



Mathematics Colloquium

Maximal cusps of low volume

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Abstract

We address the following question. What are all the 1-cusped hyperbolic 3-manifolds whose maximal cusps have low volume? We approach this using geometric topology, hyperbolic geometry and rigorous computer assistance. Our results lead to progress on the enumeration of low volume manifolds, results on exceptional Dehn fillings and a proof that the figure-8 knot complement and its sister are the 1-cusped manifolds with minimal maximal cusp volume.

Joint work with Robert Haraway, Robert Meyerhoff, Nathaniel Thurston and Andrew Yarmola.

Wednesday, 22 February 2017, 4pm

Smith Hall 204

Tea and refreshments will be served at 3:45pm.