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*Star chromatic index of subcubic multigraphs*



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The *star chromatic index* of a multigraph  $G$ , denoted  $\chi'_s(G)$ , is the minimum number of colors needed to properly color the edges of  $G$  such that no path or cycle of length four is bi-colored. A multigraph  $G$  is *star  $k$ -edge-colorable* if  $\chi'_s(G) \leq k$ . Dvořák, Mohar and Šámal [Star chromatic index, *J. Graph Theory* 72 (2013), 313–326] proved that every subcubic multigraph is star 7-edge-colorable. They conjectured in the same paper that every subcubic multigraph should be star 6-edge-colorable. In this talk, we will list some results on this conjecture. Joint work with Hui Lei, Zi-Xia Song and Tao Wang.