

Seminário de sistemas dinâmicos e estocásticos

Departamento de Matemática - IMECC - UNICAMP

Weak Functional Ito Calculus and Applications

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Resumo:

In this talk, we present weak differential representations for processes adapted to a multi-dimensional Brownian motion filtration. Our approach is based on weak approximations for Wiener functionals and extends the standard pathwise functional Itô calculus. We apply the theory to derive variational inequalities for continuous adapted value processes with general terminal conditions. In particular, we provide a natural principle of smooth fit in a general non-Markovian/non-semimartingale setup. Finally, we present novel Tanaka-Meyer-type formulas for adapted processes with rough dependence w.r.t Brownian motion under p -variation regularity assumptions. The local-time representations for path-dependent functionals are then expressed in terms of suitable pathwise 2D Young integrals.

Data: Sexta-feira, 30 de maio de 2014, 14:00hs.

Local: Sala 321 do IMECC.

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