



REVIEW

Related to a competition for the Academic position of 'Associate Professor',
in the field of higher education 5. Technical sciences
professional field
5.3. Communication and computer technology

with a candidate
Chief Assistant Professor Elena Nikolaeva Paunova-Hubenova, Ph.D.

Prepared by Professor Olympia Nikolaeva Roeva,
Institute of Biophysics and Biomedical Engineering,
Bulgarian Academy of Sciences

Member of Scientific Jury according to the Order № 135 / 17.05.2022
of the Director of the Institute of Information and Communication Technologies
– Bulgarian Academy of Sciences, prof. G. Angelova, D.Sc.

The competition for the Academic position of 'Associate Professor', in the field of higher education 5. Technical sciences, professional field 5.3. Communication and computer technology, specialty Communication Networks and Systems, for the needs of the Information and Communication Technologies (IICT) – Bulgarian Academy of Sciences (BAS) is announced in State Gazette Vol. 21/15.03.2022 according to the requirements in Act on the Development of the Academic Staff in the Republic of Bulgaria (ADASRB) and Regulations of ADASRB – IICT, BAS.

Documents for participation in the competition were submitted by candidate – Chief Assistant Professor Elena Nikolaeva Paunova-Hubenova, Ph.D. The documents for the competition are presented in accordance with the Regulations of ADASRB – Information and Communication Technologies – BAS.

According to the ADASRB and Regulations of ADASRB and Chapter 5 from Regulations on the specific conditions for obtaining scientific degrees and for holding academic positions in IICT – BAS, the candidate for the Academic position of 'Associate Professor' Ch. Assist. Prof. Elena Paunova-Hubenova fully meets the specified conditions and requirements.

Ch. Assist. Prof. Elena Paunova-Hubenova has defended her Ph.D. Thesis "Designing and Implementing Computer Games for Schools as Web Based Service" (June 12, 2013), she was awarded the educational and scientific degree "Ph.D." in the Application of principles and methods of cybernetics in various fields of science. She works on a basic employment contract and her work experience is 11 years and 7 months, including as a Chief Assistant Professor – 3 years.

General description of the submitted materials regarding the research activity of the candidate

Ch. Assist. Prof. Elena Paunova-Hubenova, participated in the competition with the following materials:

1. B4: Habilitation work - scientific publications (not less than 10) published in sources that are refereed and indexed in world-renowned databases with scientific information – 10, including 5 publications with SJR.
2. Г7: Scientific publications published in sources that are refereed and indexed in world-renowned databases with scientific information – 6 copies, including 1 publication with SJR.
3. Г8: Scientific publications in unrefereed journals with scientific review or in edited collective volumes – 10.

In 12 of the publications Ch. Assist. Prof. Elena Paunova-Hubenova is the first author, which gives reason to believe that the candidate is the leading researcher in these studies. Her participation in a number of international conferences is impressive, which shows not only the wide dissemination of the results, but also seeking active discussion with the scientific community.

Some of the publications are presented as conference proceedings, but they are in fact papers in Springer series, such as Advances in Intelligent Systems and

Computing, or papers in scientific journals – WSEAS Transactions on Environment and Development and IOP Conference Series: Materials Science and Engineering.

The reference of the publishing activity shows that Ch. Assist. Prof. Elena Paunova-Hubenova significantly exceeds the minimum requirements for holding the academic position of 'Associate Professor' according to ADASRB and Regulations of ADASRB at IICT – BAS (Table 1).

Table 1. Scientometric indicators

Group of indicators	Minimum requirements for holding the academic position of 'Associate Professor'	Number of points of Ch. Assist. Prof. Elena Paunova-Hubenova
A	50	50
B	100	165
Г	220	240
Д	60	162
E	20	74
Total	450	691

A list of 29 citations of the publications is presented with which Ch. Assist. Prof. Elena Paunova-Hubenova participates in the competition. 13 of them are in scientific journals, refereed and indexed in world-renowned databases of scientific information (Scopus and/or Web of Science). The presented citations exceed the recommended requirements for citations.

A search in Scopus shows that the candidate has 15 indexed publications, 33 citations (with excluded self-citations) and h-index = 3.

Participation in research projects

According to the presented documents Ch. Assist. Prof. Elena Paunova-Hubenova has participated in a total of 6 research projects. She is a team leader of 1 project (project for young scientists at the Bulgaria National Science Fund). These data indicate the great activity of the candidate in scientific research.

Scientific contributions

Scientific-applied and scientific contributions of Ch. Assist. Prof. Elena Paunova-Hubenova can be summarized as follows:

1. Scientific contributions

1.1. Trends in the application of educational games, ICT devices and electronic resources in Bulgarian schools are analysed.

1.2. The usefulness of ICT devices, resources and educational games for the learning process (according to teachers) and the frequency of their actual application in Bulgarian schools are analysed.

2. Scientific-applied contributions

2.1. A systematic step-by-step procedure for designing educational video games has been developed.

2.2. The application of educational computer games in Bulgarian schools is analysed.

2.3. The integration of electronic educational resources and technological equipment according to the different groups of school subjects is analysed.

2.4. The application of different types of modern technologies for the implementation of precision animal husbandry is analysed.

The publications presented for participation in the competition for Academic position of 'Associate Professor' show the scientific research activity and efficiency of Ch. Assist. Prof. Elena Paunova-Hubenova, as well as her contribution to the areas in which she worked. One of the directions, application of information and communication devices, resources and educational games in the learning process, is a particularly important trend in modern education. Especially given the past two years and the introduction of ubiquitous distance learning, such results are applicable to improve the learning process. The research in this field is relevant and significant and I hope that the candidate will continue to work and contribute to the development of a competitive and technological Bulgarian education.

CONCLUSION

Based on the above, I highly evaluate the scientific and scientific-applied work of Ch. Assist. Prof. Elena Paunova-Hubenova.

All requirements, conditions and criteria of ADASRB, Regulations for the implementation of ADASRB, Regulations for the implementation of ADASRB in IICT – BAS are met and I give a positive conclusion for the election of Ch. Assist. Prof. Elena Paunova-Hubenova in a competition for Academic position of 'Associate Professor' in the professional field 5.3. Communication and computer technology.

I propose to the esteemed Scientific Jury to vote a proposal to the Scientific Council of IICT – BAS to elect Ch. Assist. Prof. Elena Paunova-Hubenova for the Academic position of 'Associate Professor' in the field of higher education 5. Technical sciences, professional field 5.3. Communication and computer technology, specialty Communication Networks and Systems.

13.06.2022 г.

Scientific Jury member

НА ОСНОВАНИИ

331А