



# 北京理工大学

## 数学与统计学院学术报告

### Gradient Estimate Problem Arising from Parameter and Geometric Irregularities

**报告人：胡跃光**（清华大学）

**时间：** 2025.09.18 下午 3:30--4:30

**地点：文萃楼E218**

**摘要：** This talk will present several results concerning the gradient estimate problem in the frequency regime. The first part of the presentation will investigate the derivation of effective acoustic boundary conditions induced by parameter irregularities. This work serves as a preliminary work for the gradient estimate problem. Subsequently, we will report on recent advancements in gradient estimation, encompassing both theoretical findings and supporting numerical experiments. This talk aims to provide a motivational foundation for the gradient estimate problem of a large class of second-order elliptic equations where the maximum principle is not applicable.

**报告人简介：** 胡跃光博士现任清华大学丘成桐数学科学中心博士后研究员。在此之前，他分别于北京理工大学和香港城市大学获得硕士和博士学位。他的研究方向包括反问题、电磁波散射理论和梯度估计问题等。目前他已在SIAM应用数学杂志(SIAP)、应用数学研究(SAPM) 等诸多知名国际期刊上发表了多篇论文。。