



复旦大学数学科学学院 数学综合报告会

午间学术报告会（一百三十三）

报告题目：Topology and geometry of flagness and beltiness of simple orbifolds

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报告时间：2021-04-09 星期五 12:00-13:00

报告地点：光华东主楼 2201

摘要：

In this talk we introduce simple orbifolds, which are a generalization of simple polytopes. We generalize the notions of flag and belt in the setting of simple polytopes into the setting of simple orbifolds. To describe the topology and geometry of a simple orbifold in term of its combinatorics, we focus on simple handlebodies (simply speaking, simple orbifolds which can be obtained from simple polytopes by gluing some disjoint specific codimension-one faces). We obtain the two main results, which can be understood as Combinatorial Sphere Theorem and Combinatorial Flat Torus Theorem on simple handlebodies. As further applications, we obtain that the existence of some curvatures on manifold covers over a simple handlebody can be characterized in terms of the combinatorics of the simple handlebody. This is a joint work with Lisu Wu.

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