

OPINION REPORT

on the competition for the academic position of “Professor”

in the scientific field: 4. Natural Sciences, Mathematics and Informatics,

professional field: 4.6. Informatics and Computer Sciences,

**scientific specialty: Informatics (Systems for management of digital
cultural content and e-learning),**

for the needs of the Institute of Mathematics and Informatics (IMI)

Department „Mathematical Linguistics“,

Competition announced in State Gazette (SG) no. 102 (01.12.2020) and on the website of IMI.

This statement report has been prepared by Assoc. Prof. Todorca Alexandrova, PhD, IMI-BAS, as a member of the scientific jury for the competition according to Order № 12/29.01.2021 г. of the Director of the Institute of Mathematics and Informatics at the Bulgarian Academy of Sciences.

For participation in the announced competition documents were submitted by **only one** candidate namely:

Assoc. Prof. Desislava Ivanova Paneva-Marinova, PhD, IMI-BAS.

1. General description of the submitted documents

The documents submitted by the candidate in accordance with the competition comply with the requirements of the Act on Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations on the Implementation of the ADAS of the Republic of Bulgaria (RIADASRB) and the Regulations on the Terms and Requirements for Acquisition of Academic Degrees and Occupation of Academic Positions at BAS and IMI-BAS. For participation in the current competition the candidate has submitted the following documents:

1. An application to the Director of IMI-BAS for admission to the competition.
2. Professional CV in European format.
3. Diplomas for higher education (bachelor`s and master`s degree).
4. Diploma for educational and scientific degree “Doctor”.
5. List of all publications.
6. List of publications for participation in the competition.
7. Reference on the original scientific contributions in the papers for participation in the competition in Bulgarian and English.
8. Abstracts of the publications for participation in the competition in Bulgarian and English.
9. Copies of the papers in 6.
10. List of all citations.
11. List of citations for participation in the competition.
12. Copy of SG with the announcement of the competition.
13. Certificate of years of work experience in the specialty.
14. A certificate for the academic position of Associate Professor.
15. Reference for other activities.

16. A reference form for the fulfillment of the minimum national requirements of the candidate in a competition for an academic position "Professor" according to Art. 2b, (2), (3) and (5) of ADASRB and the specific ones of IMI-BAS.

17. Two declarations.

It is worth noting that the submitted documentation for participation in the competition has been prepared extremely diligently and precisely.

2. Short CV of the applicant

Desislava Paneva-Marinova graduated with a Master`s Degree in Informatics (Language and Multimedia Technologies) from the University of Veliko Tarnovo "St. Cyril and St. Methodius" in 2003. She received her PhD in 2008 from IMI-BAS with a doctoral thesis with title "Semantic-oriented architecture and models for personalization and adaptive access to knowledge in a multimedia digital library". From 2005 until now she has been working at IMI-BAS consequently as mathematician, chief assistant and associate professor. She has been the leader of the Department „Mathematical Linguistics“ at IMI-BAS since 2016.

3. General characteristics of the applicant`s scientific work and achievements

The list of all publications of Assoc. Prof. Desislava Paneva-Marinova, PhD consists of 133 scientific papers. For the current competition she submitted 20 scientific publications, 5 of which were published in scientific journals, 13 in proceedings of international conferences, 1 collective monograph and 1 book chapter. From the scientific works presented for participation in the competition 1 is with Impact Factor (IF) and 12 with SJR Rank (SJR). All publications are co-authored which shows the applicant`s excellent teamwork skills. I have no doubt that the candidate's contribution to the joint publications is equivalent. The scientific papers submitted by the applicant do not repeat those of previous procedures for acquiring a scientific title and academic position.

The number of citations submitted by the candidate for participation in the current competition is 31, all of which are indexed in Scopus. It can be noted that the citations with numbers 5, 6, 25 and 27 in the list of citations for participation in the current competition were also included in the list with the noted citations of the scientific works of the candidate in her previous procedure for "Associate Professor" in 2013. Since at that time there was no practice of presenting a separate list of citations for participation in the competition and a list with all citations it was difficult for me to understand exactly which citations were used in the previous procedure. That is why I consider it more correct citations that were included in the list with the noted citations of the scientific papers of the candidate in her procedure for "Associate professor" not to be included in the list of citations for participation in the current competition. Of course, even without these citations, the candidate exceeds the minimum national requirements for points on indicator D, as well as the specific requirements of IMI-BAS.

In summary the number of points for each group of indicators for the applicant`s materials for the competition are as follows:

Group of indicators	Points of the applicant	Minimum required points
A	50	50
B	104	100
C	250	220
D	162	140
E	225	150

From the reference form for fulfillment of the minimum national requirements of the candidate (according to Art. 2b, (2), (3) ADASRB) and the specific ones of IMI-BAS (Art. 2, (1) and Art.3, (1) of the Regulations on the Terms and Requirements for Acquisition of Academic Degrees and Occupation of Academic Positions at IMI-BAS – “From the publications presented by a candidate in a competition for academic position "Professor" at least 10 should be with IF or SJR.”) in the competition for an academic position "Professor" in professional field 4.6. Informatics and Computer Sciences, accompanied with the necessary evidences for verification in the world scientific information databases, it is clear that the applicant exceeds both the minimal national requirements and the specific ones of the internal regulations of IMI-BAS.

4. Description and evaluation of candidate`s teaching and project experience

Assoc. Prof. Desislava Paneva-Marinova, PhD, has been the supervisor of 6 PhD students, and under her guidance one doctoral student obtained the PhD degree in 2021. She has taught various courses at the University of Veliko Tarnovo, Sofia University and the National Academy of Music. This proves her rich and successful educational and pedagogical activities.

The participation of Assoc. Prof. Desislava Paneva-Marinova, PhD, in large number of national and international projects not only as a member but also as a leader is impressive and proof of her excellent communication and organizational skills.

5. Detailed analysis of the scientific and applied achievements of the candidate contained in the materials submitted for participation in the competition

The scientific publications presented by the candidate for participation in the competition can be organized in the following two groups:

A. Systems for management of digital cultural content – technologies and methods.

Publications [9], [12], [19], [20] are devoted to different methods and tools for creation, exploitation and semantic description of digital library contents. In [20] an algorithm for complex search of information objects in a digital library has been developed. In [12], the first in Bulgaria multimedia digital library of traditional culture and folklore (Bulgarian Folklore Digital Library) is presented. The main contribution of [9] is related to the design of the first in Bulgaria system for management of digital fashion objects with application in education. In publication [19] methods for the implementation of personal manipulation (incl. selection, synthesis and analysis) of digital library content in learning context have been proposed.

Publications [3], [4], [5], [10], [16] investigate different methods and tools for analysis, synthesis, processing and intelligent curation of Big Data sets. In [10], an approach for an improved user experience in a digital library through integration of innovative services for analysis and synthesis of data is proposed. In [5], a method for intelligent data curation, implemented in a system for management of digital cultural content, is proposed. The main contribution of [16] is the development of an architecture for a virtual museum and models for functionality of a content visualization with educational purposes. Publication [3] develops an approach for analysis and improved use of digital cultural assets for informal educational goals in digital cultural ecosystems. In [4], an approach for administration of transport processes is presented, aiming at improving the safety while driving diverse types of vehicles.

Publications [2], [6], [13], [14], [15] are devoted to different methods and tools for interoperability on content level. In [6] a solution for implementing the integration between two digital libraries (the digital library “Virtual encyclopedia of the Bulgarian iconography” and the digital library “Encyclopaedia Slavica Sanctorum”) has been presented. In [2], the solution for integration between two digital libraries is expanded with a third environment for management of digital content – the multimedia fund “BellKnow”, which artifacts include digital copies of bells, and the knowledge about them. In [14], developments, related to the integration of a panoramic visualizer on different platforms (web, mobile), and applications for panoramic photos for attractive presentation of cultural heritage objects, are presented. In [13] a model for multifunctional ecosystem of digital cultural assets has been developed.

B. E-learning – technologies and methods;

Publications [1], [7], [8], [11], [17], [18] are focused on the development and applications of serious educational games, digital theatre and storytelling methods in education. [1], [8], and [11] present a new educational approach in learning about ancient history and civilization, through the combination of “storytelling” and “serious educational games”. For the goals of the e-learning, [18] presents a mobile application of the digital storytelling platform eShadow, an implementation of a digital shadow theatre. Publications [7] and [17] propose models and tools for education in mathematics via integration of pedagogical methods, arts and innovative technological platforms.

The scientific publications presented for the competition and the results obtained in them, which are related to the implementation of several successful research projects and national research programs, show that the candidate is familiar with and successfully works in important for society and innovative topics. The abstracts of the publications and the reference on the original scientific contributions in the papers for participation in the competition reflect accurately, clearly and correctly the contents of the publications and the results in them.

6. Critical comments and recommendations

I have no critical comments.

7. Personal impression of the candidate

I have known Assoc. Prof. Desislava Paneva-Marinova for two years and I have excellent impression of her personal and professional qualities and skills.

8. Conclusion on the application

Having become acquainted with the documents and scientific papers presented in the competition and on the basis of the analysis of their importance and the scientific and applied contributions contained therein, **I do confirm** that the scientific achievements meet the requirements of the Act on Development of the Academic Staff in the Republic of Bulgaria, the Regulations on the Implementation of the Act on Development of the Academic Staff in the Republic of Bulgaria, the Regulations on the Terms and Requirements for Acquisition of Academic Degrees and Occupation of Academic Positions at BAS and the Regulations on the Terms and Requirements for Acquisition of Academic Degrees and Occupation of Academic Positions at IMI-BAS for occupation by the candidate of the academic position "Professor" in the scientific field and professional field of the competition. In particular, the applicant **meets the minimal national requirements** in the professional field and **no plagiarism** has been detected in the scientific papers submitted for the competition.

GENERAL CONCLUSION

On the basis of the above said, I am convinced to give **my positive evaluation** of the application and **strongly recommend** to the scientific jury of the competition to propose to the Scientific Council of IMI-BAS to select **Assoc. Prof. Desislava Ivanova Paneva-Marinova, PhD**, for the academic position "Professor" in scientific field: 4. Natural Sciences, Mathematics and Informatics, professional field 4.6 Informatics and Computer Sciences, scientific specialty Informatics (Systems for management of digital cultural content and e-learning).

15.03.2021r.

Sofia

Signature:

(Assoc. Prof. Todorka Alexandrova, PhD)