北京工业大学理学部数学学科系列报告

Well-posedness of Linearized Incompressible Ideal MHD with Closed Free Surfaces

报 告 人：郝成春 研究员

（中国科学院数学与系统科学研究院）

报告日期：2020 年 11 月 24 日（星期二）

报告时间：15:00--16:00

会 议 ID：腾讯会议 701 278 738

摘要： In this talk, I review some results of free boundary problem of incompressible ideal MHD in a bounded domain with closed free surfaces based on the joint works with Prof. T. Luo, especially the well-posedness for the linearized system. We expressed the magnetic field in terms of the velocity field and the deformation tensors in the Lagrangian coordinates, and substituted the magnetic field into the momentum equation to get an equation of the velocity in which the initial magnetic field serves only as a parameter. Then, we linearized this equation with respect to the position vector field whose time derivative was the velocity, and obtained the local-in-time well-posedness of the solution by using energy estimates of the tangential derivatives and the curl with the help of Lie derivatives and the smooth-out approximation.

主讲人简介：郝成春，研究员、博士生导师。2005 年于中国科学院数学与系统科学研究院获得博士学位并留数学研究所工作。曾获中国科学院卢嘉锡青年人才奖，主要研究方向为非线性偏微分方程，部分研究成果发表在包括 ARMA、CMP 等在内的国际重要学术期刊上，多次主持和参加国家自然科学基金项目以及中国科学院基金项目。

联系人：王术　黎勇　　联系方式：yli@bjut.edu.cn

欢 迎 参 加 ！

理学部 Faculty of Science