

REVIEW

by **Academician Vassil Sgurev**
from the Bulgarian Academy of Sciences,
on the Competition for the academic position "**Associate Professor**",
under the Scientific Field: 5. Technical sciences,
the Professional Area: 5.2. Electrotechnics, Electronics and Automation,
for the needs of the Intelligent Systems Department
of the Institute of Information and Communication Technologies,
at the Bulgarian Academy of Sciences,
announced in Darjaven Vestnik No. 90 of 11.11.2022

with a participant - **Assistant Professor Tatyana Radeva Radeva -
Stoilova**

In accordance with Order No. 10 from 10.01.2023 of the Director of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences, I have been appointed as a member of the Scientific Jury of the competition for occupation of the academic position "Associate Professor" in the Scientific Field 5. Technical sciences, the Professional Area 5.2. Electrotechnics, Electronics and Automation, announced in the Darjaven Vestnik, Issue 90 of 11.11.2022, for the needs of the Intelligent Systems Department of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences, with

the sole participant in the competition - Assistant Professor Tatyana Radeva Radeva -Stoilova, PhD.

I. General information about the applicant.

Tatyana Radeva Radeva-Stoilova was born on June 16, 1979 in Sliven. She obtained her Bachelor's Degree in 2002 at the Technical University - Sofia, majoring in Electrical Engineering. In 2005, she acquired the Master's Degree in the same specialty as well as the Master's Degree, majoring in Public Administration at the same university. Her professional career began in 2005 at the Bulgaria's largest metalworking company - Kremikovtzi AD. Since March 2016, she is part of the research staff of the Technical University – Sofia and has held the academic position Assistant Professor.

II. General characteristics of the submitted documents and works.

As a member of the Scientific Jury I have received the following documents:

1. Order No. 10/10.01.2023 of the Director of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences.
2. Application for participation in the competition by Assistant Professor Tatyana Radeva Radeva-Stoilova.
3. European Curriculum Vitae.
4. Copy of the diploma for educational and scientific PhD degree.
5. Medical certificate.

6. Certificate of conviction.
7. Certificate of internship in the specialty.
8. List of scientific publications, with which the applicant Assistant Professor Tatyana Radeva Radeva-Stoilova, participates in the competition.
9. List of noted citations of Assistant Professor Tatyana Radeva Radeva-Stoilova, publications for participation in the competition for the academic position "Associate Professor".
10. Abstracts of Assistant Professor Tatyana Radeva Radeva-Stoilova, scientific publications, for participation in the competition for academic position "Associate Professor".
11. Copies of Assistant Professor Tatyana Radeva Radeva-Stoilova, scientific publications for participation in the competition for academic position "Associate Professor".
12. Reference for fulfillment of the minimum national requirements under Art. 2b, # 2 and # 3 and the requirements of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences under Art. 2b, # 5, based on the documents submitted for the competition by Assistant Professor Tatyana Radeva Radeva-Stoilova.
13. Reference for the original scientific and applied scientific contributions of Assistant Professor Tatyana Radeva Radeva-Stoilova.
14. Declaration that there is no proven plagiarism in the scientific works of Assistant Professor Tatyana Radeva Radeva-Stoilova.

In accordance with the requirements of the Development of Academic Staff Act in the Republic of Bulgaria and the specific requirements in the Act's Institutional Regulation, the candidates for occupying the academic position of "Associate Professor" must meet the following conditions, regulated in Art. 24. (1):

1. Have acquired an educational and scientific PhD degree;
2. Have held for at least two years the academic position of Assistant Professor;
3. Have submitted published monographs or equivalent publications in specialized scientific publications that do not repeat the ones submitted for the PhD degree;
4. To comply with the minimum national requirements under Art. 2b, # 2 and # 3, respectively, of the requirements of art. 2b, # 5;
5. Not to have plagiarism in the scientific publications proven by the legislation order.

III. General characteristics of the applicant's scientific, applied and teaching activities.

The candidate works in a very promising and current scientific field, which is a guarantee for achieving good results, with guaranteed publicity among the world scientific community. According to the presented author's report, Assistant Professor Tatyana Radeva Radeva-Stoilova, participated in the competition with a monograph, two guides and twenty one scientific publications.

The publications submitted were not used in the procedures for obtaining the PhD degree and the scientific position of "Assistant Professor".

The works presented to the candidate in the competition are original and I do not know the presence of plagiarism.

The results obtained in the publications presented for the competition are entirely in the field of the competition, and in two main areas of the studies can be outlined:

I. Energy efficiency.

II. Optimization of electricity networks and energy objects/plants.

I accept the author's reference for the contributions in the works with which Assistant Professor Tatyana Radeva Radeva-Stoilova participated in the competition, the results being scientific, scientifically applied and applied.

Scientific and applied contributions can be systematized by:

1. A mathematical model has been developed for the formation of an optimal schedule for the operation of the micromilence in the agreed deliveries of two types of services to and to the external network.

2. Models have been developed to optimize electricity networks and energy objects/plants.

3. A numerical example has been developed for a mathematical optimization model of mixed linear programming.

4. The thermal action caused by a short circuit in a rectangular cross section has been examined.

5. An integrated energy efficiency assessment system has been developed consisting of a building, microclimate provision systems, occupants and habitats and climatic environmental impacts.

6. There is a practical task for building a photovoltaic energy system for a public school building.

7. Specific energy saving measures are proposed to increase the energy efficiency of street lighting systems, reduce the cost of electricity of

Chelopech Municipality (direct and indirect) and increase the security and operational characteristics of the street lighting systems on its territory.

The citation report presented by Assistant Professor Tatyana Radeva Radeva-Stoilova shows a number of 14 citations. I agree that this number is at the time of submission of the competition documents and no new citations have been included.

Assistant Professor Tatyana Radeva Radeva-Stoilova has been a member of a team of national and international scientific projects.

Assistant Professor Tatyana Radeva Radeva-Stoilova has submitted a certificate of impressive classroom employment as a lecturer in the Technical University – Sofia.

According to the information presented by Assistant Professor Tatyana Radeva Radeva-Stoilova, for meeting the minimum requirements of the Development of Academic Staff Act in the Republic of Bulgaria and of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences, she fulfills the minimum requirements for indicators A, C, D, E and F for the Professional Area 5.2. Electrotechnics, Electronics and Automation.

IV. Notes and recommendations.

According to the prerequisites for reviewing the materials in the competition of Assistant Professor Tatyana Radeva Radeva-Stoilova, the following notes and recommendations can be made:

1. The candidate in the competition should focus her attention to more modern methods for managing technical objects - including methods of the arsenal of artificial intelligence;

2. It would be good if the formal methods offered and used are also found in terms of their computing complexity.

V. Personal impressions of the candidate.

I do not know the candidate for this competition Assistant Professor Tatyana Radeva Radeva-Stoilova, but I am very impressed by her research activities. I believe that she is a scientist with enviable knowledge and skills.

VI. Conclusion.

In conclusion, I agree that the requirements of the Law for the Development of Academic Staff Act in the Republic of Bulgaria and the specific requirements in the Act's Institutional Regulations for its implementation, the Rules for the conditions and the order for acquiring academic degrees and for the occupation of academic positions in the Bulgarian Academy of Sciences, and the Rules for the specific conditions for acquisition of academic degrees and occupation of academic positions in the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences are accomplished. After getting acquainted with the materials submitted by the applicant for the competition, I give my positive estimation about the choice of Assistant Professor Tatyana Radeva Radeva-Stoilova in the competition for the academic position of "Associate Professor" for the needs of the Intelligent Systems Department of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences, in the Scientific Field 5. Technical sciences, the Professional Area 5.2. Electrotechnics, Electronics and Automation.

I propose that the Scientific Jury unanimously vote for a proposal to the Scientific Council of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences, to elect Assistant Professor Tatyana Radeva Radeva-Stoilova for the academic position of Associate Professor in the Scientific Field 5. Technical sciences, the Professional Area 5.2. Electrotechnics, Electronics and Automation.

17.02.2023

Sofia

Signature

НА ОСНОВАНИЕ

ЗЗЛА

...cau. vassil Sgurev/