Bern-Fribourg Graduate Seminar

a seminar for Master and PhD students

Thursday 30$^{\text{th}}$ November, 2023: 17:15 - 18:00

Room B6, Exakte Wissenschaften, Bern

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On Gromov's systolic inequality

Abstract

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.