

OPINION

by Prof. Dr. Todorka Atanasova Glushkova
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of the materials submitted for participation in a competition
for the academic position of "**professor "**
of the Plovdiv University "Paisii Hilendarski"

in: field of higher education 4. Natural Sciences Mathematics and Informatics
Professional Field 4.6. Informatics and Computer Science (Artificial Intelligence)

In the competition for "professor", announced in the State Gazette, issue 98 of 19.11.2024. and on the website of Plovdiv University "Paisii Hilendarski" for the needs of the Department of "Computer Informatics" at the Faculty of Mathematics and Informatics, Assoc. Prof. Dr. **Stanka Ivanova Hadzhikoleva** from the Department of "Computer Informatics", Faculty of Mathematics and Informatics of PU "Paisii Hilendarski" participates as a candidate.

1. General presentation of the procedure and the candidate

By order No. PD-22-443 of 18.02.2025 of the Rector of Plovdiv University "Paisiy Hilendarski" (PU), I have been appointed as a member of the scientific jury of a competition for the academic position of "professor" at PU in the field of higher education 4. Natural Sciences Mathematics and Informatics, professional field 4.6. Informatics and Computer Sciences (Artificial Intelligence), announced for the needs of the Department of "Computer Informatics" at the Faculty of Mathematics and Informatics.

The only candidate who submitted documents for participation in the announced competition is Associate Professor Dr. Stanka Ivanova Hadzhikoleva from the Department of Computer Informatics, Faculty of Mathematics and Informatics of Plovdiv University "P. Hilendarski". The set of materials presented by Assoc. Prof. Dr. Stanka Hadzhikoleva on paper and electronic media is in accordance with all the requirements of the Regulations for the Development of the Academic Staff of Plovdiv University.

The candidate Assoc. Prof. Dr. Stanka Hadzhikoleva has applied a total of 31 scientific papers for participation in the competition, not used for acquiring the educational and scientific degree "doctor" and occupying the academic position "associate professor", of which:

- 20 articles in scientific journals and periodicals, 17 of which are refereed in Scopus/WoS, including 7 with IF and 10 with SJR;
- 10 publications in proceedings of international and national conferences, of which 8 are refereed in Scopus/WoS
- 1 textbook

Documents (in the form of official notes) for participation in scientific research projects from the National Academy of Sciences; Medical Academy and Plovdiv University are also presented.

Also presented are: lists of scientific works (all and for participation in the competition); list of scientific articles co-authored with students; list of noted citations; references for compliance with the minimum national requirements and additional requirements of the FMI at the Plovdiv University, according to Art. 76.(1) of the Regulations for the development of the academic staff of the University of Plovdiv; annotations of the materials for participation in the competition in Bulgarian and English and self-assessment of the contributions; documents proving work experience, academic work and scientific research activity; copies of scientific works.

All publications are entirely on the topic of the competition. The materials are precisely described and well arranged.

Brief biographical data of the candidate . Assoc. Prof. Dr. Stanka Ivanova Hadzhikoleva was born on April 12, 1977. In 2000, she graduated as a master at the Paisii Hilendarski University in the Faculty of Mathematics and Informatics with the specialties "Mathematics, specialization Informatics" and "Teacher of Mathematics and Informatics". In 2013, at the same university, she acquired the educational and scientific degree "doctor" in the field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.6. Informatics and Computer Science after a successfully defended dissertation on the topic "Modeling and Management of Quality Assessment Methods (with Application in the Education System)".

The candidate began her work experience in 2001 as a teacher of informatics, information technologies and computer accounting at the Private Vocational High School "Business and Banking"

– Plovdiv. From 2001 to 2011 he worked in various software companies as a software specialist and managing partner. In parallel, from 2002 he started working as a lecturer at the University of Plovdiv, initially as an assistant and chief assistant. From 2016 to the present he holds the academic position of “associate professor” in the professional field 4.6. Informatics and computer sciences. The rich professional experience in education and real business unequivocally shows the high motivation of the candidate and her desire to share and pass on her knowledge and experience.

2. General characteristics of the candidate's activities

The scientific and applied research activities of Assoc. Prof. Dr. Stanka Ivanova Hadzhikoleva are mainly focused on the development of artificial intelligence models and their application in education, energy, textile production, bioinformatics, etc. These scientific interests are also related to the implementation of specific goals and objectives in a total of 17 international, national and university research or educational projects, implemented with the participation of the candidate. The candidate's work with PhD students, two of whom have already successfully defended their dissertations, makes a very good impression.

In Group B, 11 publications are presented, referenced in global scientific databases for a total of 279 points with a minimum requirement of 100 points, including one with an impact factor (Q1) and 2 with SJR. Of the 14 publications included in Group D indicators, 6 articles have an impact factor and quartiles Q1 and Q2, and 3 of the articles have SJR. Thus, in Group D indicators, Assoc. Prof. Stanka Hadzhikoleva has 612 points with a minimum requirement of 200 points. Assoc. Prof. Stanka Hadzhikoleva participates in the competition with a total of 76 citations of her publications in articles by other authors, published in publications, referenced and indexed in Web of Science or Scopus. In Group D indicators, the candidate has presented evidence of citations for a total of 608 points, and in Group E indicators – 190 points with a minimum requirement of 100 points. The total number of points achieved by Assoc. Prof. Dr. Stanka Hadzhikoleva has 1739 points, with a requirement of 550 points, i.e. exceeds by more than 3 times the minimum national requirements for holding the academic position of "professor" in professional field 4.6. "Informatics and Computer Sciences".

The submitted scientific papers, evidence of academic work and materials for participation in the competition also meet the additional requirements for occupying the academic position of "professor" at the Faculty of Mathematics and Informatics of the Plovdiv University.

The scientific papers submitted for participation in the competition contain original applied and applied results. The main contributions of Assoc. Prof. Dr. Hadzhikoleva are grouped into several main areas such as: modeling and prototyping of a cloud application for automated test creation and

management using generative artificial intelligence; methodology for developing educational games using ChatGPT; methodology for training with AI that stimulates the development of high-order thinking skills; models for quality assurance and evaluation of training, etc.

All this gives me reason to define Assoc. Prof. Dr. Stanka Hadzhikoleva as a successful and competent researcher and accomplished scientist with recognized scientific contributions in the fields of informatics, artificial intelligence and modeling.

From the presented materials it is evident that Assoc. Prof. Dr. Stanka Hadzhikoleva has a diverse range of educational and teaching activities. In the period 2016 – 2025 she lectures at the University of Plovdiv in the following basic academic disciplines: Software Technologies; Introduction to Cloud Technologies; Mobile Applications; Databases; Intelligent Data Analysis with Orange; Graph Databases with Neo4J; Modeling of Educational Courses in Moodle, Discrete Structures, Modeling and Management of Business Processes, etc. In addition, Assoc. Prof. Hadzhikoleva has lectured in bachelor's and master's programs and in other higher education institutions in the country: AMTI Plovdiv; Technical University – Plovdiv Branch; Thracian University- Stara Zagora; Burgas Free University, Higher School of Agribusiness and Regional Development – Plovdiv, etc. In her teaching work, Assoc. Prof. Hadzhikoleva demonstrates high professionalism and responsibility. She enjoys authority among her colleagues and the students she teaches. She is a co-author of 1 textbook for student training.

Assoc. Prof. Hadzhikoleva works with outstanding students and attracts them to conduct research work. She supervises students in the process of preparing diploma theses, and for the period 2016 - 2024, 12 students successfully defended their bachelor's degree under her supervision; she is the scientific supervisor of seven doctoral students. Two doctoral students have successfully defended their dissertations (Vladimir Tsvetkov, Zhelyazko Terziyski), three are in the process of studying (Ivan Ivanov, Petko Iliev, Maria Gorgorova), two doctoral students have been dismissed and are in the process of preparing a dissertation (Assen Uzunov, Emil Yonchev); she is the mentor of one young scientist - Maria Borisova, during her participation in the National Program "Young Scientists and Postdoctoral Fellows - 2". Assoc. Prof. Dr. Stanka Hadzhikoleva successfully combines her scientific and practical experience with her administrative and teaching work, which gives me reason to highly appreciate the candidate's educational and pedagogical experience.

3. Critical remarks and recommendations

I haven't critical remarks. Although complex studies are the work of larger scientific teams, I believe that it would be useful and significant for the scientific community for the candidate to present his work in more independent publications.

CONCLUSION

The candidate for the announced competition, Assoc. Prof. Dr. Stanka Ivanova Hadzhikoleva, meets the requirements of the Law on Academic Staff of the Republic of Bulgaria, the Regulations for the Implementation of the Law on Academic Staff of the University of Plovdiv "Paisii Hilendarski" and the additional faculty requirements of the Faculty of Mathematics and Informatics at the University of Plovdiv "Paisiy Hilendarski" under the Regulations for the development of the academic staff of the University of Plovdiv for holding the academic position of "professor".

The above is a reason for me to confidently give a positive conclusion for the election of Assoc. Prof. Dr. Stanka Ivanova Hadzhikoleva as Professor of " Artificial Intelligence", professional field: "4.6 Informatics and Computer Sciences", field of higher education "4. Natural Sciences, Mathematics and Informatics".

I propose to the esteemed scientific jury to unanimously propose to the esteemed Faculty Council of the Faculty of Mathematics and Informatics at the "Paisiy Hilendarski" University of Plovdiv to elect Assoc. Prof. Dr. Stanka Ivanova Hadzhikoleva for the academic position of "professor".

04.04. 2025

Prepared the opinion :
(signature)

Prof. Dr. Todorka Glushkova