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：

Porous Shape Memory Alloys

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报告时间：**2013** 年 **1** 月 **8** 日（周二）

上午 **10:00~11:00**

报告地点：　　科技综合楼三层 **311**

计算数学所报告厅

Abstract:

Shape Memory Alloys are capable of changing their crystallographic structure due to changes of temperature and/or stress. Our research focuses on three points: (1) Iterative Homogenization of Porous SMAs: Development of a Multiscale Model of porous SMAs utilizing iterative homogenization and based on existing knowledge of constitutive modeling of polycrystalline SMAs. (2) DDDAS: Develop tools to turn on and off the sensors and heating unit(s), to monitor on-line data streams, to change scales based on incoming data, and to control what type of data is generated. The application must have the capability to be run and steered remotely. (3) Modeling and applications of porous SMA: Vibration isolation devices with SMA and porous SMA components for aerospace applications will be analyzed and tested. Numerical tools for modeling porous SMAs with a second viscous phase will be developed.The outcome will be a robust, three-dimensional, multiscale model of porous SMA that can be used in complicated, real-life structural analysis of SMA components using a DDDAS framework.

欢迎大家参加！