Bern-Fribourg Graduate Seminar

a seminar for Master and PhD students

Thursday 13th March, 2025: 17:15 - 18:00

Room B7, Exakte Wissenschaften, Bern

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An introduction to the Urysohn width

Abstract

The Urysohn width was first studied in the context of topological dimension theory, and later its connection to other geometric invariants of Riemannian manifolds was investigated by Gromov. More recently, the Urysohn width has been successfully studied in the setting of metric spaces.
Roughly speaking, the Urysohn k-width measures how well a space can be approximated by a k-dimensional space by collapsing it. For example, the Urysohn 1 width of a product of Euclidean circles is comparable to the smaller of the two radii.
In this talk we give an overview of the various connections of the Urysohn to other geometric notions.