

# OPINION

by Prof. Nikolay K. Vitanov, D. Sc

on the election of an associate professor

**In Field of higher education:** 1. Pedagogical sciences, Professional field 1.3. Pedagogy of teaching in ... (Pedagogy of teaching in information technology in primary school)

**For the needs of** the Faculty FNOI (Faculty of Science, Education and Arts) of the Sofia University "St. Kliment Ohridski "

**Under the competition**, announced in the State Gazette, issue 96 of 19.11.2021

## 1. General description of the submitted materials

A single candidate is admitted to participate in the competition: Senior assistant professor Ivan Nikolaev Dushkov, Ph. D, from Faculty of FNOI at Sofia University "St. Kliment Ohridski ". For the competition the candidate has presented: CV; diplomas for higher education and for the Ph. D. degree; certificate for academic positions held; check list about the criteria for participation in the competition; list of all publications and list of publications for participation in the competition; summary of the major scientific contributions and contributions to publishing and teaching activities; list of citations; other data - summaries and copies of the applicant's scientific publications.

## 2. Brief biographical information about the candidate

Senior assistant professor Ivan Nikolaev Dushkov, Ph. D, was born in 1980. He received B. Sc. and M. Sc. degrees in applied mathematics from the Sofia University "St. Kliment Ohridski ". In 2012, Ivan Dushkov began his doctoral studies at Sofia University "St. Kliment Ohridski ". In 2015 he defended a doctoral thesis for the Ph. D. degree (scientific specialty 1.3. Pedagogy of teaching in ... (Methodology of teaching in primary school)). The title of the thesis was "Integration of information and communication technologies in mathematics education c primary school (in geometric content). The professional activity of Dr. Dushkov started at the position of a teacher of mathematics and informatics at the 8th Secondary School "Vasil Levski" in the city of Sofia. Since 2006 Ivan Dushkov has been on a permanent employment contract as a full-time lecturer at Department of Primary School Pedagogy at the Faculty of Primary and Preschool Pedagogy of the Sofia University "St. Kliment Ohridski ". From 2015 until now Ivan Nikolaev Dushkov is a Senior assistant professor at the Department of Primary School Pedagogy at the Faculty of Science Education and Arts of the Sofia University "St. Kliment Ohridski ".

## 3. General characteristics of the scientific, teaching and scientific-applied activity of the candidate

Dominant activity of the Senior assistant professor Dushkov is his scientific and applied activity (publishing and teaching). The publications of the candidate are of very good quality. Ivan Dushkov is a specialist in the application of information and communication technologies in mathematics education. Evidence for this are his two independent monographs. For the competition the candidate presents 21 publications, 6 of which are in English. There are publications refereed in the prestigious international databases Web of Knowledge and Scopus. Except scientific contributions Senior assistant professor Dushkov also presented contributions to

the research and applied aspects of his teaching activity. I would like to note the following. In the Category D of the form for fulfillment of the minimum requirements for associate professor by the candidate, the points must be 65 instead of 55. There are 2 citations from category 11 of PPZRASRB (SG No. 56/2018). These are citations to the article in Mathematical Methods in the Applied Sciences. These citations carry 30 points. There are 2 citations from category 12 that carry 20 points. There are 3 citations from category 13 that carry 15 points. Even if only one citation from the category of citations carrying 15 points is taken into account, the candidate again scores the required minimum of 50 points.

#### **4. Analysis of scientific and applied scientific achievements**

As a scientific achievement I will consider the results of research on processes related to the presence of a time delay in the model equations of the dynamics of interacting populations. These studies are part of the research program on interacting populations carried out at the Institute of Mechanics - BAS. The scientific and applied achievements of the candidate can be divided into several groups. The first group is related to the teaching of mathematics in the primary school. An innovative approach is applied related to the integration of educational multimedia, with a goal of increasing the learning outcomes of students. The problems related to the above integration are systematized. A system of criteria for improvement of used multimedia didactics training materials is proposed. In addition, a system of comparative criteria has been developed for analysis of curriculum related to the subject Computer Modeling in primary classes, and a set of educational multimedia presentations have been integrated into teaching mathematics in primary school related to entertaining tasks. The next group of achievements of the candidate are practical tools to help of the learning process. These tools include e-learning courses for students from pedagogical specialties in the Moodle system; university courses: "Web design for pedagogical goals "," Web design for teachers "," Mathematical and statistical methods in physical education and sports "," Information and communication technologies in learning and working in a digital environment "," Audiovisual and information technology ", "Current pedagogical practice", "Undergraduate practice" and "Computer modeling". Ivan Dushkov also has practical experience in carrying out scientific activities by participating in national and international conferences on topics related to mathematics models with time delay, as well as practical experience in implementing pedagogical activity accumulated during participation in trainings related to improving the quality of teachers. There are citations from both his scientific publications and his publications with pedagogical orientation.

I would like to note the significant project activity of the candidate who participated in 14 the project with scientific and pedagogical orientation. The candidate was the scientific supervisor of 8 graduate and is a co-author of 3 textbooks.

#### **5. Reflection of the candidate's results in the works of other authors.**

The publications of Senior assistant professor Ivan Dushkov are cited to a good extent, and there are also citations by foreign authors. Citation of the candidate is sufficient to occupy the academic position of associate professor in scientific specialty 1.3 and I have no doubt that these citations will continue to grow at a good pace in the coming years.

#### **6. Critical remarks and recommendations**

It is known that I do not like to write critical notes on competitions other than competitions for professor. This is a competition for an associate professor. I see that the candidate is systematically building a good career in the chosen field of science. My recommendation is to continue in the same spirit. Patient and purposeful work with a clear goal to be achieved, always leads to success. I have no doubt that the candidate would become a successful specialist from senior class in the scientific field 1.3.

#### **7. Personal impressions of the candidate**

I know Senior assistant professor Ivan Dushkov since his student years, as I was the advised of his M. Sc. thesis. My impression of him is that he does his job diligently, with quality and on time. I never doubted that Ivan Dushkov will become a high qualified specialist, whatever he does in life.

### **CONCLUSION**

Based on the above, for me there is no doubt that Senior assistant professor Ivan Nikolaev Dushkov is suitable candidate for the academic position of associate professor in this competition. That's why, I give a positive assessment of his candidacy and without any doubt I recommend it the announced academic position for associate professor in this competition to be occupied by Ch. Assistant Professor Dr. Ivan Nikolaev Dushkov.

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/ Prof. Nikolay K. Vitanov, D. Sc. /