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A noncommutative extension of Mahler's theorem on interpolation series.

(English summary)

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Summary: “In this paper, we prove an extension of Mahler's theorem on interpolation series, a celebrated result of p -adic analysis. Mahler's original result states that a function from \mathbb{N} to \mathbb{Z} is uniformly continuous for the p -adic metric d_p if and only if it can be uniformly approximated by polynomial functions. We prove the same result for functions from a free monoid A^* to \mathbb{Z} , where d_p is replaced by the pro- p metric, the profinite metric on A^* defined by p -groups.” *Saeed Salehi*

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