

## Multicolor Ramsey number for the loose 3-path of length three

Let  $P_3^3$  be the 3-uniform hypergraph with the set of vertices  $\{a, b, c, d, e, f, g\}$  and the set of edges  $\{\{a, b, c\}, \{c, d, e\}, \{e, f, g\}\}$ . The Ramsey number  $R(P_3^3; n)$  is the smallest integer  $N$  such that any coloring of the edges of the complete 3-uniform hypergraph  $K_N^3$  on  $N$  vertices with  $n$  colors leads to a monochromatic copy of  $P_3^3$ . We show that

$$R(P_3^3; n) \leq \lambda_0 n + 7\sqrt{n},$$

for some explicit constant  $\lambda_0 = 1.97466\dots$

This is joint work with Tomasz Łuczak.