

REVIEW

for Chief Assist. Petar Ivanov Kopanov, PhD

in a competition for the academic position of "Associate Professor"

by professional field 4.5 Mathematics (Probability Theory and Mathematical Statistics)

Reviewer: Acad. Ivan Petkov Popchev

By order No. P₃₃ - 636 Plovdiv, 19.02.12021 of the Rector of the Plovdiv University "Paisii Hilendarski" Prof. Rumen Mladenov, PhD in connection with the announced competition for the **academic position "Associate Professor"** in SG no. 99/20.11.2020 in the field of higher education 4. Natural sciences, mathematics and informatics, professional field 4.5 Mathematics (Probability theory and mathematical statistics) and report by Prof. Angel Atanasov Golev, PhD - Dean of the Faculty of Mathematics and Informatics I have been appointed an internal member of the Plovdiv University by a Scientific Panel, approved by a decision of the Faculty of Mathematics and Informatics, Protocol No. 14/17.02.2021

As a reviewer, I have received all included in the application 14 documents to the Rector for admission to participate in the competition K2-6/18.02.2021.

According to ADASRB, Regulation of application of the ADASRB (RAADASRB) and Additional requirements for the academic position of "Associate Professor" of the Faculty of Mathematics and Informatics (FMI), candidates for associate professor must meet certain conditions and requirements.

Art. 24 (1) The applicants to occupy the academic position of Associate Professor must meet the following conditions:

1. to have been awarded the educational and scientific degree of Doctor...;

2. for minimum two years:

a) to have occupies the academic position of Assistant, Chief Assistant.

3. to have presented a published monograph or equivalent publications in specialized scientific issued or ..., which do not reproduce those presented for awarding the educational and scientific degree of Doctor and for awarding of the scientific degree of Doctor of Science.

4. to meet the minimum national refinements under Art.2b, Para. 2 and 3, respectively the requirements under Art. 2b, Para. 5.

5. to have no plagiarism proven as per the legally established order in the scientific works.

(2) The academic position of Associate Professor shall be occupied on the basis of a competition and election.

(3) A competition for occupying the academic position of Associate Professor shall be opened, if it is possible the relevant teaching and research load to be provided, according to the relevant rules of procedure of the higher school or scientific organization.

Ch. Assis. Petar Ivanov Kopanov, PhD **meets the requirements of Art.24 (1).1** as a candidate of mathematical sciences. He holds Diploma No. 24173, issued April 19, 1996.

Ch. Assis. Petar Ivanov Kopanov, PhD **meets the requirements of Art. 24 (1).2a** because with a certificate ex. No. U-61/18.02.2021, signed by the Rector Prof. Rumen Mladenov, PHD certifies that Petar Ivanov Kopanov works at the University on a basic employment contract with order No. P34-705/11.12.1989 as an assistant in the Department of "Computer Systems" at the Faculty of Mathematics and Informatics and continues to work.

Ch. Assist. Petar Ivanov Kopanov, PhD **meets the requirements of Art. 24 (1).3** as it has presented 3 publications in specialized scientific issues, which do not repeat the ones presented for acquiring the educational and scientific degree "Doctor".

In the documents for the competition there is a "List of all publications of the candidate - 21 pcs. and "List of scientific papers for participation in the competition".

The brief analysis of the **18 publications** submitted for participation in the competition shows the following:

- 6 publications are **in journals with IF** (NNo. 1, 2, 3, 4, 5 and 6);
- 3 publications are **in journals with SJR** (NNo. 7, 8 and 9);
- 8 publications are in magazines (Nos. 11, 12, 13, 14, 15, 16, 17 and 18);
- 1 publication is in conference proceedings (No. 10);
- 2 publications are **independent** (No. 16 and 17);

There are presented: 4 textbooks for students in Bulgarian, of which 3 co-authored and 2 independent in Bulgarian.

The "**Citation List**" includes **16 citations of 7 publications**.

The reviewer considers that Ch. Assist. Petar Kopanov, PhD **fulfills the requirement of Art. 24 (1).4** as he meets the minimum national requirements under Art. 2 b, para. 2 and 3, the requirements under Art. 2b, para. 5 and the additional requirements of FMI. According to **Art. 24 (1).5 there is no plagiarism in the scientific works proved according to the legally established order**.

In accordance with Art. 65 of PRASPU it is presented "**Annotations of the presented materials and self-assessment of scientific contributions**" in Bulgarian and English.

According to Art. 26 ADASRB "... the candidate submits information about the original scientific contributions ...". Such a reference is not presented, but a self-assessment of the scientific contributions in 6 directions is given.

The contributions of Ch. Assist. Peter Kopanov, PhD assuming equal participation in co-author publications briefly can be summarized as follows:

1. There have been obtained new conditions which make possible to verify whether a probability distribution is uniquely determined by its moments or not [NNo. 4 and 5].
2. There are studied Impulse differential equations, where the moments when impulses occur are random with known distributions [NNo. 1, 2 and 3].
3. It is proposed a network approach for modeling sociological agents as a combination of stochastic automata. [NNo. 11, 13 and 15].

4. A comparison was made between coblation assisted tonsillectomy versus conventional tonsillectomy regarding the postoperative pain and bleeding. The comparison proves the coblation tonsillectomy as an advanced method [No. 14].
5. The impossibility $P = NP$ is shown [No. 16].
6. The practical coincidence of the measurements between some cosmological values and the well-known probabilities of a standard normal distribution is noted. This coincidence may not be accidental and is due to fundamental quantum fluctuation [No. 18].

There are presented "**Documents for educational work**" with **two** references:

- curricular and extracurricular employment;
- activity with students and doctoral students.

The references were prepared by Ch. Assis. P. Kopanov, PhD and are signed by Assoc. Prof. Hristo Kiskinov, PhD - Head of Department and Prof. Angel Golev, PhD - Dean of the Faculty of Mathematics and Informatics. Briefly these references note that Ch. Assis. Petar Kopanov, PhD has led exercises in 9 disciplines and lectures in 19 disciplines, prepared 7 students for participation in the International Competition MITE - Moscow, won 1 gold medal and 2 silver medals, head of the FMI team at PU "P. Hilendarski" for participation in student Olympiads and competitions from 2012 until now, won 7 gold, 7 silver and 21 bronze medals, scientific guidance of 35 graduates, reviewer of over 20 diploma theses of students, participated in State commissions for exams and defense of diploma theses.

There are also presented "**Research Documents**" with four references:

- in scientific research activity - 21 scientific publications, one domestic and one international project;
- in 1 ATACD research project (team member);
- in professional organizations - Union of Mathematicians in Bulgaria;
- with reports at 7 international and national scientific forums.

The references were prepared by Ch. Assis. P. Kopanov, PhD and signed by Assoc. Prof. Hristo Kiskinov, PhD and Prof. Angel Golev, PhD.

It is included an "Official Note" Ex. No. NPD 1959/25.04.2018 for participation in project under VI Framework Program of the EU, under a contract with the European Commission No. 043415/2007.

Ch. Assist. P. Kopanov, PhD has proven organizational skills and competencies for leadership and coordination of teams of people.

Generalized "**scientometric image**" of Ch. Assist. Prof. Petar Ivanov Kopanov, PhD can be based on information from world scientific bases:

- Scopus: 9 documents, 18 citations, h-index - 2;
- Web of Science: 9 total publications, 9 citations;
- Scholar.google: 31 references, h-index 4, i10-0;
- Research Gate: RG Score: 8.36

The generalized "**scientometric image**" deserves to be the subject of careful and critical **self-analysis** and is a sufficient basis for further **independent publication activity**.

CONCLUSION

All requirements, conditions and criteria according to ADASRB, RAADASRB and the Additional requirements of FMI are fulfilled and I give a categorically **positive conclusion** for the election of Ch. Assist. Petar Ivanov Kopanov, PhD in a competition for the academic position of "Associate Professor" in the professional field 4.5 Mathematics (Probability Theory and Mathematical Statistics).

I propose that the Scientific Panel unanimously vote on a proposal to the Faculty of Mathematics and Informatics to elect Ch. Assist. Petar Ivanov Kopanov, PhD for the academic position of "Associate Professor" in the professional field 4.5 Mathematics (Probability Theory and Mathematical Statistics).

15.03.2021 г.

Reviewer:

Acad. Ivan Petkov Popchev