

# REPORT

by Prof. Evdokia Nikolaeva Sotirova, PhD

“Prof. Dr. A.Zlatarov” - Burgas

on the materials provided by

Chief assistant professor Kremena Vasileva Stefanova

for a competition procedure for awarding the academic position “Assoc. Professor”

in the higher education area 4. Natural Sciences, Mathematics and Informatics,

professional field 4.6. Informatics and Computer Science, scientific field “Informatics  
(Algorithms and models for data analysis)“,

issued by the Government Newspaper in No 57 / 26.06.2020

Grounds for writing the report are order P33-4128/25.08.2020 of the Rector of the Plovdiv University „Paisii Hilendarski“ Prof. Rumen Mladenov, PhD for determining the members of the Scientific Jury and Protocol 1 of the meeting of the Scientific Jury. This opinion has been prepared in accordance with the Law for the Development of Academic Staff in the Republic of Bulgaria (ZRASRB), the Rules for the Implementation of the ZRASRB, the Rules for for the Development of Academic Staff in the Plovdiv University „Paisii Hilendarski“ (amended and supplemented on 10.06.2019 г) and The additional faculty requirements of the Faculty of Mathematics and Informatics (FMI) in Plovdiv University.

The only candidate for the competition is chief assistant professor **Kremena Vasileva Stefanova, PhD.**

## **1.General details of the applicant**

Kremena Vasileva Stefanova was born on 08.01.1987. She graduated with a bachelors's degree in 2010 at Plovdiv University „Paisii Hilendarski“, Faculty of Mathematics and Informatics, specialization mathematics, and master's degree in 2011, specialization „Business informatics with English language“. In 2012 г. at the same university she obtained a PhD in the higher education area 4. Natural Sciences, Mathematics and Informatics, professional field 4.5. Mathematics, PhD program "Differential Equations".

In 2011 Kremena Stefanova was appointed to the position of “assistant professor” at the Plovdiv University “P. Hilendarski” and from February 2013 till now she works as „chief assistant professor“.

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

The presented materials and documents for participation in the competition, are in accordance with the Rules for the development of the academic staff at Plovdiv University „Paisii Hilendarski“.

Chief assist. Prof. Kremena Vasileva Stefanova, PhD presented 18 scientific publications, all after receiving the scientific title „Chief assistant professor”, of which:

- 14 articles;
- 3 co-authored monographs, issued by a publisher Lap Lambert Academic Publishing and one of them based on shi'e dissertation;
- 1 co-authored textbook.

Attached are following reports: annotations (abstracts) of the scientific works for participation in the competition and author's references; references for satisfaction of the additional faculty requirements of the FMI in Plovdiv University, according to 65.(3) from the Rules for the development of the academic staff at Plovdiv University, documents, certifying the educational activity performed by the candidate, reports on the candidate's citations; research documents.

The presented documents are very well described and arranged.

## **3. General characteristics of the applicant's teaching, research and applied activities.**

From the submitted documents for educational activity it is shown that Chief assist. Prof. Kremena Vasileva Stefanova, PhD has serious teaching experience. She has conducted exercises and lectures at the University of Plovdiv in various courses in the field of information technology, as well as prepared the necessary programs and materials. She is an author in the team of 1 textbook „Integration of business software applications“, and World Wide Education”, Wels, Austria, 2013. She has always worked hours above the required annual norm. She has actively participated in various FMI initiatives - competitions, conferences, for the annual student research session of FMI 7 students has been prepared, 6 students for awards for special achievements at the Ministry of Education and Science. She was a mentor to 58 students in the project "Student Internships" at the Ministry of Education and Science, and also under her leadership defended a total of 43 graduates (34 students of Bachelor's and 9 students of Master's degrees). She was trained in Horizon 2020: Work program 2017. All this gives me reason to appreciate the pedagogical experience of the candidate in the competition.

Kremena Vasileva Stefanova has participated in the teams of 7 FMI projects and 2 national programs - funded postdoctoral fellow in "Young Scientists and Postdoctoral Fellows"-2019 and a member of the team in the National Research Program ICTvNOS. She was a member of 10 program and organizing committees of scientific forums and conferences of PU, as well as presented papers at 2 scientific forums (1 in Plovdiv and 1 in Serbia).

The scientific interests of Kremena Vasileva Stefanova are focused mainly on modeling and studying the behavior of neural networks with different types of input effects, including with different pulses, modeling and simulation of real processes with anomalous dynamics. I support the presented scientific and applied contributions and the grouping of the main achievements of the candidate in the following main directions: computer modelling of discrete neural networks, computer application of iterative methods for fractional differential equations, computer realization of algorithms for approximate methods for differential and differential equations, development of business software applications. A monograph based on a dissertation is also presented. Chief assist. Prof. Kremena Vasileva Stefanova, PhD demonstrates serious scientific skills and research experience.

#### **4. Critical notes and recommendations.**

I have no critical remarks about the candidate.

I do not know personally Chief assist. Prof. Kremena Vasileva Stefanova, PhD, but I would recommend her to continue her work with the same enthusiasm and not lose her desire to seek the practical appearance of her theoretical research.

#### **5. Conclusion**

The materials and documents presented by Chief assist. Prof. Kremena Vasileva Stefanova, PhD fully satisfy the requirements of the ZRASRB and the Rules for its implementation. The number of points in the groups of scientometric indicators significantly exceeds the minimum number of points in accordance with the Rules for the Development of Academic Staff in the Plovdiv. The additional faculty requirements of the Faculty of Mathematics and Informatics in Plovdiv University are satisfied.

**This is the reason to give my positive evaluation of the materials for participation in the competition and to recommend to the honorable members of the Scientific Jury to vote for the adjudication of assistant professor Emil Hristov Doychev to the academic position “Assoc. Professor” in the field of Higher Education 4. Natural Sciences, Mathematics and Informatics, professional field 4.6. Informatics and Computer Science, scientific field “Informatics (Algorithms and models for data analysis)“, for the needs of the Plovdiv University „Paisii Hilendarski”.**

10.10.2020 г  
Burgas

Assessor:.....

(Prof. Evdokia Sotirova, PhD)