

# Jindřich Zapletal

## *Coloring triangles and rectangles*

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**Abstract:** It is consistent that  $\text{ZF} + \text{DC}$  holds, the hypergraph of rectangles on a given Euclidean space has countable chromatic number, while the hypergraph of equilateral triangles on  $\mathbb{R}^2$  does not.

**Keywords:** real algebraic geometry; algebraic hypergraph; chromatic number; geometric set theory; consistency result

**AMS Subject Classification:** 03E35, 14P99, 05C15

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