



## 复旦大学数学科学学院 数学综合报告会

报告题目: Turbulent weak solutions of the Euler equations

报告人: Prof. Alexander Shnirelman (Concordia University, Montreal, Canada)

时间: 2020-12-10 星期四 21:00-22:00

地点: ZOOM Id: 836 7313 8944, Passcode: 808818

### 报告摘要:

Turbulence is the property of flows of an incompressible fluid at very high Reynolds number, or, equivalently, at very small viscosity. The most prominent feature of turbulent flows is a considerable rate of the energy dissipation which is nearly independent on the viscosity provided the latter is small enough. It is natural to consider the case of infinitesimally small viscosity in the hope that there exists a meaningful limit of viscous flows as the viscosity tends to zero. In the limit the flows are described by some sort of weak solutions of the Euler equations. However, there exist a lot of examples of weak solutions (Scheffer, Shnirelman, De Lellis, Szekekyhidi, Buckmaster, Vicol, and others) whose behavior is far from what is expected from the models of turbulent flows. Those weak solutions are definitely non-physical.

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