PDES
APRIL 28-30, 2020 | 9 AM (PT)

ZOOM LINK:

[HTTPS://UCLA.ZOOM.US/J/9264073849](https://ucla.zoom.us/j/9264073849)

(Tues 4/28) Lecture 1: Geometric stochastic PDEs

We review Parisi and Wu's stochastic quantisation procedure and apply it to the non-linear sigma model as well as the Yang-Mills model. We then review a number of recent results on the resulting equations. In particular, this sheds some new light on an old controversy regarding the interpretation of path integrals.

(Wed 4/29) Lecture 2: Introduction to regularity structures 1

(Thurs 4/30) Lecture 3: Introduction to regularity structures 2

In these two lectures, I will give an introduction to the main concepts behind the theory of regularity structures which allows to give meaning to many stochastic PDEs that were previously thought to be ill-posed. This combines some of the insights and tools from (perturbative) QFT with classical PDE theory.