

## OPINION

by Prof. Evdokia Nikolaeva Sotirova, PhD  
University “Prof. D-r Asen Zlatarov” - Burgas  
on the documents submitted by  
Assoc. Prof. Milen Yordanov Petrov, PhD  
for participation in the competition  
for acquiring the academic position “Professor”  
of Sofia University “St. Kl. Ohridski”  
Faculty of Mathematics and Informatics  
in the field of higher education: 4. Natural Sciences, Mathematics and Informatics;  
professional field 4.6. Informatics and Computer Science;  
(Software technologies - network programming, cloud technologies and web  
technologies), announced in State Gazette No. 48 of June 28, 2022

The reason for writing the present opinion is Order No RD-38-519/25.08.2022 of the Rector of Sofia University “St. Kl. Ohridski” (SU) for selecting the members of the Scientific jury. The present opinion is prepared according to the Law on the Development of the Academic Staff in the Republic of Bulgaria, the regulations for its implementation and the Rules on the Terms and Conditions for Acquisition of Academic Degrees and Occupation of Academic Positions at SU “St. Kl. Ohridski” (RTCAADOAPSU).

One applicant has submitted documents for participation in the announced competition: Milen Yordanov Petrov, PhD, associate professor at department „Software technologies“ FMI.

### **1. General information about the candidate**

Assoc. prof. Milen Yordanov Petrov, PhD was born on 30.01.1974. In 1999 as a Master of Engineering in “Computer Systems”, specialization “Software Systems” at Technical University - Sofia. After successfully defending a thesis in 2010 on “Interoperability between assessment systems in modern e-learning” he is awarded the educational and scientific degree Doctor of Philosophy (PhD) in the scientific specialty 01.01.12 “Informatics” from the Higher Attestation Commission.

From the submitted documents it is clear that the candidate started his work experience as a software engineer at the Scientific and Research Sector of SU "St. Kliment Ohridski" (2001-2006). In the period 2006-2009 he was an assistant, 2009-2011 - senior assistant, and in 2011-2012 - chief assistant at the Department of Software Technologies, at FMI of SU. From 2012 until now, he is an assoc. prof. of 4.6. Informatics and Computer Science (Informatics: Software Technologies - Network Programming and Web Engineering) at the same department. From 2017 until now, he has been the Deputy Dean of Academic Activities at the Master's Faculty at the FMI of the SU.

## **2. Description of the submitted materials**

The submitted materials and documents for participation in the competition are in accordance to the RTCAADOAPSU of the Sofia University "St. Kliment Ohridski". The materials are precisely described and carefully arranged.

Assoc. prof. Milen Yordanov Petrov participates in the competition with 14 scientific papers (1 of which monographic work), not used for obtaining the educational and scientific degree "Doctor of Philosophy" and holding the academic position "Associate Professor". All publications are entirely on the topic of the competition.

Also presented: lists of scientific works (all for participation in the competition); document of noticed citations; document of compliance with the minimum national requirements; a reference to the original scientific contributions; reference from the "Authors" system; summaries of the materials for participation in the competition in Bulgarian and English; documents to prove work experience, for academic work and scientific research activity; copies of scientific papers.

All documents and references required for the academic position of "professor" are presented, and they are in full compliance with the requirements of RTCAADOAPSU of the Sofia University "St. Kliment Ohridski".

## **3. General description of the scientific and applied research and assessment of the personal contribution of the applicant**

A scientific interests of the assoc. prof. Milen Yordanov Petrov's are largely focused on the application of various types of applications for technological support of the learning process. The use of more flexible methods to deliver adaptation and personalization of

learning content and assessment to learners is undoubtedly of high utility. The candidate's monographic work entitled "Cloud, network and web technologies in technology-assisted learning" is also dedicated to this topic. In it, within 131 pages, the author has presented at a very good level methods, approaches and results for developed software systems and solutions by using cloud, network and web technologies in technology-assisted learning. According to *Group of indicators B*, the candidate has 100 points.

According to application "10B/16. List" candidate participates in the competition with 13 scientific publications, of which: 1 in a journal ([10]), the remaining 12 in conference proceedings, 3 of them in IEEE conferences ([2], [6], [14]). According to *Group D indicators*, assoc. prof. Milen Yordanov Petrov has 294 points with a minimum requirement of 200 points.

The scientific works submitted for participation in the competition contain original scientific and scientific-applied results related to (1) technological support of learning through the design and implementation of software components integrating network, cloud and web technologies, (2) security of personal data of learners, analysis of their degree of protection and applications and (3) opportunities for optimization of traffic information. I believe that the obtained results are proof of the scientific potential of assoc. prof. Milen Yordanov Petrov and define him as a successful and competent researcher with opportunities for research and critical analysis.

Assoc. prof. Milen Yordanov Petrov participates in the competition with 17 citations of 5 of his publications in articles by other authors, published in publications, referenced and indexed in Web of Science or Scopus. According to *Group D indicators*, the candidate has 136 points with a minimum requirement of 100 points.

Assoc. prof. Milen Yordanov Petrov has 250 points in *Group of indicators E* with a minimum requirement of 100 points. He was the supervisor of a doctoral student of independent training in professional field 4.6. "Informatics and Computer Sciences", who successfully defended his PhD thesis in 2016. To participate in the competition, the candidate reports activity on 6 national scientific projects (in 2 as a leader, in 4 as a team member) and 7 international scientific projects (member of the team).

The total number of points achieved by assoc. prof. Milen Yordanov Petrov is 830 points, with a requirement for 550 points according to the minimum national requirements

for occupying the academic position “professor” in professional field 4.6. “Informatics and Computer Science”.

According to the reference provided by the “Authors” system, assoc. prof. Milen Yordanov Petrov currently has a total of 83 scientific publications, 14 of which are in scientific journals, 65 in conference proceedings, 1 studies, 1 chapter of a book published in Cambridge Scholars Publishing, 1 book and 1 monographic work. They have been reflected in the works of other authors. He has been participated in 57 national and international conferences in the country and abroad, he led 8 scientific projects at SU "St. Kliment Ohridski" and 2 national projects at the DFNI of the Ministry of Education and Culture, he was a member of the team of 7 national projects and national programs, as well as 8 international research projects and operational programs, he conducted various specializations abroad, was a member of a number of national and international scientific organizations.

All this proves the high level of expertise of the candidate and gives me the reason to rate assoc. prof. Milen Yordanov Petrov as a scientist with recognized scientific achievements in the field of software technologies.

#### **4. General characteristics of the applicant's teaching activities**

Assoc. prof. Milen Yordanov Petrov has a serious teaching activity at FMI, starting in 2002. It is clear from the submitted materials that his workload is much higher than required. He leads training in a variety of disciplines, to students in the Bachelor's courses ("World-Wide Web", "XML Technologies for the Semantic Web") and in the Master's courses ("Java Network Programming", "Internet Programming and Web Technologies ", "Data Modeling and Database Design", "Application Programming Interfaces for Working with Cloud Architectures with Amazon Web Services (AWS)"). From 2016 until now, he has been conducting lectures and exercises for foreign students under the Erasmus+ program (in the disciplines "Web Technologies and Architectures", "Advanced Web Programming", "Network Programming with Java", "Object-oriented programming", “Highly Secure Software”). He is the author of the textbook "Introduction to Programming (C/C++)", published by SU. Since 2014, he has been the head of the Master's program "Information Protection in Computer Systems and Networks". He supervised 114 successfully defended doctoral students from seven FMI master's programs.

He is the scientific supervisor of four PhD students, one of whom successfully defended its PhD thesis, one current PhD student and two dismissed with the right to defend in 2022.

From 2017 until now, assoc. prof. Milen Petrov is the deputy dean at FMI in charge of educational activities of the Master degree.

The diverse pedagogical activities of assoc. prof. Milen Yordanov Petrov are proof of his serious professional competences and skills. He manages to skilfully combine his serious research and scientific experience with his teaching and teaching work.

## **5. Conclusion on the application**

After getting to know in depth the scientific works presented by assoc. prof. Milen Yordanov Petrov and their significance, I became convinced that he has serious scientific and scientific-applied achievements. No plagiarism was found in the scientific publications submitted for the competition. I confirm that the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the regulations for its implementation and the Rules on the Terms and Conditions for Acquisition of Academic Degrees and Occupation of Academic Positions at SU “St. Kl. Ohridski” for the occupation of the academic position of “Professor” in the professional field “Informatics and Computer Science” are completely satisfied.

I give a **positive assessment** of the application of assoc. prof. Milen Yordanov Petrov.

## **GENERAL CONCLUSION**

Based on the above, I recommend the scientific jury to vote on a proposal to the Council of the Faculty of Mathematics and Informatics of Sofia University St. Kliment Ohridski **to select assoc. prof. Milen Yordanov Petrov, PhD for the academic position of “Professor” in the field of higher education: 4. Natural Sciences, Mathematics and Informatics, professional field 4.6 Informatics and Computer Science (Software technologies - network programming, cloud technologies and web technologies).**

16.10.2022 г.

Burgas

Signature:.....

(Prof. Evdokia Sotirova, PhD)