

# Dimension gaps and escaping sets for maps on the real line

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## Abstract

In this talk we will be interested in investigating the transient behavior and the occurrence of dimension gaps for maps on the real line which are skew-periodic  $Z$ -extensions of expanding interval maps. Our main focus lies in the dimensional analysis of the recurrent and transient sets as well as in determining the whole dimension spectrum with respect to  $\alpha$ -escaping sets. For doing this, we introduce the concept of the fibre-induced pressure which allows us to express the occurrence and the height of a dimension gap in our setting exclusively in terms of this newly developed pressure. Moreover, we are able to show that a dimension gap occurs if and only if the corresponding system has non-zero drift behavior. If time permits, we will also present closely related new insights concerning transient one-dimensional dynamics with a reflective boundary. This is joint work with Johannes Jaerisch and Marc Kesseböhmer.