



北京理工大学

数学与统计学院学术报告

Uniform stability of equilibria in the inviscid limit for the Navier-Stokes-Korteweg system

报告人: 蒲学科教授, 广州大学

时 间: 2025年10月14日14: 00

地 点: 腾讯会议: 951-886-862

摘 要: This talk considers a stability result for the three-dimensional Navier-Stokes-Korteweg system uniformly in the inviscid limit. We obtain a unique global smooth solution close to the constant equilibria $(1, \mathbf{0})$, independent of the viscosity parameter ε , assuming that the potential part of the initial velocity is small independently of the viscosity parameter ε while the incompressible part of the initial velocity is small compared to ε . The proof is based on the parabolic energy estimates and dispersive properties involving the method of space time resonances.

个人简介: 蒲学科, 理学博士, 广州大学, 教授, 博士生导师。毕业于中国工程物理研究院研究生部, 获理学博士学位, 应用数学方向, 主要从事非线性偏微分方程的数学理论研究。目前已在Sci. China: Math, Comm. Math. Phys., Arch. Ration. Mech. Anal., J. Funct. Anal., SIAM J. Math. Anal., Calc. Var.等重要数学期刊上发表论文多篇, 出版专著四部, 目前已获得国家自然科学基金三项面上项目资助。