

OPINION

by

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of the materials submitted for participation in the competition

for the academic position of **‘professor’**

of Plovdiv University "Paisii Hilendarski"

in the field of higher education **3. Social, economic and legal sciences,**
professional field **3.8. Economics (Economics and Management – Information Systems and
Technologies)**

In the competition for “professor”, announced in the State Gazette, issue no. 40, dated 14.05.2021 and on the website of Plovdiv University "Paisii Hilendarski" for the needs of the Department of Management and Quantitative Methods in Economics at the Faculty of Economics and Social Sciences, as a candidate participates Assoc. Prof. Dr. Galina Mircheva Ilieva from Plovdiv University "Paisii Hilendarski".

1. General presentation of the procedure and the candidate

By order № P33-3126 of 12.07.2021 of the Rector of Plovdiv University "Paisii Hilendarski" (PU) I was appointed a member of the scientific jury of a competition for the academic position of **“professor”** in PU in the field of higher education 3. Social, economic and legal sciences, professional field 3.8 Economics (Economics and Management – Information Systems and Technologies), announced for the needs of the Department of Management and Quantitative Methods in Economics at the Faculty of Economics and Social Sciences.

The **only candidate** for participation in the announced competition has submitted documents: Assoc. Prof. Dr. Galina Mircheva Ilieva from Plovdiv University "Paisii Hilendarski".

The set of materials presented by Assoc. Prof. Dr. Galina Mircheva Ilieva is in accordance with the Regulations for development of the academic staff of PU, and includes the following documents:

- CV in European format;
- higher education diploma with acquired master's degree;

- diploma for educational and scientific degree "doctor";
- diploma (certificate) for the academic position of "associate professor";
- document (certificate) for work experience;
- reference for compliance with the minimum national requirements;
- reference for compliance with the additional faculty requirements;
- list of scientific works;
- a complete list of citations for participation in the "professor" competition;
- documents for academic work – Information for academic classes after acquiring the academic position of "Associate Professor";
- research documents;
- annotations of the materials under Art. 76. from PRASPU including self-assessment of contributions;
- copies of the scientific papers for participation in the competition for "professor";
- declaration of originality and authenticity of the attached documents.

The candidate Assoc. Prof. Dr. Galina Mircheva Ilieva has applied a total of 24 scientific papers. Of these, 1 monograph, 22 scientific publications (16 articles in scientific journals and 6 papers in proceedings of international conferences) and 1 textbook. All 24 scientific papers that are on the topic of the competition and are outside the dissertation and the habilitation procedure are accepted for review. I have no notes or comments on the submitted documents.

The candidate is a graduate of the Technical University - Sofia (VMEI "Lenin"), ACS "Master", radio electronics engineer. Since 1991 she has been working at the Paisii Hilendarski University of Plovdiv, having successively moved from assistant to senior assistant, chief assistant in "Mathematical and software support of computers and systems" and associate professor. I believe that the candidate has teaching, scientific and professional experience in connection with the topics of the announced competition.

I have no personal impressions of the candidate, but from the submitted documentation for the competition I have a very high opinion of the teaching and research activities of Assoc. Prof. Dr. Galina Mircheva Ilieva.

2. General characteristics of the candidate's activity

2.1. Evaluation of educational and pedagogical activity and preparation of the candidate

From the presented reference for the classes of the candidate she has taught various disciplines, such as:

- Information systems and technologies;
- E-Government;
- Internet marketing;
- E-commerce;
- Management information systems;
- Information technologies in the economy;
- Business analysis with R;
- Internet technologies in tourism.

In 2016, a textbook entitled "Management Information Systems" was developed. The candidate has participated in the practical training of 17 students from different specialties of FISN, as an academic mentor within the national project BG05M2OP001-2.002-001 "Student practices" under OP "Human Resources Development", co-financed by the European Social Fund of the European Union, 2013-2014. On the other hand, the candidate actively works with graduates. The submitted documents provide information on 8 successfully defended graduates, of which 6 in FMI in bachelor's degree and 2 in FF in master's degree. Assoc. Prof. Ilieva was a research supervisor of a successfully defended doctoral student in the professional field 3.8. Economics (Economics and Management).

2.2. Evaluation of the scientific and scientific-applied activity of the candidate

A total of 24 publications have been submitted for participation in the competition. Of these, 1 monograph, 22 scientific publications (16 articles in scientific journals and 6 papers in proceedings of international conferences) and 1 textbook. A very good impression is that 9 of the publications are indexed in the world-famous databases of scientific information Scopus or Web of Science. 15 publications are in English and 7 have been published abroad. The publications for participation in the competition are beyond those submitted for the acquisition of ONS "Doctor" and for holding the academic positions of "Chief Assistant" and "Associate Professor". The publications presented in the competition are on its topic. From the reference for fulfillment of the National minimum requirements for acquiring the academic position "Professor" under 3.8. Economics shows that the candidate exceeds the minimum points on all indicators. For example, for a group of indicators "D" at a required 200 points is presented scientific output corresponding to 239.75 points. The same applies to the group of indicators "E", where evidence is presented for 140 points with the required 100 points.

2.3. Scientific, scientific-applied and applied contributions of the candidate

After performing an analysis of the submitted monograph and the other publications in the competition, the following main scientific, scientific-applied and applied contributions of the candidate can be determined:

- Reference models for the application of big data in e-commerce [8] have been proposed for a business intelligent system, with technologies for integration, processing and analysis of company data integrated in the three layers of the model [12];
- A conceptual and reference framework has been proposed for smart data analysis [23] and for the application of the Internet of Things (IoT) for distance teaching and assessment in an electronic environment in a pandemic [22];
- Several new methods have been developed and proposed: to solve the transport problem [17]; to determine the relative weights of the compared alternatives with fuzzy triangular numbers and relatively low computational complexity [20]; for predicting time series with fuzzy numbers on the basis of fuzzy regularities revealed in a given time interval [14]; for multicriteria analysis, including a method for calculating the relative weights of the criteria in conditions of increased uncertainty [10];
- Models for comparison and regulation of objects of economic and social management have been developed and proposed: cloud platforms for work with big data [18]; cloud service providers [21]; bidding strategies in e-commerce [2]; construction companies involved in public procurement [9]; participants in e-learning courses [19];
- Analyzes have been performed and proposed for: grouping countries into statistical clusters with similar indicators for competitiveness, innovation and digitalization [15]; current changes in the segment of business intelligent systems [13];
- Results related to the practical application of geographic information systems in solving various practical problems [4], [6] and [16] are presented;
- Some problems have been revealed in the successful preparation of students for their realization as entrepreneurs of the future [11].

2.4. Citation

From the submitted documents in the competition 117 citations of the candidate's scientific works are available. A significant part of them is in the works of prestigious and national and foreign researchers, as they are comprehensive in essence. This gives grounds to believe that the scientific activity of Assoc. Prof. Dr. Galina Mircheva Ilieva has found a serious response at home and abroad. The attached documents correctly separate the citations of Assoc. Prof. Dr. Galina Ilieva in the competition for "Associate Professor", registered in NACID.

2.5. Implementation activity

The relevant documents for the participation of Assoc. Prof. Dr. Galina Mircheva Ilieva in 2 international, 5 national and 5 university projects are presented. She is the head of 1 university project NI11 FISN 003/30.05.2011 "Intelligent methods for processing business information", 2011-2012.

From the analysis of the publications presented in the competition, I believe that they are a personal contribution of the candidate. The formulated contributions and obtained results are her personal merit. During the analysis of the submitted publications I did not find any plagiarism.

3. Critical remarks and recommendations

My main recommendation for the future work of the candidate is to expand (as far as administratively possible) the work with doctoral students, to lay the foundations for the establishment of a scientific discipline in the specific research field.

CONCLUSION

In conclusion, I believe that the documents and materials submitted by **Assoc. Prof. Dr. Galina Mircheva Ilieva meet all** the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria (ZRASRB).

The candidate in the competition has submitted **enough** scientific papers published after the materials used in the defense of ONS "Doctor" and outside the procedure for acquiring the scientific title "Associate Professor". In the scientific works of the candidate there are **original scientific and applied contributions**, which have received international recognition, as a representative part of them are in scientific journals published by international academic publishers. The theoretical developments of Assoc. Prof. Dr. Galina Ilieva have practical applicability, as some of them are directly oriented to the educational work. The scientific and teaching qualification of Assoc. Prof. Dr. Galina Mircheva Ilieva is **unquestionable**.

The results achieved by Assoc. Prof. Dr. Galina Mircheva Ilieva in teaching and research **fully** comply with the specific requirements of the Faculty of Economics and Social Sciences, adopted in connection with the Regulations of the University of Plovdiv for the implementation of ZRASRB.

After getting acquainted with the materials and scientific works presented in the competition, analysis of their significance and contained in them scientific, scientific-applied and applied contributions, I find it reasonable to give my **positive assessment** and recommend to the Scientific Jury to prepare a report-proposal to the Faculty Council of the Faculty of Economics and Social Sciences for

election of **Assoc. Prof. Dr. Galina Mircheva Ilieva** to the academic position "Professor" at the University of Plovdiv "P. Hilendarski" in professional field 3.8. Economics (Economics and Management – Information Systems and Technologies).

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Author of the opinion:

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