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：

A multigrid solver for Stokes control problems

报告时间：2016 年 10 月 26 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 present a multigrid solver for distributed optimal control problems constrained by Stokes equations. The distributed velocity tracking problem is considered with Dirichlet boundary conditions. The optimality system forms a linear system connecting the state, adjoint, and control variables. We investigate multigrid methods on staggered grids. A coarsening by a factor of three is introduced that results in a nested hierarchy of staggered grids and simplified the inter-grid transfer operators. On these grids a distributive Gauss-Seidel smoothing scheme is employed. Results of numerical experiments demonstrate the efficiency of the proposed multigrid staggered grid framework for distributed control problems with and without control-constraints.

欢迎大家参加！