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：

Multi-frequency iterative methods for the inverse medium scattering problems in elasticity

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报告时间：**2019** 年 **6** 月 **26** 日（周三）

上午 **10:00-11:00**

报告地点：　科技综合楼三层

305 会议室

Abstract:

This talk concerns the reconstruction of multiple elastic parameters (Lamé parameters and density) of an inhomogeneous medium embedded in an infinite homogeneous isotropic background in R2. The direct scattering problem is reduced to an equivalent system on a bounded domain by introducing an exact transparent boundary condition and the wellposedness of the corresponding variational problem is established. The Fréchet differentiability of the near-field scattering map is studied with respect to the elastic parameters. Based on the multi-frequency measurement data and its phaseless term, two Landweber iterative algorithms are developed for the reconstruction of the multiple elastic parameters. Numerical examples, indicating that plane pressure incident wave is a better choice, are presented to show the validity and accuracy of our methods.

欢迎大家参加！