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Department of Applied Mathematics

VŠB – Technical University Ostrava, 17. listopadu 2172/15, Ostrava–Poruba

LIST STRONG EDGE-COLORING OF SUBCUBIC GRAPHS

BORUT LUŽAR, EDITA MÁČAJOVÁ, ROMAN SOTÁK*, DIANA ŠVECOVÁ

A strong edge-coloring of a graph is an edge-coloring in which every color class is an induced matching. In the talk, we will consider the list version of the strong edge-coloring. Dai et al. (Strong list-chromatic index of subcubic graphs, *Discrete Math.*, 341(12) (2018), 3434–3440) proved that every subcubic graph admits a strong list-chromatic index at most 11. We improve this result and give a tight upper bound for the strong list-chromatic index of subcubic graphs. In the proof, we use Combinatorial Nullstellesatz for reduction of small subgraphs and combine them to find a suitable strong edge-coloring for the shortest cycle with pendant edges.

We also discuss the relation between the strong chromatic index and the strong list-chromatic index of cubic graphs, and present an infinite class of cubic graphs where these two indices differ.