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**Selcuk Koyuncu\*** ([skoyuncu@ung.edu](mailto:skoyuncu@ung.edu)), 4266 Suwanee Brook Ct, Buford, GA 30518, and **Lei Cao**. *A short note on multilevel Toeplitz matrices.*

Chien, Liu, Nakazato and Tam proved that all  $n \times n$  classical Toeplitz matrices (one-level Toeplitz matrices) are unitarily similar to complex symmetric matrices via two types of unitary matrices and the type of the unitary matrices only depends on the parity of  $n$ . In this paper we extend their result to multilevel Toeplitz matrices that any multilevel Toeplitz matrix is unitarily similar to a complex symmetric matrix. We provide a method to construct the unitary matrices that uniformly turn any multilevel Toeplitz matrix to a complex symmetric matrix by taking tensor products of these two types of unitary matrices for one-level Toeplitz matrices according to the parity of each level of the multilevel Toeplitz matrices. In addition, we introduce a class of complex symmetric matrices that are unitarily similar to some  $p$ -level Toeplitz matrices. (Received September 15, 2020)