

I. IDENTIFICATION DATA

Thesis name:	Code coverage analysis and test case generation
Author's name:	Kryštof Sýkora
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Computer Science and Engineering
Thesis reviewer:	Dr. Bestoun S. Ahmed Al-Beywanee
Reviewer's department:	Computer Science and Engineering

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	Choose an item.
<i>Evaluation of thesis difficulty of assignment.</i>	
The student conducts a project which is not only highly qualified for a bachelor thesis, but it is qualified for some higher level of study. The topic is significant in the software engineering field, and the student supported all the methods with empirical studies and experiments.	

Satisfaction of assignment	Choose an item.
<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>	
The thesis is much more than the assigned tasks, and the topic can be extended to some higher level to be a research topic for his future study.	

Method of conception	Choose an item.
<i>Assess that student has chosen correct approach or solution methods.</i>	
The thesis already defined a new method for testing by combining the constraint solver with statistical methods to generate test cases. The definition of the method is precise, and it has been investigated scientifically through some empirical study on reliable programs.	

Technical level	Choose an item.
<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>	
Technically, the thesis contains many challenges, and the student fulfilled all the challenges. Finding reliable case studies which are suitable for this method, using statistical methods for test generation, using Z3 constraint solver, using different code coverage tools, all these are technical challenges that are available in the thesis and the student passed through them.	

Formal and language level, scope of thesis	Choose an item.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
All the definitions, terminologies and methods are due to the standards.	

Selection of sources, citation correctness	Choose an item.
<i>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.</i>	
The student used up to date references including books, scientific papers from journals and conferences. The student uses the citation correctly due to the IEEE standards, and he used latex and BibTeX to assess the correctness of writing. He used the support of these references when needed in the text.	

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.

As mentioned above, the thesis is following a research point of view to undertake the experiments and define the new method. The student was able to achieve all the goals set in the starting of the project, and the experimental results are presenting some interesting findings. The student can take the thesis to some higher level to meet some higher requirements.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

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



Date: **29.5.2018**

Signature: