

OPINION

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Concerning scientific works submitted for participation in competition for awarding the academic position of “Associate Professor” in the field of higher education – 5. Technical Sciences, professional field – 5.3. “Communication and Computer Engineering”, scientific specialty – “Communication Networks and Systems” (“Wireless Communications and Broadcasting”, “Security equipment”)

In the competition for „Associate professor“, announced in the State Gazette, issue 68/31.07.2020 and on the website of TU – Gabrovo for the needs of the Department of “Communication Equipment and Technologies” at the Faculty of Electrical Engineering and Electronics as a candidate participates **Ch. Assist. Prof. Krasen Kirov Angelov, PhD** – Technical University of Gabrovo.

1. An overview of the content and results of the submitted works

The submitted materials for participation in the competition include a total of 42 peer-reviewed publications and 3 textbooks and teaching guides. Of these, 9 publications are indexed in the IEEE database, 11 – in SCOPUS and 2 – in the Web of Science. One of the scientific papers submitted in the competition was published in an international journal with Impact Factor.

In accordance with the numbering of the abstracts, all publications and teaching guides can be divided into two major thematic areas, which are directly related to the announced competition for “Associate Professor”:

Wireless communications and broadcasting, Internet of Things (IoT) and industrial IoT systems, broadband wireless communications and systems and services in satellite and cable television networks:

- (B.4.1, 4.3, 4.4, 4.5, Г.7.1, 7.3) – publications indexed in SCOPUS databases;
- (Г.8.3, 8.8, 8.9, 8.10, 8.12, 8.14, 8.16 to 8.29) – publications outside those indexed in SCOPUS;

Security and fire alarm systems, access control and video surveillance and optical communication networks:

- (B.4.2, 4.6 – 4.9) – publications indexed in SCOPUS databases, (B.4.10) – IF, WoS;
- (Г.8.1, 8.2, 8.4, 8.6, 8.7, 8.11, 8.13, 8.15) – publications outside those indexed in SCOPUS;

According to the author's copyright information form attached to the materials of the competition, the candidate has a total of 10 citations, 6 of which are in publications referenced in world databases with scientific information (SCOPUS).

The candidate has participated and is involved as a member of the teams in 4 national projects national projects under Operational Programme “Science and Education for Smart Growth”, 2 national projects under the national “Scientific research” fund of Ministry of Education and Science and 4 university research projects (one of which the candidate is a head).

The object of scientific-research and scientific-applied activities in the publications and projects are mainly research in wireless and optical communications, as well as research focused on the modeling and optimization of optical communication lines and analysis of the reliability and security of communication systems.

I consider that the materials submitted for participation in the competition of the candidate in terms of volume, structure and content are in the field of the competition and fully meet the criteria of Technical University of Gabrovo for awarding an academic position of “Associate Professor”.

2. General characteristics of the candidate's activities

2.1. Educational and pedagogical activity (work with students and postgraduate students)

The candidate has submitted documents for an academic activity with the required academic horarium amount in the Department of Communication Engineering and Technology at the Technical University of Gabrovo. He has over 12 years of work experience as a lecturer in a higher education institution and consistently held of academic positions as “Assistant Professor” and “Chief Assistant Proffers”. During this period, he has participated in the development of 6 curricula for Bachelor's and Master's degrees, where he is a holder in 5 courses and one course project. Materials for development, implementation of equipment and design of simulation and practical models for 4 laboratories in the Department of CET are submitted.

His work with the students in the Department of CET is very active, as confirmed by the more than 50 graduates in the Bachelor's and Master's degrees and the participation under his supervision of nearly 10 students to participate in the annual Student Scientific Session of TU-Gabrovo. He has actively participated in the supervision and preparation of student teams with developments presented at national competitions, exhibitions and forums.

There are submitted certificates, diplomas, documents, etc., certifying advanced training and acquiring of modern pedagogical skills. Therefore, I accept that the overall assessment of the teaching and pedagogical activities of the candidate meets the requirements of TU-Gabrovo and the Law on the Development of Academic Staff in the Republic of Bulgaria.

2.2. Scientific and scientific-applied activity

After getting acquainted with the submitted documentation and the information in it about the candidate's participation in research projects and his publishing activity, as well as with the requirements of the TU-Gabrovo for awarding an academic position of “Associate Professor”, I can ascertain the following:

The candidate has submitted a total of 42 scientific publications, other than those for the acquisition of Educational and scientific degree “Doctor”. After an up-to-date reference, it can be seen that currently 12 are indexed in the Scopus databases and 1 of them has an "Impact" factor (IF) in the WoS databases. Of the submitted publications, 9 are articles in national and international journals and 33 – in international conferences and annuals. There are 4 publications as a single author, and in 15 of the publications the candidate is in first place. He is a co-author of 3 textbooks and teaching guides.

Based on the above facts, I consider that the candidate meets the criteria for scientific-research and applied-scientific activity of TU-Gabrovo and my overall assessment is a positive.

2.3. Implementation activity

The candidate has submitted data for participation, as a member of the teams for the implementation of 10 research projects, as well as from the presented publishing activity, it is clear that in the last 5 years he has participated in the creation of 3 applied developments with potential for implementation.

A good attestation is the development and implementation in the education of students of new demonstration models, prototypes and platforms, which are introduced for teaching and research purposes on the territory of the Department of CET and TU-Gabrovo.

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

I accept the presented reference for the candidate's contributions to the scientific work. All submitted scientific publications are in the professional field 5.3. Communication and Computer Engineering”. The contributions concern specific competencies related to the candidate's interests and scientific development, in particular: “research in wireless, broadband, satellite, cable and optical communications” and “research in security and fire alarm systems, access control systems and video surveillance, Internet of Things (IoT) systems”.

The reported scientific-applied and applied contributions are directly related to the announced disciplines (in brackets) of the competition – “Wireless Communications and Broadcasting” and “Security Equipment”. I checked and found the available 8 citations in the Scopus databases and the Hirsch index – $h = 2$.

I consider that the requirements for the quantitative indicators of the criteria for holding the academic position of “Associate Professor” have been met. According to attendance in the, IEEE, WoS and Scopus databases, the candidate is recognizable in the scientific community in Bulgaria and abroad.

4. Assessment of the candidate’s personal contribution

The scientific summaries, illustrated with engineering methods for research, numerical experiments, real measurements, as well as the simulation analysis are indisputable proof of the candidate's personal involvement in the applied-scientific and applied contributions reflected in the publication activity. Although most of the publications are co-authored, which is normal, I dare say that the results obtained are the work of the candidate and reflect his scientific development over the years directly related to the scientific specialty “Communication Networks and Systems”.

5. Critical remarks and recommendations

I have no critical remarks, but I recommend the candidate to make efforts in the future to develop under his management research projects with the possibility of implementation. The obtained results should be presented and published in international conferences in the country and in peer-reviewed journals with Impact factor (WoS) or Scopus rank.

6. Personal impressions

I know Ch. Assist. Prof. Krasen Kirov Angelov, PhD for 18 years and I think that his attitude towards work, colleagues and students is at an excellent level. He always demonstrates a responsiveness and willingness concerning all academic and scientific-research tasks assigned. His professional, technical and communication competence is at a very high level. He possesses the necessary theoretical and practice skills, as well as manager abilities to perform the academic position of “Associate Professor”.

I consider that the submitted information about the academic work and scientific production of the candidate meets the requirements for occupying the academic position of “Associate Professor” in accordance with the Law on the Development of Academic Staff in the Republic of Bulgaria and the Rules for its implementation, as well as the Rules for the terms and conditions for the occupation of academic positions and acquisition of scientific degrees at the Technical University of Gabrovo.

7. Conclusion

In view of the above, I propose Ch. Assist. Prof. Krasen Kirov Angelov, Ph.D. to be awarded the academic position of “Associate Professor” in the field of higher education – 5. Technical Sciences, professional field – 5.3. Communication and Computer Engineering, specialty – “Communication Networks and Systems” (“Wireless Communications and Broadcasting”, “Security Equipment”).

22.10.2020 г.

Member of the scientific jury: /signature/

/Assoc. Prof. Stanimir Mihaylov Sadinov, PhD/