数学与系统科学研究院

计算数学所学术报告

报告人：Prof. Rudolf Scherer

（ Karlsruhe Institute of Technology ）

报告题目：

The Concept of Stability in Numerical Mathematics

邀请人： 洪佳林 研究员

报告时间：2017 年 6 月 20 日（周二）

下午 16:00-17:00

报告地点： 科技综合楼三层

301 小报告厅

Abstract:

Stability is a concept that appears in various fields of numerical mathematics as well as in other parts of mathematics, and there is a common meaning for stability, roughly described by the fact that perturbations are not amplifying the result in a dangerous way. But mostly in each subfield stability is differently defined. Although the stability definition is inspired by numerical phenomena, it is also suited to purely analytical purposes. In numerical mathematics, we have to distinguish between finite algorithms, such as Gauss elimination method for solving a system of linear equations, and approximation algorithms where consistency, convergence and stability are important, such as fixpoint methods and discrete methods for differential equations. This lecture presents an overview to stability concepts in numerical mathematics.

References:

Wolfgang Hackbusch: The Concept of Stability in Numerical Mathematics (Springer 2014).

Nicolas J. Higham: Accuracy and Stability of Numerical Algorithms (SIAM, Philadelphia 2002).

欢迎大家参加！