

## OPINION

on a competition for academic position "professor"  
professional field 5.7. Architecture, construction and geodesy  
(Cartography (incl. thematic geographical mapping),

The competition was announced in SG Issue 64 of 03.08.2021.

Candidate: Assoc. Prof. Dr. Eng. Sabin Ivanov Ivanov

Member of the scientific jury: Prof. Dr. Eng. Chavdar Iliev Aleksandrov

### 1. General characteristics of the applicant's scientifically research and scientifically applied activities

The candidate for participation in the competition for the academic position "Professor" in the Department of Geodesy of the University of Shumen "Bishop Konstantin Preslavski" has been working at the same university since 01.03.2014. After studying for a PhD, he defended his dissertation on „Cartography (incl. thematic geographical mapping)“ on the topic "Mapping and analysis of the cultural and historical heritage of Shumen region" in 2017. June 2019 has been selected as an associate professor of the same specialty. All scientific production outside the dissertation is also entirely in the field of geodesy and cartography, including using modern research methods, technical means and application software. The applicant is included in the register of academic staff and protected dissertation papers in the NCID (National Centre for Information and Documentation). In registering his dissertation and the academic position "Associate Professor" there are introduced scientific indicators as follows: for the ONS "Doctor" – 81 p., for the academic position "Associate Professor" – 401 p.

In the competition for "Professor", the candidate participates with monographic work and 21 other publications, of which one in the collection of publications of an international conference on cartography and geographical information systems, 6 articles in magazines, 10 publications in the yearbook of the Faculty of Technical Sciences of the University of Shumen and 4 in collections with reports from the scientific session "Mattech", also organized by the faculty. The list of scientific papers also includes 2 textbooks in mathematical cartography and 4 pieces of teaching tools that are used in the training of students in the faculty. The candidate is an independent author of 8 publications and has indicated 37 citations to 9 of his works. He participated in one research project as a leader and in 9 other projects as a researcher. Data on two PhD students of which the candidate is a leader are also included.

All works of the applicant representing his scientifically research and scientifically applied activity are in the field of competition and comply with the requirements of the normative documents as follows:

A – Indicator 1	50 p.	at min. requirements of 50 p.
V – Indicator 3 or 4	100 p.	at min. requirements of 100 p.
G – Sum of Indicators 5 – 11	200,32 p.	at min. requirements of 200 p.
D – Sum of Indicators 12 – 15	103 p.	at min. requirements of 100 p.
E – Sum of Indicators 16 – 28	160 p.	at min. requirements of 150 p.
Total	613,32 p.	at min. requirements of 600 p.

## **2. Evaluation of the pedagogical training and activity of the applicant.**

Assoc. Prof. Ivanov started teaching work as an assistant in the Department of Geodesy of University of Shumen in 2014, where at the time of the announcement of the competition he held an academic position "Associate Professor". He teaches various dispositions from the curricula of the Faculty of Technical Sciences at the University of Shumen, including "Topographic cartography" in two parts, "Geodesy" in two parts, "Cartography" in two parts, "Transformation of map images", "Cartography and GPS navigation", "Mobile GIS" and "Thematic cartography". He is the author of two textbooks, four teaching tools and numerous lecture courses, curricula and programs. All this shows that Assoc. Prof. S. Ivanov has very good pedagogical training and experience in teaching work.

## **3. Main scientific and scientifically applied contributions.**

Contributions from the applicant's scientific research and pedagogical activities can be pooled in the following areas:

### **3.1. Contributions of a predominant scientific and scientifically applied nature**

A toolkit has been developed for the implementation of digital remote methods, providing better opportunities for detecting different morphological structures in remote areas;

A universal landmark system covering cultural monuments has been developed, as well as specific solutions for the effective operation of cultural heritage sites;

Methods of modeling the relief are proposed, as well as stereophotogrametric techniques using aerial photos;

Some basic principles of digitisation related to avoiding errors in the digitisation process have been brought up;

New technologies and methods for data collection and management in a digital environment have been proposed.

### **3.2. Contributions of a predominantly applied nature and contributions to implementation**

A methodology has been established for mapping the sites in sets of geographic information systems to facilitate their management;

Field activities for mapping, description and appropriate visualization of the rich cultural historical heritage are proposed, following the trends of modern cartography.

### **3.3. Methodological studies, textbooks and teaching tools**

During his years working as a lecturer at the University of Shumen, the candidate participated actively in the development and improvement of methods and technologies for improving the quality of higher education, the curriculum documentation and the methodology of its implementation in the learning process. The result of this work consists in the development of textbooks and manuals for exercises in disciplines related to the topic of the competition, as well as a guide to thesis and doctoral students. These facts speak of a successfully established and working school for the preparation of highly qualified young specialists in the field of geodesy and cartography, the main merit of which is due to the applicant.

## **4. Importance of contributions to science and practice**

Theoretically, the applicant's contributions are related to research in the field of geodesy and mapping of sites of a certain cultural and historical value and significance and to the use of modern scientific and applied techniques and tools.

The publications proposed for participation in the competition are dominated by research in the field of geodesy and cartography, solving real problems in the field of geodetic practice with the application of digital remote methods, stereophotogrammetric techniques using aerial photographs, cartographic visualization, etc. This gives me reason to believe that the main contributions to the works submitted for participation are on the subject of the competition and are the personal work of the candidate.

#### 5. Critical notes and recommendations

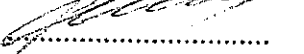
The candidate's audience activity complies with the normative requirements, both quantitatively and as content. However, it can be seen that the majority of publications are made in editions of the faculty where the candidate works. It would be good in the future for his audience activity to focus mainly on more specialized indexed publications abroad, suitable for publication on his scientific specialty. This will also increase the chances of more and more diverse citations, which in participation in this competition are limited to publications of Bulgarian authors and do not appear in the Scopus and WoS bases.

It is also noticed that the applicant presents participations only in projects with national funding and in any international one. In this regard, I would recommend looking for more opportunities to work on projects with related institutions not only in the country, but also abroad.

#### CONCLUSION

Assoc. prof. Dr. Sabin Ivanov Ivanov has submitted for participation in the competition for academic position "**professor**" sufficient in volume of scientific production, aimed mainly at the field of geodesy and cartography for solving real problems in the field of geodetic practice with the application of digital remote methods, stereophotogrammetric techniques using aerial photographs, cartographic visualization, etc. The submitted developments are at a good theoretical level, with a sufficient number of citations and meet the requirements of the regulating documents. The applicant's pedagogical experience also meets the requirements. All of this gives me sufficient reason to propose Assoc. Prof. Dr. Sabin Ivanov Ivanov to take the academic position "Professor" in the Department of Geodesy of the University of Shumen "Bishop Konstantin Preslavski" in professional field 5.7. "Architecture, construction and geodesy (Cartography (incl. thematic geographical mapping))"

26.10.2021

Member of the scientific jury:   
/Prof. Dr. Eng. Ch. Aleksandrov/