

STATEMENT

Concerning scientific works submitted for participation in competition for awarding the academic position „Associate professor“ in the area of high education 5. „Technical sciences“ in the professional field 5.3. „Communication and computer technology“

course „Synthesis and analysis of algorithms “,

announced in State Gazette. 31/19.04.2022

candidate Ch. Assist. Prof. Neli Ananieva Arabadzhieva-Kalcheva, PhD



Member of scientific jury: Assoc. Prof. Rosen Stefanov Radkov,
Dept. „Software and Internet Technologies“ of TU Varna

1. Overall characteristic of the candidate's research and applied activity.

Ch. Asst. Prof. Neli Ananieva Arabadzhieva-Kalcheva graduated from the "Computer Engineering" specialty at the Technical University - Varna in 1990 and obtained the Master's degree. In 2014, she also obtained a master's degree in Education Pedagogy at "Konstantin Preslavski" Shumen University. The candidate receives the Education-Scientific Degree "Doctor" in the scientific specialty "Automated information processing systems" in the month of October, 2020.

In her professional career, Neli Arabadzhieva-Kalcheva held various positions in private companies, all of which were related to information technology. In addition, she held the following positions: informatics and information technology teacher - 4 years; part-time assistant in computer technologies, system analysis, synthesis and analysis of algorithms at TU Varna - 3 years; director of a Private Vocational High School for Engineering, Technology and Computer Science - a total of 1 year and 7 months; deputy director of the ASD in the same high school – 1 month; and from November 2014 to November 2018 she was an assistant in the Department of Computer Science at Varna University of Technology. From March 2021, she is the Ch. assistant professor in the SIT department.

The candidate Dr. Eng. Neli Arabadzhieva-Kalcheva has submitted scientific papers for participation in the competition as follows:

Scientific papers:	Quantity/Points
Dissertation work for the award of the ESD "Doctor", developed and defended in the professional field of the competition - 5.3	50 points
11 scientific works published in peer-reviewed publications and indexed in world-renowned scientific information databases, equivalent to a monographic (habilitation) work, which meet the requirements of group B indicators (minimum 100 points), in particular indicator B.4	Total 295 points
Publications other than the above (group of indicators D, minimum 200 points):	Total 222.33 points
- publications published in peer-reviewed and indexed publications in world-renowned scientific information databases Scopus and Web of Science (indicator G.7)	3psc 53.33 points
- publications in edited collective volumes in Bulgaria and abroad as well as scientific publications in non-refereed journals with scientific review in Bulgaria (indicator G.8)	12psc 169 points

Group of indicators D (minimum 50 points):	Total 120 points
• Citations or reviews in specialized scientific publications indexed in world-renowned databases with scientific information or in monographs and collective volumes (indicator D.12)	2 pcs, cited 7 times and 3 times respectively 100 points
• Citations or reviews in non-refereed peer-reviewed journals (indicator D.14)	5 pcs, cited 2 times, 4 times, 1 time, 2 times and 1 time respectively 20 points
Group of indicators J (minimum 30 points) - the schedule of lectures for the last three years:	Total 234 points

Of the 26 scientific works presented, seven are independent (one according to indicator B.4 and 6 according to indicator G.8), eight have two authors (in five of them the first author), eight have three authors (in three of them the first author), two with four authors (one of them is first author) and one with five authors. It can be seen that in 15 of the works the candidate is the sole or first author.

Dr. Eng. Neli Arabadzhieva-Kalcheva has participated in 6 research projects, with a scientific, applied and educational direction.

Attached is a reference for membership in the Union of Automation and Informatics, as well as in the Union of Mathematicians in Bulgaria. Dr. Eng. Neli Arabadzhieva-Kalcheva was the head of 24 programming teams, organizer of an online university programming Olympiad, organizer of a national online programming competition, etc. The attached documents are convincing evidence of the candidate's scientific and professional competence.

In conclusion: the candidate covers the requirements of all groups of indicators for academic position „Associate professor“ in the higher education "Technical Sciences".

2. Assessment of the pedagogical preparation and activity of the candidate.

Dr. Eng. Neli Arabadzhieva-Kalcheva has more than 15 years of experience as a part-time assistant and head, assistant in the departments of CSE and SIT of TU-Varna. She is currently leading classes in 2 disciplines at the "Bachelor" OCS of CIT and CST specialties, 1 discipline in the "Software Engineering" OCS "Master" specialty.

In my capacity as a colleague from the SIT department, I have direct observations of the candidate's pedagogical activity and I can firmly state that she does an excellent job with the duties of a lecturer and teacher.

In conclusion: the candidate has academic and pedagogical preparation for the administrative position of Associate Professor.

3. Main scientific and scientific-applied contributions.

From the summaries of the scientific works presented, it can be concluded that the contributions are predominantly of a scientific and applied nature and can be classified into three main directions:

- Mathematical methods and algorithms used in engineering sciences;
- New models of teaching by applying scientific approaches in training students from technical universities;
- Synthesis and analysis of methods and algorithms used in computer science.

Given that the applicant is predominantly the sole author or lead author of a publication, it can be argued that the above contributions reflect the applicant's significant contribution to the results achieved.

4. Significance of contributions for science and practice.

On the basis of the submitted materials for the competition, it is established that the candidate has fulfilled the quantitative indicators of the criteria for the administrative position "Associate Professor" in the higher education "Technical Sciences".

The leading author position in a large part of the publications, as well as the independent publications, prove the candidate's contribution to the realization of the research and the obtained results. Contributions in scientific works are related to solving important scientific and applied tasks. The significance of the contributions can be indirectly judged by the presented citations of the candidate, which are relatively few - 20 in total.

5. Critical remarks and recommendations.

The documentation for participation in the competition is well designed and I have no objections. My recommendation to the candidate is to strengthen his publication activity in publications that are refereed and indexed in world-renowned databases falling in Q1, Q2, Q3 or Q4, as well as to expand his research activity by training PhD students.

CONCLUSION

According to the submitted documents by Dr. Eng. Neli Arabadzhieva-Kalcheva for the competition for the academic position "Associate Professor" comply with the Law for Development of the Academic Staff of the Republic of Bulgaria, the Regulations for its application and the Regulations for the terms and conditions for the occupation of academic positions at the Technical University - Varna for the administrative position "Associate professor".

Given the above, I propose Ch. Asst. Prof. Neli Ananieva Arabadzhieva-Kalcheva to be elected as "Associate Professor" in professional field 5.3 "Communication and computer technology", academic course "Synthesis and analysis of algorithms", at the department "Software and Internet Technologies" at the "Faculty in Computer Science and Automation" of the Technical University - Varna.

Date 20.08.2022 г.
TU-Varna

Member of scientific jury:
/ Assoc. Prof. Rosen ~~Stefanov~~ Radkov, PhD /

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