

数学与系统科学研究院
计算数学所博士后定期学术报告

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报告题目:

**Modified interpolatory projection
method for the second kind
Fredholm integral equations in L^1
space**

报告时间: **2013 年 11 月 27 日 (周三)**

下午 16:00~17:00

报告地点: **科技综合楼三层 311**

计算数学所报告厅

Abstract:

Many practical events in science and engineering can be described as Fredholm integral equations of the second kind. These equations are difficult to be solved analytically and analytical solutions only in some special cases can be found. Hence, numerical solutions are required. We propose a new numerical method for linear Fredholm integral equations of the second kind in L^1 space. The method is based on the approximation of the integral operator by modified interpolatory projection. Norm approximation is proved theoretically and the corresponding error estimation is given. Numerical examples are presented to illustrate the theoretical results and the efficiency of the method. Moreover, the compactness of the integral operator with weakly singular kernels from $L^1 [0,1]$ to $L^1[0,1]$ is obtained.

欢迎大家参加！