Oklahoma State University

Topology Seminar

Title

On quantifying the width of 3-dimensional manifolds

Speaker:	Kristóf Huszár, Inria
Date:	Mar 22, 2022
Time:	3:00 PM
Room:	Virtual meeting

Abstract: There are various ways of defining the "width" of a 3-dimensional manifold. Well-known examples include the Heegaard genus, or, in case of hyperbolic 3-manifolds, the volume. Driven by the algorithmic study of 3-manifolds, recent years have seen a growing interest in combinatorial notions of width defined through triangulations: it has been shown that several computationally hard problems about 3-manifolds can be efficiently solved for triangulations that are sufficiently "thin" in a certain sense.
In this talk we give an overview of recent results that link these combinatorial width parameters with classical topological invariants of 3-manifolds in a quantitative way. To establish our theorems, we rely on generalized Heegaard splittings and on layered triangulations.
Joint work with Jonathan Spreer and Uli Wagner.

Contact Neil Hoffman for the seminar link.