



МИНИСТЕРСТВО НА ОТБРАНАТА

ИНСТИТУТ ПО ОТБРАНА „ПРОФЕСОР ЦВЕТАН ЛАЗАРОВ”

София, бул. „Проф. Цветан Лазаров” № 2, факс: 02/92 21 808, <http://di.mod.bg>

OPINION

by Professor D.Sc. Atanas Ivanov Nachev

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REGARDING: The competition for the academic position of Associate Professor in the scientific specialty *"Design and Construction of Automatic and Manned Aerial Vehicles"* within the professional field 5.5 *"Transport, Shipping, and Aviation"*, in the higher education area 5 *"Technical Sciences"*, with candidate Dr. Eng. Atanas Jordanov Ganchev, Chief Assistant at the Defence Institute "Prof. Tsvetan Lazarov"

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Sofia

2025

I. GROUNDS FOR THE PRESENT OPINION

The grounds for the present opinion are as follows:

1. Order No. 285/13.05.2025 issued by the Director of the Defence Institute “Prof. Tsvetan Lazarov” regarding the announced competition by the Institute for the academic position of **Associate Professor** in higher education area 5. *Technical Sciences*, professional field (PF) 5.5 *Transport, Shipping, and Aviation*, for the needs of the Defence Institute.
2. Announcement in the *State Gazette*, issue No. 29 dated 04.04.2025, concerning the conduct of the current competition.

II. CANDIDATES FOR PARTICIPATION IN THE COMPETITION

Only one candidate has submitted documents for participation in the competition: **Dr. Eng. Atanas Jordanov Ganchev**, Chief Assistant at the Defence Institute.

The submitted documents include:

1. Copy of the diploma for the awarded educational and scientific degree “Doctor”;
2. Copy of the diploma for the awarded educational qualification degree “Master”;
3. (Repeated) Copy of the diploma for the awarded educational qualification degree “Master”;
4. Personnel record;
5. Creative curriculum vitae;
6. Reference-declaration for compliance with the minimum national requirements under Art. 2b, para. 2, 3, and 5 of the Development of the Academic Staff in the Republic of Bulgaria Act, for the academic position of “Associate Professor”;
7. List and abstracts of scientific publications;
8. Copy of the documents from the latest attestation;
9. Report on original scientific contributions;
10. Reference for compliance with the minimum national requirements, with supporting materials;
11. Documents proving professional experience;
12. Report on original scientific contributions, with attached supporting evidence;
13. Copy of certificate of English language proficiency according to STANAG-6001;
14. Published monograph.

III. DESCRIPTION OF THE SUBMITTED MATERIALS

For the purposes of the current competition, the candidate has submitted a total of **15 scientific publications**, including:

1. One **monograph**.
2. **Articles and papers** in non-refereed journals with scientific peer review or published in edited collective volumes — **13** in total, of which the candidate is the **sole author of 12**, and **co-author of 1**.
3. **List of citations** — 21 in total.

The submitted documents are sufficient in volume and content to clarify the scientific, scientific-applied, and applied results achieved by the candidate.

IV. GENERAL CHARACTERISTICS OF THE CANDIDATE'S SCIENTIFIC RESEARCH AND APPLIED ACTIVITIES

The candidate, **Chief Assistant Professor Dr. Eng. Atanas Jordanov Ganchev**, has held academic positions at the Defence Institute “Prof. Tsvetan Lazarov” as follows:

- Chief Assistant in the **Department of Armament and Ammunition**, within the **Directorate for Development of Armament, Equipment, and Logistic Assets and Materials**;
- Chief Assistant in the **Department of Scientific Research and Analysis in Security and Defence**.

In **1983**, he graduated from the **Georgi Benkovski Higher Military Airforce School** in Dolna Mitropoliya, earning a **Master's degree** with the qualification: *Engineer in Operation and Maintenance of Aircraft*.

In **1998**, he completed his studies at the **G. S. Rakovski Military Academy**, obtaining a **Master's degree** in *Air Force Operational-Tactical Staff Command*.

In **2018**, after successfully defending a dissertation, he was awarded the **educational and scientific degree "Doctor"** in the scientific specialty *"Dynamics, Ballistics and Flight Control of Aircraft"*, within higher education area 5 *Technical Sciences*, professional field 5.1 *Mechanical Engineering*, with the dissertation topic: **"Minimizing the Negative Impact of Bird Strikes on Aircraft."**

V. MAIN SCIENTIFIC AND APPLIED CONTRIBUTIONS

The main scientific and applied contributions of the candidate can be grouped into the following key categories:

1. Methods for ensuring a high level of **aviation safety**.
2. Methods for **optimizing the operation of unmanned aerial vehicles (UAVs)**.
3. **Timely detection of technical malfunctions** in aviation equipment and support for effective decision-making by flight crews.

In this context, the following results have been achieved:

1. Methods for **enhancing the structural strength** of aircraft.
2. Methods for **improving the efficiency of aircraft control systems**.
3. Methods and tools for **counteracting bird species** in the vicinity of airports and aircraft runways.
4. Methods to **ensure flight safety** of aircraft.
5. Analysis of the **design, operational characteristics, combat capabilities, navigation, communication, and logistical support** of UAVs.
6. Methods for **improving the strength characteristics** of aircraft.
7. **Modeling, simulation, and emulation** of the dynamic interaction in bird strike incidents with aircraft.

The candidate meets the **minimum required criteria (Table 1)** for holding the academic position of **Associate Professor** in *Area 5 Technical Sciences, Field 5.5 Transport, Shipping, and Aviation*.

Table 1

Indicator Group	Indicators	Requirements for Academic Position "Associate Professor"	Candidate's Points
A	Indicator 1	50	50
C	Indicator 3	100	100
D	Sum of Indicators from 5 to 11	200	245
E	Sum of Indicators from 12 to 15	50	63
F	Sum of Indicators 16 and beyond	-	10
Σ		400	468

VI. Critical Remarks

The candidate, Chief Assistant Professor Dr. Eng. Atanas Jordanov Ganchev, demonstrates significant scientific achievements throughout the course of his research activity. Unfortunately, a substantial portion of these results remains unknown to the broader scientific community due to their relatively limited publication. This is, to some extent, related to the specific nature of the research, which is intended to serve the needs of national defense. However, there are also scientific outcomes that do not

constitute classified information, yet are of considerable importance by their very nature. I recommend that these results be disseminated through reputable scientific journals.

CONCLUSION

Based on the requirements of the **Law on the Development of the Academic Staff in the Republic of Bulgaria** and its implementing regulations, and taking into account all of the considerations presented in this review, I recommend that the esteemed Scientific Jury elect Chief Assistant Professor Dr. Eng. Atanas Jordanov Ganchev to the academic position of **Associate Professor**.

June 4, 2025

Sofia

PROFESSOR /s/ ATANAS NACHEV

DOCTOR OF TECHNICAL SCIENCES