



Fakultät für Mathematik und Informatik Institut für Mathematik

Seminar zur Stochastik

Mittwoch, 9. August 2017

14 Uhr c.t.

Seminarraum 225, Carl-Zeiß-Str. 3

Frau Dr. Minoo Kamrani

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„Numerically computable a posteriori bounds for SPDEs “

Abstract: The aim of this talk is the derivation of an a-posteriori error estimate for a numerical method based on an exponential scheme and spectral Galerkin methods. We obtain analytically a rigorous bound on the mean square error conditioned to the calculated data, which is numerically computable and relies on the given numerical data. Thus one can check a-posteriori the error for a given numerical computation without relying on an asymptotic result.

All estimates are only based on the numerical data and the structure of the equation, but they do not use any a-priori information of the solution, which makes the approach applicable to equations where global existence of solutions is not known. For simplicity of presentation, we develop the method here in a relatively simple situation of a stable one-dimensional Allen-Cahn equation with additive forcing.

Alle Interessenten sind herzlich eingeladen!

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