

数学与系统科学研究院
计算数学所博士后学术报告

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报告题目:

**Uzawa-type methods for solving a
class of block three-by-three saddle
point problems**

报告时间: **2016 年 11 月 23 日 (周三)**

下午 16:00-17:00

报告地点: **科技综合楼三层
311 报告厅**

Abstract:

In this talk, we consider numerical methods for solving a class of block three-by-three saddle point problems, which arises from the finite element methods for solving time-dependent Maxwell equations or a kind of quadratic program. Using a splitting of the coefficient matrix, we propose a new Uzawa iterative method for the saddle point problems. Based on the new method, we introduce a non-stationary iterative method with two variable relaxation parameters. The two variable parameters can be updated by a similar way as the evaluation of the two iteration parameters in the conjugate gradient method. We establish the convergence theory by deriving the upper bounds of the errors. Numerical experiments are presented to demonstrate the effectiveness and robustness of these new methods.

欢迎大家参加！