# On some inequalities for eigenvalues of a special class of unitary matrices

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### Abstract

The purpose of this talk is twofold. First, to present new information on the historical development of some results on zeros of paraorthogonal polynomials on the unit circle. Second, to obtain some known and new interlacing properties of their zeros– as an eigenvalue problem for certain unitary matrices which are the "right" unitary analogue of Jacobi matrices– by using, exclusively, a result form matrix theory due to Arbenz and Golub [**?**].

## Keywords

Paraorthogonal polynomials on the unit circle, unitary matrices, eigenvalues, rank one perturbations.

## References

[1] Arbenz, P., Golub, G.H. (1988). On the spectral descomposition of Hermitian matrices modified by low rank perturbations with applications. *SIAM J. Matrix Anal. Appl. 9* 40–58.