

REPORT

to occupy the academic position:

"Professor"	
"Associate Professor"	X
	one of the academic positions indicated shall be marked with the sign "X"

Candidates to occupy the position:

1	Chief ass.	Dr.	Hristo	Mihailov	Antchev	UCTM
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

5.2	Technical science
code	name

Professional area:

5.2	Electrotechnics, electronics and automatization
code	name

Scientific specialty:

Industrial electronics

The competition has been announced:

102	23.12.2022	Metallurgy technology, electrotechnics and electronics	Metallurgy and materials science
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

professor	Dr.	Ratcho	Marinov	Ivanov	retail
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Chief ass.	Dr.	Hristo	Mihailov	Antchev
academic position	scientific degree	name	middle name	last name

1.1. Meeting the minimum requirements under the Regulations:

A) The candidate meets the minimum requirements	20 points	X
B) The candidate doesn't meet the minimum requirements	0 points	
		one of the answers given is marked with the sign "X"

<p>It must be filled in if answer B is marked. The publication activity of the candidate is analyzed. The response of the results achieved (quoted) is analyzed.</p> <p>The candidate, Chief ass. professor Dr. Hristo Mihailov Anchev has submitted all the necessary documents for participation in the competition, including according to indicator 4 - 12 publications, according to indicators 7 and 8 - 28 publications and a Manual for laboratory exercises in electronics.</p> <p>According to indicator 1 (Dissertation for "doctor") there are 50 points, as a result of a defended dissertation on the topic "Research of systems of power electronic converters with a common output voltage" at TU Sofia in 2012 from professional direction 5.2.</p> <p>According to indicators 3 and 4 – 12 scientific publications that are referenced and indexed in world-famous databases with a total number of points 217 with requirements of 100.</p> <p>According to indicators 5 to 11, there are 28 scientific publications with a total of 293 points out of a requirement of 200.</p> <p>According to indicators 12 to 15, there are 35 citations in scientific publications referenced and indexed in Scopus, 32 of which are abroad and 3 in Bulgaria with a total number of points of 350 with a requirement of 50.</p> <p>According to indicators 16 to the end, the total number of points is 70</p> <p>According to indicator 24 – one study guide was published</p> <p>He participated in contracts, managing 4 contracts with the participation of 13 students in an internal competition of UCTM. With an associate professor requirement of 420 points, he has 999 points and definitely meets the requirements.</p>
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1.2. Relevance of scientific and / or applied research:

A) The research is relevant. Part of the research is pioneering (no results are known on the topic by other authors)	8 points	
B) Research is relevant. Results from other authors are known for each of the topics and / or applications studied.	6 points	X

C) Most of the research is relevant, but also some results are presented that have no scientific and / or applied value	4 points	
D) The smaller part of the research is relevant	2 points	
E) Research is not relevant	0 points	
		one of the answers given is marked with the sign "X"

The evaluation of the relevance of the research must be substantiated.

DC-to-DC converter systems are investigated in terms of output power enhancement possibilities, better grid energy performance – power factor, grid current harmonics and radio interference level. The candidate's dissertation and publications are in this area. In this scientific and applied field, there is active work and many studies are published. This is an indication that the topic is current. The candidate's works are in the field of active power filters, phase-locked loops for power electronic converters, power electronic converters for various purposes and blocks of control systems for power electronic converters.

1.3. Objectives of the research:

A) Realistic and of scientific and / or applied interest	8 points	X
B) Realistic, but not of scientific and / or applied interest	4 points	
C) Unattainable (unrealistic)	0 points	
		one of the answers given is marked with the sign "X"

Objectives must be specified. The type of the set objectives must be justified

Research of DC/DC converters with a common output constant voltage under different control algorithms in order to improve their performance. Study of algorithms for controlling parallel converters in order to equalize their load. DC to DC converter systems in the conversion of energy from renewable energy sources and their matching to photovoltaic modules and fuel cells. The purpose of the research is to find options with reduced pulsations as well as reduced requirements for the power tools.

1.4. Candidate research contributions:

A) With lasting scientific and / or applied response, they form the basis for new research and applications	20 points	
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B) They are of significant scientific and / or applied interest, complete and / or summarize previous research	16 points	X
C) They are of scientific and / or applied interest	12 points	
D) Lack of significant contributions	8 points	
E) Lack of contributions	0 points	
		one of the answers given is marked with the sign "X"

Contributions must be specified. The type of results achieved must be justified.

The candidate's scientific and scientific-applied contributions are in the field of active power filters, phase-locked loops for power electronic converters connected to the supply network, power electronic converters for charge, power electronic converters for lighting, blocks of power electronic converter control systems.

In the report on the contributions submitted by the candidate, he has formulated and presented them in 5 groups according to their subject matter. There are definitely scientific and scientific-applied contributions, and formulated in that way I accept them. A list of 32 cited abroad and 3 in Bulgaria is presented.

There is participation and management of 4 internal contracts at UCTM with the participation of students.

At TU Sofia, he participated in two NIS contracts.

1.5. Participation of the candidate in the achievement of the presented results:

A) The candidate has at least an equal participation in the submitted papers	8 points	X
B) The candidate has at least an equal participation in most of the submitted papers	7 points	
C) The candidate has a secondary participation in most of the submitted papers	4 points	
D) The candidate participation is unnoticeable	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items C or D is marked.

Of the publications according to indicator 4 - the first author is 3, the second is 3, the third is 2 and the fourth is 4.

Of the publications according to indicators 7 and 8, 4 are the sole author, 8 publications are the first author, 6 are the second, and in the rest the third or fourth. From these data it can be concluded that the candidate's participation is equal and I have no doubts.

1.6 Pedagogical activity:

A) The candidate has effective and sufficient pedagogical activity at the university. The textbooks issued are modern and useful (they meet the requirements of the Regulations). The work with undergraduate and doctoral students is at a high professional level.	8 points	
B) The candidate has sufficient pedagogical activity at the university. The textbooks issued satisfy the requirements of the Regulations.	6 points	X
C) The pedagogical activity and / or textbooks issued are insufficient (do not meet the requirements of the Regulations)	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items B or C is marked.

1.7. Critical notes:

A) Lack of critical notes	8 points	X
B) Critical notes of a technical nature	7 points	
C) Critical notes that would partially improve the results achieved in a small part of the research	5 points	
D) Critical notes that would partially improve the results achieved in most of the research	3 points	
E) Significant critical notes	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the answers C, D or E is marked.

1.8. Conclusion

A) The evaluation of the candidate's activity is POSITIVE	This evaluation is assigned to a total number of at least 50 points	X
B) The evaluation of the candidate's activity is NEGATIVE	This evaluation is assigned to a total number below 50 points	
		one of the answers given is marked with the sign "X"

To be filled in if requested by the member of the scientific jury
From my familiarity with the materials presented, I can say with conviction that the candidate meets the requirements of the law and the regulations, and his selection as an "associate professor" will be useful for the academic environment and the education of students.

25.04.2023r.	The report was written by:	
date		signature