

REVIEW

of the application package submitted for participation in the competition for a tenure of academic position "Associate Professor", in professional area 5.5 "Transport, shipping and aviation", academic course "Conservation of biological diversity", in department of "Ecology and environmental protection", at the Faculty of Shipbuilding of Technical University of Varna, announced in the Bulgarian State Gazette No 65/06.08.2021

Applicant: Ch. Assistant Professor Ph.D. Stoyan Ivanov Vergiev

Reviewer, Member of the Scientific Jury: Prof. Ph.D. Eng. Miroslav Yordanov Tsvetkov, Professor at Navigational Department and Head of Scientific Department at Nikola Vaptsarov Naval Academy, Varna, Bulgaria

1. General provisions and biographical data.

The current competition for the academic position of "Associate Professor" has been announced in State Gazette No 65 of 06.08.2021 in compliance with all regulatory requirements by the administration of TU-Varna. The only candidate who submitted documents and was admitted to participate in the competition is Ch. Assistant Professor Ph.D. Stoyan Ivanov Vergiev.

The candidate in this competition has completed his higher education at the Technical University of Varna in the specialty "Ecology and Environmental Protection", successively acquiring a Bachelor's degree in 2002 and a Master's degree in 2003.

The candidate acquired his Ph.D. degree in 2014 for thesis "Paleoecology and geoarchaeology of upper pleistocene and holocene sediments according to data from the deep Black Sea and Varna Lake". The education was conducted under the doctoral program "Geology of the Oceans and Seas" in the Section "Marine Geology and Archeology" of the Institute of Oceanology "Prof. Fritjof Nansen" at BAS.

The work experience of Chief Assistant Ph.D. Vergiev started in January 2008 and moved to the following positions: curator, research associate III degree and assistant at the Regional History Museum - Varna, and from 02.01.2018 until now he holds the academic position of "chief assistant" in TU-Varna as follows: from

02.01.2018 to 21.05.2018 in the Department of Plant Breeding and from 21.05.2018 until now in the Department of Ecology and Environmental Protection.

2. General description of the submitted materials.

The candidate has submitted for review a total of 40 scientific publications. Books, textbooks and teaching aids are not presented. 35 scientific publications that are outside the dissertation and are considered in the final evaluation are accepted for review. 5 scientific papers on the dissertation are not reviewed (abstract, two publications on indicator D.7 and two publications on indicator D.8).

The candidate submits a list and evidence for participation in a total of eight research and educational projects, as well as other related documents proving his scientific, teaching and implementation activities.

The analysis of the provided materials is presented in the next few paragraphs.

To cover the requirements of indicator group "B", the applicant has submitted 13 scientific publications in publications that are referenced and indexed in world-famous databases with scientific information, grouped thematically to meet the requirements of indicator "B.4", as equivalent of habilitation work.

These 13 publications are currently visible in SCOPUS and WoS. Four of the mentioned scientific publications have been developed independently, and the rest in co-authorship, as only four of them have more than two co-authors. Assuming that the candidate's contribution to the individual co-authored publications can be judged by the order of the authors, it should be noted that Ph.D. Vergiev is the first co-author in 4 reports, in another 2 he is second, in 1 he is third. All this gives reason to believe that the candidate has a significant contribution to the above publications. Of the 13 scientific publications presented, only one is in Bulgarian and the remaining 12 are in English.

The total number of points for the author by group of indicators "B" is 415.84.

To meet the requirements of the group of indicators "G", the candidate has submitted a list of indicator "G.8" with a total of 22 scientific publications in unreferred journals with scientific review or in edited collective papers. Four of the scientific publications on indicator "G.8" are indexed in the Google Scholar platform, and all the others in the National reference list of contemporary Bulgarian scientific journals with scientific review. Of these 22 publications, 14 are independent (over 60% of the total number), and the remaining 8 are co-authored. The candidate is the first author in all co-authored scientific publications.

Of the 22 scientific publications presented under indicator "G.8", five are in English and the rest are in Bulgarian.

The total number of points for the author by group of indicators "G" is 333.99.

In accordance with the requirements of Bulgarian Law and its regulations, the candidate has provided a list of abstracts of dissertations and 4 publications used to acquire Ph.D. degree (two of which in English and two in Bulgarian).

After reviewing the lists provided, the abstracts and the full text of the publications, I accept them for review in the above volume. A summary of the scientific and applied contributions of the developments reported in these publications is presented in Section 5 of this review.

To meet the requirements of group of indicators "D", the applicant has submitted lists of indicators "D.12" and "D.14" with a total of 21 citations by other authors distributed as follows: 16 citations on indicator "D.12" and 5 according to indicator "D.14".

The total number of points for the author on indicator "D" is 170.0.

According to the "ZH" indicator, the candidate has provided information on the over 500 hours of lectures held in the last three academic years for students in the Bachelor's and Master's degrees, which repeatedly exceeds the minimum requirements for the "ZH" indicator of the conditions for borrowing "Associate Professor" position.

In summary of the analysis of the individual indicators, I present in tabular form a comparison of the submitted materials on the individual groups of indicators with the minimum national and institutional requirements for the candidates for employment of "Associate Professor" position:

Table. Information on the fulfillment of the conditions for borrowing of academic position "Associate Professor" by groups of indicators for scientific field 5. "Technical Sciences"

Group of indicators	Minimum requirements for the tenure academic position "Associate Professor"	Scores of Ph.D. Vergiev
A	50	50
B	-	-
B	100	415,84
G	200	333,99
D	50	170
E	-	-

ZH	30	305
	430	1 274,83

The comparison presented in the table shows that the applicant in total exceeds almost 3 times the minimum requirements for borrowing of academic position "Associate Professor", and in the groups of indicators "B", "G" and "ZH" significantly exceeds the minimum requirements for Area 5. "Technical Sciences", specified in Bulgarian Law.

3. A general description of the RTD activity of the applicant.

The presented published scientific papers for participation in the competition, considered in their entirety, frame a large-scale scientific study covering an extremely long period of time, which analyzes the correlations between climate change dynamics, the state of coastal areas and threats (natural disasters and anthropogenic activity) on coastal biodiversity.

The candidate uses adequate and up-to-date methods for applied research, such as modeling and simulations of hydrodynamic processes in the environment of a digital model based on bathymetric studies and detailed mapping of elements from coastal areas.

The candidate presents a reference and evidence for participation in 8 projects, two of which are educational, four are research with international participation, and the other two research (funded by the state budget through TU-Varna) is the head.

Summary of the contributions that Ch. Assistant Professor Ph.D. Vergiev states I present in Section 5 of this review.

4. Assessment of the pedagogical qualification of the applicant.

According to the submitted documents, the candidate was elected as a researcher. III degree - competition assistant announced in SG issue 31 of 23.04.2010 at a meeting of the Scientific Council of the Institute of Botany - BAS was held on 21.06.2010 on the basis of which he was appointed Research Associate III degree - Assistant on 28.06.2010, which date I accept as the beginning of the pedagogical activity of the candidate.

As of the date mentioned so far, the pedagogical activity of the candidate covers over 11 years, and in the last 3 years he has been working as a chief assistant at the Technical University - Varna.

According to the presented report, the candidate has spent for the last three academic years over 500 lecture hours, over 600 hours of laboratory exercises,

over 150 hours of seminars and over 100 hours of extracurricular activities with applied coefficients of reduction and reduction. This workload includes disciplines included in the curricula of specialties for the acquisition of Bachelor's and Master's degrees full-time and part-time. He has participated in the development of five curricula, included in the curriculum of the specialty "Engineering Ecology" Bachelor's degree and the same specialty Master's degree. He has developed and conducted 9 lecture courses, 12 laboratories and 6 seminars, author and screenwriter of the popular science film "Broken Stones" produced by BNT and introduced to the lecture course "Protected areas and conservation of the genetic fund." The candidate presents evidence for conducting external trainings in the disciplines led by him: in a real production environment in the workshops of "Optimat 1" Ltd., in the area of the University Botanical Garden - Balchik and in the area of the mouth of the Kamchia River. During the last two academic years he has supervised five graduates in the specialty "Engineering Ecology" with a Master's degree. Actively works with students and PhD students in the development of scientific publications and participation in conferences, as well as leadership of students in research projects funded by the state budget through the system of internal competitions for research at TU - Varna. Ch. Assistant Professor Vergiev presents a reference and evidence certifying his personal contribution to the modernization of the material and technical base of the Department of Ecology and Environmental Protection by purchasing sets of specialized computers and multimedia equipment and a training microscope.

I consider the above facts as reliable indicators for the successful transfer of experience to students and express my highest appreciation in terms of pedagogical training and activities of the candidate.

5. Major scientific and RTD contributions.

I consider that the presented publications reflect a significant volume of research and applied research. The candidate has presented in a synthesized form the most significant contributions, which can be summarized as:

- Studies of adverse climatic events and their impact on habitats, flora and vegetation of the Black Sea coast;
- Studies of the modern flora and vegetation of the Bulgarian Black Sea coast and Northeastern Bulgaria and modeling for identification, assessment and prioritization of areas of conservation importance;
- Modeling studies to assess the effects of floods and erosion as a result of marine impacts and storms on biodiversity, sand habitats, dunes and coastal areas;

- Studies of the evolution of biodiversity along the Bulgarian Black Sea coast in time and space with a focus on the development and anthropogenization of landscapes.

In conclusion, the contributions in the presented publications can be categorized as: empirically obtained new data, proving with new means of already existing theories and hypotheses and confirmatory data, creation of new methods and models, developed methodologies for analysis.

Judging by the composition of the author's team of most of the publications, I believe that the formulated contributions accurately reflect the significant contribution of Ch. Assistant Professor Ph.D. Vergiev for the achieved results.

6. Significance of contributions to practice.

The importance of the contributions formulated in the candidate's publications is judged by the number of citations by independent authors as more than $\frac{3}{4}$ of the total number of submitted citations are by foreign authors whose articles are registered in the international databases SCOPUS and WoS, which in turn is unique. assessment and the recognition of the candidate among the scientific circles abroad. The candidate has participated in 6 research projects, two of which he is a leader, which is a good testament to the practical benefits of his research and applied research activities.

7. Critical notes and recommendations.

I have no critical remarks. I find the documentation well organized and convenient for checking the facts.

My only recommendation to Ph.D. Vergiev is to focus part of his efforts on the development and application of project proposals under the calls of the Horizon Europe Program.

8. Personal impressions and opinion of the reviewer.

At this stage I do not know personally Ch. Assistant Professor Ph.D. Vergiev and I cannot express personal impressions.

CONCLUSION

Based on the acquaintance with the presented scientific works, their significance, the scientific-applied and applied contributions contained in them, I find it reasonable to propose Ch. Assistant Professor Ph.D. Stoyan Ivanov Vergiev to take the academic position of "Associate Professor" in the professional field 5.5.

“Transport, shipping and aviation”, discipline "Conservation of Biological Diversity", Faculty of Shipbuilding, Department of "Ecology and Environmental Protection".

Date:
Nov 18, 2021

Reviewer:
Prof. Ph.D. Eng. Miroslav Tsvetkov/
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