



STATEMENT

by assoc. prof. Nikolay Stoimenov, Ph.D.
Institute of Information and Communication Technologies,
Bulgarian Academy of Sciences

ABOUT

**documents and scientific papers presented in a competition for the academic position
“Associate Professor”**

Field of higher education: 5. Technical sciences;

Professional field: 5.3 Communication and Computer Engineering;

Specialty: Communication networks and systems,

published in the State Gazette No 45/28.05.2021 for the needs of the department
„Distributed information and communication systems“

in the Institute of Information and Communication Technologies – BAS

with the only candidate in the competition: Chief Assist. Prof. Vladimir Ivanov, Ph.D.

By order No 178/16.07.2021 of the Director of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences (IICT-BAS), I am included in the Scientific Jury of the competition for the academic position “Associate Professor” published in the State Gazette No 45/28.05.2021. Materials for the competition are submitted by the only candidate Vladimir Ivanov, Ph.D., Chief assist. prof. at IICT-BAS. As a member of the Scientific Jury, I have received the following materials from the candidate, meeting the requirements of IICT-BAS:

1. Application for participation in the competition;
2. European CV;
3. Copy of diploma for the educational and scientific degree “Ph.D.”;
4. Medical certificate (for candidates who are not employees of the BAS);
5. Certificate of criminal record (for candidates who are not employees of the BAS);
6. Certificate of internship in the specialty;
7. List of scientific publications for participation in the competition;
8. List of citations;
9. Summaries of scientific publications for participation in the competition - in Bulgarian and English;
10. Copies of scientific publications for participation in the competition;
11. Information on fulfillment of the minimum requirements of IICT;
12. Information on the original scientific and scientific-applied contributions;
13. Declaration that there is no legally proven plagiarism in scientific works.

General characteristics of the presented materials.

The presented CV shows that the candidate received the educational and scientific degree "Ph.D." at the Institute of Information and Communication Technologies - BAS, in the period 2011-2015. The degree obtained is in the professional field 5.3. Communication and Computer Engineering, specialty Communication Networks and Systems, fully meets the topic of this competition. The reference for the fulfillment of the requirements of IICT-BAS for the occupation of the academic position "Associate Professor" shows that the requirements for all groups of indicators are fulfilled and have been exceeded. The review of the submitted materials by the candidate Ivanov, Ph.D. shows that they have been prepared following the Act for Academic Growth, the Regulations for its implementation, as well as the Rules for the specific conditions for the acquisition of academic degree and occupation of academic positions at IICT-BAS.

Evaluation of the scientific work.

To participate in the competition, the candidate has submitted a habilitation thesis – a monograph, scientific papers, referenced and indexed in world-famous databases of scientific information, as well as in non-refereed journals with a scientific review or reviewed collective volumes.

The monographic work with title "Transport system and process management" consists of 210 pages including text, figures, tables, and appendices. The material is grouped into four chapters. The material meets the topic of this competition.

The candidate presented 23 scientific publications corresponding to group D indicators. Issued in the period 2012-2020, of which 7 are in indicator G7, referred to in world-famous databases, in editions with SJR. In this indicator, the candidate has 2 independent publications, in 1 he is the first author, in 3 of them, he is in 2nd place. The publications corresponding to indicator G8 are 16. Of these, 10 are independent, in 5 the candidate is the first author.

The scientific papers presented by the candidate do not repeat the publications for obtaining the doctoral degree.

In general, the presented works contain scientific and applied results related to transport systems and the development of technical means for measuring, identifying, and simulating the dynamics of transport flows, technologies for traffic management, road traffic, FPGA based systems in transport. These results show that the candidate has in-depth knowledge, high competence, and experience in the field of the competition.

Evaluation of the citations.

In the presented list of citations, most citations of the candidate's works are in the works of authors in publications that are indexed and referenced in the database with scientific information Scopus, citations in foreign publications are also noticed. The candidate has 11 citations, referenced and indexed in world-famous databases with scientific information and 5 citations or reviews in non-refereed journals with a scientific review.

In the submitted information for fulfillment of the minimum requirements of IICT for "Associate Professor" the candidate has indicated the data shown in Table 1.

Table 1. Data, provided by the candidate.

Group ind.	Indicators	Points required	Candidate Points
A	1. Dissertation thesis for educational and scientific degree "Ph.D. "	50	50
B	Indicator 3 or 4		
G	Sum of indicators 5 to 11	Min. 100	100
D	Sum of indicators 12 to 15	Min. 220	423.33
E	Sum of indicators from 16 to the end	Min. 60	370
		Min. 20	105
	Total:	450	1048.33

In the presented table from the candidate, the following inaccuracies in groups of indicators G and D are found. The sum of points on group indicator G, in which the candidate has indicated 423.33 points, 10 points are not counted. The sum of points in group indicator D is 120, the candidate has indicated 370. Despite this inaccuracy, the candidate meets and exceeds the requirements of IICT with total points of 808.33.

Scientific and scientific-applied contributions.

I accept and evaluate positively the scientific and scientific-applied contributions of the candidate, indicated in the attached reference for the contributions. They fully comply with the scientific specialty of the competition "Communication Networks and Systems" and include the development of an algorithm for recognizing road traffic from video surveillance, designed technical means through FPGA devices that implement a moving average, PID controller, pulsar signal processing, model for traffic optimization in a two-stage optimization task, development of an algorithm for recognizing vehicles in motion and traffic control in urban environments, optimization for street management, video surveillance for measuring traffic intensity. The listed scientific and scientific-applied contributions define the candidate as a highly qualified specialist in the field of communication networks and systems, incl. and in terms of their practical implementation.

General characteristics of the candidate's activity.

The candidate in this competition, Ivanov, Ph.D. has a master's degree from the University of Chemical Technology and Metallurgy - Sofia, specialty in "Production Automation". He has a total work experience in IICT of 7 years, of which 6 years as a chief assistant professor. During this period, he was a doctoral student, programmer, and chief assistant professor. The publications presented for participation in the competition show the active publishing of the candidate and contain original scientific and scientifically applied results in the field of communication networks and systems.

He has led 2 Youth projects. He has participated as a member of the team in 2 projects from NSF. A project funded by the Seventh Framework Program of the European Union on Capacities.

Critical notes and recommendations.

Inaccuracy has been noted in the submitted materials for the fulfillment of the minimum requirements of IICT for the academic position of associate professor. This does not detract from the candidate's achievements, which are undoubtedly proven by his works and their citations. I would recommend in the future activity of the candidate to focus on publishing in foreign scientific forums.

Conclusion

The materials of the competition and the presented results of the candidate satisfy all the requirements under the Act of the Development of the Academic Personnel of the Republic of Bulgaria, and the Rules of the Academic Personnel of the Republic of Bulgaria, the Rules for the conditions and the procedure for acquiring scientific degrees and for the occupation of academic position in the Bulgarian Academy of Sciences and the Rules for the specific conditions for the acquisition of the academic degrees and the occupation of academic positions in the Institute of Information and Communication Technologies. My assessment of the overall activity of the candidate is **positive**.

I strongly recommend the esteemed Scientific Jury to vote a proposal to the Scientific Council of IICT-BAS for the election of Vladimir Ivanov Ph.D. to the academic position of "Associate Professor" in Professional: 5.3 Communication and Computer Engineering, specialty "Communication Networks and Systems" for the needs of Department "Distributed Information and Management Systems" at the IICT-BAS.

Date:

08.09.2021 г.



/Assoc. Prof. N. Stoimenov, Ph.D./