



OPINION

from

Prof. Maria Petkova Hristova, PhD

on the materials submitted for participation in the competition
for occupying the academic position "**Associate professor**"

in the field of higher education 4. Natural sciences, mathematics and informatics,
professional field **4.6. Informatics and Computer Science**, specialty "**Informatics**",
for the needs of the "Informatics and Mathematics" Department, Faculty of Economics at
Trakia University - Stara Zagora

1. General presentation of the procedure and the candidate

With order of the rector of Trakia University - Stara Zagora, No. 1361/ 12.05.2022, I have been appointed as a member of a scientific jury according to the announced in State Gazette No. 24/ 25.03.2022 competition for the academic position "Associate professor" in professional field 4.6. "Informatics and Computer Sciences", scientific specialty "Informatics", for the needs of the Faculty of Economics, department "Informatics and Mathematics", at Trakia University - Stara Zagora. The opinion was prepared according to the decision of the first meeting of the scientific jury on 06.06.2022 and is in accordance with the requirements of Art. 2, para. 5 of the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria (PPZRASRB) and art. 83 of the Regulations for the Development of the Academic Staff at Trakia University - Stara Zagora (PRASrU).

The only candidate in the competition is Emil Georgiev Delinov, PhD, who submitted documents for participation within the required period. Dr. Emil Delinov graduated from Plovdiv University "Paisiy Hilendarski" in 1984 with a major in "Mathematics" and a specialization in "Informatics". In 2016, he defended his dissertation at the Institute of Mathematics and Informatics, BAS, on the topic "Informatics approaches to increase efficiency in the development of projects in the field of education" and was awarded the educational and scientific degree "doctor" in informatics. Acquired qualifications at Stone Computers, CERN - Geneva, SAP - Bulgaria, UNSS, COMPUTER EDUCATION CENTER "SZAMOK" - Budapest, etc.

In the period 1987-1990, he was an assistant and senior assistant in "Mathematical Assurance of Computing Machines and Systems" at the Higher People's Military Transport School "Todor Kableshev" Sofia. He was a research associate II degree at the Technological Institute of Chemical Engineering - Haskovo. From 2001 to 2018 he was a principal assistant and associate professor of informatics, IT in economics and data analysis at the International Slavic Institute, Sofia. He has worked as a programmer and system administrator in the computing center of SMK - Haskovo. He has extensive experience in the field of information security of banking and financial technologies. He has held a number of management positions such as head of ICT, head of the "Information Technologies" department, director and manager of companies, etc.

2. General characteristics of the materials presented by the candidate

For participation in the competition for the academic position "Assistant Professor" Emil Delinov has presented one monograph, two co-authored books, 3 articles (one independent) and 3 reports (one independent) at scientific conferences. The applied scientific works were not used for the acquisition of the educational and scientific degree "doctor".

The candidate's production is thematically in the competitive professional direction 4.6 Informatics and computer sciences, as well as in the field of mathematics and informatics training.

According to PPZRASRB, Dr. Delinov presented an independent monograph "Optimization of infrastructure with cloud technologies" in the scientific field of the competition. The monographic work is in accordance with ZRASRB, Additional provisions, item 10. (new - SG No. 30 of 2018). The paper is well structured in an introduction, 3 chapters, a conclusion and a bibliography of 172 sources. It consists of 118 pages. The monograph was reviewed by two qualified persons and was published by Paisii Hilendarski University Publishing House, Plovdiv, 2022. The paper presents the main concepts in the field of cloud technologies, as well as the advantages, possible negatives and risks of their use. Based on his many years of experience in the field of information and communication technologies, the author gives examples of approaches to the optimization of ICT infrastructure using cloud technologies. In the conclusion, the main points of contribution in the monographic work are summarized. The graphic part of the study makes a very good impression - over 40 figures and tables. The language of the monograph is at a high professional level.

Papers 2-6 are articles in journals ("Automatics, computing technology and automated systems", "Mathematics and informatics", "Pedagogy") and reports at conferences in Bulgaria, and are referenced and indexed in world-famous databases with scientific information. There are official notes for some of these indicating they have been presented at a conference, they have been peer-reviewed, and they are in print in the IEEE Xplore Digital Library, which is indexed in the Scopus database, and one paper published in an edited collective volume of an international conference is presented "Education and research in the information society". Papers 8 and 9 are chapters of books with a total volume of 121 pages, which are publications of the "Paisiy Hilendarski" University Publishing House, Plovdiv and are in the field of mathematics and physics education. In them, the candidate is author of 3 chapters and co-author of 3 chapters. There are no separation protocols between co-authors.

No plagiarism has been found and proven according to the law in the works submitted for evaluation.

Regarding the fulfillment of the minimum national requirements for the groups of indicators for the academic position of "associate professor" in PN 4.6 "Informatics and computer sciences" (according to Art. 2b paras. 2 and 3 of the ZRASRB and Art. 24, para. 4).

- For group "A", Dr. Delinov has submitted a certificate for ONS "doctor" - 50 items.
- For group "B", the candidate submitted a habilitation thesis/monograph - 100 points.
- For group "G" (publications) from the Reference of the candidate for the fulfillment of the minimum national requirements for holding the academic position "associate professor" in the field of higher education 4. "Natural sciences, mathematics and informatics" it is evident that he has presented 5 publications in publications that are referenced and indexed in world-famous databases with scientific information (Web of Science and Scopus), as well as 7 chapters in 2 books.

From the list of publications and books I take into consideration the following:

- Article 1 is published in a journal that is indexed in Zentralblatt MATH - 6 points by coefficient 3 - total 18 points.
- Article 2 - there is a reference from Trakia University - Stara Zagora, that the article was published in a journal (Mathematics and Informatics, 2012), indexed in Web of Science, 12 points by coefficient 3 - 36 points.

- Article 3 - there is an official note that the article has been accepted for publication in the 9/2022 issue of the scientific journal "Pedagogika", which is indexed in WoS (Quartile 4) - 12 points by coefficient 3 - a total of 36 points.
- Papers 4, 5 - there is a service note submitted by the Electronics, Electrical Engineering and Communications Union (19/05/2022) that the papers were "presented at a conference ('Electronica 2022') and peer-reviewed, and in print at the IEEE Digital Library Xplore, which is indexed in the Scopus database'. We accept 6 items for each publication and with a factor of 3 - a total of 36 items for both publications.
- Paper 6 - published 4 chapters of a book (2 independent and 2 co-authored) - I accept 3 chapters of 15 points - 45 points.
- Paper 7 - published 3 chapters of a book (one independent chapter and 2 co-authored), I accept 2 chapters of 15 points each - 30.

The total number of points for indicator group "G" is 201 points.

- For group of indicators "D" (citations), the candidate submitted 12 citations, all made by Bulgarian authors.
 - from a reference of Trakia University, 2 publications of Delinov are cited in two publications in WoS and Scopus (citation 1 in the magazine Pedagogika, 2014, 2 items by coefficient 4 - 8 items; and citation 3 in Mathematics and Informatics, 2015, 2 points by coefficient 4 – 8 points);
 - citation 2 is in Pliska Studia Mathematica, Institute of Mathematics and Informatics, BAS, (citation in MathSciNet – 4 items);
 - citations 4-12 are made in the same paper, which has an attached service note that it was "presented at a conference ("Electronica 2022"), peer-reviewed, and in print in the IEEE Xplore Digital Library, which is indexed in the database Scopus data" – 9 citations in 1 vol. by a factor of 4 – a total of 36 points.

I accept 56 pts (out of the required 50 pts) for this group, given the fact that for a large number of citations there is an attached official note that the citing publication is in print.

3. General assessment of the candidate's academic and teaching work

The teaching and methodical activity of Dr. Emil Delinov is expressed in:

- leading classes on "Informatics", "Information Technologies in the Economy", "Data Analysis", "Banking Information Technologies", etc.;
- co-authorship of 3 textbooks on "Programming" for students and 3 books on mathematics;
 - scientific guidance of pupils and students developing projects in the field of informatics and information technologies
 - supervision and review of theses of pupils and students.

4. Main Contributions

Based on the works of Dr. Delinov and the author's reference, several main directions of the candidate's scientific interests and contributions can be distinguished: research of new information technologies and their possible applications in various areas of the economy, education, health care, central and local government; analysis, design and redesign with optimization of technological and business processes; specifying needs for software solutions, designing, modeling, developing, implementing and supporting software products and systems; methodological studies and proposals for improving teaching, assessment and the effectiveness of the learning process (mainly in mathematics, informatics and information technology), etc.

I assess the contributions as scientifically applied, applied and educational-methodical.

5. Critical notes and recommendations

1. The candidate could have more carefully and precisely prepared his set of documents for participation in the competition for associate professor, thereby presenting his research and teaching activities more fully. There is unrepresented scientific production outside the ONS "Doctor" procedure that could be part of this competition. Dr. Delinov could, for example, submit for participation in the competition: the three textbooks on programming for students, in which he is a co-author; other publications not submitted for participation in the previous procedure; a list of research and educational projects in which he has undoubtedly participated and led; evidence of implemented developments in practice; memberships in creative and professional organizations, evidence of expert and consulting activities, and other creative performances, etc.

2. In his future work, I would recommend that Dr. Delinov strengthen his publication activity in the field of PN 4.6 Informatics and computer sciences in publications referenced and indexed in world-renowned databases with scientific information, incl. with publications abroad, which are currently lacking.

CONCLUSION

Based on the submitted materials and (parallel to this) other creative works of the candidate not submitted for review in this competition, but present in the appendices to the documents, an extended list of 42 of his publications, books and textbooks, I come to the conclusion that the scientific production, educational/teaching and research activities of the only candidate in the competition, Dr. Emil Delinov, satisfy the requirements of:

- The Law on the Development of the Academic Staff in the Republic of Bulgaria,
- The regulations for the implementation of the RSASR, the minimum national requirements (albeit at the borderline) for occupying the academic position "Associate professor",
- The regulations for the development of the academic staff of the University of Stara Zagora,
- the requirements for occupying the academic position "Associate professor" in the Faculty of Economics at Trakia University on the basis of Art. 2b, para. 5 of ZRASRB,
- and taking into account the other data and facts declared in the applicant's resume, proof of his multifaceted creative activity in the field of PN 4.6

I give my **positive assessment** and propose to the scientific jury to vote on a proposal to the Faculty Council of the Faculty of Economics at Trakia University - Stara Zagora to elect Emil Georgiev Delinov, PhD to the academic position of "Associate professor" in professional field 4.6 Informatics and computer sciences.

28.07.2022

The opinion was prepared by:.....
/prof. Maria Hristova/

