AN ITO-KUNITA-WENTZELL TYPE FORMULA FOR ROUGH PATHS

Rafael A. Castrequini and Pedro J. Catuogno

(Imecc - Unicamp)

Resumo/Abstract:
We give a Itô-Kunita-Wentzell type formula and a substitution adapted to Rough path integral. This formula is a representation for composition of a rough path integral with a smooth function.

Kunita uses this representation in the context of stochastic calculus (ie, special case when rough path is a Brownian motiom) to solve partial differential equations. The ideia is to develop an Characteristic Method in this context.

Our contribution is to show this formula in a general setting (rough path), and trace a parallel between previous stochastic case.