

## Asymptotics of block Toeplitz determinants with piecewise continuous symbols

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I discuss the asymptotic behavior of block Toeplitz determinants with piecewise continuous matrix-valued symbols and that arise in the study of entanglement entropy in quantum spin chain models. Some recent results on finite Toeplitz plus Hankel matrices and finite sections of functions of Toeplitz operators will also be mentioned.

The talk is based on joint work with Estelle Basor and Torsten Ehrhardt.

- [1] E. Basor, T. Ehrhardt, J. Virtanen: Asymptotics of block Toeplitz determinants with piecewise continuous symbols, *Comm. Pure Appl. Math.*, 78 (2025), 120–160.