复旦大学数学科学学院
数学综合报告会

报告题目：Regularity for the Navier-Stokes Equations via Liouville Type Theorems

报告人：Professor Grigory Seregin（University of Oxford, UK）

时间：2021-05-10 星期一 16:30 – 17:30; 2021-05-12 星期三 16:30-17:30; 2021-05-17 星期一 16:30-17:30; 2020-05-19 星期三 16:30-17:30; 2020-05-24 星期一 16:30-17:30; 2020-05-26 星期三 16:30-17:30

地点：ZOOM Meeting ID: 876 1464 0705，Passcode: 753770

报告摘要：

We are going to discuss how Liouville-type theorems for the Navier-Stokes equations are related to the local regularity theory of weak solutions to those equations. The notion of mild bounded ancient solutions and even more general local energy ancient solutions are going to be introduced and discussed. The conjecture about the relationship between potential Type I blowups of solutions to the Navier-Stokes equations and Liouville type theorems for ancient solutions will be explained. We also going to prove Liouville-type theorems in a few cases like 2D-case, case with axial symmetry, and so on. In particular, we will show that there is no Type I blowups for axisymmetric conditions.

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