

OPINION

by Assoc. Prof. Dimitrinka Ivanova Vladeva, PhD

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Regarding: application for the academic position Associate Professor in Plovdiv University „Paisii Hilendarski“

Area of Higher Education: 4. Natural Sciences, Mathematics and Informatics

Professional Field: 4.5. Mathematics (Probability Theory and Mathematical Statistics)

I present the evaluation below in my capacity as a member of the Scientific Jury appointed by an Order P 33-636 , dated February 19, 2021, of the Plovdiv University Rector, regarding application for the academic position Associate Professor at Plovdiv University in area of higher education 4, Natural Sciences, Mathematics and Informatics in professional field 4.5. Mathematics (Probability Theory and Mathematical Statistics). The procedure has been announced in the State Gazette issue 99, dated November 20, 2020, as well as in the Plovdiv University web-site.

The only candidate applied for the position is a Chief Assistant Professor. Peter Ivanov Kopanov, PhD, from the Plovdiv University Faculty of Mathematics and Informatics.

I was submitted files with the following materials:

- application form of the Candidate for Associate Professor position in Plovdiv University;
- CV (in Bulgarian, European format);
- MS degree diploma, Sofia University € 104276, July 1986;
- PhD degree diploma € 24 173, issued on 19.04.1996 by Higher Attestation Commission;
- certificate for more than 32 years pedagogical practice from which more than 25 years as a position of Chief Assistant Professor at Plovdiv University;
- full list of 28 scientific works;
- list of 24 scientific works submitted for the procedure;

- certificate of confirmation that the Candidate satisfies the national minimal requirements for the Associate Professor position and additional requirements of Faculty of Mathematics and Informatics, Plovdiv University;

- list-table of scientific works and citations about confirmation that the Candidate satisfies the national minimal requirements for the Associate Professor position;

- list-table of scientific works and citations about confirmation that the Candidate satisfies the additional requirements for the Associate Professor position of Faculty of Mathematics and Informatics, Plovdiv University;

- certificate for research activity, issued by Faculty of Mathematics and Informatics, Plovdiv University;

- reference confirming participation in scientific project;

- list of citations for the procedure;

- abstracts of the scientific works submitted for the procedure (in Bulgarian);

- abstracts of the scientific works submitted for the procedure (in English);

- self-assessment for the scientific contributions (in Bulgarian);

- self-assessment for the scientific contributions (in English);

- statement of the Candidate that the contribution in his scientific works submitted for the procedure are original and the documents submitted are authentic;

- certificate for teaching employment.

Chief Assistant Professor Peter Kopanov has defended a dissertation „Stochastic analysis of methods for approximate calculation of integrals“ by scientific specialty Probability theory and mathematical statistics.

Seventeen of all papers presented are in the field of probability theory or in applications of this field.

In articles 4 and 5 are obtained new conditions to check whether a distribution is unambiguously determined by its moments or not. The specific examples are given. In an article 12 the existence of density in the Bernoulli process and in the article 17 the generalizations of the Cauchy distribution have been studied.

In works 1,2,3,6,7,8 and 9 are studied differential equation and solved the problems of existence, uniqueness and stability. These equation have impulses occur at random moments, which is more complicated problem and requires new techniques.

The articles 11, 13 and 15 are in area Applications of Probability Theory in Sociology. The model of social agents, interacting in networks are considered. The original idea, that the agents are modeled as stochastic automata exchanging random signals is using.

The article 14 is an application of statistical methods for specific medical examination. The computer mathematics packages are used.

The article 18 is application of Probability Theory in Cosmology. In this paper is considered a quantitative relationship between the probabilistic standard normal distribution and the distribution of matter and energy in the Universe.

The article 16 consider the computer science problem. The author construct a independent random process as a solution of a specific NP-complete problem and it is the reason to reject the hypothesis of equality of the complexity classes P and NP.

Work 10 is a report of an education conference.

I believe that the scientific and scientific-applied articles with which Chief Assistant Professor Peter Kopanov participated in the competition, they are original and his contribution to the articles with co-authors is essential.

Chief Assistant Kopanov has participated in 6 program and organizational committees of scientific events and in an international research and educational project at „Scientific and Applied Activity“ of PU. He has participated with reports at 7 international and national conferences.

16 citations from different authors from Bulgaria and abroad on various topics are presented.

The candidate satisfies the national and the specific for the Faculty of Mathematics and Informatics of PU requirements for this position.

Submitted 18 (minimal 8) publications, from which in journals whit Impact Factor 6 (minimal 3), citation 16 (minimal 5).

Peter Kopanov is Chief Assistant Professor in PU „Paisii Hilendarski“ more then 25 years. He taught different courses: Probability theory and mathematical statistics, Operational research, Statistical software, Applied statistics, Optimizational models in economics, Software systems in mathematics, Modern statistical methods for decision making, as well as special elective disciplines such as: Nonlinear and stochastic optimization, Types of dependencies and their statistical analysis, Stochastic models in operations research and Optimization problems in image recognition processes.

He has trained 35 graduates.

The candidate is the author of a total of 6 textbooks and teaching aids, 3 of them on Probability Theory , one for software and 2 for preparing students for mathematical Olympiads.

The candidate has created many disciplines related to the preparation of students for

various Olympiads.

He is a member of the commission and the jury of the National Student Olympiad in Mathematics (NSOM) and the Olympiad in Computer Mathematics. He is chairman of the organizing committee of NSOM'2017.

The number of medals from various Olympiads received by his students is impressive - 8 gold, 9 silver and 21 bronze, as 1 gold and 2 silver are from an international competition in Moscow.

The University of Plovdiv can be proud of such a lecturer.

I have personal impressions of Petar Kopanov, whom I know for a long time. Extremely correct colleague with in-depth knowledge in various fields of mathematics. He knows how to work in a team. A creative person who won a prestigious award in the field of literature.

Conclusion

The documents and the articles submitted by Chief Assistant Professor Peter Ivanov Kopanov satisfy the requirements of the Development of Academic Staff in the Republic of Bulgaria, the Rules for its implementation, the internal PU rules and regulations.

The Candidate not only meets completely, but in some respects exceeds the eligibility criteria for the position of an Associate Professor of Mathematics at PU. There are many original contributions in the Candidate's applied-theoretical and theoretical works, some of which are published in reputable specialized journals.

Both research and teaching qualifications of Peter Kopanov are undisputable. Her results in teaching and research activities cover the additional specific requirements of the Faculty of Mathematics and Informatics.

The aforementioned evidences justify that Chief Assistant Professor Peter Ivanov Kopanov satisfies the Development of Academic Staff in Republic Bulgaria Act, the Rules for its implementation, the internal PU rules and regulations and policies of the PU on habilitation to the rank of Associate Professor of Mathematics. That is why I firmly recommend to the Scientific Jury to propose the Faculty Council to elect Chief Assistant Professor Peter Ivanov Kopanov Atanasova, PhD, as Associate Professor in Professional Field 4.5 Mathematics (Probability theory and mathematical statistics).

Sofia, March 31, 2021.

Signature:
(D. Vladeva)