数学与系统科学研究院

计算数学所学术报告

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报告题目：

Recent advances and open problems in the numerical analysis of Volterra integral equations

邀请人： 林群 院士

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下午 16:00-17:00

报告地点： 数学院南楼七层

702 教室

Abstract:

In November 1993 Professor Lin Qun invited me to visit his institute at Academia Sinica and present a series of lectures on open problems in the numerical solution of Volterra integral equations. It may be interesting to look back, almost 25 years later, at the current state of some of those open problems and, at the same time, review some of the current research in the field of Volterra integral equations. This includes so-called cordial integral equations whose underlying operator is not compact. The spectrum of such an integral operator is uncountable (in contrast to a 'classical' Volterra integral operator whose spectrum is the set {0} and which has no eigenvalues), the design and the analysis of numerical methods for cordial Volterra integral equations is much more complex and still only partly understood. I will describe, by means of mostly simple examples, some of the difficulties one encounters in the application of, e.g., collocation methods to such integral equations.

欢迎大家参加！