Authors' abstract: "Let G be a graph, $m > r \geq 1$ integers. Suppose that it has a good coloring with m colors which uses at most r colors in the neighborhood of every vertex. We investigate these so-called local r- colorings. One of our results (Theorem 2.4) states: The chromatic number of G, Chr(G)$\leq r2^r \log_2 \log_2 m$ and this value is the best possible in a certain sense. We consider infinite graphs as well."

I. Tomescu

Classification:
05C15 Chromatic theory of graphs and maps

Keywords:
strong limit cardinal; intersecting Sperner family; local r- colorings; chromatic number; infinite graphs