

OPINION

by Prof. Angel Sotirov Smrikarov, PhD,
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of the materials submitted for participation in the competition for occupying the academic position "Associate Professor" in field of higher education - 5. Technical sciences, by professional direction - 5.3. Communication and computer technology, specialty - "Computer systems, complexes and networks" (Schematic technology, Microprocessor technique)

In the competition for Associate Professor, announced in the State Gazette, no. 54/25.06.2024 and on the TU - Gabrovo website for the needs of the "Computer systems and technologies" department at the "Electrical Engineering and Electronics" faculty, as a candidate participate, Chief Assistant Professor eng. Hristo Stefanov Kilifarev, PhD.

1. Overview of content and results in the presented works

Ch. Assistant Prof. eng. Hristo Stefanov Kilifarev, PhD, participated in the competition for associate professor with a total of 33 publications, 1 textbook on "Schematic technology" and 1 teaching aid - "Manual for laboratory exercises in microprocessor technique". The candidate's publications can be classified as follows:

- of the 33 publications presented, 17 are in English and the remaining 16 in Bulgarian;
- 11 scientific publications in publications that are referenced and indexed in world-renowned databases with scientific information (Scopus - 11, Web of Science - 1);
- 22 scientific publications in non-refereed peer-reviewed journals or in edited collective volumes;
- out of a total of 33 publications (with a minimum 15 required), 26 are co-authored, and in 6 of them the candidate is the first author, and 7 are independent (with a minimum 4 required);
- the number of known citations presented is 8 (with a minimum 5 required).

As can be seen, the scientometric data of Ch. Assistant Prof. Hristo Kilifarev, PhD, meet, and in some indicators exceed the minimum requirements of TU-Gabrovo.

The scientific publications of Ch. Assistant Prof. Hristo Kilifarev, PhD, can be classified by type of publications as follows:

- articles in journals with Impact Factor (WoS) – 1 [B.4.8];
- articles in non-refereed publications abroad – 1 [G.8.12];
- articles in non-refereed publications in Bulgaria – 2 [G.8.16, G.8.17];
- reports in referenced and indexed databases (Scopus) – 10 [B.4.1 – G.4.7, G.4.9, G.4.10, G.7.1];
- reports at international conferences abroad – 3 [G.8.13, G.8.14, G.8.22];
- reports at international conferences in Bulgaria – 15 [G.8.1, G.8.2, G.8.4 – G.8.11, G.8.15, G.8.18 – G.8.21];
- reports at national conferences in Bulgaria – 1 [G.8.3].

In all joint publications, the contribution of the co-authors is equal.

Thematically, the presented publications are interdisciplinary in focus and cover various areas of the theory and use of computer systems, computer technologies, and methods for creating computer systems.

The presented works can be classified into 6 thematic areas, namely:

- The first area is "Design and development of automated systems", in which the candidate has 8 publications [B.4.1, B.4.2, B.4.3, B.4.4, G.8.6, G.8.11, G.8.15, G.8.18];
- The second area is "Specialized platform for video management in online learning", in which there is 1 publication [B.4.5];
- The third area is "Non-contact research of mediums, materials and speed", in which there are 16 publications [B.4.7, B.4.6, G.8.10, G.8.14, B.4.8, G.7.1, G.8.4, G.8.5, G.8.7, G.8.12, G.8.13, G.8.16, G.8.17, G.8.19, G.8.1, G.8.2];

- The fourth area is “Design and development of systems providing local short-term weather forecasting, based on a microcontroller”, in which there are 4 publications [G.8.21, G.8.20, B.4.10, B.4.9];
- The fifth area is related to “Optimization of big data for e-shops” and there is 1 publication in it [G.8.3];
- The sixth area is “Research in the field of electric vehicles”, in which there are 3 publications [G.8.8, G.8.9, G.8.22].

2. General characteristics of the applicant's activity

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

From 2002 to 2017 Ch. Assistant Prof. Hristo Stefanov Kilifarev, PhD, works in the department "Automation, information and control systems" at TU-Gabrovo, holding the academic positions of "assistant", "senior" and "chief assistant". From 2018 to the present, he is "chief assistant" in the "Computer systems and technologies" department.

Over the years, Hristo Kilifarev, PhD, has lectured for Bachelor's degrees in the disciplines "Computer graphics", "Multimedia systems", "Programming of embedded systems", "Computer peripherals", "Computer graphics systems", "Modeling and visualization of objects", "Computer graphics III", "Web design and multimedia products", "Multimedia design and presentation", for Professional Bachelor's degree in "Computer graphics", and for the Master's degree - "Multimedia systems and Web design", "Computer graphics" and “Computer peripherals”.

He has also led seminars and laboratory exercises for Bachelor's degree in the disciplines "Schematic technology", "Computer graphics", "Multimedia systems", "Programming of embedded systems", "Microprocessor technique", "Artificial intelligence", "Computer peripherals", "Computer graphics systems", "Modeling and visualization of objects", "Computer graphics III", "Web design and multimedia products" and for the Master's degree in "Multimedia design and presentation", "Multimedia systems and Web-design", "Systems with artificial intelligence", "Computer graphics", "Computer peripherals" and "Microprocessor technique".

To date, he has participated in the development of a total of 49 curricula, of which 16 for "Bachelor" degree, 3 for "Professional Bachelors" degree and 30 for "Master" degree.

For the period from 2017 to the present Ch. Assistant Prof. Hristo Kilifarev has supervised a total of 59 graduate students, reviewed 27 theses and participated in 11 thesis defense committees.

The number of disciplines led by the candidate is significant, which speaks to his very good professional training, covering various aspects of computer technology. I believe that the pedagogical training of Ch. Assistant Prof. Hristo Kilifarev, PhD, is at a high level and I assess his educational and pedagogical activities as successful and fruitful.

2.2. Scientific and scientific-applied activity

Chief Assistant Prof. Hristo Kilifarev, PhD, was the head of 1 scientific research project of TU-Gabrovo - No. 2004E "Modern methods for food and materials quality assessment".

He also participated in 5 more projects at TU-Gabrovo:

- No. 2304E "Increasing the effectiveness of education through the use of information and communication technologies";
- No. 2203E "Development and validation of solutions for effective distance learning through the use of innovative ICT technologies";
- No. 2109E "Research and implementation of ICT solutions for effective distance learning";
- No. 1907E "Implementation of innovative ICT technologies in education" and
- No. 1810E "Application of virtualization and cloud technologies in education.

He also participated in the project BG05M2OP001-1.002-0002-C01 "Digitalization of the Economy in a Big Data Environment" under the Operational Program "Science and Education for Smart Growth".

2.3. Implementation activity

The candidate has not submitted official implementation documents.

For educational purposes, the specialized educational platform Hydra Educational Platform (HEP) was designed, realized and implemented at TU-Gabrovo, which serves to manage video recordings during online learning.

On the guided disciplines Ch. Assistant Prof. Hristo Kilifarev, PhD, has developed numerous laboratory exercises and stands.

The topics of some of the publications are related to the disciplines taught, which implies the use of the obtained results in the educational process.

From the publications in the thematic area "Non-contact testing of mediums, materials and speed" it can be seen that controllers have been developed and implemented for controlling ultrasonic measuring heads for a system for remote recognition, qualification and classification of substances, materials and states of mediums in real time.

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

In the presented by Ch. Assistant Prof. Hristo Kilifarev, PhD, author's reference for the contributions, 3 scientific, 7 scientific-applied and 9 applied contributions have been formulated, which correspond to the professional direction 5.3 "Communication and computer technology". I believe that the presented contributions accurately reflect the results obtained by the candidate. I accept the stated contributions and consider that they are sufficient for holding the academic position of "Assistant Professor". The significance of the contributions in the candidate's scientific works is indisputable, taking into account the topicality of the subject, the dissemination of research results among the scientific community and their wide application in practice.

4. Evaluation of the personal contribution of the candidate

After my acquaintance with the presented works of Ch. Assistant Prof. Hristo Kilifarev, PhD, I am convinced that the results achieved from the research and development work were obtained entirely with his participation.

5. Critical notes and recommendations

I have no critical remarks on the presented documents and scientific works. I think that some of the contributions can be merged.

I recommend to Ch. Assistant Prof. Hristo Kilifarev, PhD, if possible, to reduce the number and spectrum of taught disciplines in order to have an opportunity for more active and effective scientific and implementation activity.

6. Personal impressions

I do not personally know Ch. Assistant Prof. Hristo Kilifarev, PhD, and I have no immediate impressions of his activities. I admire the fact that he has focused on improving the quality of educational activities and, more precisely, on its digitalization through the use of innovative educational technologies.

7. Conclusion:

Bearing in mind the above, I propose Chief Assistant Professor eng. Hristo Stefanov Kilifarev, PhD, to be elected as an "Associate Professor" in the field of higher education - 5. Technical sciences, professional direction - 5.3 Communication and computer technology, specialty - "Computer systems, complexes and networks" (Schematic technology, Microprocessor technique).

08.11.2024

Jury member: /signature/
/ Prof. Angel Smrikarov, PhD /