Unité de probabilités

Séminaires programmés

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Quer-Sardanyons - Mardi 10 mars 2009
french only

Conférence en probabilité

Mardi 10 mars 2009 11h15
MA A1 10, EPFL, Ecublens

Prof. Lluís Quer-Sardanyons

Université Autonome de Barcelone

Gaussian Density Estimates for Solutions to Quasi-Linear SPDEs

Résumé

We establish lower and upper Gaussian bounds for the solutions to the heat and wave equations driven by an additive Gaussian noise, using the techniques of Malliavin calculus and recent density estimates obtained by Nourdin and Viens. In particular, we deal with the one-dimensional stochastic heat equation in [0,1] driven by space-time white noise, and thestochastic heat and wave equations in $\mathbf{R}^d$ (d $\geq$ 1 and d $\leq$ 3, respectively) driven by a Gaussian noise which is white in time and has a general spatially homogeneous correlation. These results have been obtained in collaboration with D. Nualart (University of Kansas).

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