



OPINION

Of Prof. Katya Georgieva

On a competition for the academic position "Professor" in higher education area 4. Natural sciences, mathematics and informatics, subarea 4.4. Earth sciences, scientific specialty "Remote sensing of the Earth and planets" (Investigation of the processes in the Earth's middle and upper atmosphere) for the needs of the "Atmospheric optical investigations" department, Stara Zagora branch, published in State Gazette No 98/13.12.2019

One candidate has applied for the competition: Ass. Prof. Dr. Veneta Hristova Guineva.

GENERAL INFORMATION ABOUT THE CANDIDATE

Veneta Guineva graduated in 1980 from Sofia University "St. Kliment Ohridski" as a MSc in Engineering specialty "Radiophysics and electronics" with a specialization in "Plasma Physics".

She received her PhD in 2000 from the Central Laboratory for Space Research at the Bulgarian Academy of Sciences (CLSR-BAS) in specialty 01.04.08 "Physics of the Ocean, Atmosphere, and Outer Space" with a thesis on "CO⁺ in the Halley comet spectrum from data of the 3-channel spectrometer aboard Vega-2".

Veneta Guineva began her professional career in 1980 as a constructor for the United Plants for Memory Devices in Stara Zagora. In 1983 she joined the Central Laboratory for Space Research – BAS, later renamed into Institute for Space Research. After the Institute split in 1996, she was part of Solar-Terrestrial Influences Laboratory/Solar-Terrestrial Influences Institute, and since 2010 – Space and Solar-Terrestrial Influences Institute/Space Research and Technology Institute of BAS. She has held the position of physicist (1983-1990), research associate III (1990-1996), II (1996-2001) and I (2001-2008) grade. In 2008 she got the Associate Professor position.

APPLICATION PACKAGE

Veneta Guineva's documents for the competition for the academic position "Professor" are in compliance with the requirements of the The Law on the Development of Academic Staff in the Republic of Bulgaria (LADASRB) and the Regulations for its Implementation, with the Rules on the Terms and Conditions for Acquiring Degrees and Holding of Academic Positions in the Bulgarian Academy of Sciences, as well as with the SRTI-BAS regulations.

COMPLIANCE WITH THE MINIMAL SCIENTIFIC AND SCIENTO-METRIC CRITERIA AND REQUIREMENTS FOR HOLDING THE ACADEMIC POSITION "PROFESSOR" IN HIGHER EDUCATION AREA 4. "NATURAL SCIENCES, MATHEMATICS AND INFORMATICS", SUBAREA 4.4. "EARTH SCIENCES"

As far as Dr. Guineva is applying for the academic position "Professor" in one of the institutes of the Bulgarian Academy of Sciences, in the applied Table for compliance with the minimal scientometric criteria the comparison should be shown of her metrics with not only the minimal ones required for the country, but also with the ones required for the Bulgarian Academy of Sciences approved by its General Assembly. This remark is however only formal because Dr. Guineva's scientometric scores exceed not only the national requirements but also the ones for the Bulgarian Academy of Sciences.

Another formal comment – about the calculation of the score in Group D, criterion 7: "Scientific publication in journals, referenced and indexed in world databases of scientific information". Here Dr. Guineva has cited 3 papers, 2 of which in Solar-Terrestrial Physics Vol. 12, 2008 indexed in WoS. Solar-Terrestrial Physics is published by the Institute of Solar-Terrestrial Physics (ISTP) of the Russian Academy of Sciences, Irkutsk, Russia. A check in the site of ISTP reveals that as a journal, Solar-Terrestrial Physics has been published since 2015, and since 2017 it has been indexed in WoS. Before 2015 Solar-Terrestrial Physics was published as conference proceedings and was not indexed. Therefore, the two publications of Dr. Guineva in 2008 cannot be included in D7 but should rather be in D8 "Scientific publications in non-referenced peer-reviewed journals or with edited collective volumes". In this case the total score in Group D becomes 382.35 which is again much higher than the 220 required in the Bulgarian Academy of Sciences.

In the Table below I show the corrected required and gathered scores which demonstrate that the achievements of Dr. Guineva not only cover but substantially exceed the requirements.

Group of criteria	content	Score required by LADASRB	Score required in BAS	Score of the candidate
A	Criterion 1.	50	50	50
B	Criterion 2	-	-	-
C	Criterion 3 or 4	100	100	47.75
D	Sum of criteria from 5 to 9	200	220	382,35
E	Sum of criteria from 10 to 12	100	120	261
F	Sum of criteria from 13 to the end	150	150	530

SCIENTIFIC CONTRIBUTIONS

In my opinion, the scientific contributions of Dr. Guineva can be divided into 3 main groups (though she herself has grouped them in a different way):

1. Development and using of optical instruments for monitoring of atmospheric parameters

These are contribution 5 „Design of instruments for optical measurements“ and 3 „Study of small gaseous components“ according to the Author's reference;

2. Development and using of various models related to time series, radiative transfer and optical spectra – contribution 2 „Using and development of various models related to time series, radiative transfer and optical spectra“ (2.1 „Modeling and analysis of spectra of planetary atmospheric spectra“ and 2.2 „Modeling of time series and radiative transfer processes“ according to the Author's reference);
3. Investigation on the influence of different factors on the magnetosphere, auroral emissions, magnetic disturbances, temperature, and temperature trends (contributions 1 „Investigation of the influence of solar activity and solar wind streams on the magnetosphere, auroral emissions and magnetic disturbances“ and 4 “Study of the influence of different factors on the temperature and temperature trends, according to the Author's reference).

PROJECTS

Dr. Guineva has been a leader in 11 and a participant in 13 projects, contracts and international collaborations, among which projects in the framework of EC's FP2, bilateral collaborations, bilateral agreements of the Bulgarian Academy of Sciences, 3 satellite programs, contracts with the Ministry of Education and Science, etc.

CONCLUSION

The scientific achievements of Dr. Guineva substantially exceed the minimal criteria required not only for the country, but also for the Bulgarian Academy of Sciences. Her scientific activity fully corresponds to the theme of the competition. Among the 75 publications presented for evaluation, she is the first author in 34 and a second author in 10 ones which, together with her leading role in a number of scientific projects and contracts, is a proof of her important contribution to these studies. The achieved scientific results demonstrate that Dr. Guineva fully meets the requirements of The Law on the Development of Academic Staff in the Republic of Bulgaria (LADASRB) and the Regulations for its Implementation, with the Rules on the Terms and Conditions for Acquiring Degrees and Holding of Academic Positions in the Bulgarian Academy of Sciences, as well as with the SRTI-BAS regulations in the area of Earth sciences. This is why I recommend to the Scientific Jury to propose to the Scientific Council of SRTI-BAS to elect Dr. Veneta Guineva for the academic position “Professor” in higher education area 4. Natural sciences, mathematics and informatics, subarea 4.4. Earth sciences.

Opinion presented by: 

/Prof. Dr. Katya Georgieva/

