

OPINION

by Prof. Dimitar Diakov, Technical University – Sofia
on the materials submitted for participation in a competition for the
academic position of "associate professor" in
field of higher education – 5. Technical sciences,
professional field – 5.1. Mechanical Engineering,
specialty – Electronic (analog and digital) measuring transducers and
instruments
with candidate senior assistant, Eng. Borislav Atanasov Georgiev, PhD

1. Competition information

The competition for the academic position of "Associate Professor" at TU-Gabrovo was announced in the "State Gazette", issue 48 of 13.06.25 and on the website of TU-Gabrovo for the needs of the Department of Mechanical Engineering and Instrumentation at the Faculty of Mechanical Engineering and Instrumentation.

2. Candidate information

For participation in the competition, the scientific works of the candidate, Senior Assist. Prof. Eng. Borislav Atanasov Georgiev, PhD full-time lecturer at the Department of Mechanical and Instrument Engineering have been submitted. The candidate meets the normative quantitative and qualitative requirements of the "Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB)" in the part "Conditions and Procedure for Holding the Academic Position of Associate Professor" and of the "Regulations for Acquiring Scientific Degrees and Holding Academic Positions at the Technical University of Gabrovo"

Senior Assist. Prof. Eng. B. Georgiev, PhD is a Master of Technical Sciences with a specialty in "Mechanical Engineering and Instrumentation" and a Doctor of Science with a scientific specialty in "Hydraulic and Pneumatic Drive Systems" with a defended dissertation on the topic "Research and Optimization of the Dynamics of an Electrohydraulic Drive Tracking System".

The scientific materials submitted in the competition do not repeat the publications submitted for the acquisition of the ESD "Doctor" and for holding the academic position "Senior Assistant".

3. Overview of the content and results in the presented papers

The candidate B. Georgiev, PhD participated in the competition with a habilitation thesis (monograph), scientific publications - articles in journals and conference reports, a textbook. 21 publications were presented, presented both in Bulgaria and abroad, 11 of which are indexed in prestigious databases such as Scopus and/or WoS, 3 of which are with IF and/or SJR, which unequivocally confirms the high quality and scientific value of the research.

In the monograph submitted for participation in the competition, entitled "Adaptive Methods for Controlling the Dynamics of Electro-Hydraulic Systems", an analysis of the main nonlinearities, external impacts and structural features affecting the stability and accuracy of the systems is made, and approaches are proposed for their compensation through adaptive and intelligent algorithms.

The presented reference shows that Senior Assist. Prof. B. Georgiev, PhD actively participates in research projects and collective publications, making a significant contribution to their implementation. In a significant part of the works, he is a second or third author, and in ten publications he is the first author, which emphasizes his ability to formulate scientific ideas and guide their practical application. In accordance with the requirements of the Regulations for the acquisition of scientific degrees and holding academic positions at the Technical University - Gabrovo, the candidate also has 4 independent publications.

For participation in the competition, a textbook "Handbook for Laboratory Exercises on Elements of Automation" was also presented, intended for students majoring in "Mechatronics", which developed laboratory exercises that support the mastery of the principles of operation, structure and classification of programmable logic controllers (PLC) and provides the connection with the practical implementation of control and automation tasks for real engineering applications.

4. Reflection of the candidate's scientific publications in the scientific community

From the reference submitted by the candidate at the time of submitting the documents, it is evident that Georgiev's publications have been noticed by the global scientific community - out of 19 citations of his publications, 11 are registered in the internationally recognized Web databases. of Science and Scopus.

5. General characteristics of the candidate's activities

5.1. Educational and pedagogical activities

The candidate for the position of Associate Professor has been part of the staff of the Department of Mechanical Engineering of the Technical University of Gabrovo since 2018, and has been a Senior Assistant Professor since 2020. He lectures in 6 disciplines and gives tutorials in 9 disciplines in the Bachelor's and Master's degree programs.

5.2. Scientific and applied scientific activities

The scientific and applied activity of Senior Assist. B. Georgiev includes participation in 7 international, national and university projects related to the development of intelligent measuring systems and adaptive algorithms for control, modeling, simulation analysis and experimental verification of methods and technical solutions. The scientific and applied activity of the candidate is distinguished by a clearly expressed focus on increasing the accuracy and reliability of measuring systems, and is in full accordance with the topic of the competition.

5.3. Implementation activity

The documents submitted for participation in the competition did not include any documents certifying implementation activities by the candidate.

6. Contributions. Significance of contributions to science and practice

I believe that the defined contributions are correct and reflect the essence of the results obtained in the candidate's scientific and applied activities. I fully accept the presented report with the contributions.

7. Assessment of the candidate's personal contribution

I know Senior Asst. Georgiev as a doctoral student and colleague in the Department of "ME" at TU-Gabrovo. My personal impressions of Senior Asst. Georgiev's work as a lecturer, scientist and colleague are entirely positive.

8. Critical notes and recommendations

The above-mentioned merits of the materials presented by Senior Assistant Professor Georgiev, PhD categorically dominate my entirely positive assessment. I am convinced that after his habilitation, the candidate will continue to develop his research activities and pass them on to young specialists.

9. Personal impressions

I believe that the defined contributions are correct and reflect the essence of the results obtained in the candidate's scientific and applied activities. I fully accept the presented report with the contributions.

10. Conclusion

Given the above, **I propose to the esteemed Scientific Jury to award Senior Asst. Prof. Eng. Borislav Atanasov Georgiev, PhD the academic position of "Associate Professor" in:**
field of higher education - 5. Technical sciences,
professional field - 5.1. Mechanical Engineering,
specialty - Electronic (analog and digital) measuring transducers and instruments

05.11.2025

Prepared the opinion:

/Prof. Dimitar Diakov, DSc/