

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 p-Version Two-Level Spline
Method for Semilinear Elliptic
Equations**

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计算数学所报告厅

Abstract:

A novel two level spline method is proposed for semi-linear elliptic equations, where the two level iteration is implemented between a pair of hierarchical spline spaces with different orders. The new two level method is implemented in a manner of p-adaptivity. A coarse solution is obtained from solving the model problem in the low order spline space, and the solution with higher accuracy are generated subsequently, via one step Newton or modified Newton iteration in the high order spline space. We also derive the optimal error estimations for the proposed two level schemes. At last, the illustrated numerical results confirm our error estimations and further research topics are commented.

欢迎大家参加!