应用数学讲座

Научный Семинар по Прикладной Математике

Research Seminar on Applied Mathematics

应用数学报告（53）

报告人 / **Докладчик** / **Speaker:** 魏婷 教授 (兰州大学)

题目 / **Название** / **Title: Identification problems of potential coefficients for time-fractional diffusion-wave equations**

时间 / **Время** / **Time：23 Jul. 2022, 15:10-15:40**

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

摘要 / **Аннотация** / **Abstract**:

In this talk, I will give some introductions to identification problems of potential coefficients for time-fractional diffusion-wave equations. Including the inverse time-dependent potential coefficient by using the boundary measured data at a point and by an additional integral condition as well as an inverse space-dependent potential coefficient by boundary measurement. The existence, uniqueness and regularity of the solution for the direct problems are provided. Based those, we try to give some uniqueness and conditional stability estimates for the inverse potential coefficient problems.

The Levenberg-Marquardt regularization method and two points gradient method are proposed to solve the inverse coefficient problems. Some numerical examples in one-dimensional case or in two-dimensional case are provided to show the effectiveness of the proposed methods.