

## SCIENTIFIC STANDPOINT

**on contest for occupying the academic position of ASSOCIATE PROFESSOR in professional strand 5.2 Electrical Engineering, Electronics and Automation specialty of Digital Signal Processing in the Department of Electronics and Microelectronics, Faculty of Computer Sciences and Automation, Technical University of Varna, published in State Gazette No. 31/19.04.2022 applicant: Firgan Nihatov Feradov, Senior Assistant Professor PhD Eng.**

**Member of the Scientific Jury: George Vasilev Angelov, Professor PhD Eng**

The contest for occupying the academic position of ASSOCIATE PROFESSOR in professional strand 5.2 Electrical Engineering, Electronics and Automation, specialty of Digital Signal Processing is published in State Gazette #31/19.04.2022 for the needs of the Department of Electronics and Microelectronics in the Faculty of Computer Sciences and Automation, Technical University of Varna. The only participating applicant is Senior Assistant Professor Eng. Dr. Firgan Nihatov Feradov.

### **1. Overall Characteristic of the Applicant's Research and Applied Research**

The research and applied research activities of Senior Asst. Prof. Dr. Eng. Firgan Feradov, as evidenced by the attached documents, are in the fields of medical applications and power electronics. For the contest a total of 19 publications are submitted, which relate to the creation of: (1) methodologies for the classification of emotional states and cognitive activity from electroencephalographic (EEG) recordings and cognitive load from photoplethysmographic (PPG) signals and galvanic skin resistance (GSR), (2) anthropomorphic medical phantoms and research resources, (3) electronics schematics of power electronic converters (PECs) used in solar inverters, (4) algorithms for computer aided design (CAD) of power electronic converters. None of the 19 publications are included in previous scientific procedures (PhD thesis) of the applicant.

The publications are correctly separated according to the groups of indicator – Group B (11 publications) and Group Γ (8 publications). 18 of the papers are indexed in Scopus. Five of the paper are individual, in 6 papers the applicant is first co-author and in 2 papers he is second co-author. The presented 19 publications are cited 13 times; in Scopus the applicant has a total of 18 citations.

The applicant has presented a reference list for reviewing a total of 11 publications in the Annual journal of Technical University of Varna and the BIA conference. He has also presented a reference for participation in the organizing committee of 2 conferences.

For his participation in the contest Senior Asst. Prof. Dr. Eng. Firgan Feradov has presented a reference for participation in 11 projects.

### **2. Assessment of the applicant's teaching practice and activity**

Senior Asst. Prof. Dr. Eng. Firgan Feradov has 4 years of teaching experience in the Department of Electronics and Microelectronics in the FCSA of TUV. He has delivered and he is still delivering lectures and laboratory exercises in 5 disciplines, with the addition of laboratory exercises in two additional disciplines.

### **3. Main scientific and applied contributions**

Senior Asst. Prof. Dr. Eng. Feradov has formulated 6 original scientific contributions on the basis of the presented 19 publications. I classify the proposed contributions as applied, although the applicant has not provided a classification of his contributions as scientific, applied scientific or applied.

Taking into consideration the publications presented for the contest I would recommend that the contributions be summarized and abridged. Contributions 2, 4, 5 and 6 can be summarized and abridged into one contribution, related to his work in the field of medical applications, and contributions 1 and 3 – into a second contribution related to the field of power electronics.

#### **4. Significance of contributions to science and practice**

The results presented in the applicant's publications are on a very good level. All papers, except one, are referenced in Scopus and/or WoS. I have the impression that the author is a capable young lecturer and engineering researcher with potential for future development in the field of engineering sciences and in the Technical University of Varna.

Formally, the total applicant's score pursuant to the indicators of the minimal requirements is 559 pts., with which he exceeds the minimum of 430 pts.

#### **5. Critical notes and recommendations.**

I would recommend the contributions to be summarized and abridged. I would wish that in the future the applicant would aim towards more publications in journals with impact factor and, if possible, in the first quartiles.

### **CONCLUSIONS**

Based on the detailed review of the presented scientific works and the contributions contained within them, the presented teaching activities and the participation in projects, I believe it is completely reasonable to propose that Senior Asst. Prof. Dr. Eng. Firgan Feradov to take the academic position of ASSOCIATED PROFESSOR in the professional strand 5.2 Electrical Engineering, Electronics and Automation, specialty of Digital Signal Processing.

**Date:** 19.08.2022

**JURY MEMBER:**

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/George Angelov/