An introduction to Malliavin Calculus and its applications

David Nualart (University of Kansas, USA)

Time **Tuesday, May 15, 2012 at 15:00**
Place **Campus Kirchberg, room C02**

The Malliavin calculus is a differential calculus on the Wiener space that was introduced by Paul Malliavin to provide a probabilistic proof of Hörmander's hypoellipticity theorem. The main application of Malliavin calculus is the regularity and estimation of densities of Wiener functionals. In this talk we will present an explicit formula for the density, and we will discuss its application to derive the Hölder continuity for the solutions to a class of nonlinear stochastic partial differential equations arising from a system of particles in a random media.