# O P I N I O N

## by Prof. Dr. Magdalena Zlatkova Garvanova

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### regarding:

competition for the academic position of "Associate Professor", in the field of higher education 5. Technical sciences, professional field 5.2 Electrical engineering, electronics and automation, scientific specialty "Application of the principles and methods of cybernetics in various fields of science (Social-assisting robotics with elements of artificial intelligence)", announced in the State Gazette No. 66 of 12.08.2025 for the needs of the section "Interactive Robotics and Control Systems" at the Institute of Robotics – Bulgarian Academy of Sciences

## 1. General information and biographical data

The competition was announced for the needs of the section "Interactive Robotics and Control Systems" at the Institute of Robotics at the Bulgarian Academy of Sciences in the State Gazette No. 66 of 12.08.2025 based on a Decision of the Scientific Council – Protocol No. 7/25.09.2025. I participate in the composition of the scientific jury as an external member in accordance with the Order of the Director of the Institute of Robotics No. 130/07.10.2025.

The only candidate to participate in the competition was **Chief Asst. Prof. Dr. Paulina Tsvetanova Tsvetkova**. At the first meeting of the Scientific Jury, held on 13.10.2025, I was chosen to prepare an opinion and received a full set of documents for participation in the competition.

## 2. Assessment of compliance with the minimum national requirements and the requirements of the Institute of Robotics at the Bulgarian Academy of Sciences

According to the Act on Development of the Academic Staff in the Republic of Bulgaria (ADASRB), Regulations on the Implementation of the Development of Academic Staff in the Republic of Bulgaria Act (RIDASRBA), and requirements of the Institute of Robotics at the Bulgarian Academy of Sciences, the candidates for "Associate Professor" must meet certain criteria and conditions.

In response to these conditions, Dr. Tsvetkova holds a Diploma for the educational and scientific degree "PhD" with No. 1000504/20.04.2022, issued by the Plovdiv University "Paisiy Hilendarski", thereby fulfilling Art. 24 (1), point 1 of the ADASRB and covering indicator A of the RIDASRBA.

The candidate meets Art. 24 (1), point 2, as she has held the academic position of "Chief Assistant Professor" at the Institute of Robotics "Saint Apostle and Gospeller Mathew" – BAS from 27.09.2022 to the present, which is more than the required two years.

She complies with Art. 24 (1), point 3, as she has presented ten equivalent publications in specialized scientific editions, thus fulfilling the requirements of indicator B.

Dr. Tsvetkova responds to Art. 24 (1), point 4 for compliance with the minimum national requirements. The prepared report shows that the candidate has provided evidence for 579 points with a minimum requirement of 400 points for holding the academic position of "Associate Professor".

Ten scientific publications in editions that are referenced and indexed in the world-renowned scientific information databases Scopus and/or Web of Science have been provided, as well as 21 scientific publications in non-refereed editions with scientific review or in edited collective volumes, thus fulfilling the requirements of indicator G.

The submitted scientific papers have not been used by the candidate in previous procedures for acquiring the educational and scientific degree "PhD".

Chief Asst. Prof. Dr. Paulina Tsvetkova responds to Art. 24 (1), point 5, as there is no proven plagiarism or unreliability of the published scientific data in the scientific works. As confirmation of this statement, a reference for 12 citations of 5 scientific publications has been provided, which fulfills an indicator from group D.

The analysis shows that Dr. Tsvetkova not only meets, but also exceeds the minimum national requirements for "Associate Professor" in the professional field 5.2 Electrical Engineering, Electronics and Automation.

### 3. Evaluation of research activities and results

Dr. Tsvetkova is visible in the scientific space, having profiles in the most prestigious databases of scientific information. An Internet check on 29.10.2025 revealed the following scientometric indicators, excluding self-citations (in Scopus):

| Databases with scientific information | Scopus | WoS | ResearchGate |
|---|---|---|---|
| Author's papers | 18 | 14 | 33 |
| Citations | 24 | 18 | 81 |
| H-index | 2 | 3 | 4 |

## 4. Assessment of the candidate's main scientific and applied scientific contributions

From the presented publications it can be summarized that the scientific achievements of Chief Asst. Prof. Dr. Paulina Tsvetkova directly correspond to the topic of the competition announced. The candidate's contributions have a significant scientific and applied scientific nature and can be systematized in the following scientific areas: Artificial intelligence and social-assisting robots; Applied artificial intelligence in image processing and cultural heritage; Machine learning and optimization; Neuroscience and pedagogy; Application of social robotics in psychology; Future trends in assistive technologies (AT), and social inclusion.

I accept all the presented contributions as essential and enrich both theory and practice in the respective scientific fields. They contribute to the extraction of new knowledge of high scientific value and demonstrate an interdisciplinary nature that expands the possibilities for the application of the results in various fields of modern scientific knowledge in the fields of technical sciences, information technologies, cognitive sciences and social and human sciences.

Dr. Paulina Tsvetkova participates as a leader and member of the scientific team of several national and international scientific projects, contributing to the development of scientific potential, the implementation of innovative practices and the establishment of sustainable models for research and applied activity.

## 5. Critical remarks and recommendations

I have no critical remarks, but rather a recommendation that Dr. Tsvetkova in the future develop and publish an independent monographic work in which she would present her scientific research and achieved results in its entirety. Such a work would allow her to systematize her accumulated scientific experience, conduct an in-depth analysis of the data obtained, and formulate clearly, accurately, and with reason her contributions in the field of robotics, artificial intelligence, and assistive technologies.

## 6. Personal impressions of the candidate

I have known Dr. Tsvetkova for over 3 years. We have no joint publications, but I am well acquainted with her work and the results achieved. She is a highly erudite and promising young

scientist who demonstrates in-depth knowledge, analytical thinking and the ability to apply scientific approaches in practice. Dr. Tsvetkova possesses excellent organizational skills, demonstrates initiative and the ability to work independently, as well as a willingness to effectively collaborate in a team. I am convinced that she has impressive potential for future professional and scientific development.

### 7. Final assessment

The candidate fulfills all the requirements of the ADASRB, RIDASRBA and the specific criteria of the Institute of Robotics at the Bulgarian Academy of Sciences for holding the academic position of "Associate Professor" and based on this, I give a categorically **positive assessment** for her selection for the academic position of "Associate Professor" in the professional field 5.2 Electrical Engineering, Electronics and Automation.

I propose to the Scientific Jury to unanimously vote on a proposal to the Scientific Council of the Institute of Robotics "Saint Apostle and Gospeller Mathew" – BAS to elect **Chief Asst. Prof. Dr. Paulina Tsvetanova Tsvetkova** for the academic position of "Associate Professor" in the professional field 5.2 Electrical Engineering, Electronics and Automation, scientific specialty "Application of the Principles and Methods of Cybernetics in Various Fields of Science (Social-Assisting Robotics with Elements of Artificial Intelligence)" for the needs of the section "Interactive Robotics and Control Systems" at the Institute of Robotics – BAS.

Date: 06.11.2025  Signature:

Sofia  /Prof. Dr. Magdalena Garvanova/