

On the chromatic number of digraphs

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The dichromatic number of a digraph D is the smallest k such that the vertex set of D can be partitioned into k sets each of which induces an acyclic subdigraph. We will survey some results which provide evidence that this digraph invariant is a natural extension of the notion of the chromatic number of (undirected) graphs. In particular, we will show analogs of Brooks' Theorem and Gallai's Theorem for digraphs, discuss some extremal results and planar digraphs. This is joint work with Bojan Mohar.