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Ali Pirhadi* (pirhadi@okstate.edu). *Real zeros of random cosine polynomials with palindromic blocks of coefficients.*

Out of many ways to construct a dependent random function, one is to force the coefficients to be palindromic. In general, it makes sense to ask how many real zeros a random cosine polynomial (of degree n) possesses if the coefficients are identically and normally distributed, and sorted in palindromic blocks of length ℓ . In this paper, we show that the expected real zeros of such a polynomial lying in one period is asymptotically $K_\ell \cdot 2n/\sqrt{3}$ where $K_\ell > 1$. That is to say, such polynomials have slightly more expected real zeros compared to the classical case with i.i.d. coefficients. (Received June 07, 2019)