数学与系统科学研究院

计算数学所学术报告

报告题目：Control and Modeling of Vibrational and Structural Dynamics

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邀请人： 曹礼群研究员

时间：2010 年 6 月 14 日（周一）上午 10:00-11:00

地点：科技综合楼 311 报告厅

内容摘要：

The control and modeling of vibration systems such as, waves, plates and shells are difficult topics, in particularly, when those systems are with variable coefficient or nonlinear materials. We intend to provide the recent theoretical advances on control and modeling of the vibration systems through the geometric methods which have arisen from the need to cope with the following two situations: (i) The case where the dynamic systems are with variable coefficients in space; (ii) the case where the dynamic systems themselves are defined on curved surfaces. In particular, the geometric methods provide checkable conditions to exact controllability and stabilization for wave and plate systems with variable coefficients. They offer intrinsic mathematical models for shells. Then observability estimates for shells are able to be established. Furthermore this approach allows for the use of a computational energy method in the Riemannian metric so that the control analysis of the quasi-linear wave equation was carried out.

欢迎大家参加！