

Special Number Theory Seminar

RATIONAL HOMOLOGY SPHERES AND AUTOMORPHIC FORMS

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What can number theory tell us about 3-manifold topology? A conjecture of Thurston predicts that any closed compact hyperbolic 3-manifold has a cover with non-trivial first Betti number. Cooper asked whether *any* sufficiently “big” (in a precise sense) cover of such a manifold has non-trivial first Betti number. We show that the Generalized Riemann Hypothesis predicts that the answer to Cooper’s question is no. (Joint work with Nathan Dunfield)

Tuesday, February 14
4:00 p.m.
MIT, room TBA

<http://math.mit.edu/~kedlaya/stage/>