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 Biosensor Model

邀请人： 曹礼群研究员

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上午 10:30—11:30

报告地点： 科技综合楼三层 311

计算数学所报告厅

Abstract：

In this talk we consider a biosensor model in R^3, consisting of a coupled parabolic

differential equation with Robin boundary condition and an ordinary differential equation. Theoretical analysis is done to show the existence and uniqueness of a Holder continuous solution based on a maximum principle, weak solution arguments. The long-time convergence to a steady state is also discussed as well as the system situation. Next, a finite volume method is applied to the model to obtain an approximate solution. Drawing in part on the analytical results given earlier, we establish the existence, stability and error estimates for the approximate solution, and derive L^2 spatial norm convergence properties. Finally, some illustrative numerical simulation results are presented.

欢迎大家参加！