

OPINION

by Prof. Lyubka Atanasova Doukovska, PhD, DSc

from the Institute of Information and Communication Technologies,
at the Bulgarian Academy of Sciences,
on the Thesis for awarding educational and scientific degree PhD,
under the Scientific Field 5. Technical Sciences,
the Professional Area 5.3. Communication and Computer Techniques,
the Scientific PhD Specialty "Computer Systems and Technologies"

Author of the PhD Thesis: Aleksander Janusz Kacprzyk

PhD Thesis Title: Design of a software system for managers' remuneration using Generalized Nets

This Opinion was prepared on the basis of Order No. 71-A from May 20, 2020, by the Rector of the University "Prof. Assen Zlatarov" - Burgas, Prof. Magdalena Mitkova, as well as per Art. 44 of the Rules on the Terms and Conditions for Acquisition of Academic Degrees and Occupation of Academic Positions at the University "Prof. Assen Zlatarov"-Burgas, in connection with a decision of the Faculty Council of the Faculty of Technical Sciences, with protocol No. 4 form March 12, 2020 and report No. 953 from March 16, 2020 by Assoc. Prof. Yovka Dimcheva Nikolova - Dean of the Faculty of Technical Sciences. In accordance with Order No. 71-A from May 20, 2020, I have been appointed as a member of the Scientific Jury regarding the PhD thesis of the student on self-study Aleksander Janusz Kacprzyk for awarding the educational and scientific degree "Doctor of Philosophy" (PhD), with scientific supervisors - Corr. Member Prof. Krassimir Todorov Atanassov, DSc, DSc and Prof. Bratoy Georgiev Koprinarov, PhD.

Aleksander Janusz Kacprzyk was born on August 1, 1972 in Warsaw, Poland. He graduated with a Master's Degree in Finance and Banking from the Warsaw School of Economics, Warsaw, Poland and in Management from University of Minnesota, USA in

1996 and in Business Administration from Massachusetts Institute of Technology - Sloan School of Management, Cambridge, MA, USA in 2001, respectively.

As a member of the Scientific Jury I have received:

- 1. Order No. 71-A from May 20, 2020, by the Rector of the University "Prof. Assen Zlatarov" Burgas, Prof. Magdalena Mitkova.
 - 2. Dissertation for the educational and scientific degree PhD.
 - 3. Abstract of the dissertation for the educational and scientific degree PhD.
 - 4. Autobiography of Aleksander Janusz Kacprzyk.
 - 5. Copies of the publications included in the PhD thesis.

In order to form the final evaluation of the PhD thesis, the requirements of the Development of Academic Staff Act in the Republic of Bulgaria are implemented the specific requirements in the Act's Institutional Regulation shall be taken into consideration, where the respective norms are:

- 1. Pursuant to Art. 6 (3) of the *Development of Academic Staff Act in the Republic of Bulgaria*, PhD thesis should contain scientific or scientific-applied results, which represent an original contribution in science. The PhD thesis must indicate that the candidate has indepth theoretical knowledge of the relevant specialty and ability for independent research.
- 2. According to Art. 27 (2) of the specific requirements in the Act's Institutional Regulation, PhD thesis should be presented in a form and volume corresponding to the specific requirements of the primary unit. The PhD thesis should contain: a cover page; content; introduction; exhibition; conclusion a summary of the results obtained with a declaration of originality; bibliography.

The PhD thesis consists of 152 pages. Its structure includes introduction, four chapters, the PhD thesis scientific contributions, a request for originality, a list of 124 cited sources.

The aim of the PhD thesis is to "propose a new model for designing a software system for remuneration of management staff in different types of organizations, private and public, smaller and larger, with one or more owners, using the generalized networks".

I find that the aim and the problems formulated reflect the topicality and significance of the presented dissertation work, as well as the possibility to apply the results obtained in the practice.

The submitted list of publications contains eight papers. As a co-author, I will not review an article:

Atanassova V., L. Doukovska, A. Kazprzyk, E. Sotirova, I. Radeva, P. Vassilev - InterCriteria Analysis of The Global Competitiveness Report: form Efficiency-to-innovation-driven economies, Journal of Multiple-Valued Logic and Soft Computing, (Editor-in-Chief Dan A. Simovici), ISSN 1542-3980 (print), ISSN 1542-3999 (online), vol. 31, № 5-6, pp. 469-494, 2018 (IF 0.667).

All articles are in English and have been published in peer-reviewed scientific journals and papers in international scientific forums.

The data presented give me a reason to conclude that the research is self-contained and has been given the necessary publicity among the international scientific community, both at reputable scientific forums abroad and in the country.

I accept that the contributions so formulated could be considered to have scientific and common application. This separation would allow detailing the results obtained in accordance with the specificity of their significance. Such defined contributions can be defined as enriching the existing scientific field with new knowledge.

The PhD thesis abstract is 32 pages long. It reflects in detail the nature and content of the dissertation, including the purpose, subject, object and tasks of the dissertation research and the ways of their realization.

In order to form the final evaluation of the PhD thesis, the requirements of the *Development of Academic Staff Act in the Republic of Bulgaria* and its Implementation Rules are to be taken into account, so I should note that all remarks made by me during the preliminary discussion of the PhD thesis are reflected in its final version.

In conclusion, I accept that the requirements of the Development of Academic Staff Act in the Republic of Bulgaria and the specific requirements in the Act's Institutional Regulation are fulfilled. After my introduction to the dissertation thesis and its publications, an analysis of their significance and the contributions they make, I give my positive assessment and I recommend to the Honorable Jury to award the educational and scientific degree PhD to Aleksander Janusz Kacprzyk in the Scientific PhD Specialty "Computer Systems and Technologies".

June 14, 2020

Signature:

/Prof. Lyubka Doukoyska, PhD, DSc/

Чл.2 от **ЗЗЛД**