



复旦大学数学科学学院 数学综合报告会

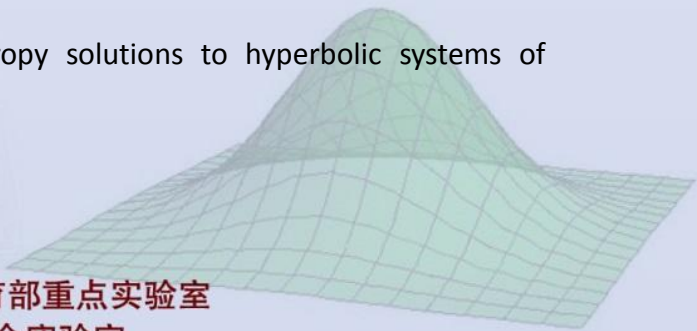
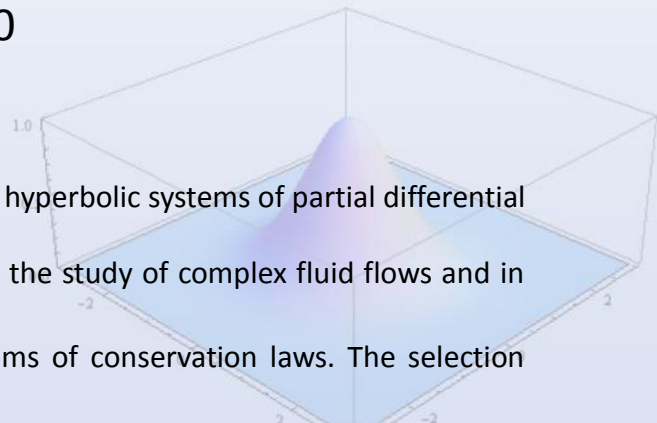
报告题目: **The mathematical theory of small-scale dependent shock waves. An overview**

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报告时间: 2017-06-16 星期五 8:30

报告地点: 光华东主楼 1801

摘要: Small-scale sensitive shock waves to nonlinear hyperbolic systems of partial differential equations often arise in continuum physics, especially in the study of complex fluid flows and in phase transition dynamics modeled by hyperbolic systems of conservation laws. The selection and dynamics of shocks may be driven by “small” viscosity and capillarity terms, which should not be neglected at the “hyperbolic” level of modeling. I will give here an overview of the analysis methods and computational algorithms which have been developed in the past twenty years (Riemann problems, Glimm method, total variation functionals, structure-preserving schemes, etc.) in order to investigate these nonclassical entropy solutions to hyperbolic systems of conservation laws. Blog: philippelefloch.org.



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