

## STATEMENT

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## ABOUT

documents and scientific papers presented in the competition for the occupation of the academic position "Associate Professor"

Field of higher education : 5. Technical sciences

Professional field: 5.2 Electrical Engineering, Electronics and Automation,

Specialty: Robots and manipulators,

announced in DV no. 41 of 21.05.2019 for the needs of section "Embedded intelligent technologies" at the Institute of Information and Communication Technologies-BAS with the only candidate in the competition: Dr. Nayden Chivarov.

By order No 183 / 19.07.2019 of the Director of IICT-BAS, I am included in the Scientific Jury of the competition for occupation of the academic position "Associate Professor", announced in DV no. 41 of 21.05.2019. The only candidate, Dr. Nayden Chivarov, a programmer at IICT, submitted materials for the competition. As a member of the Scientific Jury I have received the following candidate materials:

1. Application for participation in the competition;
2. European CV;
3. Copy of the diploma for the educational and scientific degree "doctor";
4. Certificate of internship in the specialty;
5. List of scientific publications for participation in the competition;
6. List of inventions and other scientific results;
7. List of citations;
8. Abstracts of the scientific publications for the competition - in Bulgarian and English;
9. Copies of the scientific publications for participation in the competition;
10. Reference for meeting the minimum requirements of IICT;
11. Reference for the original scientific and applied contributions;
12. Declaration that there is no legally established plagiarism in scientific works.

### **General characteristics of the materials presented.**

The attached CV shows that during the period 1997-2001 the applicant was studied at the Institute of Robotics at the Technical University of Vienna, Austria, where he received educational and

scientific degree “doctor” in robotics, which corresponds completely to the specialty of this competition. The reference for fulfillment of the requirements of IICT-BAS for occupation of the academic position “Associate Professor” shows that the requirements for all groups of indicators A, B, D D and E are fulfilled and exceeded. A signed declaration of originality of the results in the scientific works is attached. All the materials presented by the candidate Dr. Chivarov are prepared in accordance with the Law for academic growth, the Regulations for its implementation, as well as with the Rules of the specific conditions for acquisition of academic degrees and occupation of academic positions at IICT-BAS.

#### **Evaluation of the scientific works.**

To participate in the competition, the applicant submitted copies of 42 scientific publications in specialized national and international editions. All of them were issued in the period 2007-2019 and do not repeat publications for the doctoral degree. For the most part, they are co-authored with the applicant's participation, including in large international authors teams. Thirteen of the publications were indexed and referenced in the Scopus scientific database. In general, the submitted works contain scientific and applied results related to the control of service robots and robotic manipulators, autonomous mobile robots, remote-controlled robots and training robots. These results undoubtedly indicate that the applicant has extensive knowledge, high competence and experience in the field of robotics.

#### **Evaluation of the citations**

In the list of citations provided, all citations to the candidate's publications are in the works of foreign authors in prestigious editions, which are indexed and referenced in the Scopus scientific information database. The publications cited are also in editions of well-known international organizations such as IFAC Papers-OnLine, IEEE International Conference on Robotics, IEEE / RSJ International Conference on Intelligent Robots and Systems. In this way, significant results in the applicant's research activities have obviously attracted interest and become available to scientists in the field of robotics internationally.

#### **Scientific and applied contributions**

I accept and appreciate positively the applicant's scientific and applied contributions as outlined in the attached reference for contributions. They are fully relevant to the scientific specialty “Robots and manipulators” of the competition and include the developed and tested prototypes of service robots of family “Robco”, developed modules and software for intelligent robot control, the web-based user interface for controlling and maintaining robots platforms. For each contribution, the applicant has identified relevant publications and projects that he has directed or implemented. On the basis of the developed robot "Robko 12" a certificate for registration of a useful model was issued with the owner Dr. N. Chivarov. The listed and documented scientific and applied contributions determine the applicant as a highly qualified specialist in the field of robotics, both in the design and development of robots and robotic systems, and in terms of their practical implementation.

### **General characteristics of the applicant's activities**

The candidate in this competition, Dr. Chivarov, has a total of 17 years of professional work, of which two years and eight months as Chief Assistant Professor and Associate Professor. During this period he worked as a Head of Robotics and Mechatronics Department at Code Assistance Ltd., Research Associate at CLMP-BAS, Associate Professor at ISIR-BAS and Associate Professor at the European Polytechnic University (EPU), Sofia, where he conducted research, teaching, management and scientific-applied activities in the field of robotics. At ISIR-BAS he directed and participated in the work of a service robotics team. As head of the robotics laboratory at EPU, he has supervised graduate and doctoral students and has been involved in national and international projects. He has carried out expert and managerial work in the field of information and communication policy in healthcare as a state expert at the Ministry of Health. The presented scientific publications for participation in the competition show the active publication activity of the candidate and contain original scientific and applied results in the field of service robotics and robotic manipulators.

### **Notes and recommendations**

I have no substantive remarks on the materials submitted by Dr. Chivarov for the competition. I would recommend that in his future work he should also focus on the patentability of his developments. The currently registered useful model of an autonomous personal service robot with its authorship clearly indicates that such capabilities exist.

### **Conclusion**

The materials for the competition and the applicant's results presented therein satisfy all requirements of the Law for academic growth, the Rules for its implementation, the Rules for the conditions and the order for acquiring scientific degrees and occupying academic positions in BAS, as well as the Rules for the specific conditions for acquiring scientific degrees and occupation of academic positions in IICT. My assessment of the applicant's overall activity is positive.

I strongly recommend that the distinguished Scientific Jury vote on a proposal to the Scientific Council of IICT-BAS to select Dr. Nayden Chivarov for occupation of the academic position „Associate Professor“ in the Professional Field: 5.2 Electrical Engineering, Electronics and Automation, Specialty: Robots and manipulators for the needs of the section "Embedded Intelligent Technologies" at IICT\_BAS.

Sofia,

14.08.2019 г.

Signature:

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PUBLIC RELEASE**

/Assoc. Prof. V. Monov/