

## Rainbow Turán Numbers for Paths and Forests of Stars

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For a fixed graph  $F$ , we consider the maximum number of edges in a properly edge-colored graph on  $n$  vertices which does not contain a rainbow copy of  $F$ , that is, a copy of  $F$  all of whose edges receive a different color. This maximum, denoted by  $ex^*(n; F)$ , is the rainbow Turán number of  $F$ , and its systematic study was initiated by Keevash, Mubayi, Sudakov and Verstráte [*Combinatorics, Probability and Computing* **16** (2007)]. In this talk, we look at  $ex^*(n; F)$  when  $F$  is a forest of stars, and consider bounds on  $ex^*(n; F)$  when  $F$  is a path with  $\ell$  edges, disproving a conjecture in the aforementioned paper for  $\ell = 4$ .

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