数学与系统科学研究院

计算数学所学术报告

报告人：**Prof. Yalchin Efendiev**

（ Texas A & M, USA ）

报告题目：

A generalized multiscale model reduction technique for heterogeneous problems

邀请人： 陈志明 研究员

报告时间：2016 年 7 月 4 日（周一）

上午 **10:00-11:00**

报告地点： 数学院南楼九层

902 会议室

Abstract：

In this talk, I will discuss multiscale model reduction techniques for problems in heterogeneous media. I will describe a framework for constructing local (space-time) reduced order models for problems with multiple scales and high contrast. I will focus on a recently proposed method, Generalized Multiscale Finite Element Method, that systematically constructs local multiscale finite element basis functions on a coarse grid, which is much larger than the underlying resolved fine grid. The multiscale basis functions take into account the fine-scale information of the resolved solution space via careful choices of local snapshot spaces and local spectral decompositions. I will discuss the issues related to the construction of multiscale basis functions, main ingredients of the method, and a number of applications. These methods are intended for multiscale problems without scale separation and high contrast.

欢迎大家参加！