Convergence of norms and singular values of generalized Toeplitz matrices

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We consider sequences of matrices that generalize finite sections of Toeplitz operators. Using C*-algebras and limit operators techniques we obtain results that give the convergence of the norms and the convergence of singular values. Connections with Neural Networks will also be mentioned (ongoing research).
Part of the talk is based on joint work with B. Silbermann, [1].

References

[1] H. Mascarenhas and B. Silbermann *Sequences of variable-coefficient Toeplitz Matrices and their singular values.*, Journal of Functional Analysis , 270, 4, (2016), 1479–1500.