
BERN-FRIBOURG GRADUATE SEMINAR

a seminar for Master and PhD students

Thursday 23rd April, 2026: 16:15 - 17:00

Room B5, Exakte Wissenschaften, Bern

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Hyperbolic surfaces and graphs

Abstract

The goal of this talk is to provide a brief overview of the interactions between deformation spaces of hyperbolic surfaces and certain combinatorial objects. A surface of negative Euler characteristic has a space of hyperbolic metrics, called its Teichmüller space, which itself admits a metric, called the Weil-Petersson (WP) metric. Distances between two hyperbolic metrics with respect to this WP metric are hard to compute. We will describe Brock's combinatorial approach for approximating that distance using the graph of pair-of-pants decompositions. Along the way, we will also encounter the hexagon graph and other related questions.