

OPINION

by Assoc. Prof. Eng. Hristiana Nikolova, PhD Technical University of 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 Asst. Prof. Eng. Borislav Atanasov Georgiev, full-time lecturer at the Department of Mechanical and Instrument Engineering (MU) have been submitted. The submitted documents show that the candidate meets the normative quantitative and qualitative requirements of the "Law on the Development of the Academic Staff in the Republic of Bulgaria (LAADRB)" 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 - Gabrovo"

Senior Asst. Dr. Eng. B. Georgiev graduated with a Master's degree in Mechanical Engineering and Instrumentation Engineering and a Doctorate 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 for participation in the competition do not repeat the publications submitted for the acquisition of the ESD "Doctor" and for holding the academic position "Senior Assistant Professor".

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

In the competition, the candidate B. Georgiev participates with a habilitation thesis (monograph), scientific publications - articles in journals and conference reports and a textbook. 21 publications, presented in Bulgaria and abroad, are presented, 11 of which are indexed in prestigious databases such as Scopus and/or WoS, 3 of which are with IF and/or SJR.

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.

Senior Asst. Prof. B. Georgiev has also submitted a report on his participation in research projects and collective publications, having made a significant contribution to their implementation. In 10 of the presented scientific works, the candidate is the first author, and in 4 he is an independent author, which meets the requirements for holding the academic position of "associate professor" according to the Regulations for acquiring scientific degrees and holding academic positions at the Technical University - Gabrovo.

In the competition, Senior Assistant Professor Georgiev also participated with 1 textbook - "Guide to Laboratory Exercises on Elements of Automation", 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

The 19 citations submitted for participation in the competition include 11 in scientific publications, referenced and indexed in world-renowned databases of scientific information and 8 in non-refereed journals with scientific review. This gives me reason to believe that the candidate's work is known to the scientific community in our country and abroad.

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 and Instrumentation of the Technical University of Gabrovo since 2018 as a doctoral student and assistant, and since 2020 - as a senior assistant. The represented document submitted by the candidate certifies the teaching of lectures in 6 disciplines and exercises in 9 disciplines in the Bachelor's and Master's degree programs.

5.2. Scientific and applied scientific activities

Candidate Senior Assistant Professor B. Georgiev has participated in 7 international, national and university projects related to the development of intelligent measurement systems and adaptive algorithms for control, modeling, simulation analysis and experimental verification of methods and technical solutions.

5.3. Implementation activity

No documents certifying the candidate's implementation activities were submitted for

participation in the competition.

6. Contributions. Significance of contributions to science and practice

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

7. Assessment of the candidate's personal contribution

The personal contribution of the candidate can be assessed by the publications submitted for the competition – 26 in number. Of these, 4 are independent, in another 10 he is the first author. This gives me reason to assume that the contributions are the personal work of the candidate.

8. Critical notes and recommendations

I have no critical comments on the substance of the presented works of Senior Assistant Professor Georgiev, PhD.

9. Personal impressions

I know the candidate, Senior Assistant Professor Dr. Borislav Georgiev, from the meetings of the teams of our two departments, as well as the ISS "Metrology and Metrological Assurance". I highly appreciate and admire his responsibility and dedication to work.

10. Conclusion

Given the above, **I propose to the esteemed Scientific Jury to award Senior Asst. Prof. Dr. Eng. Borislav Atanasov Georgiev 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

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Prepared the opinion:

/Assoc. Prof. Eng. Hr. Nikolova, PhD/