西北大学
NORTHWEST UNIVERSITY

Planar stationary solution to initial boundary value problem for compressible heat conducting gas in R^3_+

报告人：王腾 副教授（北京工业大学）

报告时间：2021 年 6 月 29 日下午 16:00-17:00

地点：线上线下同步(东学楼 0227)　(腾讯会议 ID: 600 895 059)

链接：https://meeting.tencent.com/s/NqzH9jYy9qNQ

报告摘要：In this talk, we are concerned with the large-time behavior of planar stationary solution to the compressible heat conducting gas in three dimensions under outflow or inflow condition. (1) It is shown that a corresponding planar stationary solution to outflow problem is time-asymptotically stable, provided the initial perturbation in a certain Sobolev space and the boundary strength are sufficiently small. (2) Moreover, the convergence rate of the solution toward the stationary solution is obtained, provided that the initial perturbation belongs to the weighted Sobolev space. (3) We prove the time-asymptotic stability of planar stationary solution to inflow problem in subsonic case and transonic case provided the initial perturbation in a certain Sobolev space and the boundary strength are sufficiently small. Each proof is given by deriving a-priori estimates of the perturbation from the stationary wave by using a time and space weighted energy method.

报告人简介：

王腾，博士，北京工业大学应用数理学院副教授，校聘教授，博士生导师。2015 年于中国科学院数学与系统科学研究院获博士学位。入选北京工业大学“高端人才队伍建设计划—优秀人才”。主要研究流体力学方程组解的极限行为、动力学方程以及流体—粒子耦合模型解的大时间行为等。研究成果发表在 Arch. Rational Mech. Anal.、SIAM J. Math. Anal.、Math. Models Methods Appl. Sci.、Indiana Univ. Math. J.等学术期刊。主持国家自然科学基金面上项目、国家自然科学基金青年科学基金，北京市自然科学基金面上项目。

欢迎各位老师和同学参加！

西北大学数学学院

2021 年 6 月 28 日