Let $P$ stand for a 3-uniform loose path of length three. Given an integer $r \geq 2$, let $R(P; r)$ be the smallest integer $n$ such that every $r$-coloring of the $\binom{n}{3}$ triples from $\{1, \ldots, n\}$ results in a monochromatic copy of $P$. It is known that $R(P; r) \geq r + 6$ and $R(P; r) = r + 6$ for $r = 2, 3$. By a subtle analysis of the Turán numbers for $P$, I will show that $R(P; r) = r + 6$ also for larger $r$. Along the way, some interesting “restricted” Turán numbers will be determined. This is joint work with Eliza Jackowska and Andrzej Ruciński.

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