OPINION

on the materials for participation in the competition for the occupation of the academic position "Professor", field of higher education 3. Social, economic and legal sciences, Professional field 3.7. Administration and Management, scientific specialty "Application of Computer Engineering in Economics", in the discipline "Information Technologies", announced by the University of Forestry in SG. № 101 / 27.12.2019, Procedure Code ABM-P-1119-27.

Candidates for the competition are:

1. Assoc. Prof. Marina Petrova Mladenova, PhD .

Opinion author: Ivan Petrov Paligorov, PhD, Professor of Professional field 3.7. Administration and management by the University of Forestry - Sofia

1. Bionotes of the candidate.

Marina Petrova Mladenova graduated from the Technical University of Sofia in 1991 with a Master's Degree in Electronic and Microelectronics, Electrical and Automation Engineer.

In 2009 defended his dissertation on the topic "Research and results from the use of information technologies in the management of the furniture industry" and is a PhD of science specialty 05.02.21 "Organization and management of production".

From 1990 to 1993 eng. Marina Petrova Mladenova worked as a constructor in the base for development and implementation of Electron SC. Since 1996 he has been a full-time lecturer in the Department of Computer Systems and Informatics at the Faculty of Business Management at the University of Forestry (UF). She consistently held the positions of assistant, senior assistant and chief assistant, and since 2011 has been an "associate professor". She has additional qualifications as a system administrator for the Blackboard Learn e-learning platform and a Blackboard Learn e-learning platform trainer.

Assoc. Prof. Mladenova uses English and Russian. She has excellent computer skills, is actively involved in the educational and scientific activities of the Department of Computer Systems and Informatics.

It could be summarized that Assoc. Prof. Mladenova fulfills the requirements for participation in the competition for the academic position of "Professor" – she is PhD and holds the academic position of "Associate Professor" at LTU for more than 2 academic years.

2. General description of the materials presented.

Assoc. Prof. Mladenova participates in the competition with a large number of scientific publications in the field of the application of computer technology and information technologies in the economy. They are distributed as follows:

- ✓ Monographs - 2 pieces;
- ✓ Textbooks - 3 pieces, 2 of which are self-developed;
- ✓ Textbooks printed - 5, 3 of which are self-developed;
- ✓ Publications - 22 issues.

A list of 9 research projects was presented, in which Assoc. Prof. Mladenova took part. She was the head of 2 of them.

The submitted works are published after 2011 and do not repeat the submitted works for participation in other competitions.

3. Reflection of candidate's scientific publications in literature (known citations)

The presented scientific production, documents and references give reason to summarize that the publications of Assoc. Prof. Mladenova are known to the scientific community. They have been cited 34 times, 4 times in scientific publications, referenced and indexed in world-famous databases, which testifies to the recognition received and their use by the scientific community.

4. General characteristics of the applicant's activities

4.1. Educational activities (work with students and PhD students)

Assoc. Prof. Mladenova is a University Lecturer with a career in the Department of Computer Systems and Informatics at the Faculty of Business Administration at the University of Forestry since 1996. Conducts lectures in the following competitions: "Information Technology", "Informatics", "Computer Design - CAD/CAM Systems ". Under her leadership successfully defended a PhD student as well as graduate students.

The accumulated experience allows Assoc. Prof. Mladenova to participate in the preparation and publication of 3 textbooks, 2 of which are self-contained, 5 textbooks, 3 of which are self-contained. They can be judged to be of good scientific and methodological level and meet the requirements for the educational literature. Her involvement in research projects has undoubtedly enriched her knowledge and experience as a researcher, which also helps her to be a highly trained teacher.

Prof. Mladenova's scientific production characterizes her as a lecturer using the results of her research and applied activities, combined with the successful use of state-of-the-art tools and teaching methods. This allows us to summarize that the teaching and pedagogical activity of Assoc. Prof. Mladenova fully meets the requirements for obtaining an academic position of Professor.

4.2. Scientific and applied scientific activity

The in-depth reading of the scientific production presented at the competition makes it possible to highlight a lasting interest in the study of the problems of the application of computers in the economy. He has developed the ability and skills to systematize and critically understand the theories and methodological approaches in the scientific fields studied, to clearly define the problems and formulate directions for solving them.

Her entire research activity is built on a systematic approach - consistent, logical, with the necessary correctness and connection between the set goals and tasks and the achieved results. Assoc. Prof. Mladenova has an affinity and ability to closely relate research results to their practical applicability, based on her good literary knowledge. She has mastered and successfully uses the basic modern research approaches, skillfully and pragmatically formulating and defending her theses.

In total, I appreciate the personal contribution of Assoc. Prof. Mladenov predominantly in the study and refinement of theory and methodology in the field of the application of computer and informational technology in economics.

4.3. Implementation activities.

There is no evidence in the submitted documentation for the implementation of the research results of Assoc. Prof. Mladenova. The interest in her research can be judged by the citations provided.

A number of its developments have been implemented at the University of Forestry, highlighting the developed and implemented tools and procedures for establishing at University of Forestry a monitoring system of indicators from the higher education rating system, developed and maintained by the MES, through stakeholder surveys through the system. Alumni Network of the University of Forestry. The "Working with the System" (in the Blackboard Learn platform of the Forestry University) system was developed and implemented to provide feedback to the learners, to evaluate the impact of the learner-interface in web-based learning on the achieved result. Also, research results can be found in the textbooks and textbooks being developed.

4.4. Contributions (scientific, applied, applied)

In-depth knowledge of the scientific production presented at the competition makes it possible to characterize contributions related to:

- the adaptation and application of known scientific approaches and methods; the accumulation of new scientific facts;
- the discovery of new aspects of known processes and phenomena;
- the justification of new requirements to different professions related to the development and entry of information technology.

In particular, the following major group contributions may be highlighted:

I. SCIENTIFIC

1. Infographics have synthesized and presented with responsibilities, obligations and requirements for 76 new professions/jobs that emerged as a result of the technological revolution, based on a study of the modern development of information and communication technologies and highlighting those that have the strongest impact on the transforming the labor market. [№ В3-1]

2. The necessary soft skills are described, which are becoming more and more sought after today, even predominantly over technical skills, for some of the new jobs.[В3-1]

3. An infographic has been created to summarize the historical development of the concept of digital competence and related terms, as a result of in-depth theoretical study, analysis and systematization of the development of digital competence.[№ Г5-1]

4. The tools and procedures for building a system for monitoring the indicators of the higher education rating system, developed and maintained by the Ministry of Education and Science, through stakeholder surveys through the Alumni Network system of the University of Forestry, have been developed and implemented. The strengths and weaknesses of the rating systems and the Alumni Organizations of the universities are outlined. [№ Г7-1, Г8-2, Г8-6, Г8-14, Г9-2, Е16-4]

5. A survey "Working with the system" (in the Blackboard Learn platform of the University of Forestry) was developed and implemented, for feedback from the trainees, to evaluate the impact of the learner-interface in web-based learning on the achieved result. [№ Г7-2, Г8-3, Г8-5, Г8-12, Г8-16]

6. A balanced scorecard for economizing and evaluating the effectiveness of the activities inherent in the University of Forestry - Sofia has been developed and tested. [№ Г8-9, Е16-4]

II. SCIENTIFIC APPLICATION

1. The most promising jobs in the future and what is the right education for them are highlighted. The current state of the labor market related to the new jobs that have emerged as a result of the rapid development of ICT in Bulgaria, in the EU, and globally is analyzed and analyzed. [№ B3-1]

2. The position of Bulgaria in the context of the development of digital competences, economy and market vis-à-vis other countries in the EU and worldwide is presented and analyzed. [№ Г5-1, Г8-7]

3. A methodological toolkit was developed and scientific research was carried out, through a questionnaire, for monitoring, maintaining and sustainable development of the indicators from the rating system for the higher education institutions in Bulgaria using the Alumni System of the University of Forestry. Measures and initiatives are proposed to ensure sustainability and improve the results of University of Fores.[№ Г7-1, Г8-2, Г8-6, Г8-14, Г9-2, E16-4]

4. The characteristics, current status, prospects, opportunities, risks, advantages and disadvantages of using cloud computing have been analyzed and systematized from the perspective of the management paradigm for the trinity of economic, social and environmental aspects. [№ Г9-1]

5. The results and impact of the use of the Blackboard Learn online platform on the quality of the educational process at the University of Forestry were evaluated. [№ Г8-13, Г8-15, Г8-17]

6. A virtual laboratory for mathematical modeling and computer simulations in scientific research and training in biological resources, product modeling, interior space and exterior environments has been established and developed. [№ Г8-1, Г8-4, Г8-8, Г8-10, Г8-11, E16-2, E18-1, E18-2]

III. APPLICATIONS AND TEACHING CONTRIBUTIONS

1. The interactive textbooks, tutorials and e-courses were developed and implemented training courses are available online, via the Blackboard Learn platform at University of Forestry, with using the capabilities of modern information and communication technologies.[№ E20-1, E20-2, E20-3, E21-1, E21-2, E21-3, E21-4, E21-5, E16-1, E16-3, E16-5, E16- 6, E16-7, E18-2]

2. An online survey "Quality of Learning Resources" (on the Blackboard Learn platform of the University of Forestry) has been developed to provide feedback to the trainees. This ensures the provision of quality teaching resources that meet current educational trends and current demand in the specific subject area. [№ E20-1, E20-2, E20-3, E21-1, E21-4, E21-5]

3. A methodology for complex assessment of the trainees in each course was developed, with introduction of weight coefficients for each of the tasks. [№ E20-1, E20-2, E20-3, E21-1, E21-4, E21-5]

4. A unified structure for online courses developed and implemented in the training in the Blackboard Learn platform at University of Forestry. [№ E20-1, E20-2, E20-3, E21-1, E21-4, E21-5]

5. The applicant's personal contribution assessment

The applicant of the competition has a clearly defined style and can confidently point out his contribution to the collective development. I know a great deal of the scientific production presented and I can confidently confirm that these contributions are a personal matter of the applicant of the competition - Assoc. Prof. Mladenova.

6. Critical remarks

The in-depth reading of the presented scientific papers by Assoc. Prof. Mladenova makes it possible to assess that there are no significant omissions, inaccuracies or contradictions. I allow myself to share some critical remarks that might be rather taken as recommendations for her future work. The more important of which are:

1. Some of the achievements related to the adaptation of approaches and methods known in science and practice for their application in the specific business conditions in Bulgaria, but they would also be of interest to international companies, especially with regard to the new requirements for professions and workers places in the conditions of digitalization.
2. In some places, in some publications, in my opinion, the text and reasoning are quite frugal, especially for the more uneducated readers, which is probably sufficient and clear for the author, but a better balance could be sought.

These critical remarks do not reduce the quality of the scientific output presented and do not reduce the overall high positive rating.

7. Personal impressions

I know the candidate very well and have had a direct personal impression of her work since her admission to the Department of Computer Systems and Informatics at the Faculty of Business Administration at the University of Forestry in 1996.

I can characterize her as ambitious, very diligent and continuous building on his training as a researcher and teacher.

I had the opportunity to receive information on the results of the teaching as Vice-Dean and Dean of the Faculty. I had the opportunity to receive information on the results of the research as an Editor-in-Chief of the scientific journal "Management and sustainable development.

Her application in the competition is a consistent step in her growth, for which she is prepared and proves it with the presented scientific production.

8. Conclusion:

Evaluating in total the scientific production presented by Assoc. Prof. Dr. Mladenova and other documentation, I can confidently claim that it fulfills all the requirements to occupy the academic position of Professor at University of Forestry. (In accordance with the requirements of Academic staff development law (2019), Rules for it implementation, as well as the Rules for Academic staff development in the University of Forestry (2019)).

Marina Mládenova is a PhD. She has held the academic position of "Associated professor" for more than 2 academic years, and she is a certified teacher with teaching and pedagogical activity. Her scientific output contains scientific, applied and educational-methodological contributions, which are her personal matter and have significance for science and practice. It fully meets the requirements and criteria for obtaining the academic position of Professor, in accordance with the Regulations for the Development of Academic Staff at the University of Forestry.

I propose Assoc. Prof. Dr. Marina Petrova Mladenova to be elected as a "Professor" in the professional field 3.7. Administration and Management, scientific specialty "Application of Computer Engineering in Economics", in the discipline "Information Technologies", announced by the University of Forestry, SG. № 101 / 27.12.2019, and on the website of University of Forestry - 29.11.2019, with procedure code: ABM-P-1119-27.

Signature of the Scientific Jury Member:

Opinion submitted on 13/04/2020