

# MILITARY ACADEMY „GEORGY STOYKOV RAKOVSKY“

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## OPINION

of prof. eng. Borislav Yordanov Bedzhev, DSc,  
professor with the Faculty „Artillery, Air-Defense and Communication and  
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for the scientific works, presented at the concurs for occupation of the academic  
position „Associated Professor”

scientific area of the high education 5 “Technical Sciences”, professional  
direction 5.3 “Communication and Computer Technics”, scientific speciality  
“Automated Systems for Processing of Information and Management”, for the  
necessities of the scientific section “Doctrines, conceptions and practical lessons”  
with the Defence Advanced Research Institute, announced by the Order № OX-  
460/16.05.2019 of the Minister of Defence of Republic of Bulgaria and in issue  
51/28.06.2019 of the State Gazette

of the candidate:  
lieutenant colonel eng. Zarko Ivanov Zdravkov, PhD,  
chief expert with the section “Defence abilities” of the department “Strategic planning”  
– Ministry of Defence

## **1. General characteristic of the research, scientific-applied and pedagogic activity of the candidate.**

In the above mentioned concurs for occupation of the academic position “Associated Professor” one candidate participates – lt. col. eng. Zarko Ivanov Zdravkov, PhD. He presents 27 scientific works and publications and they are all in the professional direction 5.3 “Communication and Computer Technics”, scientific speciality “Automated Systems for Processing of Information and Management”.

From the presented scientific works, references for participation in research projects and for educational load the following conclusions ensue. First, lt. col. eng. Zarko Zdravkov, PhD, is an active researcher, introducer, pedagogue and organizer in the sphere of the automated information systems (AISs). Second, the presented materials correspond completely or exceed the minimal national requirements for occupation of the academic position “Associated Professor” in the area of the high education 5 “Technical Sciences” of the Law for development of the academic staff in Republic of Bulgaria (LDASRB) and the Rules for applying of the LDASRB.

## **2. Opinion about presence or lack of plagiarism.**

The scientific works, presented by lt col. eng. Zarko Zdravkov, PhD, are characterized by the following positive aspects. First, they comprise the most essential moments of his scientific explorations and they are written in a specific style as the logic connection among them can be traced clearly and distinctly. Second, they are presented at authoritative scientific forums and they are cited 35 times by approved specialists in the area of the communication and computer technics, which shows that the scientific society is introduced to them. Third, at the moment any motivated written signals for fixing of plagiarism in his publications are not known. These facts give me reason to have no doubt about the authority and the originality of the contributions in the elaborations of lt. col. eng. Zarko Zdravkov, PhD.

### **3. Estimation of the pedagogical preparation and activity of the candidate.**

Lt. col. eng. Zarko Zdravkov, PhD has obtained two master degrees in the area of information technologies and he has finished several educational and qualification courses in the country and abroad.

Since 2005 Lt. col. eng. Zarko Zdravkov, PhD is a part-time lecturer in the department “National and international security” with the New Bulgarian university. There he reads lectures in the course “Designing of protected automated information systems”, and since the academic year 2015 he leads the course “Protection of the critical information infrastructure”. In the period 2002-2009 he has taught in CISCO academy “G. S. Rakovsky” of the Military academy “G. S. Rakovsky”.

The monography and the methods of Lt. col. eng. Zarko Zdravkov, PhD, are used by students, cadets, engineers, post-graduate and PhD students in the area of AISs.

### **4. Basic scientific results and contributions.**

On the base of the analysis of the materials, presented for reviewing, the basic contributions of the candidate can be classified as follows:

4.1. Scientific and research contributions in the analysis and synthesis of automated information systems (AISs). These contributions are expressed in elaborations of models of different processes in AISs and methodologies for development of protected AISs by granting of reasonable selection, right inculcating and correct exploitation of the technologies and tools for protection [1], [2], [4], [11], [12], [17], [18], [21], [22], [24], [26];

4.2. Scientific and research contributions in exploration and estimation of technologies and tools for protection of AISs. These contributions present significant for the theory and useful for the practice conclusions, obtained as results of surveys and analyses of strategies, approaches and software tools for protection of AISs [3], [8], [9], [10], [13], [14], [19], [20], [23], [27];

4.3. Scientific and research contributions in the analysis, designing and building of data bases. These contributions are expressed in elaboration and practical implementation of models and methodologies for creation of protected data bases [5], [6], [7], [15], [16], [25].

From the analysis of the scientific production of Lt. col. eng. Zarko Zdravkov, PhD the following conclusions can be made.

First, the scientific, research and applied contributions represent proofs by new means of essential new aspects of existing scientific areas, problems, theories, hypotheses; creating of new classifications, methods, constructions, technologies and obtaining of confirmative facts.

Second, lt. col. eng. Zarko Zdravkov, PhD has profound knowledge in the area of the concurs, can deal independently with actual scientific and research tasks, keeping a high scientific level.

Third, the candidate can work in scientific teams, can generalize the results of scientific investigations and can present them in appropriate form for teaching of graduate and post-graduate students, PhD students and other scientific, engineering and technical staff.

## **5. Estimation of the significance of the contributions for the science and the practice.**

The significance of the contributions in the scientific works of lt. col. eng. Zarko Zdravkov, PhD ensues from the following circumstances.

First, the candidate has participated in more than 25 research projects, finished successfully and in time.

Second, the known to the moment 35 citations show that the candidate has obtained and has published considerable results, which have deserved the recognition of the scientific society.

Third, the monography, the educational materials, methods and software products, developed by lt. col. eng. Zarko Zdravkov, PhD, at the moment are used by graduate and post-graduate students, cadets and PhD students and officers, studying or exploiting AISs.

Forth, the effect of the implementation of the research exploration results of lt. col. eng. Zarko Zdravkov, PhD, is expressed mainly in elaboration of AISs and data bases of Ministry of Defence of Republic of Bulgaria.

## **6. Critical notes about the presented works.**

I have only one essential recommendation to lt. col. eng. Zarko Zdravkov, PhD, for his future work – to be more active in publications of his scientific and research results in editions with impact-factor or impact-rank.

## **7. Conclusion.**

The materials, presented by lt. col. eng. Zarko Zdravkov, PhD for participation in the concurs satisfy the requirements of the LDASRB, Rules for applying of the LDASRB and the minimal national requirements for the area of high education 5. “Technical sciences”.

## **8. Estimation of the candidates.**

On the base of analysis of the presented scientific works, their significance, the scientific, research and applied contributions, comprised in them, I give positive valuation of the scientific and the teaching activity of lt. col. eng. Zarko Ivanov Zdravkov, PhD. Accounting this, I propose to the honourable members of the scientific jury and to the honourable members of the Council of the Defence Advanced Research Institute to vote for adjudging the academic position “Associated Professor” in the scientific area of the high education 5 “Technical Sciences”, professional direction 5.3 “Communication and Computer Technics”, scientific speciality “Automated Systems for Processing of Information and Management”, to lieutenant colonel eng. Zarko Ivanov Zdravkov, PhD.

Date 10.12.2019

Member of the jury: .....

(prof. eng. Borislav Bedzhev, DSc)