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## INVERSE TURÁN NUMBERS

For given graphs  $G$  and  $F$ , the Turán number  $\text{ex}(G, F)$  is defined to be the maximum number of edges in an  $F$ -free subgraph of  $G$ . Foucaud, Krivelevich, and Perarnau and later independently Briggs and Cox introduced a dual version of this problem wherein for a given number  $k$ , one maximizes the number of edges in a host graph  $G$  for which  $\text{ex}(G, H) < k$ . Addressing a problem of Briggs and Cox, we determine the asymptotic value of the inverse Turán number of the paths of length 4 and 5 and provide an improved lower bound for all paths of even length. We also obtain bounds on the inverse Turán number of even cycles giving improved bounds on the leading coefficient in the case of  $C_4$ .

This is joint work with Ervin Győri, Casey Tompkins, and Oscar Zamora.