

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Ye Zhang**

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报告题目:

**Solving ill-posed inverse problems
via the damping dynamical system
method**

邀请人: 洪佳林 研究员

报告时间: 2017 年 6 月 6 日 (周二)

下午 15:00-16:00

报告地点: 科技综合楼三层

301 小报告厅

Abstract:

In this talk, we consider the use of damping dynamical system (DDS) methods to solve general ill-posed inverse problems. Both fixed and dynamical regularization parameter selection methods are investigated. The sensitivity of the DDS with respect to noisy data is studied. It is shown that the a priori selected dynamical regularization parameter can be applied in practice by ignoring a factor, since it can be adjusted automatically during the evolution of the process. A modified symplectic scheme is proposed for the numerical solution. The numerical analysis of this scheme for the finite linear problem is given. Moreover, (global and local) optimal DDS methods are also discussed for the finite linear model. Finally, an inverse problem for a partial differential equation is solved by the DDS, to demonstrate the robustness of the developed method.

欢迎大家参加！