UNICAMP – IMECC
Departamento de Matemática

Seminário de Sistemas Dinâmicos e Estocásticos

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Título: Stochastic integration in Banach spaces

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Local: Sala 321 do IMECC

Resumo. Classical stochastic analysis is based to a large extent on an L^2-isometry, the Ito isometry, and for this reason it is relatively straightforward to extend much of the classical theory to the Hilbert space-valued case. In my talk, I hope to explain why this is insufficient from the point of view of stochastic partial differential equations. I will then outline recent work, done in collaboration with Veraar and Weis, which establishes a theory of stochastic integration in UMD Banach spaces (this includes the spaces L^p for $1 < p < \infty$), and show how this theory allowed us to solve the maximal regularity problem for second order parabolic stochastic partial differential equations.