

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 Assistant Professor	doctor	Stanislav	Slavchev	Slavov	UCTM
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

4.	Natural sciences, mathematics and informatics
code	name

Professional area:

4.5.	Mathematics
code	name

Scientific specialty:

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The competition has been announced:

67	13.08.2021	Mathematics	Faculty of Chemical Technology
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Professor	doctor	Nikolay	Veselinov	Kyurkchiev	PU
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Chief Assistant Professor	doctor	Stanislav	Slavchev	Slavov
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"

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.

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	X
B) Research is relevant. Results from other authors are known for each of the topics and / or applications studied.	6 points	
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.

The use of mathematical models in the field of nucleation and physico-chemistry and their observation at a higher energy level is an eternally relevant task.

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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
The articles submitted by the candidate for participation in the competition contain results with scientific and applied contributions in the indicated areas.

1.4. Candidate research contributions:

A) With lasting scientific and / or applied response, they form the basis for new research and applications	20 points	
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.
<p>In my opinion, the main scientific and applied contributions of the candidate are the following:</p> <ul style="list-style-type: none"> - use of phase equilibrium diagrams, allowing to determine the topology of surfaces within the limits of zero velocity, and thus the detection of regularities in the choice of initial approximations when conducting real experiments; - study of vibrational spectra and characteristic peaks based on the convergence algorithm of Fletcher-Powell-McCormick;

- study of the structure of new bismuth-titanate materials and the profile of the characteristic peaks using Gaussian error function as well as the study of dielectric properties of compositions from the $\text{Bi}_2\text{O}_3\text{-TiO}_2\text{-SiO}_2$ system based on the Nyquist model;
- the modification of the known Picard-Lindelof scheme and its use for estimating parameters of ordinary differential equations;
- skillful use of elements of graph theory for model recognition with application in mechanical engineering.

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.

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	X
B) The candidate has sufficient pedagogical activity at the university. The textbooks issued satisfy the requirements of the Regulations.	6 points	
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
Note. In the process of preparing the opinion, I found that the list of citations (according to the candidate in the competition) is larger.

For example, the articles under NoNo: II.4; I.6; I.2 (for participation in the competition) are cited in:

N. Kyurkchiev, O. Rakhneva, A. Malinova, Anton Iliev, ON SOME ADAPTIVE G – FAMILIES. APPLICATIONS, International Journal of Differential Equations and Applications, 20, 1, 2021, 89-101; SJR: = 0.103

Articles under NoNo: I.6; I.2 (for participation in the competition) are cited in:

N. Kyurkchiev, A. Iliev, V. Arnaudova, A. Rakhnev, INVESTIGATIONS ON SOME NEW CUMULATIVE DISTRIBUTIONS VIA COSINE AND SINE FUNCTIONS. APPLICATIONS, International Journal of Differential Equations and Applications, 20, 1, 2021, 75-88; SJR: = 0.103.

With this update, the real "impact" of citations is higher! This gives additional grounds for my positive assessment of holding the academic position "Associate Professor" announced in the competition.

18.12.2021	The report was written by:	
date		signature