
HEDIYEH MASHHADI AVAZ TEHRANI, Brock University

Edge-choosability of Planar Graphs

According to the List Colouring Conjecture if G is a simple graph, then $\chi'(G) = \chi'_l(G)$. In this talk, I discuss a relaxed version of this conjecture that every simple graph G is edge- $(\Delta + 1)$ -choosable as by Vizing's Theorem $\Delta(G) \leq \chi'(G) \leq \Delta(G) + 1$. I proved the conjecture holds for planar graphs with maximum degree $\Delta(G) \neq 5$ and without adjacent 4-cycles. This is an improvement to the previous result that every planar graph without intersecting 4-cycles with maximum degree $\Delta(G) \neq 5$ is edge- $(\Delta + 1)$ -choosable. This work is a joint project with Babak Farzad.