OPINION

regarding the competition for the academic position of "Associate Professor" in higher education area 5. Technical Sciences, professional field 5.2. Electrical Engineering, Electronics and Automation, scientific specialty "Elements and Devices of Automation and Computer Engineering" ("Application of Additive Technologies in Education") for the needs of the "Unmanned Robotic Systems" Laboratory

Candidate: Chief Assistant Professor Dr. Neda Venelinova Chehlarova

Prepared by: Prof. DSc Velislava Noreva Lyubenova, Institute of Robotics – BAS

In the current competition for the academic position of "Associate Professor," announced in State Gazette No. 39 of 13.05.2025, the only candidate is Chief Assistant Professor Dr. Neda Venelinova Chehlarova.

I. Brief Biographical Data of the Candidate

Dr. Chehlarova graduated with a Master's degree in "Business Management," specialization "Management of Enterprises in the Forest Industry," from the University of Forestry, Sofia. From 2019 to 2022 she was a full-time PhD student at the same university in professional field 3.7. Administration and Management, specialty "Application of Computer Science in Economics".

Since the end of June 2023, Dr. Chehlarova has been Chief Assistant Professor in the "Unmanned Robotic Systems" Laboratory of the Institute of Robotics – BAS. She was a member of 10 expert groups under the Standing Committee on Economic Sciences and Management at NEAA from 2018 to 2022.

Her main scientific interests are the application of robotic systems in various fields development of digital competence among different user groups; and creation and dissemination of STEAM resources.

She has participated as a member of research teams in 2 projects funded by the National Research Fund; in the National Research Program "Young Scientists and Postdoctoral Researchers" (2021); and the National Research Program "Security and Defense" funded by the Ministry of Education and Science. She was project leader of a project funded by the National Culture Fund (2022).

II. Characteristics of the Candidate's Scientific and Applied Research Output

Dr. Chehlarova participates in the competition with a monograph titled "Additive Technologies in Education" (published by Trakia University) and 13 publications, of which 5 are referenced and indexed in internationally recognized scientific databases, and 8 are referenced in other editions. Of the first 5 publications, two are in Q2 journals with impact

factor, and three are in Q4 journals with impact rank. Of the remaining 8, six are indexed in ERIH Plus and two are in national academic publishers. A total of 7 citations of 4 Scopus-indexed publications are presented.

Dr. Chehlarova meets the minimum national requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB) for the position of "Associate Professor" as follows:

- Indicator B3. Habilitation work – Monograph: 100 points
- Indicator G: 216 points (minimum required 200)
- Indicator D: 70 points (minimum required 50)

A Declaration of Originality has been submitted by the candidate.

The monograph "Additive Technologies in Education" examines current trends in 3D printing and additive technology through bibliometric analysis of scientific publications and practical application in the educational environment. It presents scenarios for working with a 3D pen and ready-made 3D models suitable for lessons in mathematics, computer modeling, information technology, art, and STEM activities. Special emphasis is placed on inclusive education through the development of didactic resources for people with visual impairments. The monograph provides guidelines for teacher training and educational experts, supporting the development of digital and engineering competencies and fostering the preparation of future specialists.

III. Main Contributions in the Candidate's Scientific and Applied Research Work

I accept the four contributions presented by the candidate, which form a comprehensive framework for the development and implementation of additive technologies – from strategic and scientific planning through bibliometric analyses, to the creation of inclusive didactic resources and STEAM scenarios for school education, and the practical optimization of 3D modeling for educational purposes. Their interconnection ensures sustainability and effectiveness, combining scientific advancement, social engagement, and pedagogical practice in support of modern education and the training of future specialists.

IV. Significance of the Contributions for Science and Practice

The significance of Dr. Chehlarova's contributions is reflected in the following conclusions:

- Bibliometric analyses of additive manufacturing provide a strategic basis for scientific planning and orientation in global trends, supporting research teams and institutions in projects and programs.
- Didactic resources with 3D printed materials for visually impaired people demonstrate how technologies can have a direct social impact, creating conditions for inclusive

education.
- Scenarios for integrated STEAM activities and teacher training contribute to the modernization of school education, the development of digital and engineering competences, and the early introduction of innovations into the learning process.
- Optimization of 3D modeling ensures methodological and technical sustainability of the created resources, facilitating their application in the educational environment.

In their interrelation, these contributions combine scientific progress with social responsibility and pedagogical innovation, thereby supporting both science and practice.

V. Critical Remarks and Recommendations

I have no critical remarks towards the candidate. My recommendation is for more active publishing in journals with impact factor and higher quartiles (Q1 and Q2).

VI. Conclusion

Considering the above, I believe that Chief Assistant Professor Dr. Neda Venelinova Chehlarova meets the conditions, criteria, and requirements for appointment to the academic position of "Associate Professor" in accordance with the Act for the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its Implementation, the Regulations for the Conditions and Procedure for Acquisition of Scientific Degrees and Holding of Academic Positions at BAS, and the Specific Regulations of the Institute of Robotics – BAS. Based on this, I cast my positive vote and recommend that the members of the scientific jury also vote positively for the candidate, and that the Scientific Council of the Institute of Robotics – BAS appoint Chief Assistant Professor Dr. Neda Venelinova Chehlarova to the academic position of "Associate Professor" in higher education area 5. Technical Sciences, professional field 5.2. Electrical Engineering, Electronics and Automation, scientific specialty "Elements and Devices of Automation and Computer Engineering" ("Application of Additive Technologies in Education") for the needs of the "Unmanned Robotic Systems" Laboratory.

17.09.2025

Sofia

Reviewer: Prof. DSc Velislava N. Lyubenova