1154-11-1783 **Alexander D Smith*** (adsmith@math.harvard.edu). *Distributions of 2-Selmer groups in quadratic twist families.*

Given an elliptic curve over a number field obeying certain technical conditions, we prove that 100% of the quadratic twists of the curve have rank at most one. To do this, we find the distribution of 2^k-Selmer ranks in this family for $k \geq 1$. Previously, our approach relied on Kane's work on the distribution of 2-Selmer groups as a base case, and this meant that our theorems only applied to elliptic curves over $\mathbb{Q}$ with full rational 2-torsion. In this talk, we will give a generalization of Kane's work to more general classes of elliptic curves. We will especially focus on the roles of the Erdős-Kac theorem and the large sieve in the proofs of these results. (Received September 16, 2019)