

REVIEW

by **Corr. Member, Prof. Lyubka Atanassova Doukovska, PhD, DSc**

from the Institute of Information and Communication Technologies,

at the Bulgarian Academy of Sciences,

on the Competition for the academic position “**Professor**”,

under the Scientific Field: 5. Technical sciences,

the Professional Area: 5.2. Electrical engineering, Electronic and Automation,

the Scientific Specialty: Automated systems for information processing and control,

for the needs of the Distributed Information and Control Systems Department

of the Institute of Information and Communication Technologies - BAS,

announced in Darjaven Vestnik No. 103/12.12.2023

with a participant - **Associate Professor Nikolay Ivanov Stoimenov, PhD**

In accordance with Order No. 42/09.02.2024 of the Director of the Institute of Information and Communication Technologies - BAS, I was included in the Scientific Jury of the competition for occupation of the academic position “Professor” in the Scientific Field 5. Technical sciences, the Professional Area 5.2. Electrical engineering, Electronic and Automation, the Scientific Specialty “Automated systems for information processing and control”, announced in the Darjaven Vestnik, Issue 103 of 12.12.2023, for the needs of the Distributed Information and Control Systems Department at the Institute of Information and Communication Technologies - BAS, with the sole participant in the competition - Associate Professor Nikolay Ivanov Stoimenov, PhD.

Nikolay Ivanov Stoimenov was born on July 23, 1988 in Sofia. He obtained a Master's Degree in Automation technology and engineering in 2013 at the Faculty of Mechanical Engineering of the Technical University - Sofia. He obtained the PhD degree in the field of Automated systems for information processing and control in 2016 in the

Institute of Information and Communication Technologies at the BAS. Since 2012, he has been a member of the staff of the Institute of Information and Communication Technologies at the BAS. In 2020, he was appointed to the position of Associate Professor in the same institute, and from 2021 he is the head of the Distributed Information and Control Systems Department and deputy director of the institute.

As a member of the Scientific Jury, I have received the following documents:

1. Order No. 42/09.02.2024 of the Director of the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences;
2. Application for participation in the competition by the participant;
3. A European Curriculum Vitae;
4. Copy of the diploma for educational and scientific PhD degree;
5. Certificate of work experience in the specialty;
6. List of scientific publications, with which the applicant participates in the competition, which do not repeat the ones submitted for the acquisition of the educational and scientific PhD degree and for the occupation of the academic position "Associate professor";
7. List of inventions and other scientific and applied results;
8. List of noticed citations;
9. Summaries of the scientific publications with which the applicant participates in the competition - in Bulgarian and English;
10. Copies of all scientific publications with which the applicant participates in the competition;
11. Information for fulfillment of the minimum national requirements under Art. 2b, # 2 and # 3 and the requirements of the Institute of Information and Communication Technologies - BAS under Art. 2b, # 5, prepared, based on documents submitted for the competition provided by Associate Professor Nikolay Ivanov Stoimenov;
12. Reference for the original scientific and applied scientific contributions;
13. Declaration that no plagiarism in the scientific works of the competition has been proven according to the law.

According to the requirements of the *Development of Academic Staff Act in the Republic of Bulgaria* and the specific requirements in the Act's Institutional Regulation, the candidates for occupying the academic position of "Professor" must meet the following conditions, regulated in Art. 29. (Darjaven Vestnik issue 81 of 2010 - Decision No. 11 of 05.10.2010 of the Constitutional Court of the Republic of Bulgaria under cadastral plot No. 13/2010; amend in full, issue 101 of 2010; amend. and supplement, issue 30 of 2018, effective 05.05.2018) (1):

1. Have acquired the educational and scientific PhD degree;
2. Have held the academic position of "Associate Professor" at the same or another higher education institution or scientific organization for at least two academic years or at least five years;
3. Have submitted published monographs or equivalent publications in specialized scientific editions that do not repeat the ones submitted for the PhD degree and for the academic position of "Associate Professor";
4. Have submitted other original research papers, publications, inventions and other scientific and applied developments that are evaluated as aggregate;
5. To comply with the minimum national requirements under Art. 2b, # 2 and # 3, respectively, of the requirements of art. 2b, # 5;
6. Not to have plagiarism proven in the statutory order in scientific works.

(3) Applicants shall submit a report on the fulfillment of the minimum national requirements under Art. 2b, # 2 and # 3, respectively, of the requirements of art. 2b, # 5, and a reference to the original scientific contributions, to which the relevant evidence set out in this Act, in the regulation for its implementation, and the regulations of higher schools and scientific organizations.

Associate Professor Nikolay Ivanov Stoimenov fulfills the requirement of Art. 29 (1) item 1 of the *Development of Academic Staff Act in the Republic of Bulgaria*, because he successfully defended a PhD Thesis's on the topic "Research of the movement and interaction of bodies with a variable shape", as evidenced by the diploma No.

781/27.10.2016 for awarded PhD degree by the Institute of Information and Communication Technologies at the BAS.

Associate Professor Nikolay Ivanov Stoimenov also meets the requirement of Art. 29 (1) item 2 of the *Development of Academic Staff Act in the Republic of Bulgaria*, because the official note with Ex. No. 113 of 31.01.2024, signed by the Director of the Institute of Information and Communication Technologies at the BAS, which certifies that the candidate has a total work experience in the specialty of 9 years and 6 months, of which 3 years and 11 months as Associate Professor.

Associate Professor Nikolay Ivanov Stoimenov fulfills the requirement of Art. 29 (1) item 3 of the *Development of Academic Staff Act in the Republic of Bulgaria*, because as the equivalent of a monographic work, a list of 12 scientific publications is presented in publications that are referenced and indexed in the world databases with scientific information, of which 8% are in quartile Q2 and 42% are in quartile Q4. From the analysis of the submitted works for the competition, it follows that the peer-reviewed publications “do not repeat the ones submitted for the acquisition of the educational and scientific PhD degree and for the occupation of the academic position Associate Professor”, in accordance with the requirements of Art. 29 (1), item 3 of the *Development of Academic Staff Act in the Republic of Bulgaria*.

Associate Professor Nikolay Ivanov Stoimenov fulfills the requirement of Art. 29 (1) item 4 of the *Development of Academic Staff Act in the Republic of Bulgaria*, since in the documents for participation in the competition a List of inventions and other scientific and applied results is presented, including one patent and two utility models. For his participation in the competition, Associate Professor Nikolay Ivanov Stoimenov has also presented a list of 45 papers, of which 24 are referenced and indexed in the world databases with scientific information.

Associate Professor Nikolay Ivanov Stoimenov has presented a list of 59 citations. It is important to note that 37 citation publications have been noted, which have been indexed and referenced in Scopus and / or Web of Science editions, which also fulfills the

specific conditions for acquiring academic degrees and occupying academic positions “Professor” in the Institute of Information and Communication Technologies - BAS.

Associate Professor Nikolay Ivanov Stoimenov fulfills the requirement of Art. 29 (1) item 5 of the *Development of Academic Staff Act in the Republic of Bulgaria*, according to the information provided for the fulfillment of the minimum national requirements and the minimum requirements of Institute of Information and Communication Technologies - BAS by Associate Professor Nikolay Ivanov Stoimenov, he fully covers the minimum requirements for indicators A, C, D, E and E for the Scientific Field 5. Technical sciences, the Professional Area 5.2. Electrical engineering, Electronic and Automation, the Scientific Specialty “Automated systems for information processing and control”.

Associate Professor Nikolay Ivanov Stoimenov fulfills the requirement of Art. 29 (1) item 6 of the *Development of Academic Staff Act in the Republic of Bulgaria*, because I accept the Declaration submitted by the applicant that there is no legally proven plagiarism in the scientific works presented for this competition by Associate Professor Nikolay Ivanov Stoimenov.

The scientific works submitted for participation in the competition are related to approaches for creating innovative methods and tools for research, analysis and optimization of movement, interaction and behavior of bodies with a variable shape. The obtained results are divided into the following research areas:

1. Processes of movement and behavior of grinding bodies and environments.
2. Wear resistance of 3D printed materials, including composites.
3. 3D simulation modeling, scanning and printing.

The contributions in the peer-reviewed works, assuming equal participation of the co-authors, can be briefly presented as the creation of verified simulation models that can be applied in procedures for the optimization of industrial facilities and for achieving energy efficiency that is significant for the industry.

I accept the contributions formulated by the applicant in the works with which Associate Professor Nikolay Ivanov Stoimenov participates in the competition, the results

being scientific, scientifically applied and applied and can be defined as enrichment of an existing scientific field with new knowledge, which satisfies the requirements of Art. 29 (3) of the *Development of Academic Staff Act in the Republic of Bulgaria*.

Associate Professor Nikolay Ivanov Stoimenov was a member of the team in a National Scientific Program, in a project under the Operational Program and in 4 research projects of the National Scientific Research Fund at the Ministry of Education and Science, of which he was the head of 3.

Associate Professor Nikolay Ivanov Stoimenov is among the most prominent representatives of young scientists in the Republic of Bulgaria. Public recognition for the achieved results of his scientific and research activities are the awards he has been awarded since his school days to this day, among which are the Diploma from the EUREKA Foundation for "Excellent performance in the competition for the EUREKA YOUNG INVENTOR award for 2018" and Diploma and commemorative statuette from the EUREKA Foundation, "Award winner of the EUREKA YOUNG INVENTOR for 2019".

In conclusion, I agree that the requirements of the Law for the *Development of Academic Staff Act in the Republic of Bulgaria* and the specific requirements in the Act's Institutional Regulations for its implementation, the Rules for the conditions and the order for acquiring academic degrees and for the occupation of academic positions in BAS and the Rules for the specific conditions for acquisition of academic degrees and occupation of academic positions at the Institute of Information and Communication Technologies - BAS are accomplished. After getting acquainted with the materials submitted by the applicant for the competition, I give my positive estimation about the choice of **Associate Professor Nikolay Ivanov Stoimenov** in the competition for the academic position of "**Professor**" for the needs of the Distributed Information and Control Systems Department of the Institute of Information and Communication Technologies - BAS, in the Scientific Field 5. Technical sciences, the Professional Area 5.2. Electrical engineering, Electronic and Automation, the Scientific Specialty "Automated systems for information processing and control".

I propose that the Scientific Jury unanimously vote for a proposal to the Scientific Council of the Institute of Information and Communication Technologies - BAS, to elect **Associate Professor Nikolay Ivanov Stoimenov** for the academic position of “**Professor**” in the Scientific Field 5. Technical sciences, the Professional Area 5.2. Electrical engineering, Electronic and Automation, the Scientific Specialty “Automated systems for information processing and control”.

14.03.2024

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Signature

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