

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Yanzhao Cao**

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报告题目:

**Backward SDE methods for
nonlinear filtering problems**

邀请人: 洪佳林 研究员

报告时间: 2016 年 1 月 7 日 (周四)

晚上 19:00~20:00

报告地点: 数学院南楼二层

208 会议室

Abstract:

A nonlinear filtering problem can be classified as an inverse problem of identifying the state of a system with a noise perturbation given noisy observations of the system. Well known numerical simulation methods include unscented Kalman filters and particle filters. In this talk, we attempt to construct efficient numerical methods using forward backward stochastic differential equations. The backward SDEs for the nonlinear filtering problems are the counter parts of Fokker-Planck equations for SDEs. In this talk we will present the derivation of such backward SDEs as well as the resulting high order numerical algorithms for nonlinear filtering problems.

欢迎大家参加！