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*Graphs in which each  $C_4$  spans  $K_4$ .* (In English)

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This paper concerns a conjecture of the P. Erdős and A. Hajnal [Discrete Appl. Math. 25, No. 1/2, 37-52 (1989; Zbl 715.05052)] that for each graph  $H$  there exists a positive constant  $\varepsilon = \varepsilon(H)$  with the property that every graph  $G$  on  $n$  vertices that does not contain an induced  $H$  has a homogeneous set of at least  $n^\varepsilon$  vertices. It is known that  $\varepsilon = 1/3$  works for  $H$  being the 4-cycle or  $K_4 - e$ . In this paper it is proved that if  $G$  contains no induced  $C_4$  and  $K_4 - e$ , and  $n \geq 6$ , then  $G$  contains a homogeneous set of at least  $\lceil \sqrt{n} \rceil$  vertices.

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05C35 Extremal problems (graph theory)

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