

OPINION

by Prof. Dr. Emilia Mitkova Mihaylova
Professor of Physics at the Agricultural University - Plovdiv
field of higher education: 4. Natural sciences, mathematics and informatics,
professional direction: 4.1 Physics

about the documents submitted for the competition for the occupation of the academic position 'Professor' in the field of higher education 1. Pedagogical sciences; professional direction: 1.3 Pedagogy of the training in ... (Methodology of training in physics), announced in State Newspaper 31 of 12.04. 2019

1. General presentation

Subject

By order P33-2886 of 11.06.2019 of the Rector of the Paisii Hilendarski University of Plovdiv I was appointed as a member of the scientific jury for a competition for the occupation of the academic position 'Professor' at Plovdiv University in the field of higher education 1. Pedagogical sciences; Professional direction: 1.3 Pedagogy of the training in ... (Methodology of training in physics), announced in State Newspaper 31 of 12.04. 2019 for the needs of the Faculty of Physics and Technology at Plovdiv University "Paisii Hilendarski".

The following documents have been submitted for participation in the announced competition:

Assoc. Prof. Dr. Zhelyazka Dimitrova Raykova from the Department of Educational Technology at the Faculty of Physics and Technology at Plovdiv University.

The set of materials presented in electronic form, presented by Assoc. Prof. Zhelyazka Dimitrova Raykova, includes the following documents:

- application to the Rector for admission to the competition;
- European CV;
- work certificate;
- Declaration of originality and authenticity of the attached documents;
- reference for compliance with national minimum requirements;
- self-assessment of scientific contributions and pedagogical activity;
- annotations of the materials under Art. 76 (1)
- publications - 41;

- information on the educational work ;;
- information on the research work;
- information on additional activities and achievements;

The candidate Assoc. Prof. Dr. Zhelyazka Dimitrova Raykova has submitted a total of 55 scientific publications certifying the accomplished educational and scientific activity, as well as participation in 11 research projects. All submitted materials are accepted for review. The distribution of scientific papers by relevant headings, at home and abroad, is as follows:

- o Publications in Scientific Papers of University of Plovdiv: 1, 6, 8, 13, 16, 17, 19, 21, 22, 26.
- o Publications in Proceedings of National Conferences on Physics Training: 2, 3, 4, 5, 20, 23, 24, 25, 27, 30, 31, 35, 36, 38, 39, 45, 46.
- o Publications in Proceedings from International Conferences and Symposia: 7, 9, 10, 11, 12, 14, 34, 43, 44.
- o Publications in journals - 18, 28, 29, 32, 33, 37, 40, 41, 42.
- o Books: 47, 49, 52.
- o Tutorials and guides - 48, 50, 51, 53, 54.
- o Independent Monograph - 55 - Current Trends in Physics Education, Paisii Hilendarski University Publishing House, ISBN 978-619-202-441-3, 2019.

2. Short biography of the applicant

2001 - Scientific Committee on Pedagogy of Training at the Higher Education Commission, Sofia, Sofia University "Kliment Ohridski" - Educational and scientific degree DOCTOR in scientific specialty 1.3. "Pedagogy of Training in ...";

1985 - graduated from the Paisii Hilendarski University of Plovdiv, Physics - Teacher in Physics and Mathematics "- MASTER;

1985 - 1989 - Lecturer in Physics at secondary school;

Since 1989 - Professor at the University of Plovdiv, currently Associate Professor;

- Head of the Department of Educational Technology - from 2017
- Vice Dean of the Faculty of Physics and Technology at Plovdiv University - from 06.06.2019
- Dean of the Faculty of Physics at Plovdiv University - from 01.03.2014 to 25.09.2017
- Vice Dean of the Faculty of Physics (2008-2014)

- Member of the Board of Directors of the Union of Physicists in Bulgaria - 9 years
- President of the Union of Physicists in Bulgaria, Plovdiv Branch - 3 years
- Head of the Department of Teaching Methodology - 2008-2017
- Member of ESERA and GIREP
- Member of the Union of Scientists in Bulgaria, Plovdiv Branch

University professional experience related to the announced competition:

1. Twenty five lectures were developed for courses for students of pedagogical specialties of the University of Plovdiv;

2. Curricula of the following 7 specialties have been developed:

- Engineering teacher (Master's program)
- Physics teacher (non-specialist) (Master's program)
- Physics Teacher (Specialists) (Master's Program)
- Physics and English (Bachelor's program)
- Physics and Astronomy (Bachelor's program)
- Pedagogy of Physics Education (Master's Program)
- Teacher in the subject "Man and nature" (grades 5 and 6) (bachelor's program)

3. Assessment of the applicant's scientific and applied activity

- Participation in research projects - 11
- Leader of 5 research projects, 3 of them international;

The submitted materials for participation in the competition for the occupation of the academic position of "Professor" include 55 scientific publications. I have not noticed any forms of plagiarism in them and my opinion is that the materials presented are original.

The applicant meets the minimum national requirements for occupying the academic position of "Professor" in the field of higher education 1. Pedagogical Sciences; Professional area 1.3. Pedagogy of the training in ... (Methodology of training in physics), announced in State Newspaper 31, dated April 12, 2019.

4. Assessment of the applicant's personal contribution

The applicant fulfills all the recommended requirements of the Plovdiv University for occupation of the academic position of "Professor" in the professional direction - field of higher education 1. Pedagogical sciences; Professional area 1.3. Pedagogy of training in

The applicant is the first author of 13 (1,8,15,16,27,28,31,42,45,48,51,53,55) of the 55 scientific publications, which shows a very significant personal contribution.

5. Main contributions

In my opinion, the most significant scientific and applied scientific contributions are:

- Recommendations were made on strategies for improving non-scientific literacy in the Bulgarian school;
- The theory of the methodology of teaching in physics has been enriched, with a new emphasis on the possibilities of the research approach for building motivation for the study of natural sciences:
- Opportunities for the use of information and communication technologies are proposed to be used to adapt the educational process to the modern technological requirements;
- Participation in the development of projects of the latest (2012) Physics and Astronomy curricula for grades 9 and 10;
- Scientific adviser of 4 PhD students, one of whom has defended and two have been deferred;
- 4 master's and 3 bachelor's degree programs have been developed;
- 22 lecture courses have been developed.

CONCLUSION

The documents and materials presented by Assoc. Prof. Dr. Zhelyazka Dimitrova Raykova meet all the requirements of the Academic Staff Development Act in the Republic of Bulgaria, the Rules for the Implementation of the Act and the corresponding Rules of the Plovdiv University.

After getting acquainted with the materials and scientific works presented in the competition, analysis of their importance and their scientific and applied contributions, I find it justifiable to give my positive assessment and to recommend to the Scientific Jury to prepare a report proposal to the Faculty of Physics and Technology, University of Plovdiv for the selection of Assoc. Prof. Dr. Zhelyazka Dimitrova Raykova in the academic position of "Professor" at the Plovdiv University "Paisii Hilendarski" in the field of higher education 1. Pedagogical Sciences; Professional direction: 1.3 Pedagogy of training in ... (Physics training methodology).

October 10, 2019

Opinion by:

(Prof. Dr. Emilia M. Mihaylova)