Bernoullis Tafelrunde

Graduate Student Seminar

Monday, 19 December 2022, 12:15-13:00
Seminarraum 05.002, Spiegelgasse 5

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Stability and Construction of hyperbolic metrics in dimension 3

Abstract
We show that if a 3-manifold M admits a metric that is almost hyperbolic in a suitable sense, then there exists a hyperbolic metric on M that is very close to the given metric. It will be explained how this stability result can be used to give a new proof of the geometrization conjecture for topologically "complicated" 3-manifolds. If time permits, we discuss, as a further consequence of the stability result, a new proof of a celebrated theorem of Thurston about the hyperbolization of mapping tori of pseudo-Anosov homeomorphisms.