

Insalate di Matematica

presents

Some analytical ideas from the theories of Rough Paths and Regularity Structures

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U5 - Room 3014 and
Webex meeting

Università di Milano Bicocca

Abstract

The celebrated theories of Rough Paths (introduced by Terry Lyons in 1997) and of Regularity Structures (introduced by Martin Hairer in 2014) have been developed in order to discuss wide classes of stochastic (partial) differential equations, which typically modelize systems that are perturbed by 'rough' noise. The purpose of this presentation is not to go into the details of those theories, but rather to gently introduce some of the beautiful analytical tools they have developed: the Sewing Lemma and the Reconstruction Theorem. I will also try to present some extensions of those results which we recently proposed with D. Lee and with L. Zambotti.



Keywords:

Stochastic (partial) differential equations · Rough Paths · Regularity Structures

"Obvious" is the most dangerous word in mathematics. - Eric Temple Bell

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