

# OPINION

by **Prof. D.Sc. Eng. Ivan Stoyanov Yatchev**, Technical University of Sofia

on the materials submitted for participation in a competition for the academic position "Associate Professor"

in the field of higher education - 5. Technical sciences,

by professional field - 5.2. Electrical engineering, electronics and automation,

specialty - "Electrical engineering" (Electromechanical devices, Electrical machines)

In the competition for Associate Professor, announced in the State Gazette, issue 60 / 20.07.2021 and on the website of TU-Gabrovo for the needs of the Technical College at TU-Gabrovo, as a candidate participates Dr. Eng. Milko Ganchev Dochev - Ch. Assistant Professor in the college for the needs of which the competition has been announced.

The opinion was prepared in accordance with the requirements of the Regulations for acquiring scientific degrees and holding academic positions at the Technical University - Gabrovo.

## **1. Overview of the content and results in the presented works**

In the competition for Associate Professor, Ch. Assistant Professor Dochev has presented a total of 83 scientific publications, 2 books connected with his PhD thesis, 1 book and 2 manuals for students. Information on citations and participation in research and educational projects is also presented, as well as for implementations.

The presented works are as follows:

A. Habilitation monograph (indicator B3) - М. Дочев, Високоэффективни електрозадвигвания за електроинструменти. Монография, 2019, 160 стр. Издателство: Инфовижън – Ловеч, 2019, ISBN: 978-619-7442-35-9.

B. Publications other than the monograph - formed as follows:

- published book on the basis of defended PhD Thesis (indicator G6) – two published books - Дочев, М. Методи и средства за техническа диагностика на електрически машини и електроинструменти. Издателство „Инфовижън“ – Ловеч, 2018 г., 233 стр., ISBN 978-619-7442-16-8; Дочев, М. Методи и средства за техническа диагностика на електрически машини. Университетско издателство „В. Априлов“ – ТУ- Габрово, 2019 г., 161 стр., ISBN 978-954-683-591-8;

- in publications that are referenced and indexed in world-renowned databases with scientific information – Scopus and Web of Science (indicator G7) - 2 papers, both with Impact Rank;
- in unreferenced journals with scientific review or in edited collective works (indicator G8) - 81 papers – mostly in Bulgarian and in English and one in German.

A reference for citations of the candidate's works is presented, from which it is evident that the candidate has a total of 35 citations, of which 4 in editions referenced and indexed in world-renowned databases with scientific information and 31 citations in other editions.

## **2. General characteristics of the candidate's activity**

### **2.1. Educational and pedagogical activity (work with students and doctoral students)**

The educational and pedagogical activity of Ch. Assistant Professor Dr. Dochev is significant. An official reference is presented for conducted lectures, laboratory exercises, course projects and course works in 6 disciplines, whose main lecturer is the candidate. His study load in the last two academic years is on average over 500 hours per year. The presented two manuals for students should be evaluated positively.

### **2.2. Scientific and scientific-applied activity**

In addition to the published scientific production, Ch. Assistant Professor Dochev has presented information for participation in projects. He has participated in one project under the PHARE program and in 18 research projects. He has been the leader of 7 of them and vice-leader of 10 projects.

### **2.3. Implementation activity**

The implementation activity of Ch. Assistant Professor Dr. Milko Dochev is significant. 14 implementation documents are presented, most of them for several devices. This is evidence of the practical applicability of the candidate's results. There are implementations in the education, which should also be noted with a positive assessment.

## **3. Contributions (scientific, scientific-applied, applied). Significance of contributions to science and practice**

The main contributions of the applicant can be summarized as follows:

- a number of approaches have been proposed to increase the energy efficiency of hand-held power tools and to decrease the energy intensity of their production;
- methodologies and technical means for study and diagnostics of electrical machines and hand power tools have been developed;

- methodologies, systems, devices and technical means for automation of discrete production have been developed;
- laboratory stands and equipment for teaching and research have been developed.

The main part of the contributions can be attributed to proving with new means of significant aspects of already existing problems.

The comparison of the candidate's indicators with the minimum requirements for holding the academic position "Associate Professor" in the Regulations for acquiring scientific degrees and holding academic positions at the Technical University - Gabrovo shows that for most indicators the candidate exceeds significantly the minimum requirements.

#### **4. Assessment of the personal contribution of the candidate**

The personal contribution of the candidate is undoubted. In the predominant number of publications he is the first author, and the reference to the projects shows his significant role in their management.

#### **5. Critical remarks and recommendations**

In some articles, formal remarks of a technical nature could be made that do not affect the quality of the results obtained.

A recommendation may be made in the future for the candidate to publish his results in publications with an impact factor.

### **CONCLUSION**

**Given the above, I propose Chief Assistant Professor Dr. Eng. Milko Ganchev Dochev to take the academic position "Associate Professor" in the field of higher education 5. Technical sciences, professional field 5.2. Electrical engineering, electronics and automation, specialty "Electrical engineering" (Electromechanical devices, Electrical machines).**

07 Nov 2021

Jury member: /signature/

/ Prof. DSc I. Yatchev /