应用数学讲座

Научный Семинар по Прикладной Математике

Research Seminar on Applied Mathematics

应用数学报告（51）

报告人 / Докладчик / Speaker: **Prof. Gen Nakamura (Hokkaido University)**

题目 / Название / Title: **Forward and inverse analyses for elastic and viscoelastic systems**

时间 / Время / Time：**23 Jul. 2022, 14:00-14:30**

地点 / Место / Venue: **Zoom ID: 462 476 1414**
Password: 777777

摘要 / Аннотация / Abstract:

We consider anisotropic elastic systems and anisotropic viscoelastic systems. Compared with the isotropic case, the anisotropic case causes many difficulties to analyze these systems. They are mainly due to the lack of good algebraic and geometrical frameworks. As an example of difficulty, it is very hard to obtain a Carleman estimate which implies the unique continuation property (UCP) of solutions. The UCP is one of fundamental tools for studying inverse problems. Hence, we need to have that. Also, in many inverse problems, the coefficients of these system can have discontinuity and it can have a physically important meaning. Taking these into account, we have developed some forward and inverse analyses for these systems assuming that their coefficients are piecewise homogeneous or piecewise analytic. Under these frameworks, we will present some of our results for the forward and inverse problems for these systems.