



Du
15
JUN.
2019

12h30
-
13h30

SÉMINAIRE BOURBAKI

Oscar RANDAL-WILLIAMS — Homology of Hurwitz spaces and the Cohen-Lenstra heuristic for function fields, after Ellenberg, Venkatesh, and Westerland

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Ellenberg, Venkatesh, and Westerland have established a weak form of the function field analogue of the Cohen–Lenstra heuristic, on the distribution of imaginary number fields with l -parts of their class groups isomorphic to a fixed group. They first explain how this follows from an asymptotic point count for certain Hurwitz schemes, and then establish this asymptotic by using the Grothendieck–Lefschetz trace formula to translate it into a difficult homological stability problem in algebraic topology, which they nonetheless solve. I will explain their argument, focussing on their remarkable homological stability theorem for Hurwitz spaces.

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