

On the inducibility of cycles

Mykhaylo Tyomkyn

Tel Aviv University

In 1975 Pippenger and Golumbic proved that any graph on n vertices admits at most $2e(n/k)^k$ induced k -cycles. This bound is larger by a multiplicative factor of $2e$ than the simple lower bound obtained by a blow-up construction. Pippenger and Golumbic conjectured that the latter lower bound is essentially tight. In this talk I will discuss the notion of inducibility of graphs and digraphs, some of the few related known results, and some of the many related open problems. I will also indicate how we were able to improve the aforementioned upper bound of Pippenger and Golumbic. Joint work with D. Hefetz.