

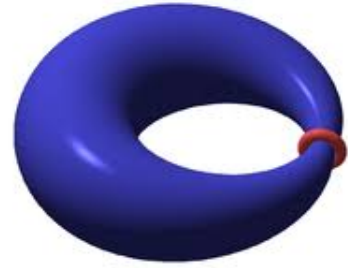
Oberseminar Geometrie

Department of Mathematics

University of Fribourg

Physics 2.52

Wednesday, 17 May 2023, 10:20



DENIS MARTI (UNIFR)

On Gromov's systolic inequality

Gromov's systolic inequality first appeared in his seminal paper "Filling Riemannian manifolds". For a closed aspherical Riemannian manifold, the inequality bounds the systole, the smallest length of a non-contractible curve, in terms of the volume of the manifold. The inequality generalizes Loewner's result for the two-dimensional torus from the 1940s, and marks a starting point for many new developments in systolic and quantitative geometry.

In this introductory talk, we first give an overview of Gromov's proof of the systolic inequality. Then we discuss some recent developments in this area.