
BERN-FRIBOURG GRADUATE SEMINAR

a seminar for Master and PhD students

Thursday 20th March, 2025: 17:15 - 18:00

Room 2.52, Perolles 08, Fribourg

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Isometries of the Wasserstein space

Abstract

The theory of optimal mass transport has found a wide array of uses in the last few decades. In particular, it allows us to equip the space of measures over a metric space (X, d) with a distance function, called the Wasserstein distance. With this distance, the space of measures forms a metric space, called the Wasserstein space.

One interesting research topic concerns the isometries of the Wasserstein space. While any isometry of (X, d) gives rise to an isometry of the Wasserstein space, the question whether there are more isometries in the Wasserstein space is in general still open.

In this talk, we give an introduction to Wasserstein spaces and present a few recent results on the isometries of the Wasserstein space. The only prerequisite for this talk is a basic knowledge of measure theory.