

The homology of configuration-section spaces

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Abstract.

Configuration-section spaces parametrise fields with singularities on a given manifold, and may be viewed as an enrichment of configuration spaces by non-local data. *Hurwitz spaces* are two-dimensional examples of these, parametrising branched coverings of surfaces, and the behaviour of their homology is important for questions in analytic number theory, as shown in a celebrated result of Ellenberg, Venkatesh and Westerland on the Cohen-Lenstra conjecture.

I will talk about joint work with Ulrike Tillmann (some published and some in progress) on homological stability and the stable homology of configuration-section spaces. Time permitting, I will also explain how similar techniques may be applied to *asymptotic monopole moduli spaces*.