

# **Seminário CEA FEL\***

**21 de Dezembro – 14:00 - sala 6.2.33**

## **Ramsey Theory for infinite words**

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Abstract:

In combinatorics of words, a concatenation of  $k$  consecutive equal blocks is called a power of order  $k$ . We define an anti-power of order  $k$  as a concatenation of  $k$  consecutive pairwise distinct blocks of the same length. We show that every infinite word contains powers of any order or anti-powers of any order. That is, the existence of powers or anti-powers is an unavoidable regularity. We will also generalize two combinatorial constructions given by Justin and Pirillo concerning arbitrarily large monochromatic  $k$ -powers occurring in infinite words and give a new class of infinite words that do not allow infinite monochromatic factorizations.

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