STATEMENT

on a competition for an academic position

"Associate Professor"

in the professional direction 4.5 Mathematics

(Mathematical Modeling and Applications in Robotics and Mechatronics),

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

Faculty of Mathematics and Informatics (FMI),

announced in the State Gazette issue No. 20 from 08.03.2024

and on the Internet sites of FMI and SU

The statement is prepared by: Prof. Dr. Evgeniy Hristov Krastev from FMI, SU, as a member of the scientific jury for the competition in professional direction (PD) 4.5 Mathematics (Mathematical Modeling and Applications in Robotics and Mechatronics) according to Order No RD-38-206/08.05.2024 of the Rector of Sofia University “St. Kliment Ohridski”.

Only one candidate has submitted documents for participation in the announced competition: **Senior assistant, Dr**. **Dimitar Trayko Nedanovski**, from the Department of Mechatronics, Robotics and Mechanics at FMI, SU.

I. GENERAL DESCRIPTION OF THE PRESENTED MATERIALS

1. Information about the application

The documents of the applicant comply with the requirements of the Act of the Development of the Academic Personnel of the Republic of Bulgaria (ZRASRB), the Rules for the Implementation of the Act of the Development of the Academic Personnel of the Republic of Bulgaria (PPZRASRB) and the Rules on the Terms and Conditions for Acquisition of Academic Degrees and Occupation of Academic Positions at SU (PURNSZATSU)

For participation in the competition, the candidate Dimitar Trayko Nedanovski (ORCID ID:0009-0001-7212-9167, Scopus H-index: 4) has submitted a list of 9. titles, including 7 articles in reputable and specialized foreign scientific journals and 2 publications in collections of reports of scientific conferences. All documents arising from the requirements of Art. 107 of the PURNSZATSU and proving the fulfillment of the requirements under Art. Art. 105, para. 1, item 2 of the PURPNSZASU.

2. Information about the candidate

Dimitar Nedanovski obtained the a B. Sc. degree in 2007 and a M.Sc. degree in 2009 from the M. Sc. degree program "Mathematics and Mathematical Physics") correspondingly, from the Faculty of Physics and the Faculty of Mathematics of SU. In 2016, he defended a doctoral dissertation on "Superconformal vertex algebras in four-dimensional space-time" at the Institute for Nuclear

Research and Nuclear Energy of the Bulgarian Academy of Sciences and received a PhD diploma in professional direction 4.1 "Physical sciences" (theoretical and mathematical physics)

He was appointed at SU (FMI) in 2017 first as an assistant, and in 2019 he was elected senior assistant at SU (FMI) at the Department of "Mechatronics, Robotics and Mechanics". Most of the lectures and exercises he has led during this period were with bachelors majoring in physics and biology at SU. He has also led practical exercises in Analytical Mechanics for students in bachelor degree studies at FMI, SU.

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

The candidate has submitted a list of all his publications (14) indexed in Web of Science and/or Scopus. They characterize his scientific research work and achievements in the following three scientific areas - mathematical modeling and optimization, modeling of mechanics and robot control, quantum field theory. Most of these publications (9) are in scientific journals, among which (6) journals with a high impact factor prevail.

In connection with the fulfillment of indicator C.4 of the minimum national requirements for this competition, the candidate has submitted 3 articles in renowned scientific journals (the three with IF and SJR), referenced and indexed in world-renowned databases with scientific information (Web of Science and Scopus) . The total number of points of Dimitar Nedanovski is over 120 points and exceeds the minimum required 100 points in PPZRASRB after applying a corrective factor (3) for PD 4.5 according to this indicator.

In relation to indicator D.7, the candidate has submitted 3 articles in reputable scientific journals (1xQ1, 1xQ2, 1xQ3), 2 publications (2xSJR) and 1 publication without IF and without SJR (other publications). The total number of points for this indicator after applying a correction factor for PD 4.5 is 258 points, significantly exceeding the required minimum of 200 points.

After checking in world-famous databases with scientific information (Web of Science and/or Scopus), I found that the points under indicator D for the citations of the candidate's works coincide in number with the points indicated by him, namely, 248 points (after application of correction coefficient (4) for PD 4.5 in connection with indicator D of PPZRASRB). These points significantly exceed the requirements for the minimum number of 50 points for this indicator.

The candidate satisfies the additional requirements of SU "St. Kliment Ohridski", related to the educational activity, as follows from the presented Report on the reported total and classroom occupancy by academic years and semesters.

It allows me to make the following conclusions about the scientific works and achievements of the candidate:

a) the scientific works meet and significantly exceed the minimum national requirements (according to Article 2b, Paragraphs 2 and 3 of ZRASRB) 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;

b) there is no evidence that the scientific works presented by the candidate repeat those from previous procedures for acquiring a scientific title and academic position;

c) there is no evidence of plagiarism in the scientific works submitted for the competition

4. Characterization and evaluation of the candidate's teaching activity

The candidate has professional experience to conduct lectures and exercises on the subject of the announced competition. From 2017 to 2024 he has led lectures and seminar exercises in Applied Mathematics (Part 2, 3 and 4) for bachelor degree studies at the Faculty of Physics of SU, as well as seminar exercises in Analytical Mechanics and Mathematics, respectively, for bachelor degree students majoring in Applied Mathematics (FMI, SU) and Molecular Biology (Faculty of Biology, SU).

5. Substantive analysis of the scientific and applied scientific achievements of the candidate contained in the materials for participation in the competition

The candidate has submitted 9 publications (7 articles and 2 conference reports) for participation in the competition, prepared in the period 2019-2024. The publications are indexed in Scopus and/or Web of Science, where most of these publications are in the field of Mathematical Modeling and Optimization in oil refining processes and have high IF [3.2-7.4] and/or SJR[0.19-0.74]. Part of the publications (6) were made in co-authorship with 8 or more co-authors, and the rest (3) were the result of joint work of 2 to 4 co-authors. I consider the weight of the contributions in these collective publications to be equally distributed among the co-authors. The candidate has provided evidence of significance of these contributions to the production practice. There is evidence for 31 citations of hos works indexed by Scopus/WoS in the last five years. The total number of points under indicator D of the minimum national requirements is 248 points, where the required minimum is 50 points after applying a corrective factor for PD 4.5. This highlights the good level of the candidate's publication activity and the quality of the scientific results achieved by him..

6. Critical notes and recommendations

My only remark regarding the submitted documents is that the documents numbered 6 and 7, respectively, WorkExperience.pdf and Artefacts.pdf present the same document, Reference from the Human Resources Department of Sofia University for work experience in the specialty. At the same time, the description of the Teaching activity is presented in document number 15 with the title Artefacts.pdf, duplicating the title of the document number 7. All of it creates confusion when examining the applicant's documents. In general, the rest of the applicant's documents are correctly prepared and contain detailed evidence to meet the legally established requirements.

My recommendation to the candidate is to dedicate more attention and creative activity to the development and publication of lecture notes and auxiliary course materials in connection with major subjects of the courses taught mainly at FMI-SU.

7. Personal impressions of the candidate

I know Dimitar Nedanovski personally from our joint work in the Department of Mechatronics, Robotics and Mechanics. I have very good impressions of his professional skills in scientific and teaching work. An extremely hard-working colleague who can always be counted on.

It makes me convinced that Dimitar Nedanovski possesses the necessary personal qualities, motivation and professional training on the subject of the competition, allowing him to fulfill the requirements of the academic position of " Associate Professor " at FMI-SU..

8. 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 of the Development of the Academic Personnel of the Republic of Bulgaria, the Regulations for its application and the relevant Regulations of SU "St. Kliment Ohridski" for the candidate to occupy the academic position of "Associate professor" in the scientific field and professional direction of the competition. In particular, 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. OVERALL CONCLUSION

Based on the above, **I recommend the scientific jury to vote positively** on a proposal to the to the competent authority at the Faculty of Mathematics and Informatics of Sofia University “St. Kliment Ohridski” to elect **Senior assistant, Dr. Dimitar Trayko Nedanovski, for the academic position "Associate Professor"** in professional direction 4.5 Mathematics (Mathematical modeling and applications in robotics and mechatronics).

June 22nd 2024 Statement prepared by: .....

Professor Evgeniy Hristov Krastev, PhD