

„KONSTANTIN PRES LAVSKY“ UNIVERSITY OF SHUMEN

REVIEW

by **Prof. DSc. eng. Plamen Borisov Dyankov**,
announced by the "Konstantin Preslavsky" University of Shumen
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of a competition for the obtaining of the academic position „associate professor“ in higher education field: 5. Technical sciences, professional field 5.13. General engineering (Engineering logistics) at the Department of “Engineering logistics”, Faculty of Technical Sciences at “Konstantin Preslavsky” University of Shumen, announced in State Gazette, issue 12 from 12 February 2021,

Candidate: Dr. eng. Stefan Marinov Kazakov

Grounds: Order № RD-16-037/06.04.2021. by the Rector of “Konstantin Preslavsky”, University of Shumen

1. Biographical data

Dr. eng. Stefan Marinov Kazakov obtained a master's degree in "Communication and Information Systems" at University of Shumen "Bishop Konstantin Preslavski" in 2011. In 2017 has defended a dissertation for the acquisition of ONS "Doctor" in the professional field 5.3. Communication and computer technology with the topic of the dissertation: "Study of the efficiency of data traffic in LAN". From 2016 to 2017 he held the position of "assistant" in the Department of Engineering Logistics at the University of Sofia "Bishop Konstantin Preslavski". In 2017, he became a "senior assistant" in the same department.

2. Pedagogical preparation and activity of the candidate

2.1. Classroom and extracurricular activities - development of lecture courses, innovations in teaching methodology, provision of classes in a practical environment outside the University or scientific organization

According to the submitted reference under Art. 61 of RIADASRB (Regulations for the Implementation of the Act for the Development of the Academic Staff in the Republic of Bulgaria) for additional indicators for participation in the competition the candidate conducts lectures and seminars in 4 disciplines.

Dr. eng. Stefan Marinov Kazakov has developed curricula in the disciplines "Information Technology" and "Engineering Graphics", as well as Methodology for conducting and evaluating students in the disciplines: "Production Practice - Part I". The classes in the last discipline are held in a practical environment on the territories of production companies and logistics structures. Another aspect of providing activities for students in a real production environment is their participation in Project BG05M2OP001-2.013-0001 of the Ministry of Education and Science "Student Internships - Phase 2", in which the candidate participates as an academic mentor.

3. General characteristics of the scientific research and applied scientific activity of the candidate

3.1 Academic textbooks and teaching aids

According to the announced competition for "associate professor" the candidate has presented a textbook in the discipline "Information Technology. It is intended for training of students, both in the specialty "Engineering Logistics" and for other specialties from the Faculty of Technical Sciences at Shumen University.

3.2 Publications

I accept the monograph of Ch. assistant Stefan Marinov Kazakov with the title "Network approach in systematization of information flows in logistics" on the basis of the accepted scientometric requirements for holding the academic position of "Associate Professor". It is a methodology of research of the network approach in systematization of information flows in logistics, through computer networks built according to the IEEE 802.3 Ethernet standard in different structures. The study was performed using the CISCO Packet Tracer software product.

In his monographic work the candidate skillfully implies the theoretical formulations with proven experience in scientific and applied developments for the development of modern information technologies, which gives a relevant character to the development.

Under the announced competition for "associate professor" the candidate participates with 14 articles and reports, of which 6 are co-authored and 8 are

independent. The subject area of the publications fully covers the professional field
5.13 General Engineering (Engineering Logistics).

3.3 Citations

The presented reference contains 18 citations of the candidate's works.

3.4 Participation in projects

From the submitted documents, the candidate participates with 4 research projects for the period 2016-2018, of which 1 national and 3 university.

3.5 Scientific contributions to the competition

Dr. eng. Stefan Kazakov according to the author's reference, has defined his contributions in three directions:

1. Standarts for LAN

The parameters of the local computer networks accept values in a rather wide range. In terms of the number of computers, a local area network can consist of two to hundreds of computers. A local area network (LAN) is a high-speed software and hardware system for transmitting information that enables computers and terminals to communicate over short distances and use common information and hardware resources. The publications present an analysis of the types of LANs and the resources they represent, the way in which they are physically and logically interconnected, the standards and procedures for the transmission of information flows are described.

1.1. Publications with scientific contributions to the specified field

1. Stefan Kazakov, Tihomir Trifonov, Ivan Tsonev – **Probabilistic-temporal characteristics in a three-level centralized computer structure**, International Conference Bionics and Prosthetics, Biomechanics and Robotics, Liepaya, Latvia, 2014, Vol.10, ISBN 978-9934-10-573-9, c.129-132;

2. Stefan Kazakov, **Resources and organization of processes in logistics engineering**, International scientific refereed online journal with impact factor, ISSUE 69, MAY 2020, ISSN 2367-5721,c. 54-59

2. Analysis of LAN structures

Data transmission in the LAN is carried out by exchanging data between network nodes. The LAN communication network is implemented using communication nodes known as hubs, multiple repeaters, switches and bridges. It is known that in these networks the end nodes computers are connected to a common communication channel and at a time only one of them can transmit service and information messages. During the transmission of the information flow, unwanted events (conflicts, collisions) occur between the computers when simultaneously accessing the communication channel.

The publications present a classification of the tools for monitoring and analysis of information flows. A collision handling algorithm is presented, which is tested using a software product.

2.1 Publications with scientific contributions to the specified field

❖ Stefan Kazakov, **General mathematical concepts used in the management of operations in logistics**, University of Shumen "Bishop Konstantin Preslavski", Scientific conference with international participation MATTEX 2020, ISSN 1314-3921, c. 335 -340;

❖ Stefan Kazakov, **Approaches and principles for building information systems for logistics management**, University of Shumen "Bishop Konstantin Preslavski", Scientific conference with international participation MATTEX 2020, ISSN 1314-3921, c. 341 -345;

❖ Stefan Kazakov, **Purpose and classification of logistics information systems**, University of Shumen "Bishop Konstantin Preslavski", Scientific conference with international participation MATTEX 2020, ISSN 1314-3921, c. 346 -354;

❖ Plamen Dqnikov, Stefan Kazakov, **Synthesis of solitions in transport testing in MatLab** software environment, 54th International scientific conference on information, communication and energy systems and technologies (ICEST 2019) Ohrid, North Macedonia, June 27-29, 2019, Issue 1, ISSN 2603-3267, p. 401-403 /online/;

3. Research and analysis of errors and collisions in systematization of information flows in logistics

The role of information provision in logistics management is constantly growing. The introduction of modern information logistics systems is gaining more and more scale. Dispositive information systems are created at the level of warehouse or workshop management and serve to ensure the normal operation of logistics systems. Executive information systems are created at the level of administrative or operational management.

The wide penetration of logistics in the field of economics is largely due to the computerization of material flow management. The ability of the microprocessor technique to solve the complex issues of information processing allows the analysis and mutual exchange of large volumes of information between the various participants in the logistics process.

When building logistics information systems, it is necessary to observe certain principles, which ensures their effective functioning, taking into account the development of computer technology, the requirements of their users and the specific conditions of their operation..

The publications present the theoretical analysis, which makes it possible to show the efficiency of local logistics networks. It has been established that with the increase in the number of communicating computers and with the development of the structure of two or more levels of the local network the probability of collisions between the communicating computers and the increase of the time for transmission of the information flow increases..

3.1. Publications with scientific contributions to the specified field

❖ Stefan Kazakov, **Analysis of logistic efficiency**, JOURNAL SCIENTIFIC AND APPLIED RESEARCH, licensed by EBSCO, USA, Vol. 18, 2020г., ISSN 1314-6289, c. 41-47

❖ Stefan Kazakov, **Purpose and classification of logistics information systems**, University of Shumen "Bishop Konstantin Preslavski", Scientific

conference with international participation MATTEX 2020, ISSN 1314-3921, c. 346 -354;

❖ **Stefan Kazakov, Approaches and principles for building information systems for logistics management, University of Shumen "Bishop Konstantin Preslavski", Scientific conference with international participation MATTEX 2020, ISSN 1314-3921, c. 341 -345;**

❖ **Stefan Kazakov, General mathematical concepts used in the management of operations in logistics, University of Shumen "Bishop Konstantin Preslavski", Scientific conference with international participation MATTEX 2020, ISSN 1314-3921, c. 335 -340**

According to the submitted Reference for Implementation of the Minimum National Requirements under Art. 2b, para. 2 and 3 of ADASRB (Act for the Development of the Academic Staff in the Republic of Bulgaria) for professional field 5.13. General Engineering, when comparing the minimum requirements by groups of indicators the following results are shown: **414,34** points while the required minimum is **400p**. I accept the scientific research papers proposed for review, as they correspond sufficiently to the content and subject area of the competition and reflect to the necessary extent the creative and pedagogical activity of Dr. Eng. Stefan Kazakov.

4. Contributions (scientific, applied scientific, applied). Significance of the contributions to science and practice

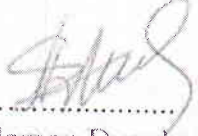
My critical remarks are not substantive. I recommend the candidate to direct his publishing activity in refereed and indexed scientific publications with impact factor, in order to promote the results of his research and to increase his participation in research projects in the fields of professional field 5.13. General engineering.

5. Conclusion

In summary, I declare that with the presented scientific production and the teaching and teaching activities the candidate for acquiring the academic position "Associate Professor" Ch. Assistant Professor Dr. Eng. Stefan Marinov Kazakov satisfies the mandatory conditions of ZRASRB and the requirements for holding

academic positions at the University of Sofia "Bishop Konstantin Preslavski", as well as the content of scientometric assessments. I responsibly find it justified to propose the candidate **Dr. eng. Stefan Marinov Kazakov** to take the academic position of "Associate Professor" in the field of higher education: **5. Technical sciences, professional field 5.13. General engineering (Engineering logistics)** at the Department of "Engineering logistics", Faculty of Technical Sciences at "Konstantin Preslavsky" University of Shumen .

13.05.2021г.

Reviewer: 
(Prof. DSc. eng. Plamen Dyankov)