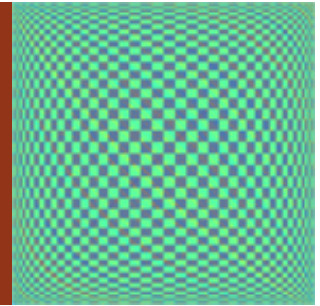




Centro de Matemática  
Universidade do Porto



## Seminar on Semigroups, Automata and Languages

### A noncommutative extension of Mahler's interpolation theorem

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**Abstract:** We prove a noncommutative generalisation 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 if and only if it can be uniformly approximated by polynomial functions. We prove an analogous result for functions from a free monoid to a free group, where the  $p$ -adic metric is replaced by the pro- $p$  metric.

This is Joint work with Christophe Reutenauer.

**Date:** Friday, 12 February 2021, 14:30  
**Place:** Online Zoom meeting



Com o apoio do projeto UIDB/00144/2020