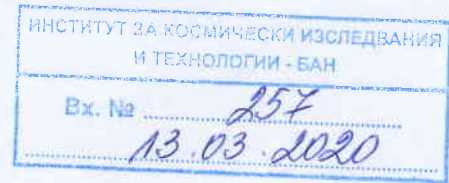


REVIEW

by

Assoc. Prof. Georgi Jelev, PhD
Space Research and Technology Institute –
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Member of the Scientific Jury, in accordance with Order No. 16 / 24.01.2020 of the Director of SRTI-BAS, for a competition for the occupation of academic positions "Associate Professor", announced in SG No. 98 of 13.12.2019 from the Space Research and Technology Institute - BAS in the field of higher education 4. Natural sciences, mathematics and informatics, professional field 4.4. Earth Sciences; Scientific specialty "Remote Sensing of the Earth and Planets" for the needs of the Department "Remote Sensing and GIS" with candidate: **Chief Assist. Alexander Georgiev Gikov, PhD.**

1. General criteria for participation in the competition

Chief Assist. Alexander Georgiev Gikov, PhD from the Department "Remote Sensing and GIS" at SRTI-BAS has submitted documents for participation in the announced competition. . He is the only candidate. The documents presented by him meet the requirements for occupation of the academic position "Associate Professor" and are in accordance with the Law for the Development of Academic Staff in the Republic of Bulgaria (LDASRB), the Rules for the Implementation of the LDASRB, the Rules on the Terms and Conditions for Acquisition and Occupation of Academic Positions at the Bulgarian Academy of Sciences and the Rules for the application of the LDASRB of the Space Research and Technology Institute - BAS.

The applicant meets the Minimum National Requirements under Art. 2b, para. 2 and 3, respectively, of the requirements of art. 2b, para. 5 of LDASRB and in accordance with the Rules of the BAS for the conditions and procedure for acquiring scientific degrees and for occupying academic positions in the field of higher education 4 - Natural sciences, mathematics and informatics, professional field 4.4. Earth Sciences.

The documents submitted by the applicant are diploma and dissertation thesis for the acquisition of Educational and Scientific Degree - *Doctor* (group of indicators A), 34 pcs. scientific publications divided respectively 10 pcs. in group V and 24 in group G. In group D are presented 7 pcs. publications cited 15 times.

The number of points scored by the candidate is higher than required by the Law and the Regulations to it.

Group of indicators	Required points for Associate Professor according to the LDASRB	Required points for Associate Professor according to the Rules of the LDASRB into SRTI and BAS	Points acquired by Chief Assist. Alexander Georgiev Gikov, PhD
A	50	50	50
V	100	100	188,9
G	200	220	281,4
D	100	60	63

2. Bibliographic data

Chief Assistant Alexander Georgiev Gikov, PhD was born on September 17, 1970. In the period 1990-1995 he graduated from Sofia University "St. Kliment Ohridski", Faculty of *Geology and Geography*, Departments of *Landscape Science and Environmental Protection* and *Geomorphology and Cartography*.

On 14.05.2019 successfully defended the Doctor's degree in scientific specialty 01.04.12 "Remote Sensing on the Earth and Planets". He has been working at SRTI-BAS for almost 20 years, and since 2012 he has been in the academic position of Assistant Professor.

His professional skills are related to the application of remote sensing methods and GIS in environmental studies and have been featured in over 60 publications. He has acquired his professional competence by participating as an expert in 20 projects and for one of which he is a manager. Twenty seven of his publications have been cited a total of 134 times (in Scopus and Web of Science, its *h* index is 3, and in Google scholar - 7).

The participant is fluent in Russian and English.

3. General characteristics of the research and applied science activity of the applicant

To occupy the academic position of "Associate Professor" in BAS there are higher requirements than those set out in the minimum national requirements.

1) Scientific research activity

The list of candidate's scientific papers on the subject of this competition is 34 pcs. out of a total of 64 pcs. They do not include the scientific papers used in the acquisition of the Doctor's degree - 4 pcs.

Indicator Group A

This group includes the defended dissertation thesis for the awarding of a Doctoral degree on the topic: *Mapping and analysis of contemporary landscapes in Rila Mountains by GIS and remote sensing*, with Scientific Advisor: Prof. Dr. Eugenia Kirilova Roumenina.

In this group 50 point were achieved and the criteria were met.

Indicator Group V

In this group of indicators are 10 scientific publications in seven leading specialized journals that have been referenced and indexed in world-renowned scientific information databases (*Web of Science and Scopus*). 4 pcs. fall into category Q1 and 1 pc. - in Q2. The total number of co-authors is over 40. The applicant is the sole author of one publication.

In this group he achieved 188.9 points and exceeded the minimum requirement with 88.9 points.

Indicator Group G

In this group of indicators, the presented 24 publications fall under the category "8. *Scientific publications in non-refereed peer-reviewed journals or in edited collective volumes*". The total number of co-authors is under 40, but it worth noting the higher number of publications for which the applicant is the sole author - 7.

In this group, 281.4 points were achieved and the criteria were exceeded by 61.4 points.

Indicator Group D

In this group of indicators, the applicant has citations of 7 scientific publications. They are allocated accordingly:

in category 10. *Quotations or reviews in scientific publications, abstracted and indexed in world-renowned databases of scientific information or in monographs and collective volumes* - 4 publications cited 13 times in total.

in category 12. *Quotations or reviews in non-refereed journals with scientific review* - the remaining 3 publications cited 4 times in total.

In this group, 63 points were achieved and the criteria were exceeded by 3 points.

2) Scientific-applied activity

The applicant has acquired his scientific and applied activity by participating as an expert in 20 projects and as a project manager.

4. Scientific and applied scientific contributions

The submitted publications clearly distinguish the scientific and applied scientific contributions of the applicant, grouped in the following three scientific fields:

1). *Development and improvement of the methodology for the study of the natural environment through the application of geoinformation technologies and landscape methods.*

The main scientific interest of the candidate is emphasized, which is related to the continuation of the scientific activity of his dissertation thesis. The contributions are to the creation of methodologies for the study of the components of the natural environment (rocks, soil, air, water, vegetation and animals) by means of remote sensing, geoinformation technologies and landscape methods, taking into account natural factors and human activity. He presents these contributions in 15 . publications. The main publication activity of the applicant in refereed and indexed journals (6 issues) in *world-renowned* scientific information databases is directed in this direction. The applicant has 9 published reports, presented at national and international conferences by which he promoted his research. The personal contribution of the applicant is evident in the large number of publications, almost half of which are with him as a first or only author. The majority of citations (11 out of 15) of the candidate's articles were in this scientific area.

2) *Application of geoinformation technologies for the study of hazardous natural phenomena and processes.*

The contributions are related to the development of an original methodology for monitoring various hazardous natural processes and phenomena (landslides, damage from forest fires and tornadoes, etc.). Geological and climatic hazard and vulnerability for specific areas have been assessed. The need to quickly present the results of research in this area determines the high publication activity in published reports presented at national and international conferences (13). Regardless of the local nature of the subject of study, there are two publications in foreign journals, referenced and indexed in world-renowned databases of scientific information. The applicant's personal contribution is clearly expressed. This shows that in this scientific area, Chief Assist. Alexander Gikov, PhD holds a leading position among his co-authors.

3) *Application of remote sensing methods for crop mapping.*

The contributions in this area are related to the development of a methodology for mapping and classification of types of crops. The publishing activity is more modest and is represented by two publications in refereed and indexed in world-renowned databases of scientific information journals, one of which is the first author and two published reports from international scientific forums.

CONCLUSION

The documents and materials presented by Chief Assist. Alexander Georgiev Gikov, PhD meet the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Rules for the implementation of the ZRASRB, the Rules for the implementation of the LDASRB of BAS and the Rules of the SRTI-BAS.

Chief Assist. Gikov, PhD presented, in the competition, a sufficient number of scientific papers, published after the materials used in the defense of the doctoral degree and according to the main indicators, he collects points exceeding the minimum required according to the criteria of SRTI-BAS. As a result, I confirm that the results achieved by him in the research activity fully cover the requirements for occupying the academic position of "Associate Professor".

Chief Assist. Gikov, PhD has original scientific and applied contributions, most of which have been published in renowned scientific journals with impact factor and have been promoted through reports in international forums. In most of his publications he has a leading role and is recognizable in the scientific field.

This gives me reason to give my positive opinion on the application of Chief Assistant Alexander Gikov, PhD and I recommend to the Scientific Jury to submit a proposal to the Scientific Council of SRTI-BAS for the selection of Chief Assistant Alexander Gikov, PhD at the academic position of "Associate Professor" at SRTI-BAS by field of higher education 4. Natural sciences, mathematics and informatics, professional field 4.4. Earth Sciences; Scientific specialty "Remote Sensing of the Earth and Planets" for the needs of the Department "Remote Sensing and GIS".

13 March 2020



Reviewer: *121*

Assoc. Prof. Georgi Jeleu, PhD