

OPINION

ОП-2854/11.04.2024г.

On the materials for participation in a competition for occupation of the academic position „Professor“, in the field of higher education 5. Technical Sciences, professional field 5.7. Architecture, Civil Engineering and Geodesy, scientific specialty "Photogrammetry and Remote sensing", in academic discipline "Photogrammetry and Remote sensing", announced by University of Forestry - Sofia in State Gazette, Issue 102/08.12.2023, and code of the procedure FOR-P-1123-111.

Applicant to participate in a competition is only one:**1. Assoc. Prof. PhD Maria Tsankova Asenova**

Opinion prepared by: Prof. Ph.D. Youlin Nikolov Tepeliev, Professor in professional field 5.7. Architecture, Civil Engineering and Geodesy, University of Forestry - Sofia

1. Brief biographical data about the candidate

Associate Prof. Ph.D. Maria Asenova is a Master of Engineering in Geodesy, Photogrammetry and Cartography, graduated in 1987 at the Higher Institute of Architecture and Civil Engineering (now University of Architecture, Civil Engineering and Geodesy). She started working in 1987 at the Higher Forestry Institute (now University of Forestry - Sofia) as an engineer-researcher in Scientific and Research sector. After a competition held in 1989, she became an “assistant professor” in Photogrammetry at the Department of “Forest Management”, and then occupied the positions of "senior assistant professor" (from 1993) and "chief assistant professor" (from 1997).

She defended a dissertation thesis on the title "Database Structure Optimization and Spatial Analysis in Specialized Forestry GIS" as a doctoral student of an independent form of education at the University of Forestry and obtained the educational and scientific degree “Doctor of Philosophy (Ph.D.)” in 2014. After participating in a competition in 2017, she acquired the academic position “Associate Professor” in the scientific specialty Photogrammetry and Remote Sensing.

In 2022, Assoc. Prof. Ph.D. Maria Asenova was elected as the Head of the Department of "Forest Management" in the Faculty of “Forestry” of the University of Forestry. In 2020, she was elected as a Vice Chairman of the General Assembly of the Faculty of “Forestry” (2020-2024), and from 2024 - as a Chairman.

She is a member of the Union of Surveyors and Land Planners in Bulgaria (USLPB) - Federation of Scientific and Technical Unions since 1989, the Bulgarian Cartographic Association (BCA) since 2016, and the Bulgarian Geographical Society (BGS) since 2018. She became a member of the Board of Directors of USLPB since 2021, and of the Editorial Board of scientific magazine “Geodesy, Cartography, Land Management” since 2022.

Assoc. Prof. Ph.D. Maria Asenova has expert skills in working with photogrammetric and geodetic tools and GNSS equipment, as well as with GIS software packages and systems for automated processing of photogrammetric and satellite data. She uses English and Russian at a very good level.

2. Compliance of submitted documents and materials of the applicant with those required under the Regulations on the Development of the Academic staff in the University of Forestry

Assoc. Prof. Ph.D. Maria Asenova has submitted accurate documents for participation in a competition for the academic position "Professor" in full compliance with the Regulations for the Development of the Academic Staff of University of Forestry (RDASUF) and the Law on the Development of the Academic Staff of the Republic of Bulgaria (LDASRB). In the Self-Assessment Report on compliance of scientific production with the Minimum National Requirements (MNI), under Art. 2b of ZRASRB and Art. 2a, paragraph 1 of the RDASUF Assoc. Prof. Ph.D. Maria Asenova has presented by groups of indicators and in a summarized tabular form the number of points for compliance with MNI in professional field 5.7. Architecture, Civil Engineering and Geodesy. From the comparison table, attached at the end of her Self-Assessment Report, it is clear that the candidate has, as follow:

- According to Indicator A (Dissertation work) – 50 points (50 required);
- According to Indicator V (Monograph) - 100 points (100 required);
- According to Indicator G (Scientific publications) - 626.99 points (above of the required 200);
- According to Indicator D (Citations - 169 points (above of the required 100);
- According to Indicator E (Scientific projects and textbooks, etc.) - 158.32 points (above of the required 150)
- Total - 1104.32 points (above of the required 600).

This shows that Assoc. Prof. Ph.D. Maria Asenova fulfills and exceeds the minimum national requirements in the competition for academic position "Professor" in the field of higher education 5. Technical Sciences, professional field 5.7. Architecture, Civil Engineering and Geodesy".

3. Evaluation of the candidate's educational and teaching activities

The pedagogical activity of Assoc. Prof. Ph.D. Maria Asenova started in 1989 at the Department of "Forest Management", University of Forestry - Sofia and continues until now. Her work is expressed in lectures, exercises, and field practices for full-time and part-time students of the Bachelor's and Master's Degrees. These lectures and exercises are in the following academic disciplines - "Photogrammetry and Remote Sensing", "Geographic Information Systems (GIS)", "GIS and Remote Sensing", "Geodesy", "Geodesy and Vertical Planning", and "Specialized applications of GIS" for 3 faculties of University of Forestry - "Forestry", "Ecology and Landscape Architecture", "Agronomics" for the specialties Forestry, Landscape architecture, Ecology and Environmental Protection, Plant Protection. She is an author and participated in the compilation and updating of curricula on the taught disciplines. She is an author of the exercise guide MapInfo Professional for the development of a GIS project and co-author of the Photogrammetry and Remote Sensing textbook and Geodesy exercise guide.

Assoc. Prof. Ph.D. Maria Asenova was the scientific supervisor of 16 successfully defended graduates (Bachelor's and Master's Degrees).

She is the scientific supervisor of a doctoral student awarded with the right of defense (2022) and the scientific advisor of an active doctoral student (2023). She trained specialists in professional qualification courses through the Center for Continuing Education at University of Forestry. She is the founder and the Head of the GIS study group of University of Forestry from 2016 until now.

Assoc. Prof. Ph.D. Maria Asenova is a well-rounded teacher with responsibility and exactingness towards the students, conducts the classes in a highly scientific style, organizes the educational work at a modern technological level and motivates the students to achieve positive results in the learning process.

4. Evaluation of the candidate's scientific, applied scientific and publication activity

4.1. Participation in scientific, scientific-applied and educational projects

Assoc. Prof. Ph.D. Maria Asenova participated in the development of 8 national scientific or educational projects, in 1 international scientific project and was the head of 1 national scientific project. The scientific and experimental work carried out and the presented scientific reports on the projects are the result of the invested knowledge, professional skills and expert qualities of Assoc. Prof. Ph.D. Maria Asenova in the field of photogrammetry, remote sensing, GIS, geodesy and their applications in forestry, landscape architecture and environmental protection.

4.2. Characteristics of published scientific results

In the submitted materials for participation in the competition of the academic position "Professor" Assoc. Prof. Ph.D. Maria Asenova has presented 39 publications, distributed by indicators in the following order:

- According to indicator V3 - Single author Monograph – 1 pc;
- According to indicator G6 - Published book on the base of a dissertation thesis - 1 pc;
- According to indicator G7 - Publications in refereed and indexed scientific journals, series and proceedings of conferences in Web of Science and SCOPUS – 15 pcs;
- According to indicator G8 - Articles and reports published in non-refereed journals with scientific review or published in edited collective volumes - 18 pcs;
- According to indicator G9 - Issued chapter of a collective monograph - 1 pc;
- According to indicator E23 - Issued textbook – 1 pc;
- According to indicator E24 - Exercise guides - 2 pcs.

The scientific articles have been published in the scientific journals "Forest Science", "Sylva Balcanica", "Geodesy, Cartography, Land Management", "Management and Sustainable Development" and Proceedings of international scientific conferences (SGEM, Cartography&GIS, ISCME, BulTrans, AgroSYM, EnviroRISKS). Of all 39 publications, 25 are in Bulgarian and 14 are in English language. The documentation correctly presents general lists of all publications by previous stages and competitions - for educational and scientific degree "Doctor of Philosophy", academic position "Associate Professor", and in the current competition for academic position "Professor".

The published scientific results are in the professional field and the scientific specialty for which the competition was announced and prove the process of building and confirming the Assoc. Prof. Ph.D. Maria Asenova as a scientist contributing to the development and application of photogrammetry, remote sensing and GIS for the needs of forestry and other related fields.

4.3. Reflection of the candidate's scientific activity in the literature (citations)

In the attached tables and lists in the documentation for participation in the competition for the academic position "Professor" Assoc. Prof. Ph.D. Maria Asenova has presented 41 citations, as follows:

- According to indicator D12 - 10 citations of 6 publications in scientific publications, referenced and indexed in world-famous databases with scientific information;
- According to indicator D13 - 7 citations of 6 publications in monographs and collective volumes with scientific review;
- According to indicator D14 - 24 citations of 20 publications in non-refereed journals with scientific review.

The distribution of citations by country is Bulgaria, Italy, Greece, Macedonia, Ukraine, USA, Brazil, China, New Zealand, and Indonesia and shows the interest of the scientific community in the candidate's research and achievements in development and publication activity.

4.4. Contributions in the candidate's works (scientific, scientific-applied, applied)

I accept the submitted List of the scientific contributions with analysis of the scientific and scientific-applied contributions of Assoc. Prof. Ph.D. Maria Asenova. The formulated 19 contributions in the publications can be grouped into 3 thematic directions - Photogrammetry and Remote Sensing; GIS with applications in Forestry, and GIS with applications in other related fields and in education. Thematic grouping of contributions is conditional due to the use of combined approaches and technologies in the candidate's developments. Contributions can be classified as scientific and scientific-applied as follows: Scientific (contribution 1, 2, 7, 11, 14, 15, and 16) and Scientific-applied (3, 4, 5, 6, 8, 9, 10, 12, 13, 17, 18, and 19).

5. Evaluation of the candidate's personal contribution

In confirmation about my favorable opinion of the personal involvement and contribution of Assoc. Prof. Ph.D. Maria Asenova is the fact that of all 39 presented publications, 16 publications are single author, 12 - with one co-author, 8 - with two co-authors and 3 - with three or more co-authors. In order of co-authors, the candidate is first author/co-author - in 33 publications, second co-author – in 4 publications, and third co-author – in 2 publications. The submitted single author monograph is entirely the work of the applicant. Through the reflection in the competition materials of its research, publication and teaching activities Assoc. Prof. Ph.D. Maria Asenova presents herself as an established scientist and lecturer in the field of Photogrammetry, Remote Sensing and GIS in Bulgaria.

6. Critical notes and recommendations

The presented materials are properly formatted in accordance with the requirements and I have no objections to the substance. I would recommend that in the candidate's forthcoming publication activity, more studies and monographs should be included in which the accumulated experience will be summarized, and the new researches will reach a wider circle of scientists and specialists. In her future work, Assoc. Dr. Maria Asenova should continue with the creation of a common methodology and technology for building a GIS database for forests in Bulgaria based on photogrammetric and satellite data with the application of UAS and LiDAR systems.

7. Personal impressions

I have known the Assoc. Prof. Ph.D. Maria Asenova since 1987, when she started working as an engineer-researcher in Scientific and Research sector and an assistant professor at the University of Forestry. I can confirm that every stage of her successful academic development from assistant professor to now has been achieved with hard work and persistence. For her colleagues, she is an excellent lecturer and scientist with authority, and among students, graduates and doctoral students, she is known for her demandingness and high requirements, which stimulate them for successful work and learning. Her responsibility to the University of Forestry is also reflected in her position as a Head of the Department of “Forest Management” and Chairman of the General Assembly of the Faculty of Forestry. Assoc. Prof. Ph.D. Maria Asenova is a proven professional as a scientist and teacher with an aspiration for the most modern methods of scientific research and training and a worthy member of the academic staff of University of Forestry - Sofia.

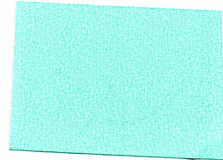
8. Conclusion

I highly appreciate the materials presented for participation in the competition, the scientific and scientific-applied achievements and contributions of the candidate **Assoc. Prof. Ph.D. Maria Asenova**. Her scientific research, applied and pedagogical activities meet and exceed

the requirements of the Law for the Development of the Academic Staff of the Republic of Bulgaria (LDASRB) for holding the academic position "Professor" in professional field 5.7. "Architecture, Civil Engineering and Geodesy", scientific specialty "Photogrammetry and Remote Sensing".

I give a **positive assessment** and PROPOSE the candidate, **Assoc. Prof. Ph.D. Eng. Maria Tsankova Asenova, to take the academic position "Professor"** in the academic discipline "Photogrammetry and Remote Sensing", scientific specialty "Photogrammetry and Remote Sensing".

The opinion prepared by:



/Prof. Ph.D. Youlin Nikolov Tepeliev/

The opinion was delivered on 11.04.2024 г.