The Gap Structure of a Family of Integer Subsets

André Bernardino (Joint work with Rui Pacheco and Manuel Silva)

Centro de Matemática e Aplicações, Universidade da Beira Interior
e-mail: `and_bernardino@hotmail.com`

Abstract: In this talk we intend to investigate the gap structure of a certain family of subsets of $\mathbb{N}$ which produces counterexamples both to the "density versio" and the "canonical version" of Brown's lemma. This family includes the members of all complementing pairs of $\mathbb{N}$. We will also relate the asymptotical gap structure of subsets of $\mathbb{N}$ with their density and investigate the asymptotical gap structure of monochromatic and rainbow sets with respect to arbitrary infinite colorings of $\mathbb{N}$.

Keywords: piecewise syndetic; complementing pairs; Brown's lemma; Ramsey theory.

Referências

[1] A. Bernardino, R. Pacheco and M. Silva, "The Gap Structure of a Family of Integer Subsets", *Electronic Journal of Combinatorics*, Vol. 21, Issue 01 (2014), P1.47.