One-term Edgeworth expansions for random vectors on Gaussian fields

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Time **Thursday, March 3, 2011 at 14:00**
Place **Campus Kirchberg, room B04**

Consider a sequence of random vectors whose components are smooth functionals over a Gaussian field and which is known to converge in law to a multivariate Normal. We will quantitatively assess the distance between this sequence and the Normal at any given instance and then improve the rate of convergence. In more mathematical terms, we will derive Berry-Esséen type bounds which in many cases yield one-term Edgeworth expansions. Essentially, the results that will be presented were discovered by I. Nourdin, G. Peccati and A. Réveillac, though some generalizations and new points of view will be given. This is work in progress.