

STATEMENT

by Prof. Dr. Kostadin Grozev Kostadinov
Member of the Scientific Jury

in a competition for the academic position of "Associate Professor" field of higher education 5. Technical sciences professional field 5.2. Electrical engineering, electronics and automation specialty "Application of the principles and methods of cybernetics in various fields of science", announced in SG No. 57 / 09.07.2021 for the needs of the section "Cyber-physical systems" of IICT-BAS with candidate: Chief Assistant Professor Dr. Denis Safidinov Chikurtev

1. General provisions and biographical data

The only applicant in the competition, Dr. Denis Safidinov Chikurtev, was born on January 19, 1990. He graduated in 2014 from the Technical University - Sofia as a master engineer in "Automation, Information and Control Engineering".

He received his doctorate degree from the Institute of Information and Communication Technologies - BAS in 2017 with the defense of a dissertation on "Research and management of service robots to support humans." In 2019 he was elected Chief assistant at IICT-BAS.

Dr. Chikurtiv is the author and co-author of 37 publications on the topic of the competition, of which 18 are referred to SCOPUS, and 8 of the publications are with SJR. The candidate presented 13 citations: 7 in refereed publications, 1 in a monograph and 5 in non-peer-reviewed.

The candidate was a member of the teams implementing 4 research projects (1 European and 3 national), leading one of them. He is currently a participant in 2 national projects (NSF, NIF) and in 2 national research programs.

2. General description of the submitted materials

Dr. Denis Safidinov Chikurtev presents 37 publications for participation in the competition for "Associate Professor", 18 of which are referenced in the global databases Scopus / WoS. The remaining 19 are in published in journals or edited collective volumes of conferences, which, however, are not referenced by world databases. 8 of the publications submitted for study are with SJR.

I found 21 citations in Scopus of 10 articles that are referenced in the global Scopus / WoS databases. I have not checked the citations presented in the materials of the competition - 1 citation in a monograph and 5 citations in unrefereed publications.

Dr. Chikurtev also presents a list of 4 completed projects in won competitions with his participation as a member of the team: 1 to 7 EU framework program - ACOMIN, 1 project funded by NSF, 1 project funded

by BAS and 1 project funded by Operational Program "Competitiveness of Bulgarian Economy".

The structural characteristics of scientific publications give grounds for the following conclusions and assessments:

- The candidate Dr. Chikurtev participated in the competition for "Associate Professor" with 37 published scientific papers, 18 of which were published in the global database Scopus / WoS, thus covering the minimum requirements of ZRASRB and the additional requirements of IICT-BAS.
- All works with which the candidate participates in the competition are in the field of the announced competition "Application of the principles and methods of cybernetics in various fields of science".
- One stand-alone publication is presented and the others are co-authored.

3. General characteristics of the research and scientific-applied activity of the applicant

The presented by Dr. Denis Chikurtev for participation in the competition 37 scientific articles and reports from conferences are on the topic of the competition. They relate mainly to the study of methods and tools for monitoring, communication and control in mobile and service robots, focusing on:

1. Methods and communication means and systems for remote control of service robots.
2. Methods for controlling mobile robots and manipulators.

4. Research and applied contributions of the applicant

I find several groups of contributions in the following areas - development of models, methods and algorithms for positioning, well-founded, well-argued and confirmed by the published scientific papers (articles and conference reports), which the candidate has submitted for participation in the competition for "associate professor", communication, control and safety in service and mobile robots

1. Methods, interface modules and communication systems for remote control of service robots - study of human-robot interaction, research and development of communication system for remote control of robots, development of a graphical interface to assist the operator in controlling robots.

These contributions have been published and tested in the following articles referenced in the world database - 1, 2, 6, 7, 8

2. Methods for control of mobile robots and manipulators - development of a method for control of a manipulator, using computer vision and iterative approach, development of a method for control of different types of mobile platforms using regulators and feedback on speed and odometry .

These contributions have been published and verified in the following articles referenced in the world database - 3, 4, 5, 9, 10

3. Constructions, sensor system and software for service and mobile robots have been developed.

These contributions have been published and tested in 8 peer-reviewed and 19 non-peer-reviewed articles in the global database -

I determine the contributions declared by the candidate with mainly scientific-applied character. Some contributions are characterized as scientific and / or applied.

I accept the contributions formulated by the candidate and consider them to meet the requirements of the regulations.

5. Significance of contributions to science and practice

The presented scientific-applied contributions of the candidate have scientific-technological and social significance. The developed and researched hardware and software for monitoring and control in service and mobile robots are important for the development and enrichment of the theory and practice of robotic systems.

From the 21 citations I found in the global Scopus / WoS database of 10 of the presented 37 publications and 6 citations in unreferred editions, I believe that the contributions of Dr. Denis Chikurtev have received the necessary fame and confirmation in the scientific community at home and abroad.

6. Critical remarks and recommendations

The list of citations presented is not accurate, which may be due to the time in which it was presented as an integral part of the application materials.

I have no remarks to challenge or downplay the candidate's contributions.

I have a critical recommendation regarding the protection of the obtained scientific results with the products of intellectual property. The candidate does not have such a protective result.

Despite the critical remarks and omissions that I consider insignificant for my overall assessment, I believe that the formulated contributions are proof that the candidate fully meets the requirements to hold the academic position of "Associate Professor" in the section "Cyber-Physical Systems" of IICT-BAS.

CONCLUSION

According to the presented materials and my personal impressions, I believe that in terms of volume and quality the research and scientific-applied activity of the candidate fully satisfies the minimum requirements of ZRASRB and PPZRASRB. The additional quantitative indicators of the IICT-BAS Regulations for holding the academic position of "Associate Professor" are also satisfied, and some of them are exceeded. In

conclusion, I am convincingly voting by Dr. Denis Safidinov Chikurtev to take the academic position of "Associate Professor" at IICT.

I propose to the Distinguished Members of the Scientific Council of IICT to vote convincingly for Dr. Denis Safidinov Chikurtev to be appointed to the academic position of "Associate Professor" at the Section "Cyber-Physical Systems" in the specialty "Application of the principles and methods of cybernetics in various fields of science ", Professional field 5.2. Electrical engineering, electronics and automation, field of higher education 5. Technical sciences.

November 5th, 2021
Sofia city

Member of the Scientific Jury:
(Prof. Dr. Kostadin Kostadinov)

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