

数学与系统科学研究院  
计算数学所网络学术报告

报告人: **Dr. Yitzhak Fouxon**

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报告题目:

**Phase transition to multifractal  
density in compressible turbulence**

邀请人: 于海军 研究员

报告时间: 2021 年 12 月 9 日 (周四)

晚上 20:00-21:00

报告工具: Zoom 会议

<https://us02web.zoom.us/j/88996187793>

## **Abstract:**

**Beyond a critical Mach number compressible turbulence enters a scaling regime where solenoidal and potential components of the flow have (approximately) identical scaling. In this regime both the density of the fluid itself and the concentration of tracer (dust) particles suspended in the flow become multifractal. We will explain the transition and consider the issue of possible difference between the active density field of the fluid (that reacts to the flow) and the passive concentration field of the tracers (that does not). The difference is far from being settled and contradictory statements in the literature will be discussed. We will also consider multifractal dimensions and their numerical measurement.**

**欢迎大家参加！**