

# OPINION



regarding the competition for occupying the academic position of "Associate Professor" in *Mechanization and Electrification of Crop Production*, announced in State Gazette 71 dated 23.01.2024

Applicant: Chief Assistant Eng. IVAN ANGELOV MITKOV, PhD

Opinion by: Assoc. Prof. Eng. Petya Marinova Veleva, PhD, appointed for a member of the Scientific Jury according to Order No. RD 14-16/20.03.2024 of the Rector of the Agricultural University - Plovdiv

## 1. Short introduction of the applicant.

There is one applicant for the announced competition - Chief Assistant Ivan Mitkov, PhD. He was born in 1970 in the town of Parvomay. In 1995 he graduated from the Technical University – Gabrovo with a Master's degree as a mechanical engineer majoring in Metal Technology and Metalworking Technology. From 2013 to 2015 he was a PhD student at the Agricultural University in the field of *Mechanization and Electrification of Crop Production*, professional direction 5.13 General Engineering. He defended his dissertation work in 2017 with a topic entitled *Research of Biomass Greenhouse Heating Technology*. In 2015 he joined the Department of Agricultural Mechanization as an assistant professor. In 2018 until present, after winning a competition, he took the position of chief assistant professor at the same department. It is clear that the scientific development of Chief Asst. Prof. Mitkov is in the direction of the competition for occupying the academic position "Associate Professor" – speciality Mechanization and Electrification of Crop Production".

## 2. General description of scientific works.

The applicant Chief Assistant Ivan Mitkov, PhD, participates in the competition with a total of 31 works, grouped in the following way:

- *Scientific publications on nomenclature specialty – 30, of which:*
  - *Publications related to the dissertation – 4 which are not subject of review;*
  - *Publications with impact factor – 3;*
  - *Publications in peer-reviewed and indexed journals – 11;*
  - *Publications in conference compendiums - 12.*

Chief Asst. Prof. Mitkov's personal participation in the mentioned 27 works is illustrated by the fact that 7 works are independent. He is the first author in 7 of them, second author in 4 of them and third and subsequent author in the other 16.

- *One book based on the dissertation.*
- **26 publications** are subject to analysis for the preparation of the statement

## 3. Lecture work.

As an assistant professor at AU - Plovdiv, Chief Asst. Prof. Ivan Mitkov has 2 years of lecturing experience and a little more than 5 years of experience as a chief assistant professor. During the period of his lecturing activity, the applicant has conducted classes (lectures, seminar classes and extracurricular activities) with Bachelor and Master undergraduate students. According to the attached certificate, only for the academic year 2022/2023, the workload of Chief Asst. Prof. Mitkov is 996 hours in total, 800 of them represent lectures.

The lecturing activity is complemented by the guidance of 18 successfully defended diploma theses. From the presented report it is clear that half of the graduates are foreign students who under the scientific guidance of Dr. Mitkov, worked on topics related to the mechanization of agriculture.

The indicated data show that the applicant has extensive teaching experience which gives him the opportunity to independently organize the studying process at a high academic level.

In the materials submitted for the competition, there is no information about textbooks published by the applicant. There is also no available information about curricula and programs with Chief Asst. Prof. Mitkov's participation. I would recommend that the applicant uses the skills acquired during his long practice and prepares a handbook that will not only enrich his scientific biography, but will be useful for upgrading the knowledge of



students.

The lecturing activity of Chief Asst. Prof. Ivan Mitkov is the basis for confidently concluding that he has significant lecturing experience and possesses the necessary qualities to occupy the academic position "Associate Professor".

#### **4. Research activity.**

In the competition for the academic position "Associate Professor" Chief Assistant Professor Mitkov participated with 26 scientific papers, which can be classified as follows:

- 14 scientific publications in journals referenced and indexed in world-renowned databases with scientific information;
- 12 scientific publications in non-refereed journals with scientific review or in edited collective volumes;

Of the works presented, 7 are independent, 2 with one co-author and 17 with two or more co-authors. In 4 of the mutual works Chief Asst. Prof. Mitkov is in the author's collective. Of the publications provided, 17 are in English and 9 are in Bulgarian.

The scientific works presented by the applicant are grouped into several main directions:

- Developments related to tillage equipment, agricultural robots and constructions of agricultural machines;
- Developments related to the effect of applying ultrasound on seeds;
- Some of the developments are related to renewable energy sources and the use of Brown's gas.

In the statement of contributions, the scientific developments are described in great detail and are related to obtaining new data and enriching existing knowledge. In principle, they reflect in detail the essence of scientific achievements, but they could be presented in a more synthesized way.

The following conclusions can be drawn from the attached report concerning the fulfillment of the minimum national requirements for occupying the academic position of "Associate Professor":

Chief Asst. Prof. Mitkov defended his dissertation thesis in direction 5.13. "General Engineering" for acquiring the educational and academic degree "Doctor" (**indicator A - 80.65** points out of the required 50 points).

He presented 10 publications, equivalent to a habilitation thesis, which are in publications, referenced and indexed in world-famous databases with scientific information (**indicator B - 125.57** points out of the required 100 points).

In **indicator Г**, the applicant submitted materials for **257.25** points (out of the required 200), including: a published book based on a defended dissertation work (**subgroup Г5 - 30 points**); 4 scientific publications in publications that are referenced and indexed in world-renowned databases with scientific information (**subgroup Г7 - 49.93 points**) and 12 articles and reports in non-refereed peer-reviewed journals or in edited collective volumes (**subgroup Г8 - 177.32 points**).

The applicant has submitted information on 7 citations in scientific publications, referenced and indexed in world-famous databases with scientific information (**indicator Г - 70** points out of the required 50 points).

The applicant's research activity can also include his participation in two university projects that are related to his scientific interests.

I am convinced of Chief Asst. Prof. Mitkov's significant contribution to the research by the results obtained in the provided scientific works. I do not consider the large number of co-authored publications a disadvantage, as it shows the applicant's ability to work in a team.

It is evident that Chief Asst. Prof. Mitkov significantly exceeds the minimum national requirements for holding the academic position of "Associate Professor", as the minimum required total number of points is 400 and the applicant has submitted materials for 533.47 points.

#### **5. Notes and recommendations.**

The materials submitted for the competition are well-presented and complete, so I have no significant comments.

I would advise that the applicant focuses on participating in international scientific projects. In addition, he could summarize the results of his research activity in a monographic work and the developed methodological units in teaching guides.

#### **6. Conclusion.**

Based on the provided scientific works and references, the analysis of the pedagogical, academic and scientific-applied activity of the applicant, I believe that Chief Assistant Professor Ivan Mitkov, PhD, meets the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation and the Regulations of the Agricultural University for its application.

The applicant covers the minimum national requirements for holding the academic position of "Associate Professor" proved by the total sum of 533.47 points for all groups of indicators. My comprehensive assessment is that Ivan Mitkov's developments helped for scientific and applied contributions which significance is indisputable. His scientific works have resonated in academic media through citations.

Date: 10<sup>th</sup> April, 2024  
City of Plovdiv

**PREPARED BY:**  
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