



WESTFÄLISCHE
WILHELMS-UNIVERSITÄT
MÜNSTER

Kolloquium des Mathematischen Instituts

Volumes: Riemannian and simplicial

Professor Michelle Bucher-Karlsson (Universität Genf)

12.05.2011, 16:30 Uhr, Hörsaal M 5

Abstract:

The simplicial volume of manifolds was introduced by Gromov in the beginning of the 80's to give a topological description of the volume of (families of) Riemannian manifolds. Applied to hyperbolic manifolds, this led Gromov to a new proof of Mostow rigidity. In fact the simplicial volume of any Riemannian manifold is proportional to its Riemannian volume by a constant depending only on the universal cover. This phenomenon is reminiscent of the Hirzebruch proportionality principle between Euler characteristic and Riemannian volume, and in fact Euler characteristic and simplicial volume share important properties such as that their positivity implies the positivity of the minimal volume. In this talk, I will review positivity results for the simplicial volume and its relations to Riemannian volume and Euler characteristic.

Tee wird ab 16:00 Uhr im Sitzungszimmer SR o des Mathematischen Instituts serviert.

Fachbereich 10
Mathematik und Informatik
<http://wwwmath.uni-muenster.de>

