数学与系统科学研究院

计算数学所学术报告

报告人：Associate Prof. Xuefeng Liu

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报告题目：

Rigorous and fully computable a posteriori error bounds for eigenfunctions

邀请人： 谢和虎 研究员

报告时间：2019 年 4 月 30 日（周二）

下午 16:30-17:30

报告地点： 科技综合楼三层

305 会议室

Abstract：

Guaranteed a posteriori error estimates for eigenfunctions in both energy and L^2 norms are derived for the Laplace eigenvalue problem. The problem of ill-conditioning of eigenfunctions in case of tight clusters and multiple eigenvalues is solved by estimating the directed distance between corresponding spaces of eigenfunctions. Also, if there is time, I will give a short report on "Progress about computer-assisted proof for the stationary solution of Navier–Stokes equation"

As one of the Millennium Prize Problems, the problem of existence and smoothness of the Navier--Stokes equation draws the attention of mathematician from the world. Meanwhile, the verified computing with assistance of computers has proved to be a promising approach to investigate the solution existence to nonlinear equation systems. In this talk, I will report the latest progress about the solution verification for the stationary Navier--Stokes equation over a non-convex 3D domain.

欢迎大家参加！