Vizing’s Independence Number Conjecture of Critical Graphs

Rong Luo
Department of Mathematical Sciences
Middle Tennessee State University
Murfreesboro, TN 37130

Yue Zhao
Department of Mathematics
University of Central Florida
Orlando, FL 32816-1364

Abstract

A graph of maximum degree $\Delta$ is $\Delta$-critical if its edge chromatic number is $\Delta + 1$ and the edge chromatic number of any proper subgraph is at most $\Delta$. In 1968, Vizing conjectured that if a graph $G$ is a $\Delta$-critical graph with $n$ vertices, then the independence number $\alpha(G) \leq n/2$. In this talk, I will talk about some recent results about this conjecture.