

OPINION

on a competition for the academic position "professor"
professional field 5.7. "Architecture, Construction and Geodesy
(Photogrammetry and Remote Methods)",

The competition is announced in SG issue 41/03.06.2022.

Candidate: Assoc. Prof. Dr. Eng. Kiril Filipov Yanchev

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

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

The candidate for participation in the competition for the academic position of "Professor" in the Department of Geodesy at the Faculty of Technical Sciences of the Shumen University "Bishop Konstantin Preslavski" has been working at the same university since 07.10.2019. In 2020 was elected associate professor in the department. The scientific production outside the dissertation and the works provided for participation in the competition for the appointment of JSC "Associate Professor" is entirely in the field of geodesy and the use of modern technical means for remote monitoring, applicable in geodetic measurements when solving specific applied problems. The candidate is included in the register of the academic staff and protected dissertation works in the National Academy of Sciences and has introduced scientometric indicators.

In the competition for "professor", the applicant's participated with a monographic work and 14 more publications, of which three articles in an international journal of the University Publishing House "Bishop Konstantin Preslavski" (included in the EBSCO database), five publications in the yearbook of the Faculty of Technical Sciences of Shumen University, five other publications in a collection of papers from a scientific conference "MATTEX" organized by the faculty and one in a collection of works of the same faculty. The applicant's is an independent author of 6 publications and has indicated 34 citations for 11 of his works. He participated in 4 research projects and supervised course projects of students from the faculty. The list also includes 4 textbooks in disciplines that the applicant's teaches.

All his works representing his research and applied scientific activities are in the field of the competition and correspond to the requirements of the normative documents as follows:

A – Indicator 1	50p.	at min. requirements of 50p.
V – Indicator 3	100p.	at min. requirements of 100p.
G – Sum of Indicators 5 – 11	200p.	at min. requirements of 200p.
D – Sum of Indicators 12 – 15	102p.	at min. requirements of 100p.
E – Sum of Indicators 16 – 28	160p.	at min. requirements of 150p.
Total	612p.	at min. requirements of 600p.

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

Associate Professor Yanchev began teaching at the Department of Geodesy of the SHU in 2019, where he was an associate professor at the time the competition was announced. Teaches various disciplines from the curricula of the Faculty of Technical Sciences, as follows: Geoinformatics Part III, GIS Design, Vertical Planning Part I and II, Applied Geodesy Part I and II Regulations, Study of geodynamic phenomena with geodetic methods, Pre-graduate practice, etc. In the competition for the academic position of "professor", the candidate participated with 4 textbooks, printed at the "Episcop Konstantin Preslavski" university publishing house. The textbooks provide the basic study subjects

"Photogrammetry and Distance Methods" and "Digital Image Processing". This gives me sufficient reason to believe that during the years in which he worked in the department Assoc. Kiril Yanchev has gained sufficient pedagogical experience and has sufficiently good preparation for work as a teacher at JSC "Professor".

3. Main scientific and scientifically applied contributions.

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

3.1. Contributions of a predominant scientific and scientifically applied nature

A theory of photogrammetric processing of laser scanning data has been developed, which allows to increase the accuracy of measurements compared to the use of other known methods. The theory is based on using the batch method to align the scanner paths;

A universal method for checking ground-based laser scanners has been developed, which allows metrological certification of all types of ground-based laser systems, both phase and pulsed;

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

The basic principles of terrestrial laser scanning have been mathematically and experimentally substantiated, based on which practical ways to improve the accuracy of measurements have been investigated;

A theoretical and methodological justification of the terrestrial laser survey process based on a universal technology for work-in-progress and aimed at assessing the accuracy of the final product has been developed.

3.3. Methodological studies, textbooks and teaching tools

Four textbooks printed by the university publishing house are presented in the candidate's works, which provide training in the disciplines "Photogrammetry and distance methods" and "Digital image processing". To the extent that the academic position "professor" is primarily a teaching one, this fact is an excellent attestation for the candidate regarding his future teaching activity.

4. Significance of contributions to science and practice

In theoretical terms, the candidate's contributions are related to research in the field of theory of photogrammetric processing of laser scanning data using modern methods to evaluate and improve measurement accuracy. The applied aspect of research is concerned with carrying out experimental work to practically investigate ways of improving accuracy.

In 6 out of all 14 publications proposed for participation in the competition, the candidate participated independently, and in the rest - with one co-author. For joint publications, no documents have been submitted for authorship claims of the other author, therefore I assume that the participation of the co-authors is equal. The works are dominated by research in the field of geodesy and laser geodetic measurement systems, providing automation of the data collection process with high resolution scanning, as well as the use of modern technologies applicable in geodesy, such as unmanned aerial vehicles, geographic information systems, etc. . This gives me reason to believe that the main contributions in the works submitted for participation are on the topic of the competition and are the personal work of the candidate.

5. Critical notes and recommendations

The applicant's publication activity corresponds to the regulatory requirements both quantitatively and in terms of content. However, the predominant part of the publications were made in publications of the faculty where the candidate works and in the university publication of the SHU. It is also noteworthy that there is a lack of publications related to the improvement and application of modern methods and technologies in the process of student education. It would be good for the candidate to pay more serious attention to this type of publication in the future, as well as to direct his publication activity mainly to more specialized indexed publications abroad, suitable for publication in his scientific specialty. This will also increase the chances of more and more diverse citations appearing in any of the famous scientometric databases - Scopus, WoS, Google Scholar, etc.

CONCLUSION

Assoc. Prof. Dr. Kiril Yanchev has submitted for participation in the competition for "professor" a sufficient volume of scientific production, aimed mostly in the field of geodesy, geodetic measurements for solving real problems in the field of geodetic practice. The presented developments are at a good theoretical level, with a sufficient number of citations and meet the requirements of the regulatory documents. The applicant's teaching experience also qualifies. All this gives me sufficient reason to propose Assoc. Dr. Kiril Filipov Yanchev to occupy the academic position of "Professor" in the "Geodesy" Department of "Episkop Konstantin Preslavski" SHU in professional field 5.7. "Architecture, construction and geodesy (Photogrammetry and remote methods)".

14.10.2022 .

VARNA

Member of the scientific jury:.....

/ Prof. Dr. Eng. Ch. Alexandrov /