

KONSTANTIN
PRESLAVSKY
UNIVERSITY
SHUMEN



UNIVERSITY OF SHUMEN

"BISHOP KONSTANTIN PRESLAVSKY"

REVIEW

by Associate Professor Dr. Eng. Plamen Mihaylov Mihaylov
internal member of a scientific jury - reviewer

Subject: Competition for academic position "Associate Professor" in the field of higher education 5. "Technical Sciences", professional field 5.7. "Architecture, civil engineering and geodesy" (General, Higher and Applied Geodesy) for the needs of the Department of Geodesy at the Faculty of Technical Sciences of the University of Shumen "Bishop Konstantin Preslavski".

A. Reason for the review

A.1. Order № РД-16-098 dated 02.10.2020 of the Rector of the University of Shumen "Bishop Konstantin Preslavski" for the appointment of the composition of a scientific jury for conducting a competition for the academic position "Associate Professor" in the field of higher education 5. "Technical Sciences", professional field 5.7. "Architecture, civil engineering and geodesy" (General, Higher and Applied Geodesy) in the Department of Geodesy at the Faculty of Technical Sciences.

A.2. The competition is regularly announced in the State Gazette issue 70/07.08.2020, with a term of two months, for the needs of the Department of Geodesy at the Faculty of Technical Sciences of the Shumen University "Bishop Konstantin Preslavski".

A.3 The reviewer was selected by Decision of the first meeting of the scientific jury, held on 19.10.2020 (Record №1).

A.4. The review complies with the requirements of the rules, procedures, criteria and requirements for holding academic positions in the Republic of Bulgaria and the University of Shumen.

B. Documents submitted by the candidate for participation in the competition

B.1. Application from the only candidate - Chief Assist. Dr. Krasimira Kuneva Kirilova, lecturer in the Department of Geodesy at the Faculty of Technical Sciences of the University of Shumen "Bishop Konstantin Preslavski".

B.2. Creative CV by Chief Assistant Dr. Krasimira Kuneva Kirilova, drawn up according to a European model.

B.3. Copy of diploma № 42147/15.08.2013 of the University of Shumen, Higher Education, Bachelor's degree.

B.4. Copy of diploma № 44334/22.07.2014 of the University of Shumen, Higher Education, Master's Degree.

B.5. Copy of diploma № Д-167/06.08.2018 University of Shumen for the educational and scientific degree "Doctor".

1. Short biographical data about the applicant

Chief Assistant Krasimira Kuneva Kirilova was born on 17.10.1987 in Varna. In the period 2009 - 2013 she graduated from the University of Shumen "Bishop Konstantin Preslavski", Faculty of Technical Sciences and graduated as a Bachelor - engineer in "Geodesy". In 2014 she graduated again from the University of Shumen as a Master's engineer in Geodesy. In 2015 she graduated as a Master engineering in Transport Construction at the „Todor Kableshkov“ University of Transport -Sofia. In 2018 she defended her dissertation at Shumen University and received the educational and scientific degree "Doctor". From the beginning of the 2014-2015 school year to the end of the academic year 2017-2018 she is an assistant professor in the Department of Geodesy of the University of Shumen. From October 2019 until now after participating in a competition occupies the academic position "Chief Assistant" of the main employment contract at the University of Shumen, Department of Geodesy. Member of the Chamber of Engineers in Investment Design, Member of IEEE – Shumen Branch. She speaks foreign languages – English on her own level.

2. General description of the submitted materials – articles, reports, instructions, scientific projects, textbooks and teaching tools, etc.

2.1. General characteristics of the applicant's scientific, scientific, applied and pedagogical activities.

The candidate's work is systematized in **three parts**.

Part one presents scientific work – monograph, with which the candidate participates in the competition for "Associate Professor" - subject of the review.

The monograph entitled "Basic Concepts of Satellite Gravimetry – Satellite Gravitational Gradiometry and Satellite Tracking" has a volume of 167 pages and contains an introduction, five chapters and a conclusion. With this work, a successful attempt was made to present a comprehensive overview of the modern development of satellite gravimetry at home and abroad. It allows you to familiarize yourself with the theoretical stagings of satellite gravitational gradiometry and satellite tracking. The monograph was developed at a very good scientific and methodological level and a scientific study providing theories, analyses and factual materials related to the training at the University of Shumen "Bishop Konstantin Preslavski" in the specialty "Geodesy" was completed.

In the **second part** are presented works of the candidate - articles, reports after receiving the educational and scientific "Doctor" a total of 12 pieces – 5 articles and 7 reports of participation in scientific forums.

In the **third part** - participation in scientific projects – 5 pieces.

2.2. Scientific and scientific-application of the applicant

Chief Assistant Dr. Krasimira Kuneva Kirilova participates in the competition with achievements in scientific and scientific - applied activities as follows:

- **Total number of publications** (articles, reports and other print editions) – **13** pieces.

- **Articles – 5 pieces**, 3 pieces of independent in a magazine that is referenced and published abroad (Journal scientific and applied research, licensed in EBSCO – USA) and 2 pieces in the Journal of “Geodesy, Cartography and Land Management” co-authored;

- **Reports** – a total of 7 pieces in Bulgaria - 5 pieces in the Yearbook of the Faculty of Technical Sciences and 2 articles in SocioBrains (onlain), all independent;

- **Monograph 1 issue (printed in the University Publishing House "Bishop Konstantin Preslavski").**

- **Общ брой научни проекти – 5 броя, вътрешно университетски проекти;**
- **Reflection of the applicant's scientific publications in literature (citations):**

A total of 17 citations from other authors are presented: 1 issue of articles, of reports – 4 pieces, which are quoted by three authors in 17 publications.

2.3. Educational and pedagogical activities (working with students)

Chief Assistant Dr. Krasimira Kuneva Kirilova in the 2014/2015 school year, 2015/2016, 2016/2017 and 2019/2020 has held classes at the University of Shumen in the following disciplines: "CAD Systems", "Cadastre", "Basics of Cartography", "Geodesy", "Geodetic Networks", "Territorial Planning", "Physical Geodesy and Gravimetry", "Geoid modelling", "Specialized Cadastre", "Applied Geodesy", "Cadastral Information Systems", "Urbanized Territories Device", "Vertical Planning" and "Regulations", all for specialty Geodesy (regular training - masters).

*According to the reviewer, the materials presented by the applicant for scientific and pedagogical activity **dominate the achievements in scientific and scientific application**. Such are the modern requirements of the National Evaluation and Accreditation Agency and the Ministry of Education and Science **to stimulate the research activities of university lecturers**, as enshrined in the Strategy for the Development of Higher Education in the Republic of Bulgaria until 2014-2020.*

3. Achievements

Claims for contributions of the applicant are summarised thematically with reference to the relevant publications by the number from the annexed list. From that list, I only review achievements that have not been peer-reviewed in previous competitions for scientific degrees and scientific titles.

In general, contributions can be summarised as follows.

3.1. Higher geodesy

- A monograph is presented that examines the modern aspects of satellite gravimetry. In short, the problems of determining earth's gravitational field by different methods are addressed. The problems of inertial gravimetry, ground and aeroplane gradiometry are discussed.

- In a systematic form, the theoretical foundations and practical possibilities of satellite gravitational gradiometry are presented, representing a leading technology for studying the Earth's outer gravitational field.

- A methodical basis has been established for future research in studying Earth's outer gravitational field.

3.2. Analyses, evaluations and results of research in the field of higher geodesy.

- In this direction are separated the scientific and applied contributions of the applicant in the field of **higher geodesy**. They present the candidate as a scientist who knows the theory and skillfully applies it in practical studies.

I recognize the contributions of the applicant, which are scientifically and scientifically applied and relate to:

- Addition to existing theory and methodology and enrichment of existing knowledge [Monograph], [5.1, 5.2, 5.7];
- Application of scientific advances in practice [5.3 – 5.6, 5.8-5.12].

For the importance of the applicant's contributions to science and practice, it should be noted:

- The articles are published in reputable foreign and Bulgarian magazines: “Journal scientific and applied research” (USA) and „Geodesy, Cartography and Land Management”.

4. Assessment of the applicant's personal contribution

In the field of scientific and scientific application, the applicant's personal contribution is clearly expressed, summarising the following:

- After receiving the educational and scientific degree "Doctor" has published 13 scientific papers;
- They were noticed after receiving the Educational Science Degree "Doctor" - a total of 17 citations from other authors.
- Participated in 5 research projects.

In the field of learning and learning, the following can be noted for the applicant's personal contribution:

- There are prepared exercises on 6 lecture courses, which she conducts at the University of Shumen.
- She is a member of the Faculty Board of the Faculty of Technical Sciences of shumen University

With regard to *publications and contributions*, I believe that *they are the personal work of the applicant* and are due to her abilities, her difficulty and the wide literary awareness of the researched scientific fields.

5. Critical notes and recommendations.

All 17 citations submitted for the competition are to her colleagues from the Department of Geodesy. My recommendation to Chief Assistant Dr. Krasimira Kirilova is to focus her efforts on publishing in specialized foreign scientific journals indexed in global scientific databases, such as SCOPUS and WOS, because her research in the field of satellite gravitational gradiometry really deserves high appreciation and will be of interest abroad. This will lead to the citation of her publications and by foreign authors, which for now is lacking in her scientific production.

I will make the following finding:

According to the Law on the development of academic staff in the Republic of Bulgaria, Regulations for implementation of the Law on the development of academic staff in the Republic of Bulgaria and Regulations for implementation of the Law on the development of academic staff in the Republic of Bulgaria of Shumen University, the candidate meets the terms and conditions for taking up the academic position "Associate Professor".

The report on the fulfilment of the minimum national requirements under Article 26(2) of the Law on the development of academic staff in the Republic of Bulgaria with the relevant evidence are (Table 2) [8]:

- Indicator A Dissertation work – 50 points;
- Indicator B Monograph – 100 points;

Indicator G 8 Scientific publications in unreferenced journals with scientific review or in edited collective volumes – 8 publications of 20 points and 4 publications of 10 points = 200 points;

Indicator D 13 Citations in monographs and collective volumes with scientific review – 17 citations by 3 points = 51 points.

A total of 401 points.

6. Personal impressions

I know Chief Assistant Dr. Krasimira Kuneva Kirilova as a hardworking, ambitious, highly erudite and student-respected teacher. Her professional training is combined with lasting scientific interests and in-depth knowledge in the field in which she works. Maintains ethical and collegial relationships with teachers and scientists at home and abroad. I have been a reviewer of the dissertation work of Chief Assistant Dr. Krasimira Kuneva Kirilova for obtaining the educational and scientific degree "Doctor", to which I have definitely given a positive assessment.

7. Conclusion

The analysis carried out in the review of the teaching, research and other activities of Chief Assistant Dr. Krasimira Kuneva Kirilova **shows that the requirements** of the Law on the development of academic staff in the Republic of Bulgaria and Regulations for implementation of the Law on the development of academic staff in the Republic of Bulgaria of Shumen University to the candidate for the academic position "Associate Professor".

In view of the above, I propose to the Dear Scientific Jury on the competition to vote positively, Chief Assistant Dr. Krasimira Kuneva Kirilova to take up the academic position "Associate Professor" in the field of higher education 5. "Technical Sciences", professional field 5.7. "Architecture, civil engineering and geodesy" (General, Higher and Applied Geodesy) for the needs of the Department of Geodesy at the Faculty of Technical Sciences of the University of Shumen "Bishop Konstantin Preslavsky".

02 November 2020

City of Shumen

Reviewer:.....

Assoc. Prof. Dr. Eng. Pl. Mihaylov