1125-05-1809 **Martin Rolek*** (mrolek@knights.ucf.edu) and **Zi-Xia Song**. *Coloring graphs with forbidden minors.*

Hadwiger's conjecture from 1943 states that for every integer $t \geq 1$, every graph either can be t-colored or has a subgraph that can be contracted to the complete graph on $t+1$ vertices. Proving that graphs with no K_7 minor are 6-colorable is the first case of Hadwiger's conjecture that is still open. It is not known yet whether graphs with no K_7 minor are 7-colorable. Using a Kempe-chain argument along with the fact that an induced path on three vertices is dominating in a graph with independence number two, we first give a very short and computer-free proof of a recent result of Albar and Gonçalves and generalize it to the next step by showing that every graph with no K_t minor is $(2t-6)$-colorable, where $t \in \{7, 8, 9\}$. We then prove that graphs with no K_8^- minor are 9-colorable and graphs with no $K_8^=$ minor are 8-colorable. Finally we prove that if Mader's bound for the extremal function for K_p minors is true for all $p \geq 10$, then every graph with no K_p minor is $(2t-6)$-colorable. We believe that the Kempe-chain method we have developed in this paper is of independent interest. (Received September 19, 2016)