

On Hadwiger's Conjecture

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We discuss recent progress on Hadwiger's conjecture. In 1943, Hadwiger conjectured that every graph with no K_t minor is $(t - 1)$ -colorable for every $t \geq 1$. In the 1980s, Kostochka and Thomason independently proved that every graph with no K_t minor has average degree $O(t\sqrt{\log t})$ and hence is $O(t\sqrt{\log t})$ -colorable. Recently, Norin, Song and I showed that every graph with no K_t minor is $O(t(\log t)^\beta)$ -colorable for every $\beta > 1/4$, making the first improvement on the order of magnitude of the $O(t\sqrt{\log t})$ bound. Here we show that every graph with no K_t minor is $O(t(\log t)^\beta)$ -colorable for every $\beta > 0$; more specifically, they are $O(t(\log \log t)^6)$ -colorable.