

OPINION

Member of the scientific commission: assoc. prof. PhD Vultchan Todorov Gueorgiev, TU-Sofia.

Concerning a contest for academic position “associated professor” in higher education area 5 “Technical Science”, Professional field 5.2 „Electrical engineering, electronics and automation“, Scientific subject „Electrical Supply and Electrical Equipment“ (Electronic Devices in Electric Power Engineering).

In the contest, published in Bulgarian Official Journal issue 68/31.07.2020 and on the website of TU-Gabrovo, for the needs of Department of ESEE, faculty of Electrical and Electronic Engineering participates a single candidate – assistant professor PhD eng. Hristo Todorov Ibrishimov.

1. Survey of the content and results of the presented materials

The scientific and research activity of Hristo Ibrishimov is published in 2 monographies and 28 publications in addition to 7 publications, concerning the PhD thesis of the candidate. From the above noted 31 publications, 11 are referred in Scopus or Web of Science and 18 are not referred. Two of the publications are presented on referred forums but the process of publishing is not completed. Five publications (4 not referred and 1 referred) are own work of the candidate, two publications (14 not referred and 1 referred) are with 1 coauthor and the others are with more coauthors.

Eight of the works of the candidate are cited in 7 referred publications. From those 7 publications 6 are authored by Bulgarian scientists and 1 by foreign scientists.

The candidate covers the national requirements and the requirements of TU-Gabrovo for acquiring the academic position “associated professor”.

2. General characteristics of the candidate’s activity

2.1 Pedagogical activity

The candidate has taught full courses - lectures and laboratory classes in 4 subjects, lectures (only) in 1 subject and laboratory classes (only) in 1 subject.

He has participated in the development of 4 subject of the bachelor’s degree curriculum of educational specialty “Electric Power Engineering” and „Electrical Supply and Electrical Equipment“.

Hristo Ibrishimov is author of 2 text books:

1. H. Ibrishimov, „A guide for laboratory classes in Electronic Devices in Electric Power Engineering“, University publishing house „V. Aprilov“-Gabrovo, 2020, ISBN: 978-954-683-624-3, (77 pages).
2. H. Ibrishimov, „A guide for coursework in Electronic Devices in Electric Power Engineering“, University publishing house „V. Aprilov“-Gabrovo, 2020, ISBN: 978-954-683-625-0, (46 pages).

He has been a tutor of 35 graduates for the time he is working in the TU-Gabrovo.

2.2 Scientific and research activity

The candidate starts his work in the field of science as a member of a research team developing ultrasound method for contactless recognition of substances, materials, mixtures, physical characteristics.

In 2015 Hristo Ibrishimov defends a PhD thesis in industrial electronics – “Study and Modeling of Inductor for Volume Heating with Differential Zones of Electromagnetic and Thermal Field”. His scientific work in the field of power electronics and induction heating continues after obtaining of a PhD degree.

His scientific interest spreads to additional areas as lighting and energy efficiency. He published results from study of regimes, analysis, modeling and synthesis of lighting parameters of luminaires and lighting installations, optimization and efficiency estimation.

The candidate took part in the development of virtual remote education in TU-Gabrovo.

2.3 Development activity

The candidate has been a member of 2 university and 1 national research projects and 2 projects supported by the Operational Programs.

He has used his experience in the development of remote education of TU-Gabrovo.

He has participated in the energy audit of the street lighting of Gabrovo and Pavlikeny municipality.

3. Scientific and development contributions. Significance of the contributions for the science and technology

Significant part of the scientific work of the candidate is connected with development of mathematical and computer models, by means of which, adequate data for complex processes and phenomena can be obtained and used for design, analysis and optimization of the studied objects. That forms a contribution. As an example, that concretizes the upper statement can be shown one of the candidate’s publications “Dynamic Temperature Model of the Industrial LED luminaire”, UNITEX’2020, where the thermal regime of LED luminaire is studied.

The resource and the efficiency of LEDs depends of their temperature. The LED operating at 58°C can have up to 30% shorter life than the same LED operating at 53°C. That is why in the process of design of new LED luminaires, the precise estimation of working temperature is very important. The required accuracy cannot be obtained by classical chain method. A FEM model based on the currently developed design documentation is necessary.

4. Evaluation of the personal contribution of the candidate.

The candidate unambiguously demonstrates an ability to integrate in large scientific teams by developing mathematical and computer models.

5. Critical notes and recommendations

In the future work, efforts may be applied for publishing in scientific magazines.

6. Personal impressions

I can declare my positive impressions. The textbooks of the candidate are written with the obvious desire the matter to be presented in the most understandable way. His publications are thorough.

CONCLUSION

Based on the upper statement I find it justified to propose Hristo Todorov Ibrishimov to obtain the academic position „associated professor“ in higher education area 5 “Technical Science”, Professional field 5.2 „Electrical engineering, electronics and automation“, educational discipline „Electrical measurements“, Scientific subject „Electrical Supply and Electrical Equipment“ (Electronic Devices in Electric Power Engineering).

Date: 18.12.2020

Member of the Jury: /signature/

Assoc. prof. Vultchan Gueorgiev, PhD