OPINION

regarding a competition for the academic position of *Associate Professor* in Higher Education Area 5. Technical Sciences, Professional Field 5.3. Communication and Computer Engineering, Scientific Specialty "Platform-Based Design," announced in the State Gazette, Issue 89/24.10.2025,

at Burgas State University "Prof. Dr. Asen Zlatarov"

Member of the Scientific Jury: Prof. Sotir Sotirov

Brief Biographical Information

Chief Assistant Professor Dr. Radovesta Todorova Stewart is an established researcher in the field of digitalization of cultural heritage, semantic models, digital libraries, and the application of artificial intelligence in the processing of cultural and scientific resources. Her scientific and applied work in recent years has been consistently developed within Professional Field 5.3. Communication and Computer Engineering, with a clearly expressed interdisciplinary character and strong practical orientation.

Research Activity of the Candidate

According to the submitted author's report, the candidate has a total of 33 scientific works, including:

- 1 single-author monograph;
- 1 book based on a defended doctoral dissertation;
- 23 publications refereed and indexed in Scopus and Web of Science;
- 8 publications in peer-reviewed, non-indexed journals.

She participates in the competition with 24 scientific works, including:

- 1 monograph;
- 1 book;
- 17 publications in internationally indexed journals;
- 5 publications in peer-reviewed proceedings and journals.

A total of 21 citations in refereed and indexed sources are presented. According to Scopus, the candidate has 36 citations, 24 publications, and an h-index of 4, while according to Google Scholar she has 78 citations, 30 publications, and an h-index of 5.

Her scientific output is thematically structured and consistent, with the main research directions including:

1. Digitalization of cultural heritage – development of standards, models, and methodologies for structuring and preserving digital resources.

2. Ontologies and semantic models – construction of basic and extended ontological models for tangible and intangible cultural heritage.
3. Digital libraries and interactive systems – development of multimedia platforms, including MusLib, with implemented mechanisms for semantic search and AI-based processing.
4. Implementation of VR, 3D technologies, and interactive environments in museum practice – practical realizations in cultural institutions.
5. AI and deep learning – applications in the analysis of historical images, medical data, physical simulations, and neural network modeling.
6. Educational innovations – implementation of robotics, game design, and virtual reality in higher education.

Particularly noteworthy is the candidate's ability to connect theoretical models (ontologies, semantic structures, AI methods) with real implementations in museum institutions, where digital collections, virtual exhibitions, and interactive environments have been developed. This demonstrates a mature research profile and strong applied value of the scientific results.

The monographic work represents a systematic contribution to the standardization and methodology of digitalization in Bulgaria and has the character of a comprehensive study with practical impact.

Dr. Radovesta Stewart fulfills the minimum point requirements for the academic position of Associate Professor in Professional Field 5.3 "Communication and Computer Engineering," with the points in Section E exceeding the minimum nearly fivefold.

Evaluation of Teaching Activity

The candidate has active teaching engagement, including participation in the development and implementation of new courses in virtual reality, game design, and robotics. The presented publications in the field of engineering education demonstrate commitment to the modernization of the educational process and the integration of contemporary technological solutions.

The combination of scientific, applied, and educational activity demonstrates a sustainable academic profile and compliance with the requirements for the academic position of Associate Professor.

Main Scientific and Applied Contributions

I accept the scientific and applied contributions formulated by the candidate. They may be summarized in the following groups:

- Development and implementation of ontological models for the digitalization of cultural heritage;
- Creation of standardized methodologies for digital description and management of museum collections;
- Integration of AI and deep learning methods in the analysis of visual and historical archives;
- Real implementations of digital platforms and VR environments in cultural institutions;

- Contribution to engineering education through the integration of robotics and virtual technologies.

Critical Remarks and Recommendations

The candidate's scientific production is thematically broad, which is an advantage; however, in the future it would benefit from clearer profiling around a leading research core with deeper specialization within the scientific specialty "Platform-Based Design."

I would recommend strengthening publication activity in higher-quartile journals and expanding international scientific partnerships.

These remarks do not diminish the overall positive evaluation of her scientific and teaching activity.

Conclusion

The presented indicators of research and teaching activity of Chief Assistant Professor Dr. Radovesta Todorova Stewart meet and significantly exceed the minimum requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, its implementing regulations, and the internal regulations of Burgas State University "Prof. Dr. Asen Zlatarov."

On this basis, and following a comprehensive evaluation of her scientific, applied, and teaching activity, **I propose that Chief Assistant Professor Dr. Radovesta Todorova Stewart be elected to the academic position of *Associate Professor* in Higher Education Area 5. Technical Sciences, Professional Field 5.3. Communication and Computer Engineering, Scientific Specialty "Platform-Based Design" at Burgas State University "Prof. Dr. Asen Zlatarov."**

Prepared by:

Prof. S. Sotirov