Groups and manifolds: a sample of low-dimensional topology

Wednesday, December 6, 2023 9:15 AM (1 hour)

A presentation of a group can be encoded into a link, i.e., a disjoint union of knots in the three-dimensional sphere. Such link contains enough information to (de)construct a four-dimensional smooth manifold. We'll sample this algorithm and give an overview of a proof of the following result.

Theorem (Dehn): Any finitely presented group is realised as the fundamental group of a closed smooth orientable 4-manifold.

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