

数学与系统科学研究院
计算数学所定期学术报告

报告人: **Assistant Professor**

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报告题目:

**Numerically computable a
posteriori-bounds for Stochastic
Allen-Cahn equations**

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报告时间: 2018 年 3 月 22 日 (周四)

下午 16:00--17:00

报告地点: 数学院思源楼一层报告厅

报告摘要:

**The aim of this talk is the derivation of an
a-posteriori errorestimate 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.

欢迎大家参加！