

Maximal inequalities for stochastic convolutions

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In this talk I will present a new approach to maximal inequalities for stochastic convolutions both in discrete and continuous time. The proofs are based on extensions of the vector-valued Burkholder-Rosenthal inequalities to the non-martingale setting. Our results are new in both Hilbert spaces and 2-smooth Banach spaces. Applications to stochastic evolution equations will be discussed as well. Here we prove the existence of continuous modifications and convergence of discretization schemes in time.

The talk is based on joint work with Jan van Neerven.