

STATEMENT

by commissioner assoc. prof. eng. Hristo Kostadinov Prodanov, PhD

Dean, Faculty of Fire Safety and Civil Protection, Academy of the Ministry of Interior

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Subject: competition procedure for the academic position of ASSOCIATE PROFESSOR,
from the field of higher education: 5. Technical Sciences,
professional field: 5.7 Architecture, Construction and Geodesy,
in academic disciplines: "Hydraulics and Water Supply for Firefighting" and "Design of Fire Suppression Systems"
For the candidate: Inspector eng. Svilena Sevdalinova Arabadzhieva, PhD

1. Information about the procedure

The competition procedure is initiated by the Academy of the Ministry of Interior – published in State Gazette – issue No. 42/08.05.2026. The procedure is for the needs of the "Fire Tactics" department at the Faculty of Fire Safety and Civil Protection.

I have been appointed as member of the scientific jury according to order with reg. No. 45813-1728/10.08.26.

2. Brief information about the candidates in the competition

The sole candidate in the competition is inspector eng. Svilena Sevdalinova Arabadzhieva, PhD, born in 1984 in the town of Elena, Veliko Tarnovo Region. In 2007 Dr. Arabadzhieva obtained a BS degree in "Fire and Emergency Safety" from the Faculty of Fire Safety and Civil Protection at the Academy of the Ministry of Interior.

Her professional career began in 2007 as an inspector for state fire control and prevention at the First District Fire Safety and Civil Protection Service in Ruse. From 2010 to 2012 she worked as an inspector in the "State Fire Control and Prevention" sector at the Regional Directorate in Veliko Tarnovo.

In 2011, she received a MS degree in "Fire and Emergency Safety," again from the Faculty of Fire Safety and Civil Protection at the Academy of the Ministry of Interior.

In March 2012, she assumed the academic position of Assistant Professor in the "Fire tactics" Department of the Faculty of Fire Safety and Civil Protection at the Academy of the Ministry of Interior. She provided "Practical Training (Operational Duty)" and gives practical exercises in the subjects "Hydraulics and Firefighting Water Supply" and "Rescue Operations." Since 2021, she has held the position of Senior Lecturer. In 2021, she also obtained a MS degree in "Security and Defense Logistics" from the "G. S. Rakovski" National Defence Academy.

In 2024, she earned a PhD degree in the doctoral program "Occupational Safety and Firefighting Equipment" within the higher education field of "Technical Sciences" and the professional

field of "Architecture, Civil Engineering, and Geodesy" at the Academy of the Ministry of Interior, with a thesis titled "Dynamics of Fire Development in Passenger Railway Carriages"

She currently teaches practical classes in the subjects "Hydraulics and Firefighting Water Supply" and "Logistics."

3. Fulfillment of the requirements for the academic position

After reviewing the Certificate of Compliance with the Minimum National Requirements under Art. 2b, para. 2 and 3, respectively the requirements under Art. 2b, para. 5 of the LDASRB, declared by the candidate, and the evidence attached to it, I establish the following:

	Indicators, Data	MNR nr. points	Declared	YES/NO
A	PhD thesis - <i>Dynamics of Fire Development in Passenger Railway Carriages</i> , AMoI, Diploma № 097/25.11.2024	50	50	YES
B	Habilitation thesis – monograph - “Water Supply for Internal Firefighting: Internal Fire Hydrants, 2026, 130 pages, ISBN 978-954-348-267-2, Scientific reviewers: assoc. prof. eng. Zhani Dimova Neykova, PhD; assoc. prof. eng. Stefan Dimitrov Dimitrov, PhD	100	100	YES
Г	25 scientific publications: - 2 publications in journals refereed and indexed in world-renowned scientific databases, with a total volume of 18 pages—both co-authored; - 23 in non-indexed, peer-reviewed journals or in edited collective volumes, with a total length of 178 pages – 5 single-authored and 18 co-authored.	200	303,35	YES
Д	A total of 23 citations: - 5 in scientific publications refereed and indexed in internationally renowned scientific databases - 13 in peer-reviewed monographs and edited volumes - 5 in peer-reviewed, non-refereed journals.	50	99	YES

Dr. Arabadzhieva fulfills the minimum national requirements for holding the academic position of ASSOCIATE PROFESSOR, in the field of higher education: 5. Technical Sciences, professional field: 5.7 Architecture, Construction and Geodesy.

4. Evaluation of teaching activities

The materials presented by Dr. Arabadzhieva demonstrate her consistent professional development as an expert and educator in the field of fire safety. Her teaching activities span all BS and MS degree programs within the Faculty of Fire Safety and Civil Protection. She also actively participates in numerous professional training courses.

I have known Dr. Arabadzhieva personally since 2003 and can confirm that she conducts her classes at a high professional and academic level. The high ratings she receives from students serve as a strong testament to the quality of her work. Also noteworthy is the large number of students who have successfully defended their theses under her supervision, as well as their subsequent contributions to publications and participation in various professional forums.

Given Dr. Arabadzhieva's extensive practical and pedagogical experience, along with her research endeavors in the field of fire and emergency safety, I believe she meets the criteria for academic advancement.

5. Brief description of the presented scientific works

Dr. Arabadzhieva participates in the competition procedure with one monograph, 11 conference papers, and 14 publications, with total volume of 326 pages. The works submitted by Dr. Arabadzhieva can be categorized into the following areas:

- experimental and applied research related to fire safety in railway transport;
- experimental and applied research related to water supply for firefighting;
- research into the implementation of new methods for ensuring fire safety, including for the training of specialists and the general public, in the design processes, and for the mitigation of fire-related consequences;

Of the works submitted for review, 23% were authored independently, while 77% were co-authored. Five of the works involved more than one co-author, reflecting Dr. Arabadzhieva's ability to work successfully within research teams, including with students.

Dr. Arabadzhieva presented 11 papers at 10 scientific conferences and sessions with international participation, organized by the Academy of the Ministry of Interior, the "Vasil Levski" National Military University, the "Lyuben Karavelov" Higher School of Civil Engineering, and others. This demonstrates that the candidate is recognized within the scientific community. The remaining works consist of publications in departmental bulletins and yearbooks. Dr. Arabadzhieva produced this body of work over a 17-year period, spanning from 2009 to 2026. Dr. Arabadzhieva reports 23 citations of her publications, including five in scientific journals refereed and indexed in world-renowned scientific databases. This demonstrates that Dr. Arabadzhieva's research output attracts significant interest within the academic and professional community.

6. Assessment of the main scientific and applied scientific contributions

Based on an analysis of the works submitted by the candidate, I consider the following groups of contributions to be the most significant:

1. Results obtained from experimental and applied research (1.1, 2.4, 2.5, 2.13, 2.17, 2.21, 2.22);
2. Models developed for the analysis, assessment, and management of fire risk (2.6, 2.8, 2.9, 2.10, 2.12, 2.15, 2.18, 2.21, 2.23);
3. Expanded scientific knowledge regarding the fire safety of specialized and high-risk facilities (1.1, 2.3, 2.4, 2.5, 2.6, 2.7, 2.11, 2.21, 2.23).

The candidate demonstrates a notable ability to identify significant fire safety issues and to formulate complex scientific tasks for their resolution.

I regard the following as key scientific contributions:

- the experimental demonstration that nozzles with the same nominal or equivalent diameter can exhibit significantly different discharge coefficients, flow rates, required operating pressures, and jet ranges (1.1);
- the developed comprehensive life-cycle concept regarding the reliability of indoor fire hydrants (1.1);
- the experimental results obtained regarding the combustibility and smoke-generating capacity of polymer and textile materials used in railway rolling stock interiors, as well as the hazardous fire factors within the compartment (2.4, 2.5, 2.16).

I highlight the following key applied scientific contributions:

- the developed theoretical-computational framework for evaluating modern combined nozzles featuring complex and variable geometry (1.1);
- the developed comprehensive computational procedure for evacuation assessment, which links route width and length, absolute and relative flow density, movement speed, specific throughput capacity, and the effects of constrictions and the merging of human flows (2.12);
- the developed numerical model of a fire in a full-size Type B84 compartment passenger carriage (2.21).

7. Opinion on the presence or absence of plagiarism or unreliability of the presented scientific data

At the time of preparation of this STATEMENT, no data on plagiarism, incorrect borrowing or unreliability of the results presented by Dr. Arabadzhieva have been found. The presented scientific works are original, reliable and fully comply with the principles of scientific ethics and academic integrity.

8. Main critical remarks and recommendations

I have no critical remarks regarding the submitted materials. I recommend that Dr. Arabadzhieva increase the proportion of her sole-authored publications and present her future work at prestigious scientific forums in other countries.

9. Conclusion

Based on the analysis of the papers and other documents provided to me for analysis, I declare that the candidate Svilena Sevdalinova Arabadzhieva, PhD **meets** the minimum national requirements for holding the academic position of ASSOCIATE PROFESSOR, from the field of higher education: 5. Technical Sciences, professional field: 5.7 Architecture, Construction and Geodesy.

My assessment of the papers provided for review is **positive**.

At the time of preparation of this report, **no data** on plagiarism, incorrect borrowing or unreliability of the results presented by Dr. Arabadzhieva have been found.

In view of the above, I propose to the esteemed Scientific Jury **to vote positively and to propose** to the Faculty Council of the Faculty of Fire Safety and Civil Protection - inspector eng. Svilena Sevdalinova Arabadzhieva, PhD to be elected to the academic position of ASSOCIATE PROFESSOR in the “Fire Tactics” Department of the Faculty of Fire Safety and Civil Protection at the Academy of the Ministry of Interior, from the field of higher education: 5. Technical Sciences, professional field: 5.7. Architecture, Construction and Geodesy, in the academic disciplines “Hydraulics and Water Supply for Firefighting” and “Design of Fire Suppression Systems”.

Date: 30.09.2026

Member of scientific jury:.....

Commissioner assoc. prof. Hristo Prodanov, PhD