

## **S T A T E M E N T**

in a competition for the academic position "**Associate Professor**"  
professional field **5.3 Communication and computer technology**  
academic course "**Synthesis and Analysis of Algorithms**"

announced in SG no. 31 of 19.04.2022

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

Member of the scientific jury: **Assoc. Prof. Eng. Kamelia Simeonova Nikolova, PhD**

### **1. General characteristics of the candidate's research and scientific-applied activity.**

**Ch. Assist. Prof. Neli Ananieva Arabadzhieva - Kalcheva** participates in the competition for the academic position "Associate Professor" with 26 scientific publications. I accept all scientific works for review. Instead of a monograph, to fulfill the minimum national requirements for group of indicators "B", the applicant provides a list of 11 scientific publications that are referenced and indexed in world-renowned scientific information databases. The points formed for this indicator are 295. There is one author's individual publication in this group, and in a total of 8 of them the candidate is the first author.

In order to fulfill the minimum national requirements under group "D" indicators, the applicant provided a list of 15 scientific publications. Indicator D.7 includes 3 scientific publications, and indicator D.8 - 12 scientific publications, of which 6 are author's individual publications. The formed points for indicator D.7 are 53.33, and those for indicator D.8 – 162.34. Regarding indicator D.8, publication D.8.11, I do not accept the 13.33 points specified by the candidate, because I do not find a justification and protocol certifying the distribution of points between the authors. In my opinion, for the mentioned publication, the correct number of points are  $20/3 = 6.67$ . Thus, the calculated total number of points formed by indicator "D" is 215.67, which again exceeds the required minimum of 200 points.

To group "D", the candidate has provided evidence for two of the indicators. For indicator D.12, a list of 10 citations of two scientific publications is provided resulting in 100 points. The first publication D.12.1 has found wide popularity and has 7 citations in SCOPUS and 4 in non-refereed peer-reviewed journals, forming 8 points in indicator D.14. Ten of the eleven citations are from foreign authors. The remaining points for indicator D.14 are formed based on 6 citations of 4 scientific publications. The total number of points for indicator "D" is 120, with a minimum requirement of 50 points.

The candidate has also provided a certificate of participation in 6 research projects, she is a manager for one of the projects. Scientific research activity is relevant to the field of the announced competition and reflects the active research of the candidate, especially in the last 3 years. The results of scientific research activity of Ch. Assist. Prof. Neli Ananieva Arabadzhieva - Kalcheva meet and even exceed the national quantitative indicators for occupying the academic position "Associate Professor" in all groups of indicators.

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

Based on the materials so provided, it can be seen that Ch. Assist. Prof. Neli Ananieva Arabadzhieva - Kalcheva has extremely rich pedagogical experience and long-term work with both pupils and students.

According to the submitted application package for the educational activity in the last 3 years, the candidate had taught a total of 1554.3 hours as following: 192 hours of lectures, 60 hours of seminar exercises, 840 hours of laboratory exercises, 132 hours of course work/course project/learning practice and 348.30 hours of non-classroom learning activity.

Ch. Assist. Prof. Neli Kalcheva led laboratory exercises in the following academic course "WEB Applications", "Synthesis and Analysis of Algorithms" and "Scripting Languages" from

the curriculum of the scientific specialty "Software and Internet Technologies", Faculty of Computing and Automation, bachelor degree, professional field 5.3. Communication and computer technology. She also led lectures and laboratory exercises in other academic courses related to programming languages from the curricula of other specialties offered by TU-Varna. She has successfully managed 5 graduates and a large number of course projects.

The candidate participated in the development of two curricula for the disciplines "Synthesis and Analysis of Algorithms" for the Bachelor's degree program and "Cybersecurity Risk Management" for the Master's degree program.

In order to fulfill the minimum requirements under indicator group "Ж", the necessary references have been provided and the accumulated points significantly exceed the minimum required 30.

### **3. Main scientific and scientific-applied contributions.**

The scientific-research and scientific-applied contributions from the presented scientific works are classified by the candidate in three main fields: mathematical methods and algorithms used in engineering sciences [B.4.1 - B.4.11]; new teaching models by applying scientific approaches in training students from technical universities [B.4.6, B.4.8, B.4.11]; synthesis and analysis of methods and algorithms used in computer science [B.4.1, B.4.3, B.4.4, B.4.7, B.4.9, B.4.10, D.7.1-D.7.3, D.8.1-D.8.9, D.8.12]. I accept the candidate's contributions and agree with their formulation. Based on the materials provided, the contributions can be classified as scientific-applied and applied. The personal participation of Ch. Assoc. Prof. Neli Kalcheva in these contributions can be judged by the number of author's individual publications (7 in total) and by the fact that she is the first author in a large number of the scientific works.

The total number of citations with which the candidate participated in the competition is 20, of which 10 are in Scopus.

### **4. Significance of contributions to science and practice.**

All citations, without one, are from foreign author groups and are mostly from the last 2 years. This gives me reason to believe that the publication activity is at a high scientific level and provides solutions to current issues. The achieved results have gained sufficient popularity and significance for the scientific research community in the field in Bulgaria and abroad. The evaluation of the submitted works of the candidate shows that the quantitative indicators and the criteria of TU-Varna for holding the academic position "Associate Professor" have been met, and in some of the indicators they have been exceeded.

### **5. Critical notes and recommendations.**

I have no critical remarks on the nature and content of the scientific works presented in the competition. They are written and laid out carefully and with high competence. I have a minor remark regarding the formatting of the presented materials, which in no way detracts from the work of Ch. Assist. Prof. Neli Ananieva Arabadzhieva – Kalcheva: complete publishing data for publication D.8.5 from the list of indicator D.8, as well as for the citations of publication C.4.3 under indicator D.14, are missing.

My recommendation to Ch. Assist. Prof. Neli Ananieva Arabadzhieva – Kalcheva is to continue with the same activity her scientific research and to expand the scope of the scientific forums to international specialized conferences and/or scientific journals indexed in SCOPUS and/or WoS and with impact factor or impact rank.

## **CONCLUSION**

Having in mind the above, I believe that the author's scientific works have all the merits and meet the national requirements of the law for development of the academic staff in the Republic of Bulgaria and the requirements of the Technical University of Varna for occupying the academic position "Associate Professor".

Based on the acquaintance with the presented scientific works, their importance, the scientific-applied and applied contributions contained in them, I find it reasonable **to propose Ch. Assist. Prof. Neli Ananieva Arabadzhieva-Kalcheva, PhD to take the academic position "Associate Professor"** in the professional field 5.3. Communication for the academic course "Synthesis and Analysis of Algorithms".

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Member of the scientific jury

/Assoc. Prof. Kamelia Nikolova, PhD/