Rozdział 9

Friday, 31 January 2025 17:55

Even cycle

Bondy-Simonovits (1974)

$ex(n, C_{2k}) \leq c\, n^{1+\frac{1}{k}}$ c dependent on k!

It is believed to be asymptotically correct.

Large minimum degree implies C_{2k}

$k \geq 3$, if G is large enough with $\delta(G) \geq 2k\, n^{\frac{1}{k}} \Rightarrow G$ contains C_{2k}.

Lower bound

$ex(n, C_{2k}) \geq \frac{1}{8} n^{1+\frac{1}{2k-1}}$

Proof: random graph