On Rainbow Turán Numbers

Daniel Johnston, Skidmore College

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 Verstrëte [Combinatorics, Probability and Computing 16 (2007)]. In this talk, we look at the rainbow Turán number for several classes of graphs.