



О P I N I O N

For the competition for the academic position "Associate Professor" in scientific field 5: Technical Sciences, professional field 5.1: Mechanical Engineering, specialty "Applied Mechanics (Coating Mechanics)", published in the State Gazette № 5/17.01.2020.

Candidate: Major Assistant Professor Polina Ilieva Milusheva - Mandadzhieva, PhD

Scientific Jury member: Professor Lubomir Dimitrov, PhD

1. General characteristic of the applicant's research activities

One candidate participates in the competition – Major Assistant Professor Polina Ilieva Milusheva - Mandadzhieva, PhD, from the Department of Electronics, Electrical Engineering and Mechanical Engineering, Faculty of Technical Sciences, Prof. Dr. Asen Zlatarov University of Burgas. The teaching and research activities and contributions of the candidate are entirely in the field of the competition. The candidate fully meets the national minimal requirements as well as those of Prof. Dr. Asen Zlatarov University of Burgas for the academic position of "Associate Professor", in particular

Indicator A (50/50 points) – a doctoral degree from the Faculty of Engineering and Pedagogy in Sliven, Technical University of Sofia of 03.10.2016.

Indicator B (480/100 points) – the candidate has presented ten publications equivalent to a monograph: these publications are indexed in world databases of scientific information. They form a whole entity that could be entitled "Application of metal, graphene and wear-resistant coatings on polymeric materials and study of their mechanical properties". Seven of them are in the Scopus database. She is the only author of seven publications and three were written in collaboration with other authors.

Indicator Г (353,34/300 points) – eng. Milusheva - Mandadzhieva has submitted a list of 30 publications, 10 of which were not written jointly with other authors: she is the only author. These 30 publications differ from the field and achievements of her doctoral dissertation. For joint publications, the candidate has submitted documents signed by her collaborators who declare the contribution of each author to the results in the publications.

Indicator Д (104/100 points) – the list of the citations of the candidate's publications submitted for this competition is accurate and detailed.

Indicator E (120/100 points) – the candidate has presented a document concerning her teaching load: 585 academic hours at Prof. Dr. Asen Zlatarov University of Burgas. Moreover, she has published an electronic textbook on Technical Mechanics and a book with subsidiary teaching materials, and in addition, she is a coauthor in 2 patent applications. The applicant has attached a document for participation in 5 research projects.

2. Assessment of the teaching work of the applicant

The candidate worked as an assistant professor in the same department from 2011 to 2015 and in 2015 she became a senior assistant professor. She has taught lectures and seminars in more than seven disciplines for the Bachelor's degree and five disciplines for the Master's degree programme at the Department of Electronics, Electrical Engineering and Mechanical Engineering. She supervised the work and theses of three students in the Master's degree programme who successfully defended their theses.

3. Key scientific contributions

The candidate's contributions are both strictly scientific and applied. They are in the field of materials science and mechanics and can be distributed in the following areas

1. Application of metal, graphene and wear-resistant coatings on polymeric materials. A total of 12 scientific papers were published in this area, of which 5 are editions indexed in world-famous databases with scientific information [B4. (3,4,6,8,10)] and 7 in referenced journals in Bulgaria [Γ^*8 . (2,4,13,14,15,18,28)];
2. Investigation of the mechanical characteristics of applied coatings and the surface properties of thin layers. A total of 19 scientific papers were published in this area, of which 6 in editions referenced and indexed in world-famous databases with scientific information [B4. (1,3,4,5,7,9)] and 13 in referenced journals in Bulgaria [Γ^*8 . (1,3,4,5,6,7,8,9, 10,13,21,25,29)];
3. Simulation research and optimization of mechanical structures with coatings. In this direction a total of 4 scientific papers were published, of which 1 in editions referenced and indexed in world-famous databases with scientific information [B4. (2)] and 3 in referenced journals in Bulgaria [Γ^*8 . (26,27, 30)].
4. Other areas. They are reflected in publications Γ^*8 (11,12,16,17,19, 20,22,23,24).

In my judgement, the scientific contributions are results of the personal work of the candidate.

4. Significance of the contributions to science and practice

Прави добро впечатление, че повечето от публикациите и приносите на кандидата са изключително пряко насочени към решаването на практически проблеми в областта на материалознанието и механиката.

I highly appreciate that fact that most of the publications and contributions of the candidate are extremely directly aimed at solving practical problems in the field of materials science and mechanics.

5. Critical remarks and recommendations

I have no critical remarks. I would recommend to the candidate to publish more papers in established international academic editions that are included in the world-famous databases SCOPUS and Web of Science. In addition, it would be good for her future career as an university teacher to participate more actively in research projects both in Bulgaria and abroad.

CONCLUSION

In conclusion, I consider that the candidate meets the requirements for the academic position of "Associate Professor" according to the Bulgarian Law for University Faculty, according to the Regulations for its application and according to the "Staff regulations for academic positions at Prof. Dr. Asen Zlatarov University of Burgas.

After careful inspections of the materials submitted by the candidate, I have sound grounds to propose to the Prof. Dr. Asen Zlatarov University of Burgas to appoint Major Assistant Professor, Dr., Eng. Polina Ilieva Milusheva - Mandadzhieva to the academic position of "Associate Professor" in the professional field 5.1. Mechanical Engineering, scientific specialty "Applied Mechanics (Coating Mechanics)" at the Department of Electronics, Electrical Engineering and Mechanical Engineering, Faculty of Technical Sciences of the same university. As a member of the scientific jury, I will not hesitate to vote in favor of this position of mine.

Date: 20.07.2020 г.

Jury member:

/Prof. L. Dimitrov/