

Assessment

Regarding an opening for the academic position of “Associated professor” in professional field 5.2.” Electrical engineering, electronics and automation” for the subject “Design of electronic equipment”.

Officially announced in State Gazette issue 108/22.12.2020

with candidate Toncho Papanchev, PhD

By member of the Scientific Committee: assoc. prof Angel Marinov, PhD

1. General characteristics of the applicant’s research and development activities.

1.1 Scientific publications and metrics

The sole applicant for the opening – T. Papanchev presents the following scientific works and metrics:

(1) 1 PhD thesis developed and successfully defended in the professional field of the academic position opening. The PhD thesis can be related **to Criteria A** of the national requirements. 50 points can be awarded for the presented work, from a threshold of 50pts.

(2) 30 scientific papers, that are presented as:

- Main systemized scientific work, where 11 papers are presented. All of the presented papers are referenced and indexed in globally renowned databases. This scientific work is related to Criteria B of the national requirements. For it, the applicant can be awarded 179pts from a threshold of 100pts.
- 19 scientific publications outside the main scientific work, from which 7 are referenced and indexed in globally renowned databases, while 11 are in non-referenced, peer reviewed journals or proceedings. Those publications are related to Criteria Γ of the national requirements. For them, the applicant can be awarded 237.20pts from a threshold of 200pts.

(3) 6 cited paper with a total of 12 citations. Where 10 of those citations are from scientific publications referenced and indexed in globally renowned databases, while 2 are form non referenced peer reviewed journals or proceedings. The presented citations are related to Criteria Δ from the national requirements. For the presented citations, the applicant can be awarded 104pts from a threshold of 50pts.

Based on the presented overview regarding the scientific work and metrics of the applicant, I can conclude that the material is sufficient and balanced in terms of coauthors and inclusion in both international and national referenced databases. I can state that the scientific work and metrics, presented by applicants satisfy the national requirements in terms of Criteria A, B, Γ and Δ

1.2. Participation in scientific, development or educational projects

The applicant presents a rich portfolio of various project participations, where he had worked as both participant and coordinator. Those projects include: (1) A total of 7 projects funded by the national budget; (2) 1 project funded by the Ministry of Science and Education; (3) 1 project funded by the Bulgarian “Human resource development” structural fund; (4) 2 projects funded by the Bulgarian “Science and education for intelligent growth” structural fund.

1.3. Development of scientific infrastructure

The applicant has presented contributions to the development of the scientific infrastructure of the Technical University of Varna. The contributions include the development and upgrade of several laboratories in the field of electronics. The contributions are presented trough a signed reference.

1.4. Research mobilities and international cooperation

The applicant has presented participation in one international mobility (Patras, Greece). As a result of the mobility 3 scientific publications were developed.

2. Assessment of the pedagogical experience and educational activities of the applicant

For the participation in the opening the applicant presents:

(1) A reference for 10 years of experience as an assistant and chief assistant in the department of Electronics and Microelectronics of TU-Varna, where he has been teaching lectures and laboratory exercises in total of 16 subjects, presented to several Bachelor and Master courses. For the duration of 2018/2021, the applicant has

taught a total 439 hours of lectures. This activity is related to Criteria Ж of the national requirements, where the applicant is highly above the threshold.

(2) One student guidebook for laboratory exercises.

(3) Reference for coordination of extracurricular activities with Bachelor, Master and PhD students. Those activities include thesis tutoring, development of scientific publications, etc.

(4) Reference for the development of 9 syllabus part of Bachelor and Master courses.

Based on the overview related to the educational work and experiences of the applicant I can give him a highly positive assessment.

3. Main scientific contributions

The applicant presents his claims for scientific contributions in four main groups classified by thematic areas. Three of those areas (1-3) address problems related to reliability, while 1 of the areas relates to the application of artificial intelligence algorithms to modeling and design of electronic devices and controls. In my opinion the way that the applicant structures and formulates his claims is unconventional and, in some degree, confuses the reader, as – I think – that the claims are difficult to distinguished within the given thematic areas. The applicant has not presented classification in terms of whether his claims are purely scientific or are related to a specific application. In my opinion most of the claims are application rated. I do not approve the use of the word „Симуляционни“ in the definition of Thematic area 4.

Despite my remarks I think that the claims have sufficient approbation, that motivates me to accept them and to provide a positive assessment.

4. Significance of the scientific contributions

I think that the scientific claims, expand the knowledge in the area of reliability of electronics. I can assess them as very good.

5. Critical notes and recommendations

I do not have any notable critical notes toward the applicant, outside those that I have already provided in the sections above. For the applicant I can formulate the following recommendations: (1) To increase his work toward development and application in international research and development projects; (2) To increase his international activities.

Conclusion

In conclusion I can give a highly positive assessment of the materials presented by the applicant, where in my opinion they satisfy the national requirements, as well as the national and institutional legal base that regulates criteria for the specific academic position. I suggest that T. Papanchev is selected for the position of associated professor in the professional field of the opening.