

# GROWTH RATES OF FREQUENTLY HYPERCYCLIC HARMONIC FUNCTIONS

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The notion of frequent hypercyclicity stems from ergodic theory and has been an active area of research since it was introduced by Bayart and Grivaux (2004). Many natural continuous linear operators are frequently hypercyclic, for instance the differentiation operator on the space of entire functions.

We will begin by recalling some basic examples and the pertinent notions of frequent hypercyclicity. We then consider the partial differentiation operator acting on the space of harmonic functions on  $R^n$ . Our primary goal is to identify sharp growth rates, in terms of the  $L^2$ -norm, of harmonic functions that are frequently hypercyclic vectors for the basic partial differentiation operator. This answers a question posed by Blasco et al. (2010).

This is joint work with Eero Saksman and Hans-Olav Tylli.