

I. IDENTIFICATION DATA

Thesis name:	Dvouúrovňová optimalizace integrovaného problému rozvrhování liských zdrojů a projektu
Author's name:	Milička Pavel
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Computer Science and Engineering
Thesis reviewer:	Anna Minaeva
Reviewer's department:	Department of Control Engineering

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	ordinarily challenging
<i>Evaluation of thesis difficulty of assignment.</i>	
The assignment is of a reasonable difficulty.	
Satisfaction of assignment	fulfilled
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
Not only the assignment is satisfied, but also the additional chapter about suitability of the presented approach and extensive experimental evaluation are presented. However, the evaluation comparison of the presented approach with state-of-the-art results is not provided, arguing that the considered model size is too large for the method. The comparison could have been done on instances of smaller sizes.	
Method of conception	correct
<i>Assess that student has chosen correct approach or solution methods.</i>	
The proposed method solves the stated problem and experiment results show its efficiency.	
Technical level	A
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
The thesis are of a high technical level. It correctly uses already existing model formulations and concepts and introduce novel technically sound formulations.	
Formal and language level, scope of thesis	A
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
The thesis is written very clearly and readable. All the necessary notations are formally introduced and often follow with examples. Concerning language level, this work is excellent.	

Selection of sources, citation correctness

B

Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.

Mr. Milicka has shown that he can work with technical literature. The used sources are cited properly and the contributions are presented. The related work section considers more than enough items. However, the related work is mostly presented independently of the student results, which does not clearly distinguish the considered problem formulation and results produced in this thesis from the problem formulations and results of cited works.

Additional commentary and evaluation

Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.

This thesis looks at the problem of integration of resource-constrained project scheduling and personnel staffing from an interesting angle, applicable in real life. However, this angle is fully motivated by the bi-level procedure. Therefore, I think that it is slightly pointless to present the proof of suitability of this method in Chapter 5, showing that one-level approaches cannot reach the same results as the presented bi-level approach. I also miss the discussion of why these formulations of the integer linear programming model and lazy constraints were chosen among all the possible formulations.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation. Please present apt questions which student should answer during defense.

I enjoyed reading the work of Mr. Milicka since: it provides an overview of the work in the domain of joint resource-constrained project scheduling and personnel staffing that can be applied in multiple domains; proposes a novel view on the integration; presents non-trivial decomposition approach to solve the problem; and, finally, experimentally evaluates the proposed approach.

Questions:

1. What are alternative formulations of the model and why did you choose this formulations?
2. Are there any other formulations of lazy constraints that would be suitable for the proposed bi-level approach?

I evaluate handed thesis with classification grade **A - excellent**

Date: **Click here and enter the date.**

Signature: