

Equitable Choosability of Prism Graphs

Kirsten Hogenson*, Skidmore College; Dan Johnston, Trinity College; Suzanne O'Hara, Wesleyan University

A graph G is equitably k -choosable if, for every k -uniform list assignment L , G is L -colorable and each color appears on at most $\lceil |V(G)|/k \rceil$ vertices. Equitable list-coloring was introduced by Kostochka, Pelsmayer, and West in 2003 [A list analogue of equitable coloring, J. Graph Theory 44 (2003) 166–177]. They conjectured that a connected graph G with $\Delta(G) \geq 3$ is equitably $\Delta(G)$ -choosable, as long as G is not complete or $K_{d,d}$ for odd d . In this talk, we discuss a discharging proof which verifies their conjecture for the infinite family of prism graphs.

Keywords: list coloring, equitable list coloring, reducible configuration, discharging