数学与系统科学研究院

计算数学所学术报告

报告人： **Prof. Chein-Shan Liu**

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报告题目： THE LIE-GROUP METHODS ON ENGINEERING INITIAL-VALUE, BOUNDARY-VALUE PROBLEMS AND INVERSE PROBLEMS

邀请人： 余德浩研究员

报告时间： 2007 年 7 月 26 日(周四)

上午 10:00—11:00

报告地点： 科技综合楼三层 311

计算数学所报告厅

Abstract：

In this talk I will cover my past several years works by applying the Lie–group methods on engineering initial–value or boundary–value problems of ordinary dieren–tial equations (ODEs) and inverse problems of partial dierential equations (PDEs). First, the group–preserving scheme for ODEs developed since 2001 will be introduced.

Then, in 2006 the past cone structure of ODEs was constructed. Nowadays we have a complete future and past cones structure of ODEs and their Lie–group methods were available. At the same year, there rst appeared a Lie–group shooting method, which was applied on the solutions of boundary value problems of ODEs. In 2006 again, I have developed a Lie–group estimation method applied on the parameters identication of PDEs. The major applications of these Lie–group methods will be mentioned, including backward in time problems, parameters identication problems, as well as the boundary conditions identied problems.

欢迎大家参加！