

OPINION

by Dr. Radoslav Dakov Yoshinov - Professor, Telematics Laboratory – Bulgarian Academy of Sciences

of a dissertation for awarding the educational and scientific degree "doctor"
by: field of higher education 4. Natural sciences, mathematics and informatics
professional direction 4.6 Informatics and computer sciences
doctoral program "Informatics"

Author: Nikolay Georgiev Handzhiyski

Topic: An iterative parsing algorithm with application in the profiling of parsers

Research supervisor: Prof. Dr. Elena Petrova Somova – University of Plovdiv “Paisiy Hilendarski”

1. General presentation of the procedure and the PhD student

Pursuant to order No. RD-21-654/21.03.2024 of the Rector of "Paisiy Hilendarski" PU, I have been designated as a member of the Scientific Jury. At the first meeting held, I am determined to prepare an opinion on the procedure, for which I have received all the necessary materials on electronic media in accordance with Art. 36 (1) of the Regulations for the Development of the Academic Staff of PU "Paisiy Hilendarski". The provided materials include the following documents: a request to the Rector of the PU to disclose the procedure for the defense of a dissertation work; CV in European format; protocol from the departmental council related to reporting the readiness to open the procedure and preliminary discussion of the dissertation work; dissertation work in Bulgarian; abstract in Bulgarian and English; list of scientific publications on the topic of the dissertation; copies of scientific publications; list of noticed citations; declaration of originality and authenticity of the attached documents.

Doctoral student Nikolay Khandzhiyski obtained a master's degree in "Software Technologies" at Plovdiv University "Paisii Hilendarski" in 2012. He worked as a programmer, part-time assistant in SQL; assistant, company manager, etc. From 2018 until now, he has been working at Software Systems - Bulgaria as a programmer responsible for software support.

2. Actuality of the topic

The topic of the dissertation is related to the research, design and development of tools (machines, algorithms, models, languages and tools) that are suitable for linear data translation based on some

multi-valued context-free grammars. The relevance of research is determined by the need to develop tools with the help of which to generate a large number of context-free grammars.

3. Knowing the problem

Evidence of knowledge of the researched problem is the number of used literary 191 sources. In addition to this, significant scientific results can be added, which have been published in six scientific publications.

4. Research methodology

In solving the set tasks, a mixed methodology was applied, used both to confirm the research and for the purpose of exploratory research. Thanks to this, the doctoral student achieved not only the set goal, by solving the formulated tasks, but also obtained relevant significant scientific and scientifically applied results.

5. Characterization and evaluation of the dissertation work and contributions

The presented dissertation has a total volume of 174 pages and contains an introduction, four chapters, conclusions, contributions and appendices, and used literature.

The specified contributions in the dissertation work can be classified as contributions of a scientific and scientific-applied nature. The conducted research of the doctoral student confirms some known facts, while another part of them enriches the scientific field with new knowledge.

6. Assessment of the PhD student's publications and personal contributions

On the topic of the dissertation research, Nikolay Handzhiyski has presented six scientific publications in English, all indexed in the world-famous databases - 4 in Web of Science and 5 in Scopus. According to the minimum national requirements for acquiring the educational and scientific degree "Doctor" in professional direction 4.6. "Informatics and computer science", defined in art. 2b, para. 2 and 3 of Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), respectively Art. 24, para. 1 of the Regulations for its implementation, 30 points are required for the indicators from Group D. for the dissertation form The total sum of points for the indicators from Group D, according to the presented publications, is equal to 168 points, which exceeds the required minimum of 30 points. All publications are co-authored with the supervisor, but the PhD student is the first author on all publications. Information on one citation of one of the publications is presented.

From the attached declaration of originality of results, as well as from the presented publications on the topic of the dissertation research, it can be judged that the described results are the

personal work of the doctoral student. The plagiarism check report generated by the Strike Plagiarism system conclusively proves that the results obtained and described in the dissertation are original.

7. Abstract

The presented abstract is in sufficient volume and faithfully reflects the essence of the dissertation research and is in accordance with the requirements of the LDASRB and the Rules for its Implementation. The abstract is presented both in Bulgarian and in English.

Conclusion

The results presented in the dissertation show that the candidate has in-depth knowledge of the specialty and proven abilities to conduct independent scientific research. The dissertation corresponds to the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Rules for its Implementation, as well as the Rules for the Specific Conditions for Acquiring Scientific Degrees and Holding Academic Positions at PU "Paisiy Hilendarski". All this gives me sufficient reason to give a positive assessment of the dissertation work and I propose to the respected Scientific Jury to award the educational and scientific degree "doctor" to Nikolay Georgiev Handzhiyski in the field of higher education: 4. "Natural sciences, mathematics and informatics", professional direction 4.6 "Informatics and computer sciences", doctoral program "Informatics".

10.05.2024

Scientific Jury member:
Professor Radoslav Yoshinov