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REPORT

on a competition for the academic position of ASSOCIATE PROFESSOR in Professional field 4.4. Earth Sciences in the scientific specialty "Geology of the Oceans and Seas", Scientific field: "Paleoclimate and Geoecology of the Black Sea", for the needs of the section "Marine Geology and Archaeology" according to the announcement in the State Gazette No. 63 of 01.08.2025 with candidate: Krasimira Ruseva Slavova, Chief Assistant at the Institute of Oceanology at the Bulgarian Academy of Sciences

Prepared by: Prof. Dr. Nikolai Dobrinov Dobrev, Geological Institute at the Bulgarian Academy of Sciences

The scientific jury for the competition was appointed by order No. 300/26.05.2025 of the Director of the Institute of Oceanology at the Bulgarian Academy of Sciences. At the jury meeting held on 10.10.2025, I was selected to prepare a statement for the competition. This opinion has been prepared in accordance with the Law on the Development of the Academic Staff of the Republic of Bulgaria and the Decision of the National Assembly of the Institute of the Sea (Minutes No. 12/17.09.2025, item 6).

Brief information about the candidate

The candidate Krasimira Slavova was born in the city of Varna. She graduated from the Master's degree in 1997 at the Naval Academy "Nikola Yonkov Vapatsrov", Faculty of Civil Engineering. She started working at the Institute in 1999. In 2004, she defended her PhD on the topic "Climatic and geocatastrophic events in the Black Sea 7500 calendar years ago". Since 2011, she has been a senior assistant. She participates in 23 research projects - 8 national and 15 international. She is fluent in English and Russian.

Publication activity

The author's works submitted for review in the competition for associate professor are 34, which are classified as follows:

1. Scientific publications in publications that are referenced and indexed in world-renowned databases of scientific information – Web of Science or Scopus (group of indicators V). According to the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the candidate must submit a monographic work or publications that meet the above criteria, and the number of points calculated according to the criterion and established in the decree must be at least 100. In this case, 6 publications were submitted with a total of 115 points.

2. Under group of indicators G item 7 (scientific publications in publications that are referenced and indexed in world-renowned databases of scientific information), the candidate has submitted 28 titles with a total number of points of 262.

3. The number of points that the candidate receives related to citations of his publications – group D, is a total of 487 out of 115 citations of 16 publications established.

As a summary of the entire publication activity of the candidate, I can note that the full list of her works contains 48 titles. The main part of her publications is in English – 28, and in Bulgarian there are 6. She is the first author in 12 publications, of which 4 are independent publications. Of the independent publications, 2 are in Bulgarian and 2 in English. The publications under indicator B in Q1 are 2, in Q2 is 1 and 3 in Q3, under indicator D are as follows: 2 in Q1, 1 in Q2, 4 in Q3 and 1 in Q4. A variety is established in the publications – "Marine Geology", "Reports of the Bulgarian Academy of Sciences", "Journal of the Bulgarian Geological Society", "Geologica Balcanica", "Geology and Minerals of the World Ocean", "Grana", etc. There are 5 publications in conference reports.

Contributions

The contributions presented by the candidate are divided into scientific and applied scientific, with 8 being scientific and 3 being applied scientific. The scientific contributions are as follows:

1. Study of correlations between data from different palaeo-climatic archives (cave deposits and sediments) and different dating methods

2. Supplementation and refinement of the existing models for palaeo-exchange of water masses between the Aegean, Marmara and Black Seas and the existing chronostratigraphic schemes for the Black Sea area.

3. Criteria have been established for studying the transition of the Black Sea basin from a regressive lacustrine phase to a transgressive marine phase at the end of the early Holocene.

4. Interpretation and reconstruction of the evolution of the Black Sea basin during the Late Pleistocene-Holocene.

5. Detailed reconstruction of palaeo-climatic and palaeo-ecological changes in the Black Sea region and basin over the last ~26,000 years.

6. A curve of average surface salinity for the Black Sea basin over the last 20,000 years has been derived.

7. Application of a new approach to obtain data on carbon stored in coastal marine sediments.

8. Investigation and assessment of the contamination of Black Sea sediments with radio-nuclides and heavy metals and the pollution of the marine environment with floating debris.

The candidate's scientific and applied contributions are:

1. Development of documents related to sampling and sample preparation of sediments for analysis with nuclear analytical techniques.

2. Integration of sediment data from the Black Sea area, obtained using nuclear analytical techniques, into the IAEA Marine Radioactivity Information System (MARiS) database.

3. Application of a new approach for better interpretation of palaeo-climatic, palaeo-ecological and palaeo-geological data on the evolution of the Black Sea Basin during the early Holocene

To summarize, it can be said that the main part of the candidate's scientific contributions relates to the study of coastal and deep-sea sediments of the Black Sea in order to establish correlations between climate change, changes in the palaeo-ecological conditions of the basin, sea level fluctuations and the dynamics of deposition of Late Pleistocene and Holocene sediments. The results of these studies are based on the interpretation and reconstruction of the evolution of the Black Sea Basin in the context of correlations between various indicators of the geological environment and palaeo-climatic changes during the period under consideration. The new data obtained are studied in the context of modern climate change and anthropogenic pressure and are a contribution to scientific research in the field of geoecology of Black Sea sediments.

The review shows that the scientific activity of Krasimira Slavova fully corresponds to the topic of the competition and the presented contributions are the personal work of the candidate.

Remarks and recommendations

I have no particular remarks on the scientific activities of candidate Krasimira Slavova. Only with regard to the presentation of the contributions, I am of the opinion that they could be reduced (merged or rearranged), and presented in a more summarized form.

Conclusion

In conclusion, I appreciate the highly achieved scientific results and the acquired scientific research experience of Dr. Krasimira Slavova. She possesses the necessary scientific achievements and qualifications for the title of "associate professor" and satisfies the requirements of the Law for the development of the academic staff in the Republic of Bulgaria under Art. 2b, para. 5 and the requirements of the BAS for the conditions and procedure for acquiring scientific degrees for holding academic positions in area 4 - Natural Sciences, Mathematics and Informatics. Therefore, I propose to the jury to propose to the esteemed Scientific Council of the Institute of Scientific Research of the Bulgarian Academy of Sciences to vote for the head. Assistant Professor Dr. Krasimira Slavova to take up the academic position of "ASSOCIATE PROFESSOR" in the professional field 4.4. Earth Sciences - scientific specialty "Geology of the Oceans and Seas", scientific field: "Paleoclimate and Geoecology of the Black Sea".

Sofia, 31 Oct. 2025

Prepared by:

(Prof. Dr. Nikolai Dobrev)