Edgeworth expansion for Euler approximation of continuous diffusion processes

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Place **Campus Kirchberg, room C17**

In this talk we present the Edgeworth expansion for the Euler approximation scheme of a continuous diffusion process driven by a Brownian motion. Our methodology is based upon a recent work of Yoshida (2012), which establishes Edgeworth expansions associated with asymptotic mixed normality using elements of Malliavin calculus. Potential applications of our theoretical results include higher order expansions for weak and strong approximation errors associated to the Euler scheme, and for studentized version of the error process.