

On Malliavin derivatives for rough differential equations

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Time **Tuesday, June 7, 2011 at 17:00**

Place **Campus Kirchberg, room B02**

Integrability properties for linear differential equations driven by general Gaussian processes (in particular fractional Brownian motion with Hurst parameter smaller than $1/2$) are still an important open problem in rough paths analysis. This kind of equation governs for instance Malliavin derivatives, but also differentials of flows or convergence rates for numerical schemes. After recalling this general problem, we shall give some nontrivial examples of equations for which Malliavin derivatives are integrable and Gaussian bounds for the density are available, in the case of rough equations driven by fractional Brownian motion. If time allows it, we shall then give a general strategy in order to bound accurately the Malliavin derivative.