Math 295 - Mathematics Colloquium

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Arithmetic of Dehn surgery points and Azumaya algebras

Abstract:

Associated to a finite volume hyperbolic 3-manifold is a number field and a quaternion algebra over that number field. Closed hyperbolic 3-manifolds arising from Dehn surgeries on a hyperbolic knot complement provide a family of number fields and quaternion algebras that can be viewed as “varying” over a certain curve component (the so-called canonical component) of the $SL(2,C)$-character variety of the knot group. This talk will give examples of different behavior and survey recent work on how the varying behavior can be explained using the language of Azumaya algebras over the canonical curve.

Host: Amir Mohammadi
Thursday, December 7, 2017
4:00 PM
AP&M 6402