1161-60-63 Ali Pirhadi^{*} (pirhadi@okstate.edu), 938 N. Main St., Apt. A, Davidson, NC 28036. Random trigonometric polynomials with (strongly) dependent coefficient.

It is well known that a random cosine polynomial $V_n(x) = \sum_{j=0}^n a_j \cos(jx)$, $x \in (0, 2\pi)$, with the coefficients being independent and identically distributed (i.i.d.) real-valued standard Gaussian random variables (asymptotically) has $2n/\sqrt{3}$ expected real roots. On the other hand, out of many ways to construct a dependent random polynomial, one is to force *blocks* of the coefficients to be identified. We discuss four different cases of random cosine polynomials with dependent coefficients-three of which employ strongly dependent coefficients, namely the expectation of the number of real zeros is not universal any longer. We plan to discuss two examples of random cosine polynomials with contiguous blocks of coefficients as well as one with palindromic blocks, and at last random cosine polynomials with periodic blocks. (Received August 07, 2020)