

Povzetek:

V diplomskem delu so podane nekatere osnovne definicije iz teorije barvanja grafov in seznamskega barvanja grafov s poudarkom na zgradbi kritičnih grafov. Dokazana sta Diracov izrek in posplošitev Brooksovega izreka na seznamska barvanja. V drugem poglavju so obravnavani hipergrafi in zgradba kritičnih hipergrafov, dokazan pa je tudi posplošeni Diracov izrek za seznamska barvanja hipergrafov.

Abstract:

Basic definitions and results from graph colouring and graph list colouring are presented, with emphasis on colour-critical graphs. Generalizations of Dirac's theorem and Brooks' theorem to list colourings are proved. In the second section hypergraphs and structure of critical hypergraphs are discussed. At the end, a list version of Dirac's theorem for colour critical hypergraphs is proved.

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Ključne besede: graf, hipergraf, barvanje, seznamsko barvanje, Dirac, kritični graf.

Key words: graph, hypergraph, colouring, list colouring, Dirac, critical graphs.

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