Zbl 729.05025

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How to make a graph bipartite. (In English)

J. Comb. Theory, Ser. B 45, No.1, 86-98 (1988). [0095-8956]

The following theorems are proved:
(1) Every triangle-free graph with n vertices and m edges can be made bipartite by the omission of at most $\min\{(m/2)-2m(2m^2-n^3)/[n^2(n^2-2m)], m-4m^2/n^2\}$ edges.
(2) There exists a constant $\epsilon>0$ such that every triangle-free graph with n vertices can be made bipartite by the omission of at most $(1/18-\epsilon+o(1))n^2$ edges.
(3) For every forbidden graph F and for every $c>0$ there exists a constant $\epsilon=\epsilon(F,c)>0$ such that any F-free graph with n vertices and $m\geq cn^2$ edges can be made bipartite by the omission of at most $m/2-\epsilon n^2$ edges.
(4) If $f=f(n,m)$ is the maximum integer such that every triangle-free graph with n vertices and at least m edges contains an induced bipartite subgraph with at least f edges then
(i) $(1/2)m^{1/3}-1\leq f(n,m)\leq cm^{1/3}\log^2 m$ if $m<n^{3/2}$,
(ii) $4m^2/n^4\leq f(n,m)\leq c(m^3/n^4)\log^2(n^2/m)$ if $m\geq n^{3/2}$.
Several related questions, generalizations and unsolved problems are also considered.

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Classification:
05C35 Extremal problems (graph theory)
05C99 Graph theory

Keywords:
triangle-free graph; bipartite; forbidden graph