

OPINION

authored by Prof. Iliya Slavov Zhelezarov, PhD

concerning materials submitted for participation in competition
for awarding the academic position of “Associate Professor”
in higher education area - 5. Technical Sciences,
professional field - 5.1. Mechanical Engineering,
scientific major – Technology of Textile Materials

One candidate has applied for participation in the competition for awarding the academic position of Associate Professor announced in the State Gazette, issue 55 from 27.06.23, and on the website of the Technical University of Gabrovo for the needs of department “Industrial Design and Textile Engineering” which is a constituent unit of the faculty of “Mechanical and Precision Engineering“ - Borislav Tsonev Stoyanov - Senior Assistant Professor in the Department of Industrial Design and Textile Engineering at the Faculty of Mechanical and Precision Engineering.

1. Overview of content and results in the submitted works

The research and applied research activities of Senior Assistant Professor Borislav Tsonev Stoyanov, PhD focus on laser marking of textile materials, electron beam treatment, textile materials science, light industry machinery and equipment, theory of mechanisms, machines and automated assembly lines, electromechanics.

Senior Assistant Professor Borislav Tsonev Stoyanov, PhD participates in the competition with habilitation thesis – monograph titled “Laser marking of textile materials”, 10 scientific publications in refereed editions and indexed in world renowned data bases of scientific information Web of Science and/or Scopus, 5 of which are with Impact Factor, 37 scientific publications in non-refereed journals with scientific reviewing or in edited volumes of collections and 3 course-books. Among the publications submitted for participation in this competition, some are the result, or include the results obtained from projects and contracts successfully completed by the candidate. The list of citations -16 citations in prestigious scientific editions, 7of which are found in publications refereed in Web of Science and/or Scopus and 9 in non-refereed journals with scientific reviewing, is evidence for the high quality level of the candidate’s research and applied research activity.

2. General description of candidate’s activity

2.1. Teaching and pedagogical activity

Senior Assistant Professor Borislav Tsonev Stoyanov, PhD began his academic and teaching career at the Technical University of Gabrovo in 2006 at the Faculty of Mechanical and Precision Engineering, in the Department of Industrial Design and Textile Engineering where he reads lectures in 10 subjects and conducts seminars in 11 subjects related to textile materials science,

textile testing, spinning machines and processes, modern spinning methods, computer 3D modeling, modeling and scale modeling, computer aided graphic design, computer aided interior design, design of offices and commercial premises, individual research on design, all of which fall in the thematic area of the announced competition for awarding the academic position of Associate Professor. The teaching and pedagogical activity of the candidate meets the requirements for the academic position of Associate Professor at the Technical University of Gabrovo.

2.2. Scientific and applied research activity

The candidate Senior Assistant Professor Borislav Tsonev Stoyanov, PhD takes active part as a researcher in the team of the Center of Competence “Smart, Mechatronic, Eco- and Energy Saving Systems and Technologies” and the laboratory “Intelligent Technologies Based on Intensive Energy Flows”. The candidate has participated in the following projects: BG16RFOP002-1.005-0229 – “Increasing the Innovation Activity in “Adtex” OOD by developing the production innovation (service) – Laser Marking System, BG051PO001-3.1.10-001 - Improvement of the Quality of Adult Vocational Training Services Provided by Vocational Training Centers, BG051PO001-3.1.09-0017 - System for Career Development of the Academic Staff at the Technical University of Gabrovo, BG051PO001-4.3.04-0051 – Design and Implementation of Virtual Technologies for Sustainable Development of Distant Learning at the Technical University of Gabrovo, as well as projects funded by the grant for inherent research activity of the Technical University of Gabrovo: "Design and Development of Laser Marking System”, Exploring the Technological Potential of Laser Marking System LMM-06-20”, “Special Effects on Denim Made With Laser” and “Laser Processing of Fabrics Involving Synthetic Materials”.

2.3. Implementation activity

The results from the pedagogical and teaching, the scientific and applied research activities of the candidate Senior Assistant Professor Borislav Tsonev Stoyanov, PhD have been applied in the training process and practical classes conducted with students. The candidate in this competition has been involved in the design and development of laser marking systems that are currently in use in the Department of Industrial Design and Textile Engineering at the Faculty of Mechanical and Precision Engineering of the Technical University of Gabrovo, the companies “Adtex” OOD and “Yantra” AD. Part of the team has developed utility models BG3214-U1:2019 “System for Laser Marking” BG3564-U1:2019 “System for Laser Marking of Parts with Complex Surfaces” and BG3503-U1:2020 “Automated Parts Fixing System”. Scientific and technical guidance in the development and the implementation in production of a technological line for vector dyeing and automatic device for winding yarn units with intersecting axes in “Cardena – Tex” OOD.

3. Contributions. Significance of contributions for science and practice

I fully accept the candidate's research and applied research contributions related to the monograph and the scientific publications.

The quantitative indicators of the criteria for awarding the academic position of Associate Professor have been complied with and correspond to the Rule for Acquisition of Academic Titles and Positions of TU-Gabrovo.

4. Evaluation of candidate's personal contribution

The results of the research and applied research activities published in prestigious scientific journals and presented at national and international scientific forums make me to believe that the contributions are due to the individual work of the candidate Senior Assistant Professor Borislav Tsonev Stoyanov, PhD.

5. Critical remarks and recommendations

I have no particular remarks or objections concerning the materials submitted by Senior Assistant Professor Borislav Tsonev Stoyanov, PhD and my assessment is completely positive. I recommend that the large number of research and applied research contributions related to the monograph and the scientific publications be categorized and systematized.

6. Personal impressions

I am quite familiar with the research activity performed by the candidate Senior Assistant Professor Borislav Tsonev Stoyanov, PhD in the team of the Center of Competence "Smart Mechatronic, Eco-and Energy Saving Systems and Technologies" and the laboratory "Intelligent Technologies Based on Intensive Energy Flows". Dr. Borislav Stoyanov, along with colleagues from the Institute of Electronics of the Bulgarian Academy of Sciences and colleagues from the Technical University of Gabrovo is involved in the development of an activity which is new and of high priority for the University, related to the employment of technologies for welding and surface modification of products in vacuum, based on intensive energy flows.

Conclusion:

Drawing upon the content of the materials submitted for participation in this competition, the topicality and significance of accomplished research and applied research contributions, I propose to the esteemed jury that Senior Assistant Professor Borislav Tsonev Stoyanov, PhD be awarded the position of Associate Professor in the higher education area of Technical sciences, professional field of Mechanical Engineering, scientific major "Technology of Textile Materials".

Gabrovo,
09.11. 2023

Member of jury: /signature/
/Prof. Iliya Zhelezarov/