



SEMINARIUM MATEMATYKA DYSKRETNA

wtorek, 25 listopada 2025 r., godz. 12:30, s. 612 C7

Outdegree Conditions Forcing Directed Cycles

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In 2009, Kelly, Kühn and Osthus conjectured the minimum semidegree in an oriented graph which forces containment of a directed cycle of some given length L and proved its correctness for L not divisible by 3. The Kelly-Kühn-Osthus conjecture was fully resolved in 2021 by Grzesik and Volec. In this paper we study a natural extension of the conjecture obtained by replacing minimum semidegree with minimum outdegree. In this talk a detailed proof idea regarding all but finitely many possible L will be presented as well as sharp lower bound constructions for almost all L .