Bern-Fribourg Graduate Seminar

a seminar for Master and PhD students

Thursday 10th March, 2022: 17:15 - 18:00

Room B7, Exakte Wissenschaften, Bern

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Topology and combinatorics in knot theory

Abstract

Knots are objects with a double nature: according to each one's preference, they can be considered as topological or as combinatorial objects. Unsurprisingly, they can be studied with a large array of techniques, spanning from algebraic topology to quantum physics. In this talk we will introduce some basic notions of knot theory and explain how different tools can be used for constructing interesting invariants. The driving example will be the Levine-Tristram signature, a classical topological invariant for which a combinatorial construction has been recently conjectured.