



复旦大学数学科学学院 数学综合报告会

报告题目: The noncommutative geometry of differentiable stacks

报告人: Dr. Christian Blohmann (MPIM-Bonn)

时间: 2025-11-05 星期三 9:30-10:30

地点: 光华东主楼2001

报告摘要:

In a recent result with D. Aretz, we proved that the complete bornological convolution algebras of Lie groupoids and convolution bimodules of groupoid bibundles define a symmetric monoidal functor from the 2-category of differentiable stacks to the Morita 2-category of complete bornological algebras. (This is not quite true for C^* -algebras.) The convolution algebras can be thought of as the smooth noncommutative geometry of the differentiable stacks. I will motivate and explain all the ingredients of the theorem: differentiable stacks, 2-categories, the Morita 2-category, and bornological completion. As an application, I revisit the noncommutative torus which acquires the additional structure of a Hopf monoid.

非线性数学模型与方法教育部重点实验室
中法应用数学国际联合实验室
上海市现代应用数学重点实验室
复旦大学数学研究所