

OPINION



regarding the competition for occupying the academic position of "Associate Professor" in the scientific specialty *Mechanization and Electrification of Crop Production*, announced in the State Gazette 7/23.01.2024

Candidate: Ivan Angelov Mitkov from the Agricultural University – Plovdiv (AU-Plovdiv)

Opinion worked out by: Assoc. Prof. Eng. Kaloyan Stoyanov, PhD, assigned a member of the scientific jury according Order № РД 16-406/20.03.2024 of the Rector of AU-Plovdiv

1. Brief introduction of the candidate.

Ivan Angelov Mitkov was born in 1970. He completed his secondary education at the Vocational School of Architecture "Yordanka Nikolova" in Plovdiv in 1989. In the period from 1990 to 1995 he studied at Gabrovo Technical University majoring in "Metal Technology and Metalworking Technology", where he graduated with a very good grade of 5.23. He was enrolled as a doctoral student at the Agricultural University - Plovdiv in 2012 and studied there until 2015. In 2017 he successfully defended his doctoral thesis and obtained the educational and scientific degree of "Doctor" in the professional area *General Engineering*, scientific specialty *Mechanization and Electrification of Crop Production*. Ivan Angelov Mitkov has been teaching in the Department of Agricultural Mechanization since 2015 and his academic workload is much higher than the required norm. He participated in the development of two research projects at the Agricultural University-Plovdiv on topics related to his field. For the period 2020-2023 he supervised 18 successfully defended graduates.

2. General description of the candidate's scientific production.

Ivan Angelov Mitkov participates in the present competition with a total production of 32 scientific works grouped as follows:

❖ *Scientific publications on the nomenclature specialty – 31 pieces, of them:*

- *Publications related to the doctoral dissertation – 4 pieces, which are not subject of review;*

- *Impact Factor publications (IF) – 3 pieces;*

- *Publications in reviewed and referenced scientific journals – 14 pieces;*

- *Publications in collective volumes – 12 pieces;*

The personal participation in the presented 27 developments of Ivan Mitkov is illustrated by the fact that in 7 he is an independent author, in 11 – a first author, in 3 – a second author, and in the rest 6 – a third and consecutive author.

❖ *Textbooks and handbooks – there are no data.*

❖ *Monography based on the dissertation work – 1 piece.*

27 scientific works are subject of the present opinion.

3. Teaching work.

The teaching activity of the candidate Ivan Mitkov started in 2015 as an assistant professor in the Department of Agricultural Mechanization at the Faculty of Viticulture and Horticulture, AU-Plovdiv. In the period 2017-2018 he was appointed and occupied the position of junior expert with administrative and technical duties at the Department of Agricultural Mechanization. From 1.10.2018 he was appointed as a chief assistant professor and has been holding this position until the present.

Candidate`s teaching workload.

Taking into account the submitted report related to the candidate`s academic workload, it is obvious that he has been fully loaded with teaching activities in the department, amounting to 3433 academic hours for the last 5 years, which completely confirms his habilitation.

The teaching activity is complemented by his supervision of 18 graduates who have successfully defended their diploma theses.

Published books.

In 2023 the candidate prepared and published a book entitled *Study on a Technology for Greenhouse Heating with Biomass*.

In the submitted reference there is lack of data about other published teaching materials.

Developed syllabuses.

There is no information about any!

4. Scientific and research work.

Fields of publishing.

The main fields of working and publishing are:

- ✓ research of new technologies and working bodies for tillage machines;
- ✓ ultrasonic treatment of seeds in vegetable crops and their treatment in parallel with a biostimulator;
- ✓ modern technologies and equipment for heating greenhouses;
- ✓ the use of a combined heating module to a heating installation using Brownian gas, by means of a specialized generator;
- ✓ autonomous robotic systems (agrobots) in the cultivation of agricultural crops;
- ✓ smart technologies and remote monitoring in the service of agriculture;
- ✓ development and research of new techniques and technologies for growing essential oil crops (coriander and rose) in the conditions of Bulgaria.

Citations and referencing of the scientific production.

Taking into account the submitted reference, it is evident that Ivan Mitkov has 7 citations of 5 of his research papers.

Participation in research projects.

The candidate has participated in two research projects directly related to the field in which he works and develops his research studies. The first of the projects has a three-year term, namely *Development of a Model of an Energy-Efficient Module of Heating Installations*, the second one is in the field of modern smart technologies, agrobots.

5. Notes and recommendations.

I have several recommendations for the candidate Ivan Mitkov regarding:

- to strengthen its scientific research activity, concentrating and directing it in the future in a specific, narrowly profiled direction in the field of agriculture and the technology related to it;
- to develop or participate in the development of new up-to-date textbooks and teaching aids;
- to participate in the development of study programs (syllabuses) in the disciplines led by him.

6. Conclusion.

Based on the analysis of the candidate's teaching, scientific and scientific-applied work, I believe that **Ivan Angelov Mitkov** meets the requirements of the Act on Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation, as well as the Regulations for its application of the Agricultural University, which gives me full reason to consider that the candidate is a highly erudite, valuable and well established teacher and researcher in his field, and who would be of full benefit to the department, the faculty and the university after his habilitation.

All this gives me reason to **POSITIVELY** evaluate his overall work.

I allow myself to propose to the honorable Scientific Jury to also vote positively, and the Faculty Council of the Faculty of Viticulture and Horticulture at the Agricultural University - Plovdiv to elect **Ivan Angelov Mitkov** for the academic position of "**Associate Professor**" in the scientific specialty *Mechanization and Electrification of Crop Production*.

Date: 05.04.2024
City of Ruse

Opinion worked out by:
(Assoc. Prof. Eng. Kaloyan Stoyanov, PhD)