

STATEMENT

For the competition for occupation of the academic position "associate professor"
Professional field 5.2. "Electrical Engineering, Electronics and Automation",
Specialty " Automated systems for information processing and control",
For the needs of the Department Embedded Intelligent Technologies of ICT-BAS,
Candidate: Dr. Nikolay Ivanov Stoimenov
Member of the Scientific Jury: Acad. Vasil Sgurev
State Gazette №. 85 of 29.10.2019, Order of the Director of ICT-BAS No. 347 / 30.12.2019.

1. General and biographical data

The only candidate in the competition is Dr. Nikolay Ivanov Stoimenov. He was born on July 23, 1988 in Sofia. He graduated from the Technical University in Sofia in 2013 with a degree in Automation Technics and Engineering. He defended his doctoral thesis in 2016 at the ICT-BAS on the topic "Study of Motion and Interaction in Variable-Form Bodies". From 2012 he was appointed as a engineer in the section "Embedded Intelligent Technologies" of ICT-BAS. From 2012 until now, Dr. Stoimenov has co-authored 38 publications and 1 patent application in procedure on the topic of the competition, of which 10 SCOPUS referenced and 7 of the publications were with SJR (1 with IF), 16 citations were given. He has participated in 2 research projects, has managed 1.

2. General description of the presented materials

In the competition for "Associate Professor" Dr. Nikolay Ivanov Stoimenov gives 10 scientific works in refereed and indexed editions. The work are in the fields of "preservation and digitization of cultural and historical heritage, innovative technologies in the process of grinding, non-destructive analysis of objects and details".

A list of 28 other publications has also been provided. Of these, 5 are international. 7 of the publications featuring Dr. Stoimenov are with SJR (1 with IF).

16 citations to a total of 6 publications are given (4 international, 1 book).

A list of 2 projects is given, in 1 of which Dr. Stoimenov is the leader. A patent application in procedure, "Thermometer" is given.

I believe that the candidate participates in the competition for "associate professor" with sufficient number of jobs, fulfilling the requirements of the Law and the Regulations of ICT-BAS. The presented works are devoted to scientific and applied problems in the field of the announced competition.

3. A general characteristic of the applicant's research and scientific and applied activities

Articles and reports address the following groups of issues:

1. 10 monographic publications: Common Topics - preservation and digitization of cultural and historical heritage, innovative technologies in the process of grinding, non-destructive analysis of objects and details.

2. 28 articles outside the monographic work are thematically similarly divided into the following major scientific fields:

- Preservation and digitization of cultural and historical heritage,
- Innovative technologies in the process of grinding,
- Non-destructive analysis of objects and details,
- Automation of production.

4. Scientific-research and applied contributions of the applicant

I accept several groups of contributions with which the applicant participates in the "Associate Professor" competition.

A. Publications equivalent to monograph work:

1. Methods for 3D digitization and 3D modeling of cultural and historical objects;

2. Possibilities for applying the Braille screen for works of art;
3. Factors for improving the quality and productivity of mills;
4. Robotization of high-temperature technologies for materials production;
5. Tomographic studies of the internal structure of objects;
6. Examination of biological (dental samples) and food materials (simulants).

B. Publications beyond the equivalent of monograph work:

1. Methods and tools for graphical visualization for blind users;
2. 3D Modeling and 3D digitalization of cultural and historical heritage;
3. Materials and technologies in the process of grinding and production of parts;
4. Investigation of innovative form in grinding processes in mills;
5. Contactless testing of transformer overheating temperature;
6. Study of the motion of electromagnetic micro actuators;
7. Automation of packaging processes;
8. Automation of assembly operations.

The contributions are mainly scientific - applied in nature. I appreciate the contributions as being in compliance with the requirements of the normative documents on this point.

5. Significance of contributions to science and practice

Developments and research in the field of digitalization of cultural and historical heritage - for disadvantaged people (visually impaired), innovations in grinding processes - development of an innovative form of grinding medium, non-destructive analysis of objects - study of the internal micro structure of details, production automation - automation of packaging processes and assembly operations are important for the development and enrichment of the theory and practice of high-tech systems and for supporting disadvantaged. The patent application also fits into this subject.

From the publications it can be concluded that the contributions of Dr. Nikolay Stoimenov have received the necessary fame in the scientific community at home and abroad.

6. Critical remarks and recommendations

Critical remarks can be made regarding some gaps in the layout of several publications, as well as the layout of all material.

- Gaps in the bibliographic description of certain literary sources,
- The contributions declared are too fragmented, it is better to combine them.

Notwithstanding the minor notes and omissions, I believe that with the formulated decisions and contributions, the applicant is fully prepared for the academic position of Associate Professor.

CONCLUSION

The applicant meets the requirements of the Law and the Regulations. The quantitative indicators of the Regulations of IICT-BAS for the occupation of the academic position "Associate Professor" are covered. Therefore, I give my positive vote for the occupation of the academic position of "Associate Professor" by Dr. Nikolay Ivanov Stoimenov.

This gives me reason to propose to the Honorable Scientific Jury to vote for the award of Dr. Nikolay Ivanov Stoimenov to the academic position of Associate Professor in the specialty "Automated systems for information processing and control", professional field 5.2. Electrical engineering, electronics and automation.

14th January, 2020, Sofia

Member of the Scientific Jury

**NOT FOR
PUBLIC RELEASE**

(Assoc. Vasil Sgurev)