

**ISOMORPHIC COPIES OF  $\ell_1$  FOR  $m$ -HOMOGENEOUS  
NON-ANALYTIC BOHNENBLUST-HILLE POLYNOMIALS**

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**ABSTRACT.** We employ a classical result by Toeplitz (1913) and the seminal work by Bohnenblust and Hille on Dirichlet series (1931) to show that the set of continuous  $m$ -homogeneous non-analytic polynomials on  $c_0$  contains an isomorphic copy of  $\ell_1$ . Moreover, we can have this copy of  $\ell_1$  in such a way that every non-zero element of it fails to be analytic at precisely the same point.

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