BOSTON UNIVERSITY

BOSTON UNIVERSITY STATISTICS AND PROBABILITY SEMINAR SERIES

Stochastic derivatives and Partial Differential Equations.

Sebastien Darses

Department of Mathematics and Statistics,
Boston University

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111 Cummington Street, Boston

Abstract: We will introduce general notions of stochastic derivatives on stochastic processes. We will first show how the tools from Malliavin Calculus allow to study these objects. The involved techniques yield applications on various structures of the processes under study: gradient diffusions, asymptotic expansions of fractional SDE. Second, we will extend ODE on stochastic processes through these derivatives. We will focus on the relationships between these stochastic equations and various PDE, including the Navier-Stokes equation.

For directions and maps, please see *http://math.bu.edu/research/statistics/statseminar.html.*