Aaron Landesman* (aaronlandesman@gmail.com). The geometric average size of Selmer groups over function fields.

We show that the average size of $n$-Selmer groups of elliptic curves over $\mathbb{F}_q(t)$, in a suitable large $q$ limit, is the sum of divisors of $n$. Loosely speaking, the $n$-Selmer group of an elliptic curve measures certain objects which are torsors for the $n$-torsion of the elliptic curve. We relate the question of computing the average size of the $n$-Selmer group to demonstrating homological stability for a sequence of moduli spaces of these $n$-Selmer elements, which we then approach using monodromy arguments. (Received January 26, 2020)