MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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Martingale Representation Theorem, Stochastic Derivatives and Adapted Derivatives

Tuesday, March 17, 2015
10:20 a.m. - 11:10 am
Refreshments 10:00 am
C405 Wells Hall

Abstract

The well-known Clark-Ocone formula presents the integrand in the martingale representation of a Brownian functional as a stochastic derivative, under some regularity assumptions . However, the martingale representation can be reformulated in terms of an `adapted derivative' that holds for all L_2 functionals and also for other processes like a Levy process or a diffusion process (under some regularity conditions on the semi-group). In this talk, we will discuss the main ideas behind this approach.

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