REVIEW

by competition for an academic position

"associate professor"

in professional field 4.5 Mathematics

(Mathematical analysis),

for the needs of Sofia University "St. Kliment Ohridski" (SU),

Faculty of Mathematics and Informatics (FMI),

announced in SG no. 30 of 15.04.2022 and on the FMI and SU websites

The review was prepared by Assoc.Prof. Milko Damyanov Takev, PhD - FMI, in his capacity as a member of the scientific jury in professional field 4.5 Mathematics (Mathematical analysis), according to Order No. RD 38-286 / 14.06.2022 of the Rector of Sofia University.

Only one candidate submitted documents for participation in the announced competition:

• chief assistant Nikolay Antonov Ivanov, PhD

General description of the presented materials

1. Application data

The documents submitted by the candidate in the competition correspond to the requirements of the Act on Development of the Academic Staff in the Republic of Bulgaria , Regulations on the implementation of the Act on Development of the Academic Staff in the Republic of Bulgaria and The Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University "St. Kliment Ohridski"

To participate in the competition, the candidate submitted the following documents:

CV (1), master's degree (2), doctor's degree (3), document for the academic position "principal assistant" of an employment contract (5), certificate of work experience (6), official note of work experience (7) , medical certificate (8), criminal record certificate (9), list of publications (10), list of publications from the "Authors" system (11), reference to minimum requirements (12), reference to citations (13), reference to the original scientific contributions (14), a report on classroom and non-auditory employment (15), scientific works (16), abstracts (17), a copy of the announcement in the State Gazette (18).

In conclusion, the documents of Ch. assistant professor Nikolay Ivanov for participation in the competition were prepared in full compliance with the requirements of Regulations on the implementation of the Act on Development of the Academic Staff in the Republic of Bulgaria and The Rules on the Conditions and Procedure for Acquiring Science Degrees and Holding Academic Positions in Sofia University "St. Kliment Ohridski".

2. Applicant data

Nikolay Ivanov graduated from Vasil Drumev Moscow State University, Veliko Tarnovo, in 1996. In 2001, he completed a master's degree at the FMI of SU "St. Kliment Ohridski". He received his PhD from Texas A&M University in 2007.

From 2011 to 2015, he was an assistant at VTU "St. St. Cyril and Methodius", and from 2015 to August 2016 he was the Since August 2016, he has been the chief assistant to cat. "Mathematical Analysis" of FMI.

3. General characteristics of the scientific works and achievements of the candidate

The main scientific work of the candidate is in the field of operator algebras and discrete groups, representation theory and K-theory.

With his works, the author collects a total Impact Factor IF of more than 4.6.

The scientific works meet the minimum national requirements (under Article 2b, Paragraphs 2 and 3 of the RSARB) and, accordingly, the additional requirements of SU "St. Kliment Ohridski" for occupying the academic position of "associate professor" in the scientific field and professional direction of the competition;main assistant at the same university.

He works actively and devotedly with his students. The scientific works presented by the candidate do not repeat those from previous procedures for acquiring a scientific title and academic position;

There is no evidence of plagiarism in the scientific works submitted for the competition.

4. General teaching activity

Since entering cat. Mathematical Analysis Nikolay Ivanov has led seminars on Mathematical Analysis at the Faculty of Chemistry and Pharmacy, is the holder of the course on Analysis of Functions of Many Variables at the Faculty of Physics and leader of seminars on Differential and Integral Calculus at FMI.

5. Content analysis of the applicant's scientific and scientific-applied achievements contained in the materials for participation in the competition

In the reference of ch. Associate Professor Nikolay Ivanov summarizes some of the scientific contributions:

• Contribution to the study of the structure of a special class of C*-algebras constituting reduced free products of finite-dimensional C*-algebras.

• Proof of a structural theorem for the above-described class of C*-algebras.

• Study of group C*-algebras of group amalgams and of HNN - simplicity and uniqueness extensions for the trace. Clarification of issues related to noncommutative instantons and the ADNM construct associated with them.

• Correction in the calculation of the topological index of non-commutative ADNM instantons.

6. Reflection of the candidate's work in the works of other scientists

Evidence of the significance of the results presented by the candidate is their reflection in the works of other authors. 8 citations noted.

Note: In the process of drafting the opinion, I found that the list of citations of articles on the competition is longer.

The publication under No. 2 from the presented list of publications for participation in the competition is also cited in the following dissertation:

K-theoria de algebras de Toeplitz asociados a grupos De Artin de Angulo recto Jonatan Edgard Trejo Nernandes, August 2021

7. Evaluation of the candidate's personal contribution

Out of all the scientific publications submitted for participation in the competition, the candidate is the author of 6 and the first author of one publication. The candidate's personal contribution is beyond doubt.

8. Critical notes and recommendations

I have no critical remarks.

9. Personal impressions of the candidate

I have known Nikolay Ivanov since 2011 from his work at VTU. Impressed by his routine and career path, I suggested he move to FMI at SU. Since 2015, we have been teaching the subject Differential and Integral Calculus in the journal "Information Systems" in one team.

Nikolay Ivanov is doing excellently in his teaching activity.

10. Conclusion on the application

After having familiarized myself with the materials and scientific works presented in the competition and based on the analysis of their significance and the scientific and scientific-applied contributions contained in them, I confirm that the scientific achievements meet the requirements of Act on Development of the Academic Staff in the Republic of Bulgaria , Regulations on the implementation of the Act on Development of the Academic Staff in the Republic of Bulgaria for the candidate to occupy the academic position of "associate professor" in the scientific field and professional direction of the competition. The candidate satisfies the minimum national requirements in the professional direction and no plagiarism has been found in the scientific works submitted for the competition.

I give my **positive** assessment to the application.

II. GENERAL CONCLUSION

Based on the above, **I recommend the Scientific Jury to propose to the competent authority for the selection of the Faculty of Mathematics and Informatics at SU "St. Kliment Ohridski" to elect Ch. assistant professor Nikolay Antonov Ivanov, PhD, to take the academic position of "Associate Professor" in professional field 4.5. Mathematics (Mathematical Analysis).**

25.07.2022   Signature:…………………………….

                                                        (Assoc.Prof.Milko Takev, PhD)