



复旦大学数学科学学院  
**数学综合报告会**

报告题目: **From the mapping class group to codes and generalized Kummer surfaces**

报告人: **Professor Matthias Kreck**

报告时间: 2016-09-21 星期三  
15:00-16:00

报告地点: 光华楼东主楼 1801

摘要: With Volker Puppe I have shown that all codes come from 3-manifolds with involution. But explicit constructions were only known in special cases. There is a construction associating to an element in the mapping class group a 3-manifold with involution and Johannes Holke has proved that many codes of length up to 24 arise this way. To study cases where codes of length  $>24$  occur it is very useful to have a simple criterion when the code is doubly even. This can be related to the existence of a Spin structure of a certain 4-manifold, which generalizes the Kummer surface. These manifolds are of separate interest. I will report about these recent results.

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