

χ -boundedness of graphs with no cycles with k chords

Tuesday, 21 December 2021 14:00 (50 minutes)

A family \mathcal{H} of graphs is said to be χ -bounded, if there is a function $f : \mathbb{N} \rightarrow \mathbb{N}$ such that for every graph $H \in \mathcal{H}$ the chromatic number $\chi(H)$ of H is at most $f(\omega)$, where ω is the clique number of H . We show that the family of graphs that do not have a cycle with exactly k chords is χ -bounded, for every large enough k . This proves a conjecture of Aboulker and Bousquet (2015) for sufficiently large k . Joint work with Shoham Letzter and Alexey Pokrovskiy.

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