

1058-05-261

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Let G be any triangle-free graph with $\Delta \leq 3$. Staton proved the independence number of G is at least $\frac{5}{14}n$. Heckman and Thomas conjectured that Staton's result can be strengthened into a bound on the fractional chromatic number of G ; namely, $\chi_f(G) \leq \frac{14}{5}$. Recently, Hatami and Zhu proved $\chi_f(G) \leq 3 - \frac{3}{64}$. In this talk, we will present a new upper bound $\chi_f(G) \leq 3 - \frac{3}{22}$. (Received February 16, 2010)