西北大学
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Boundary Layer and High Reynolds Number Limit in Complex Fluids

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链接： https://meeting.tencent.com/dm/tjr0GkFWABKT

报告摘要：In this talk, I first review briefly the classical Prandtl boundary layer asymptotic expansions in the study of structure of fluids with the high Reynolds number in a domain with boundaries. The vanishing viscosity limit can be regarded as a direct application of Prandtl boundary layer expansions. Next, we consider the related vanishing viscosity limit for 2D compressible viscoelastic Equations and related models with the no-slip boundary conditions on velocity. Compared with the corresponding problem of 2D compressible Navier-Stokes Equations, it shows that the deformation matrix can prevent the strong boundary from occurring. Some other complex fluids models, such as MHD equations, are also addressed.

报告人简介：

谢峰，上海交通大学教授、德国洪堡学者、上海市青年科技启明星，主要研究方向为流体力学中非线性偏微分方程解的多尺度分析和奇异极限等。特别是，Prandtl 流体边界层的稳定性和高雷诺数极限的数学理论。部分研究成果发表于 CPAM，JFA，SIMA 等本领域有影响力的学术期刊上，担任 CPAA 杂志编委。

欢迎各位老师和同学参加！

西北大学数学学院、非线性科学研究中心

2021 年 11 月 29 日