ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE

REVIEWER'S OPINION OF FINAL THESIS

I. IDENTIFICATION DATA

Thesis name:	**Parallel algorithms of microstrip antennas modeling by the method of moments.**
Author's name:	**Giniyatova Dinara.**
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Computer science.
Thesis reviewer:	Kokunin Petr Anatolevich.
Reviewer's department:	Kazan Federal University, Institute of physics, department of radio physics.

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment **challenging**

Evaluation of thesis difficulty of assignment.

To solve the problem of microstrip antennas modeling student must have the deep knowledge in electrodynamics and to know how to apply a non-trivial modern methods of applied mathematics and physics.

Satisfaction of assignment **fulfilled**

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.

Student has satisfied the assignment in all points declared in the assignment specification. As for third chapter, I would recommend more detailed and extensive description of the ways and peculiarities of implementing the parallel version of the algorithm on GPU, since the assignment in question is about parallel algorithms

Method of conception **correct**

Assess that student has chosen correct approach or solution methods.

In the first chapter the student presented a several methods for solving antennas modeling problems. The choice of the method of moments and its implementation fully correspond to the given assignment.

Technical level **C - good.**

Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.

In general, the thesis is written accurately and competently. The theoretical part of the second chapter makes a pleasant impression and testifies to the mathematical rigor of the whole work. However, the small drawback of the work is the lack of conclusions about advantages and disadvantages of the described methods in the second chapter. I also recommend to extend the third chapter adding more detail about implementation on CUDA.

Formal and language level, scope of thesis **B - very good.**

Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.

The work is well organized, formulas and symbols are used in the case, a formal style of problem description is used. Nevertheless, small spelling errors are encountered in the work.

Selection of sources, citation correctness **B - very good.**

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.

Student cites a few resources, mainly textbooks. During reading I have not found any violation of citation ethics. But for diploma thesis, I would recommend to use more specialized articles and modern electronic sources.

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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.
Please insert your commentary (voluntary evaluation).

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.

In general, the work is presented in a high-quality manner. There is a strict formal description of the problem and its solving, which indicates a profound knowledge of the student in this matter. Regarding the fact, that the thesis is presented as parallel algorithms I would suggest to extend explanation about chosen parallel technology and add more details about parallel implementation.

I evaluate handed thesis with classification grade **B - very good.**

Date: **5.6.2018** Signature: