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：

Interface conditions for the simulation of wave propagation on non-uniform meshes

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报告时间：2015 年 5 月 18 日（周一）

下午 16:00-17:00

报告地点： 数学院南楼 7 层

702 会议室

Abstract：

We proposed novel interface conditions for the simulation of linear wave equations on non-uniform meshes. Based on the superposition of second order linear wave equations, we decompose the interface condition problem into two separate problems around the interface: on one of which the conventional artificial absorbing boundary conditions can be applied; for the other, the analytic solutions can be derived. The proposed interface conditions permit the two-way transmission of low frequency waves across mesh interfaces which can be supported by both coarse and fine meshes and perform a one-way absorption of high frequency waves which can only be supported by fine meshes when they travel from fine mesh regions to coarse ones. Numerical examples are presented to illustrate the efficiency of the proposed absorbing interface conditions.

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