

Homological stability for Hurwitz spaces and the Cohen-Lenstra conjecture

Martin Palmer-Anghel // GeMAT seminar, IMAR // 5 July 2022

Abstract.

This will be an expository talk following the paper [EVW] (as well as the expository Bourbaki seminar notes [RW]), which (1) proves a stability phenomenon for the homology of Hurwitz spaces and (2) deduces from this purely topological statement a theorem in analytic number theory: an asymptotic version of the Cohen-Lenstra conjecture for function fields.

References.

- [EVW] J. Ellenberg, A. Venkatesh, C. Westerland, *Homological stability for Hurwitz spaces and the Cohen-Lenstra conjecture over function fields*, *Ann. Math.*, 2016.
- [RW] O. Randal-Williams, *Homology of Hurwitz spaces and the Cohen-Lenstra heuristic for function fields (after Ellenberg, Venkatesh, and Westerland)*, *Séminaire Bourbaki*, 2019.