

Topology Seminar

Craig Westerland

of The University of Minnesota will be speaking on

Moments of L-functions via the homology of braid groups.

on November 13 at 3:00 in

MIT Room Harvard Science Center SC507 at Arithmetic Statistics
seminar

In 2005, Conrey, Farmer, Keating, Rubinstein, and Snaith posed a conjecture on the asymptotics of moments of quadratic L-functions. While this conjecture originates as a question about number fields, it has a more geometric version when posed over function fields in positive characteristic. I'll talk about how one can reinterpret the central object in this conjecture in terms of the action of the Galois group of a finite field on the cohomology of braid groups with certain coefficients coming from the braid group's interpretation as the hyperelliptic mapping class group. We will see the "arithmetic factor" in this conjecture appear in the part of this cohomology that is accessible through tools of homological stability. This is joint work with Jonas Bergström, Adrian Diaconu, and Dan Petersen.

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