

Zbl 829.05055

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On the minimum size of graphs with a given bandwidth. (In English)

Bull. Inst. Comb. Appl. 6, 22-32 (1992). [1183-1278]

Given an integer $\mathcal{B} > 0$, what is the minimum number $m(n, \mathcal{B})$ of edges required for a graph of order n and bandwidth \mathcal{B} ? For $\mathcal{B} \leq \lfloor n/2 \rfloor$ the exact value of $m(n, \mathcal{B})$ has been determined. However, for $\mathcal{B} > \lfloor n/2 \rfloor$ it seems difficult to evaluate $m(n, \mathcal{B})$ and there are upper and lower bounds for it. Here we give better bounds.

Classification:

05C78 Graph labelling

68R10 Graph theory in connection with computer science

05C35 Extremal problems (graph theory)

Keywords:

optimal numbering; NP-complete; bandwidth; bounds