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*Chebyshev's bias for products of irreducible polynomials - I*

I will briefly introduce some of my work on the generalization of "Chebyshev's bias" to some restricted integers. Motivated by some ideas for dealing with the case of integers, joint with Lucile Devin, we consider the number of products of  $k$  irreducible polynomials over a finite field among different arithmetic progressions. We unconditionally obtain asymptotic formula for the difference of the counting functions uniformly for  $k$  in certain range. Then we derive the existence of the limiting distribution for the difference function. Due to the existence of possible central zeros of the associated  $L$ -functions, the difference function may behave very differently from the case of integers.