



复旦大学数学科学学院 数学综合报告会

报告题目: The characteristic initial value problem for the Einstein-Dirac system and the trapped surface formation

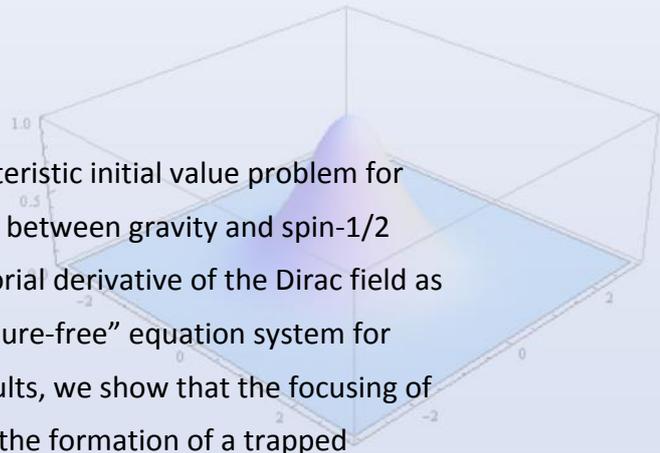
报告人: 赵鹏 (北京师范大学)

时间: 2026-03-20 星期五 10:00-11:00

地点: 光华楼东主楼 1801

报告摘要:

In this talk I will discuss the local existence of the characteristic initial value problem for the Einstein-Dirac system, which governs the interaction between gravity and spin-1/2 fields. To achieve this, we introduce the symmetric spinorial derivative of the Dirac field as the independent variables and derive a “Weyl-curvature-free” equation system for them to close the bootstrap. Based on the existence results, we show that the focusing of the gravitational wave and the Weyl spinor flux leads to the formation of a trapped surface.



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