

Weak degeneracy of graphs

Anton Bernshteyn
Carnegie Mellon University

Abstract

Motivated by the study of greedy algorithms for graph coloring, we introduce a new graph parameter, which we call weak degeneracy. This notion formalizes a particularly simple way of "saving" colors while coloring a graph greedily. It turns out that many upper bounds on chromatic numbers follow from corresponding bounds on weak degeneracy. In this talk I will survey some of these bounds as well as state a number of open problems. This is joint work with Eugene Lee.