



THESIS ASSIGNMENT

Name and Surname: Bc. Bohdan Józsa
Study programme: Computer Science (Single degree study, master II. deg., full time form)
Field of Study: Computer Science
Type of Thesis: Diploma Thesis
Language of Thesis: English
Secondary language: Slovak

Title: Edge colourings of signed cubic graphs

Annotation: Signed graphs are graphs, whose edges have assigned values from $\{-1, 1\}$. Switching at a vertex v of a graph is done by multiplying the values of all edges incident with v by -1 . Graphs that can be obtained from each other by switching are called equivalent. There are plenty of papers studying generalization of standard graph invariants to signed graphs. One of these invariants is graph colouring. The thesis should focus on edge colourings of signed cubic graphs. The study of edge colourings of signed graphs was started by Behr [Edge coloring signed graphs, Discrete Mathematics 343(2020)]. The aim of the thesis is to initiate the systematic study of 3-edge-colourability of signed cubic graphs.

Supervisor: doc. RNDr. Robert Lukot'ka, PhD.
Department: FMFI.KI - Department of Computer Science
Head of department: prof. RNDr. Martin Škoviera, PhD.
Assigned: 16.11.2022

Approved: prof. RNDr. Rastislav Kráľovič, PhD.
Guarantor of Study Programme

Student

Supervisor