数学与系统科学研究院

计算数学所网络学术报告

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报告题目：

A hybrid asymptotic and augmented compact FVM for degenerate differential equation and its applications in interface and control problems

邀请人：　龚伟 副研究员

报告时间：**2021** 年 **4** 月 **15** 日（周四）

上午 **10:00-11:00**

报告工具：腾讯会议（**ID：958 626 745**）

Abstract:

An accurate and efficient numerical method has been proposed for nonlinear degenerate two points boundary value problem. The scheme combines Puiseux series asymptotic technique with augmented fourth order compact finite volume method for the problem. Error estimates in different norms are obtained. Numerical examples confirm the theoretical analysis and efficiency of the method. We also apply this method for solving degenerate interface and control problems, numerical experiments show that the method works well for solving those problems. In particular, our approach can be extended to the cases of coefficient blow-up, time-dependent problem and 2D problem.

欢迎大家参加！