

S T A T E M E N T

on the competition for obtaining an academic position “Professor” in

professional field 5.2. Electrical Engineering, Electronics and Automatics, scientific specialty “Electronics”, for dept.“ETM“ of the Technical University – Varna,
announced in SG 38/ 10.05.2019.

Applicant: Assoc. prof. Dr.Sc. Anton Slavchev Georgiev

Member of the scientific jury: Vladimir Dimitrov Lazarov, Prof. Ph.D.

1. Overall characteristics of the applicant’s research and applied activities.

Assoc. Prof. Dr.Sc. Anton Slavchev Georgiev from TU - Varna is the only candidate in the competition. He is the author of a total of 156 publications. In the competition for professor he participates with: PhD thesis (for information presented with a diploma and with an abstract); Dr.Sc.thesis (for information presented with a diploma and an abstract); habilitation work - monograph "Reliability of electronic products", Aquaprint Ltd., Varna, 2019 (reviewed); published a book on the basis of his Dr.Sc. thesis - "A new concept for improving the operational reliability of electronic systems", Aquaprint Ltd., Varna 2013; 16 scientific publications indexed in world-renowned databases / Scopus /; 38 publications in non-refereed scientific peer-reviewed journals or in editorials; participation in national and international scientific or educational projects – 29; list of citations and other documents. The references show that the applicant meets minimum national requirements.

2. Evaluation of the applicant’s teaching capabilities and activities.

Prof. Georgiev participates in the competition as the author of 12 textbooks guides; 3 university textbooks; one of his Ph.D students has successfully defended a doctorate in 2015; he has led 16 Bachelor Degree courses, two Master's Degree courses, two course project designs and two laboratory exercises. The lectures are in the field of electronics, semiconductor devices, analog circuitry, design and technology of electronic and communication equipment; reliability and diagnostics of electronic equipment. It should be noted that some of the courses were taught in Bulgarian, while others were part of an English language curriculum. In addition to the Technical University of Varna, Assoc. Prof. Slavchev has lectured and led exercises at the DTK Dobrich, named after "Hr. Smirnenski ”- Burgas, Burgas Free University. It is obvious that the applicant has solid pedagogical training and activity.

2. Main scientific and applied contributions

I generally accept the applicant's claims. The research in the presented works is oriented towards different aspects of the reliability of electronic components and systems. The main

scientific contributions to the monograph work on "Reliability of Electronic Products" [IV.1.] can be summarized as follows - methods have been developed to standardize the number of recoverable and non-recoverable spare parts; methodology for selecting redundant electronic blocks: methods for prophylaxis period, application of Markov's models, etc. To the scientific/applied - the development of specific methodologies for practical application. The contributions to the monograph "A New Concept for Improving the Reliability of Electronic Systems" (from a Dr.Sc. thesis) are based on this dissertation, namely the formulation of a new approach and new strategies for maintenance and restoration of working capacity. Publications [IV.3.1-1 ÷ IV.3.2-38] are mainly devoted to the development of methods for determining the reliability of electronic elements, blocks and systems, as well as their application to various devices, and some devices are considered. Scientific contributions consist in the development of models for evaluating the reliability of electronic products and enhancing operational reliability by improving maintenance [IV.3.1-1,3,6,7,8,10,11,12 ÷ IV.3.2-1,7,31,32,34,35,36,37,38]. In cases where insufficient data is available, the possibility of using Bayesian functions has been investigated [IV.3.2-3,9,10,11,28,29,30]. There have also been scientific contributions to the development of FPGA-based radar system components [IV.3.2-4,33]; the study of materials and structures for pulse transformers [IV.3.2-13,16,19,20,21,22,24,25,26]. The scientific and applied contributions include the application of developed methods for procedures and measures to increase the reliability of communication systems, lightning surge protection equipment, medical devices, stage effects devices. The candidate submitted a list of 16 articles referenced in Scopus, as well as 29 citations in Scopus. The candidate also has citations in other worldwide databases (which are not quoted here), such as Google Scholar with two profiles for Anton Georgiev, one with 183 and the other with 76 citations.

The reference shows that the number of refereed articles in Scopus should now be reduced by three (or 40 points in the "Д" indicator), given that three publications of traditionally referenced in Scopus editions do not yet appear on Assoc. Prof. Georgiev's author's profile. The situation with his Scopus citations is similar: these should be reduced by 11, or 110 points in total in indicator "E". As a result of documentation inaccuracies (at least in my set of documents), I deduct 14 international or educational projects related to the Mariinsky Academy, or 280 points in indicator "E". This refinement does not have a significant impact on the final points earned by the author, after which he has 444 points in indicator "Г", 750 points in indicator "Д" and 591 points in indicator "E". The author has fulfilled the minimum requirements respectively in indicator Г - 222%, indicator "Д" - 340% and 750% in indicator "E", Other indicators (А,Б,В,) are fulfilled or over fulfilled 300% -r indicator "Ж".

4. Significance of the contributions to the science and the practice

Prof. Georgiev's research is in an important field of the science and practice - the reliability of electronic products. The research follows his own internal logic from scientific search to practical application - creating methodologies and recommendations for increasing the reliability of specific product groups. The applicant has greatly exceeded the requirements of the law and regulations of the Technical University - Varna. Assoc. Prof. Georgiev has a rich organizational activity. He was Deputy Dean of the Faculty of Electronics, Head of the Teaching and

Methodological Department of the Technical University – Varna. He was and is a member of various committees and juries, member of editorial boards, has participated in many scientific conferences in Bulgaria and abroad, chaired sections, has been a reviewer of articles and papers in Bulgaria and in reputable international journals. It can be concluded that the multifaceted activity of Assoc. Prof. Georgiev has become available to the scientific circles at home and abroad and has received its recognition.

5. Critical remarks and recommendations

Formal remarks aimed at some refinement, were made above in point 3, underlining that they do not in any way diminish the author 's scientific achievements. I have no other significant questions or concerns. I recommend that the applicant increase its publications in prestigious international journals with an impact factor.

CONCLUSIONS

The scientific works of the applicant are of high importance with scientific, applied - scientific and applied contributions. His teaching capabilities and educational skills are beyond doubt. The requirements of the law on Academic Staff Development in the Republic of Bulgaria and the Rules for its application by the Council of Ministers and of TU – Varna have been fulfilled. For these reasons, I find it justified to recommend that Associate Professor Dr.Sc. Anton Slavchev Georgiev obtain the academic position “Professor” in the professional field 5.2. Electrical Engineering, Electronics and Automatics, scientific specialty “Electronics”, within the dept.“ETM“ of the Technical University – Varna.

Date: 30.09.2019r.

Member of the jury:

/Prof.Dr.Vladimir Lazarov/