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Universally divergent Fourier series via Landau's extremal functions

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Abstract: We prove the existence of functions $f \in A(\mathbb{D})$, the Fourier series of which being universally divergent on countable subsets of $\mathbb{T} = \partial\mathbb{D}$. The proof is based on a uniform estimate of the Taylor polynomials of Landau's extremal functions on $\mathbb{T} \setminus \{1\}$.

Keywords: Fourier series; universal functions; Landau's extremal functions

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