

OPINION

on the application submitted in fulfilment of the national criteria for tenure position "Associate Professor" in the professional field "5.2. Electrical Engineering, Electronics and Automation", academic course: "Electrical Measurements", a competition declared in the State Gazette no.55 on 12.07.2019.

Applicant: **Ch.Assist.Prof. Hristo Zhivomirov Karaivanov, PhD**

Scientific Panel Member: **Assoc. Prof. Todor Dimitrov Ganchev, PhD**

1. General description of the application materials

According to the application materials, Dr. H. Zh. Karaivanov participates in the competition for the tenured position "Associate Professor" with a total of 12 scientific publications. This includes a book, entitled "*Spectral Analysis and Synthesis in Contemporary Measurement Practice*", which the applicant submits under Indicator B.3 *Habilitation Work - a monograph* to cover the requirements of the indicator group "B" and a total of 11 publications to cover the requirements for the indicator group "G". Among these are 5 scientific publications, indexed in the SCOPUS database, covering indicator G.7 and a total of 6 publications in non-refereed journals or edited collective volumes, covering indicator G.8. In accordance with the requirements, the applicant also provides a list of publications used for the acquisition of the PhD degree (in total 8 publications).

The candidate covers the minimum requirements of the indicator group "D" with a list of 6 citations for 5 publications (indicator D.12) and with a list with 1 publication cited 1 time (indicator D.14). Among these I take into account a total of 4 citations from independent authors included in the list corresponding to indicator D.12. Furthermore, I do not consider 3 citations, namely A1-B1 and A2-B1 presented under indicator D.12 and the citation A1-B1 presented under indicator D.14, since these are citations in publications by team members working closely with Dr. H. Karaivanov.

In order to meet the minimum requirements for the indicator "J", the applicant provided a reference letter standing for 150 hours of lectures.

Table 1. Implementation of the requirements for acquisition tenure position "Associate Professor" in groups of indicators for the scientific area "5. Technical Sciences"

Indicator Group	Indicators	Minimum requirements for the acquisition of "Associate Professor"	Points Dr. H. Zh. Karaivanov
A	Indicator 1	50	50
„Be”	Indicator 2	---	---
B	Indicator 3 or 4	100	100
G	Amount of performance from 5 to 11	200	240
D	Amount of indicators from 12 to 15	50	40
E	Amount of indicators from 16 to 28	---	---
J	Indicator 29	30	150

Evaluation of the application materials presented in comparison with the minimal national and institutional requirements for tenure positions "Associate Professor" (cf. Table 1), shows fulfilment of the minimum requirements for the relevant groups of indicators, except the minimum requirements for indicator group "D". It should be noted that, according to SCOPUS (as of October 30, 2019), the applicant has 2 new citations by independent authors, beyond these presented in the current application. Having said this, I consent that the minimum national and institutional requirements for occupying the academic position "Associate Professor" are fulfilled.

2. Assessment of the pedagogical activity of the applicant

Pedagogical activity of the applicant covers nearly seven-years period – from his appointment as an Assistant Professor at the Department "Theory of Electrical Engineering and Measurement" of TU-Varna to the present. According to the application package, in the past three academic years the candidate has taught 150 hours of lectures. The candidate coauthored 5 teaching manuals, which is a very good attestation of his work as a teacher.

3. Major contributions

The applicant has not provided a list of claimed scientific contributions. Thus, based on the abstracts of his publications and his book, I concluded that these are research and technology development contributions. I acknowledge that the 12 publications presented in the competition reflect well the research and technology development activities on the subject of the competition. In general, the author's contributions can be characterized as:

- Development of algorithms and software for calculation and visualization, which serve for illustrating of particular aspects of spectral analysis in applications incorporating the measurements of signal parameters and the generation of signals;
- Algorithms for the calculation of the design parameters of audio amplifiers and studies of the spatial characteristics of loudspeakers;

Based on analysis of the composition of the coauthor teams, the relative percentage of authored publications, and my personal impression about the candidate, I conclude that the candidate has significant or leading contribution to the published research results.

4. Significance of contributions to science and practice

About the relative importance of the contributions formulated in the book and the publications of the candidate, I can judge only indirectly. On the one hand, it is obvious that these contributions are related to real-world problems, and on the other hand, the small number of citations (under 10) in publications by independent authors is evident. There is no information about pending patent applications of the applicant. There is no information about the incorporation of published innovations and developments in commercial products.

5. Critical remarks and recommendations

I have critical remarks to the application materials, with respect to the incomplete evidence materials and the absence of specific list of claimed contributions. Furthermore, in the list of citations provided by the candidate, there are 3 citations by his coauthors, members of his research team.

I have the following recommendations to the candidate, which hopefully could guide him towards spending some efforts for the :

- *implementation* of the achievements and developments reported in the publications. In this regard, projects with companies, manufacturers of measurement equipment and audio equipment can be developed.
- *development of international RTD projects* - it is recommended that the applicant develop capacity for acquiring funding for the RTD activities of the team beyond the funds earmarked by TU-Varna. In this regard, I consider his current involvement in national projects an important stage in the development of such capacity.
- *gaining international recognition in the research community* through publications in scientific journals with impact factor by Thomson Reuters.
- *increasing the share of publications in SCOPUS and WoS*, in order to support the elevation of TU-Varna in the academic rating systems and to contribute to the accreditation of the University.

CONCLUSION

The application materials submitted to the competition allow for an objective and multifaceted assessment of the qualities of Dr. H. Zh. Karaivanov. A comparison between the declared assets and the minimal national requirements for tenure position "Associate Professor" and the relevant regulations of the Technical University of Varna showed, that the minimum requirements are met, and for indicator "J" are significantly outperformed. The latter gives me reason to propose to the scientific jury to support the candidate Dr. H. Karaivanov, in his application to occupy the academic position "Associate Professor" in the professional field: 5.2 "Electrical Engineering, Electronics and Automation", academic course: "Electrical Measurements".

Date : 31.10.2019

Reviewer : _____

/ Assoc. Prof. Todor Ganchev/