

数学与系统科学研究院

计算数学所学术报告

(定期学术报告)

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报告题目:

**Generalized Normal Derivatives and  
Their Applications in DDMs with  
Nonmatching grids and DG methods**

报告时间: 2010年3月18日(周四)

下午4:00—5:00

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 introduce and study a class

**of normal-like derivative for low regularity function defined on Lipschitz domain. This normal-like derivative, which is called the generalized normal derivative, preserves the main properties of the usual normal derivative. Such generalized normal derivative will be applied to analyzing convergence of domain decomposition methods (DDMs) with nonmatching grids and discontinuous Galerkin (DG) methods for second-order elliptic problems. It will be shown that the approximations generated by these methods still possess the optimal energy error estimates, even if the underlying analytic solution has low regularity only.**

**欢迎大家参加！**