

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:

**A Parameterized Deteriorated PSS
Preconditioner and Its Optimization
for Nonsymmetric Saddle Point
Problems**

邀请人: 白中治 研究员

报告时间: 2019 年 6 月 20 日 (周四)

晚上 18:30-19:30

报告地点: 数学院南楼七层

702 教室

Abstract:

Based on the deteriorated positive definite and skew-Hermitian splitting (DPSS) preconditioner, we develop a parameterized DPSS (PDPSS) preconditioner for the nonsymmetric saddle point linear systems. The spectral properties of the PDPSS preconditioned coefficient matrix are analyzed. Moreover, an upper bound of the degree of the minimal polynomial of the PDPSS preconditioned matrix is also obtained. Inasmuch as the efficiency of the PDPSS preconditioner depends on the values of its parameters, we further derive a fast and effective method to compute the optimal parameter values of the PDPSS preconditioner. Finally, numerical examples are employed to illustrate the feasibility and the efficiency of the PDPSS preconditioner.

欢迎大家参加！