



Name	Mariia Arefieva
Position, Department/Faculty	Senior lecturer, Department of Aero-Hydrodynamics
Academic Degree, Academic Title	-
Email:	m.o.arefieva@khai.edu
Scopus Author ID:	57904059100
Web of Science ResearcherID:	JVZ-5397-2024
ORCID iD:	0000-0003-2569-0194
Google Scholar:	https://scholar.google.com/citations?user=2bu5Zn0AAAAJ&hl=uk
ResearchGate:	https://www.researchgate.net/profile/Mariia-Arefieva?ev=hdr_xprf

EDUCATION:

Basic education (university, major, year of graduation):

master's degree in "Electric power engineering, electrical engineering and electromechanics", National Technical University "Kharkiv Polytechnic Institute", December 2018

Postgraduate/Doctoral studies:

National Aerospace University "Kharkiv Aviation Institute: postgraduate, 09.2022 – until now.

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):

SE "Electrovajmash Plant": leading design engineer, 03.2019 – 08.2021.

Teaching Experience:

Private institution of general secondary education "Kharkiv Lyceum "IT STEP SCHOOL"": physics teacher (part-time), 08.2020 – until now;

National Aerospace University "Kharkiv Aviation Institute": teaching assistant, 09.2022 – 09.2025;

National Aerospace University "Kharkiv Aviation Institute": senior lecturer, 09.2025 – until now.

RESEARCH ACTIVITIES:

Main Research Areas:

Hydropower, Turbogenerator, Energy, Aerohydrodynamics

Number of Publications (Scopus, WoS, others):

8 articles

Monographs, Textbooks:

1 monograph

Participation in Scientific Conferences:

1 conference



TEACHING ACTIVITIES:

Courses Taught:

Mathematical modeling of aircraft spatial motion
Aircraft aerodynamics
Hydraulics

PROFESSIONAL ACHIEVEMENTS AND AWARDS:

Distinctions, Awards, Prizes:

Competition of the Kharkiv Regional Council of the Society of Inventors and Rationalizers of Ukraine, Kharkiv State Scientific Library named after V.G. Korolenko "Young Innovator" in the nomination "Best Innovative Proposal", 1st degree diploma on the topic "Constructive and technological methods for increasing the power of hydrogenerators in Ukraine".

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):


1. Tretiak, O., Kritskiy, D., Kobzar, I., Arefieva, M., Nazarenko, V. (2022). The Methods of Three-Dimensional Modeling of the Hydrogenerator Thrust Bearing. *Computation*, 10(9), 152.
2. Tretiak, O., Kritskiy, D., Kobzar, I., Sokolova, V., Arefieva, M., Tretiak, I., Hromenko, D., Nazarenko, V. (2022). Modeling of the Stress–Strain of the Suspensions of the Stators of High-Power Turbogenerators. *Computation*, 10(11), 191.
3. Tretiak, O., Kritskiy, D., Kobzar, I., Arefieva, M., Selevko, V., Brega, D., Maiorova, K., & Tretiak, I. (2023). Stress-Strained State of the Thrust Bearing Disc of Hydrogenerator-Motor. *Computation*, 11(3), 60.
4. Tretiak, O., Serhienko, S., Zhukov, A., Gakal, P., Don Y., Arefieva, M., Tretiak, I., Kravchenko, S., Bohozhavets, O. Peculiarities of the Design of Housing Parts of Large Direct Current Machines, *SAE Int. J. Mater. Manf.* 17(1):59-72, 2024.
5. Tretiak, O., Kovryga, A., Kravchenko, S., Shpitalnyi, D., Zhukov, A., Serhienko, S., Arefieva, M., Penkovska, N., Madonych, A. (2024). Estimating the influence of the rigidity of support assemblies on the resonance phenomena and the vibration state of a hydraulic unit. *Eastern-European Journal of Enterprise Technologies*, 6(7 (132), 53–64.
6. Tretiak, O., Arefieva, M., Makarov, P., Serhienko, S., Zhukov, A., Shulga I., Penkovska, N., Kravchenko, S., Kovryga, A. Study of Different Types of Ventilation and Cooling Systems of Bulb Hydrogenerators in a Three-Dimensional Setting, *SAE Int. J. Mater. Manf.* 18(3):2025.
7. Tretiak, O., Kravchenko, S., Mykhailychenko, O., Nazarenko, V., Smyk, S., Vasyliiev, O., Arefieva, M., Tretiak, I., Serhienko, S., & Selevko, V. (2025). Devising a method for calculating the structure of efficient cooling systems for thrust bearings and guide bearings in hydrogenerators. *Eastern-European Journal of Enterprise Technologies*, 3(1 (135), 38–50.

Books, Chapters in Collective Monographs:

Tretiak O. V., Arefieva M. O., Kobzar I. V., Repetenko M. V., Sergienko S. A., Zhukov A. Yu., Penkovska N. S., Selevko V. B., Nazarenko V. V. Methods and concepts of calculation of turbo- and hydrogenerators in three-dimensional resolution: monograph - Kharkiv: KP "City Printing House", 2023 - 138 p. ISBN 978-617-619-284-8;

Links to Citation Database Profiles:



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- In the top left corner, there are decorative geometric shapes in dark blue and light blue, resembling stylized wings or abstract architectural elements.
1. <https://doi.org/10.3390/computation10090152>;
 2. <https://doi.org/10.3390/computation10110191>;
 3. <https://doi.org/10.3390/computation11030060>;
 4. <https://doi.org/10.4271/05-17-01-0005>;
 5. <https://doi.org/10.15587/1729-4061.2024.316778>;
 6. <https://doi.org/10.4271/05-18-03-0020>;
 7. <https://doi.org/10.15587/1729-4061.2025.329021>.

ADDITIONAL INFORMATION:

Language Proficiency:
English – A1

IT Skills:
programs MS Office, SolidWorks, XFIR5, SimScale

