OPINION

by Assoc. Prof. Antonina Ivanova, PhD, Varna Free University “Chernorizets Hrabar”, concerning the documents submitted for the competition for the academic position of Associate Professor

in Professional Field 4.6, Informatics and Computer Science, by candidate Chief Assistant Professor Ivan Stanimirov Stoyanov, PhD

1. General Overview of the Documents Submitted for the Competition

The competition for the academic position of Associate Professor in Professional Field 4.6, Informatics and Computer Science, was announced by Varna Free University “Chernorizets Hrabar” in State Gazette No. 69 of 31 July 2026. The competition is intended to meet the teaching needs of the Department of Computer Science within the Faculty of Social, Economic and Computer Sciences. This opinion is prepared pursuant to a decision of the Scientific Jury appointed by Order No. 605 of 30 September 2026 of the Rector of Varna Free University “Chernorizets Hrabar”.

The sole candidate in the competition is Chief Assistant Professor Ivan Stanimirov Stoyanov, PhD. The submitted documentation provides a sufficient basis for assessing the candidate’s academic qualifications, scholarly publications and research results within the competition procedure.

2. Presentation of the Candidate

Chief Assistant Professor Ivan Stoyanov, PhD, has held the academic position of Chief Assistant Professor at the Institute of Information and Communication Technologies of the Bulgarian Academy of Sciences since March 2024, and at Varna Free University “Chernorizets Hrabar” since July 2026.

The candidate has an academic background in computer science. He completed a Master’s degree in Software Technologies, specialising in Mobile Systems and Applications, at the University of Plovdiv “Paisii Hilendarski”. In 2023, he obtained the educational and scientific degree of Doctor (PhD) at the University of Plovdiv “Paisii

Hilendarski", in the doctoral programme in Informatics, with a dissertation entitled "Research on the Development of a Virtual Operator in an Intelligent Agriculture Infrastructure".

His research interests encompass knowledge and event modelling, intelligent and multi-agent systems, and their applications. His academic qualifications and research experience provide a sound foundation for developing teaching activities in subjects related to informatics and artificial intelligence.

3. General Assessment of the Candidate's Scholarly Publications

The scholarly publications of Chief Assistant Professor Ivan Stoyanov, PhD, correspond to the scope of the competition in Professional Field 4.6, Informatics and Computer Science. The candidate presents 12 scholarly publications in refereed and indexed proceedings, as well as a habilitation work. Two publications for which acceptance letters were initially submitted have since been published.

The habilitation work is presented in the form of an independently authored chapter, "Introduction to Generative Artificial Intelligence", in the collective monograph "Artificial Intelligence in 24…", Book Three, published in 2024 by Prof. Marin Drinov Publishing House of the Bulgarian Academy of Sciences. The publications are indexed in Web of Science, Scopus and specialised scientific databases. They include articles published in journals ranked in the second quartile (Q2) according to Clarivate's Journal Citation Reports (JCR).

The candidate meets the minimum national requirements for appointment to the academic position of Associate Professor. The review identified inaccuracies in the quartile classifications of two publications in the journal Future Internet, as well as discrepancies in the reporting of certain citations, requiring adjustments to the point totals for indicator groups G and D. Notwithstanding these necessary corrections, the results achieved in both groups exceed the minimum national requirements.

The candidate's research activity is further supported by participation in national research projects in intelligent agriculture, knowledge modelling and the management of plant genetic resources.

4. Scientific and Applied Scientific Contributions of the Candidate

In the submitted statement, the candidate identifies contributions in four areas. In terms of their nature, these include the development and refinement of models and architectures, advances in approaches to knowledge and event representation, and the application of scientific solutions in specific domains.

The first area concerns the modelling of events and processes in intelligent systems. The work presents an event model, mechanisms for interpreting complex events, and their use in agent-oriented architectures. The ECOS interpreter stands out among the reported results. The applicability of these approaches is demonstrated in intelligent agriculture, air quality monitoring and the management of plant genetic resources.

The second area encompasses knowledge-based systems and the integration of semantic networks, frames, production rules and ontologies. The results find application in diagnostic expert systems, environmental monitoring and the digitisation of cultural and historical heritage.

The third area concerns intelligent assistants and multi-agent systems. The research examines architectures for autonomous operation and interaction among agents, as well as approaches to combining conventional BDI agents with agents employing large language models. The developments have been applied in intelligent agriculture and environmental monitoring.

The fourth area focuses on introducing artificial intelligence into secondary education through logic programming, STEM and project-based learning. Results from experimental teaching and the assessment of acquired competencies are presented. These contributions are primarily methodological and educational in their applied nature. No specific quantitative data have been provided on the economic impact achieved through the applied developments.

5. Comments and Recommendations

The inaccuracies identified in the point-based assessment concern the quantitative reporting of publications and citations but do not alter the overall assessment of the quality

of the scientific results and contributions.

I recommend that Chief Assistant Professor Ivan Stoyanov, PhD, continue his active publication activity while expanding research collaboration with academic staff and researchers beyond his current research team, including colleagues from the Department. In the longer term, it would also be beneficial to involve students in joint research projects and publications.

With regard to his future work in the Department, I recommend that he also focus on developing his teaching activities, drawing on his research experience to enrich course content with current technologies, practical examples and assignments related to intelligent systems and artificial intelligence.

CONCLUSION

On the basis of the documents submitted for the competition and my assessment of the candidate's scholarly publications and contributions, I consider that Chief Assistant Professor Ivan Stanimirov Stoyanov, PhD, meets the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its Implementation, and Ordinance No. 3 on the Academic Staff of Varna Free University "Chernorizets Hrabar" for appointment to the academic position of Associate Professor in Professional Field 4.6, Informatics and Computer Science.

On the basis of the foregoing, I give a positive conclusion and recommend to the esteemed Scientific Jury that Chief Assistant Professor Ivan Stanimirov Stoyanov, PhD, be elected to the academic position of Associate Professor in Professional Field 4.6, Informatics and Computer Science, at Varna Free University "Chernorizets Hrabar".

3 November 2026 Prepared by:

Varna (Assoc. Prof. Antonina Ivanova, PhD)