

Vertex coloring acyclic digraphs

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Abstract

In this talk we discuss a purely combinatorial problem that arises when trying to reduce the storage space in some genetic databases, without losing certain “relation properties”. In short, we discuss vertex colorings of digraphs where two vertices with a common ancestor receive distinct colors. This is related to strong colorings of hypergraphs but there are subtle differences.

Keywords: database, digraph, down-set, vertex coloring, hypergraph, block design.