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：

An adaptive finite element method for cathodic protection

邀请人：　龚伟 副研究员

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上午 **10:00-11:00**

报告地点：　科技综合楼三层

311 报告厅

Abstract:

In this talk, I shall introduce an adaptive finite element method for numerical approximations of a cathodic protection problem, which is governed by a steady-state diffusion equation with a nonlinear boundary condition. The algorithm is first shown to guarantee strong convergence of discrete solutions to the exact solution and a vanishing limit of relevant estimators. Then it is proved to be contractive for a sum of the energy error and the scaled estimator after each refinement step. This ensures a quasi-optimal convergence rate in terms of the number of elements over underlying triangulations. Two numerical examples are also presented to illustrate the optimal convergence and efficiency of the adaptive algorithm. This is a joint work with Guanglian Li from Univeristy of Bonn, Germany.

欢迎大家参加！