复旦大学数学科学学院
数学综合报告会

报告题目： Hilbert Modules of Complex Cohomology, Part II

报告人： Prof. Harald Upmeier (德国马尔堡大学)

时间： 2025-12-29 星期一 16:00-17:00

地点： 光华楼东主楼 1801

报告摘要：

After introducing L^2-cohomology in my first talk, the second talk will give a rigorous definition of the Hilbert modules of complex L^2-cohomology, for domains in C^n, and include the proof that one actually obtains genuine Hilbert modules with a bounded polynomial action. This requires some checking in the non-holomorphic case. In addition, we discuss the problem of constructing a reproducing kernel for this new type of Hilbert modules, which cannot be the standard sesqui-holomorphic series expansion, and solve this problem from a group theoretical perspective for any discrete series representation of a semi-simple Lie group.

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