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On special class of para-orthogonal polynomials

We study the zeros in connection with perturbed recurrence coefficients of polynomials satisfying a certain three-term recurrence relation. As a particular case, we consider the Askey para-orthogonal polynomials on the unit circle,

$${}_2F_1(-n, a + bi; 2a; 1 - z), \quad a, b \in \mathbb{R},$$

generalizing a recent result about the monotonicity of their zeros with respect to the parameter b . Finally, as a direct consequence of our approach, we obtain new results on monotonicity of zeros of orthogonal polynomials on the real line.

