



反问题与成像团队学术报告

报告题目: **Determining Sources in the Bioluminescence Tomography Problem**

报告人: 龚荣芳教授, 南京航空航天大学

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摘要: In this talk, we revisit the bioluminescence tomography (BLT) problem, where one seeks to reconstruct bioluminescence signals (an internal light source) from external measurements of the Cauchy data. In the literature, BLT is extensively studied based on diffusion approximation equation, where the distribution of peak sources is to be reconstructed and no solution uniqueness is guaranteed without adequate a priori information. Motivated by the solution uniqueness issue, a new coupled model is proposed and several theoretical results are explored. Moreover, several theoretical uniqueness of the BLT problem where the light sources are in the shape of C^2 domains or polyhedral- or corona-shaped are explored.

报告人简介: 龚荣芳, 南京航空航天大学数学学院教授、博士生导师, 江苏省计算数学学会常务理事。2009年博士毕业于浙江大学, 随后进入南航数学学院工作, 期间多次赴美国、瑞典、澳大利亚、香港等地高校进行学术访问。研究方向主要包括生物光、色谱和脑成像以及 Cauchy 问题等数学物理反问题的建模、正则化理论与方法, 已在 Numer. Math.、CMAME、IP、IPI、JCM 等期刊发表论文 30 多篇。主持完成国家自然科学基金、省自然科学基金等项目 7 项, 当前主持国家自然科学基金面上和科技部高端外专项目各 1 项。