

OPINION

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of the materials submitted for participation in the competition for holding the academic position "Associate Professor" in the field of higher education – 5. Technical sciences, in professional field – 5.13. General engineering, specialty - Quality management

In the competition for associate professor, announced in the State Gazette, no. 54 of 25.06.2024 and on the website of the Technical University - Gabrovo for the needs of the Department of "Mechanical Engineering and Instrumentation" at the Faculty of "Mechanical Engineering and Instrumentation", as the only candidate participated Ch. Assistant Professor Eng. Tsvetelin Kirilov Georgiev, PhD.

1. Overview of the content and results in the presented publications

The works submitted for participation in the competition include 1 monograph (B3) on the topic "Research and applications of the PDCA cycle in quality management systems", Ruse University Academic Publishing House, 2023, ISBN: 978-619-7726-14-5; 6 scientific publications in publications that are referenced and indexed in world-renowned databases of scientific information (G7.1 - G7.6) and 11 scientific publications in non-refereed peer-reviewed journals or in edited collective volumes (G8.1 - G8.11). Six of the publications are standalone (D7.3, D8.1, D8.3, D8.7, D8.8 and D8.9). Two of the publications (G7.4 and G7.6) submitted for participation in the competition are in publications with Impact Factor and SJR. The candidate is the co-author of 1 textbook and 1 manual for laboratory exercises on "Renewable energy sources and technologies".

Scientific works are systematized in two main thematic areas.

Publications in the first area "Quality Management" are devoted to analyzing the necessary knowledge and skills of quality specialists and developing training materials for their training. For this purpose, in [G7.1] the modern requirements for the competences and training of engineers in quality and metrology are systematized, and a curriculum, curricula and didactic materials for their training have been developed. Requirements for a distance learning platform are also defined, and on this basis a virtual campus model is proposed. In [G7.2], the campus model is further developed by specifying its main components. Publication [G8.10] also belongs to this thematic area, in which a comparative analysis of the development and principles of quality management in TQM, the standards of the ISO 9000 series and the EFQM excellence model is made.

The second thematic area includes works related to different types of management systems. Two of them are plenary reports at an international scientific conference in Istanbul, Turkey (2015 and 2016), one plenary report at the National Scientific and Practical Conference "Quality - for a Better Life '2021", Sofia, as well as two the report, awarded with a diploma and a crystal prize "The Best Paper" from the Scientific Conference of Ruse University "Angel Kanchev" and the Union of Scientists - Ruse (2014 and 2017). Publications [D8.2] and [D8.5] present an original model of interactions between ISO 9001 processes. Trends in the development of management systems, including quality management systems, are presented in [D7.4], [D7.5], [D8.3] and [D8.8]. The article [G8.9], as well as the candidate's published monograph, emphasize the importance of the cycle "plan - do - check - act" (Plan - Do - Check - Act, PDCA) in all modern management systems. The selection of management systems in [D8.9] is based on the "ISO Annual Survey of Certified Management Systems" and covers the standards: ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO/IEC 27001:2022 , ISO 22000:2018, etc. In another group of articles and reports from this topic area [G7.3], [G7.6], [G8.1], [G8.4], [G8.6] and [G8.11] control systems are investigated of quality (QMS) in the field of higher education. For example, in [G8.1] the relationship between QMS according to the requirements of ISO 9001:2000, the PDCA cycle and the quality of higher education is analyzed,

and in [G7.6] the quality of education of students in Turkey, Poland and Bulgaria is analyzed. In the report [D7.3], the topic of social responsibility of educational organizations and the importance of educational processes is further developed. The analysis was made in relation to known rating systems (Times Higher Education World University Rankings, Academic Ranking of World Universities (ARWU), QS World University Rankings), the Rating System of Higher Education Institutions in Bulgaria and the criteria of the National Agency for Assessment and Accreditation (NAOA). Recommendations are presented and alternative solutions are proposed related to the implementation of ISO 9000 series standards and the IWA-2 guidelines for the implementation of ISO 9001 in education.

In [G8.4] a comparative analysis of the quality management principles applied in the QMS and the additional principles to which an educational organization must adhere is made, and in [G8.6] the topic is extended with a maturity self-assessment model of the QMS (according to IWA 2 / ISO 21001, ISO 9004 and ISO 9001) and especially the processes of Clause 8 "Activities" and Clause 9 "Performance evaluation". A work is dedicated to improving the "Internal audits" process in an educational organization by applying SIPOC diagrams [D8.6]. In it, the SIPOC model, borrowed from the Six Sigma methodology, is creatively applied to the conditions of the University of Ruse, and the obtained results can be adapted and implemented in any other educational organization (kindergartens, schools, universities, research centers and scientific institutes, etc.).

The topic dedicated to quality management systems in education according to ISO 21001 is further developed in publication [G8.11]. It contains an analysis of European (ESG) and national (Romanian - ARACIS and Bulgarian - NAOA) requirements for the quality and accreditation of higher education.

In conclusion, I believe that the works presented for participation in the competition are in topical and promising for science and practice thematic areas of quality management and the candidate uses modern methods and means to solve the problems and achieve the relevant goals.

2. General characteristics of the candidate's activity

2.1. Educational-pedagogical activity (work with bachelor, master and doctoral students)

I evaluate the pedagogical preparation of the candidate and his work as a teacher as corresponding to the level of the requested academic position on the basis of the following:

- Conducts training (lectures and laboratory exercises) in a number of disciplines included in the curricula for the Bachelor's degree (15 units), Master's degree (18 units) and Doctoral unit (1 unit) at the University of Ruse "Angel Kanchev".

His excellent professional and language training, as well as his active participation in numerous courses, seminars, schools and lectures under the Erasmus+ Program and CEEPUS Program in a number of countries contribute to the high level of lectures delivered to students and doctoral students: Belgium; Germany; Greece; Spain; Italy; Portugal; Romania; Turkey; France; Czech Republic and others.

- To ensure the learning process, he has published an independent monograph, he has also participated as a co-author of a textbook and a manual for laboratory exercises on renewable energy sources and technologies.

- Academic supervisor of over 70 successfully defended graduates;

- Advises organizations, state and private companies on real production problems.

2.2. Scientific and scientific-applied activity

For participation in the competition, the candidate submitted 1 monograph, 17 scientific publications (journal articles and conference reports), of which 6 are in refereed and indexed editions (2 are with Impact Factor and SJR), which is an important proof of the high level of the candidate's scientific work. Of the 17 publications (articles and reports), 6 are independent, and the remaining 11 are co-authored (6 with two authors, 2 with three authors and 3 with more than three authors), in 8 of which the candidate is the first author. 3 reports in scientific conferences are in Bulgarian, and the rest are in English. He is the co-author of 1 textbook and 1 teaching aid.

I want to note the systematicity and methodical planning with which the candidate's publication activity is organized. This shows sustainability in terms of scientific development, commitment and serious interests in the field of the competition's subject matter.

The publications do not repeat the articles and reports for the acquisition of ESD "PhD" attached to the documentation for the competition.

In the list of citations for participation in the competition, 7 articles are presented in scientific publications, referenced and indexed in world-famous databases with scientific information and 35 articles in non-refereed journals with scientific review. All this convincingly shows that the candidate's works are known to the scientific community at home and abroad.

Eng. Georgiev has participated in 20 research projects of Ruse University "Angel Kanchev" and in 8 international scientific and educational projects financed by various organizations. He was a member of the scientific committee, the technical program committee and the organizing committee of 19, 4 and 3 scientific forums, respectively.

Eng. Georgiev's competence and expertise determine his active activity as a reviewer of articles and reports for over 20 scientific conferences and journals, as well as his work as an external expert to the EC in 2020: DT-FOF-11-2020: Quality Control in Smart Manufacturing (Innovation Action). It should be emphasized that Eng. Georgiev is a member of a number of prestigious international and Bulgarian scientific organizations and academies: The American Society for Quality (ASQ); International Measurement Confederation (IMECO), member of Technical Committee 1 "Education and training in measurement and measuring instruments"; International Society for Professional Innovation Management (ISPIM - the International Society for Professional Innovation Management); Sigma Xi - The Scientific Research Society; Union of Quality Specialists in Bulgaria; Union of Metrologists in Bulgaria, Bulgarian Academic Metrological Society, etc.

Recognition and evaluation of the candidate's multifaceted activity are the received prestigious awards and honors: the "Danubius Young Scientist Award", 2018; The Best Paper Awards, 2014 and 2017; diploma and jubilee medal (2016) on the occasion of 25 years since the founding of the "Club 9000" Association, Founder of the Faculty of Mechanical Engineering at the "Angel Kanchev" University of Ruse.

Summary of the minimum national requirements by groups of indicators for the academic position "associate professor" in field 5. Technical sciences, professional direction 5.13. General engineering and the evidence submitted by the applicant is shown in the table:

Group of indicators	Minimum national requirements for borrowing AP "Associate Professor"	Declared points by groups of indicators by the candidate
A	50	50
B	-	-
C	100	100
D	200	247,2
E	50	140
F	-	43,14

The analysis of the data shows that the requirements of the ZRASRB and PPZRAS have been exceeded in all groups of indicators. The minimum quantitative requirements of the Regulations for the acquisition of scientific degrees and the occupation of academic positions at the Technical University - Gabrovo have also been met.

I believe that, not only in terms of volume, but also in terms of quality, the results of the candidate's research and applied scientific activities satisfy the requirements for holding the academic position of "Associate professor".

2.3. Implementation activity

From the presented certificates it is clear that the candidate has actively participated in a number of projects for the industry with "Vitte Automotive Bulgaria" EOOD, Ruse; Osm AD, Lovech; "Ralomex" JSC, Zavet, with more than 84 personnel trainings on current topics of management systems and "quality tools" (APQP, Control Plan, FMEA, MSA, SPC, PPAP, RCA, 8D Report, etc.) , as well as methodologies for visual-tactile organoleptic method for assessing surface roughness of parts after processing and for assessing the type of steel of blanks have been developed and applied in production.

3. Contributions (scientific, scientific-applied, applied). Significance of contributions to science and practice

I accept and positively evaluate the scientific-applied and applied contributions in the reference prepared by the candidate, but I believe that their refinement, editing and classification is necessary. They correspond to the professional direction and scientific specialty of the announced "Quality Management" competition.

I believe that the contributions contained in the candidate's works are relevant and relevant to the development and enrichment of scientific research in the field of metrology and quality management systems. The works presented have an indisputable importance for practice with the necessary degree of applicability. Contributions can be attributed to the groups proving by new means of essential new aspects of already existing scientific fields, problems, theories, hypotheses; creating new classifications, methods, constructions, technologies and obtaining corroborating facts.

4. Assessment of the candidate's personal contribution

The personal participation of the candidate can be judged by the number of independent publications - 6 nos. , as in other 8 nos. he is the first author, of a total of 17 nos. presented in the competition. This gives me reason to say that the contributions are the personal work of the candidate or with his leading role.

5. Critical remarks and recommendations

I have no significant remarks with which to dispute the main scientific-applied and applied contributions in the presented works of Chief assistant Professor Tsvetelin Kirilov Georgiev, PhD.

I recommend the candidate to activate the work on prestigious national and international projects, including as a manager.

6. Personal impressions

I do not know the candidate personally, but from the presented scientific works and precisely designed documents for participation in the competition, I believe that he is a responsible, active, highly qualified scientist and teacher. He enjoys authority among his colleagues at the university and specialists at home and abroad.

7. Conclusion:

Based on my familiarization with the competition materials, my positive evaluations of the candidate's research, implementation and pedagogical activities, the relevance and significance of the achieved scientific and applied contributions, with complete conviction I offer Chief Assistant Professor Tsvetelin Kirilov Georgiev, PhD to be elected as an "Associate professor", in the field of higher education - Technical sciences, professional direction - General engineering, specialty - Quality management.

30.10.2024

Member of the jury: /signature/
/Prof Eng. Ivo Malakov, DSc/