Name	Garin Vadym
Position, Department/Faculty	Senior Researcher, Department of The Technology of Aircraft Manufacturing / Faculty of Aircraft Building
Academic Degree, Academic Title	
Email:	v.garin@khai.edu
Scopus Author ID:	57219015898
Web of Science ResearcherID:	KJM-1464-2024
ORCID iD:	0000-0001-7788-0593
Google Scholar:	
ResearchGate:	https://www.researchgate.net/profile/Vadym-Garin?ev=hdr_xprf

EDUCATION:

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

National Aerospace University - "Kharkiv Aviation Institute"
Master's degree, Corporate Economics (2005 - 2007)

National Aerospace University - "Kharkiv Aviation Institute"
Master of the first degree, Technology of production, repair and maintenance of aircraft engines (2004 - 2006)

National Aerospace University - "Kharkiv Aviation Institute"
First bachelor's degree, engineering mechanics (2000 - 2004)

Postgraduate/Doctoral studies:

National Aerospace University - "Kharkiv Aviation Institute"
PhD, Processing of polymer composite materials using the plasma gasification process (2006 - 2012)

2020-2022: National Aerospace University “Kharkiv Aviation Institute”, postdoctoral studies.
Specialization: Technical Sciences – Physical and Technical Processes of Material Processing.

Additional training, certification programs:

- Certificate Nr KJ-A Nr. 23/05/204. Issue date: 20-05-2023. English Level (B2).
- Certificates of training in Ansys courses (2023).

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):

2006 – until today
Senior researcher • National Aerospace University "Kharkiv Aviation Institute"

Teaching Experience:

September 2016 - May 2020
Senior Lecturer • National Aerospace University "Kharkiv Aviation Institute"

Experience in International or National Projects:
2024-2025: Project funded by the National Research Foundation of Ukraine.
2013-2025: Projecti funded by Ministry of Education and Science of Ukraine.

RESEARCH ACTIVITIES:

Main Research Areas:
The theoretical principles of high-precision material treatment through exposure to intense thermal fluxes arising from the combustion of detonating gases in confined chambers encompass a broad range of investigations. These include the characterization of gas-dynamic behavior and thermal transfer mechanisms, the determination of electrical properties of advanced high-energy ignition devices, and the evaluation of material resistance under short-duration thermal loading. Furthermore, numerical simulations based on the finite element method are employed to analyze gas mixture combustion in various operating modes. Particular emphasis is also placed on the study of metallic plastic deformation and the processes of closed-die forging.

Number of Publications (Scopus, WoS, others):
42

Monographs, Textbooks:
3

Participation in Scientific Conferences:
13

TEACHING ACTIVITIES:

Courses Taught:
CAD/CAM/CAE systems, Welding in aviation.

GRANTS AND PROJECTS:

Participation in International and National Projects:
1. Senior Researcher, “Increasing the Energy Efficiency and Safety of Plastics Thermal Processing Using Numerical Simulation” funded by the European Union’s Horizon 2020 program under grant agreement No. 871072 (EURIZON H2020 GA # EU-3034), 2024-2025.
2. Senior Researcher, “Creation of the Remote Gas Detonation Deminer” funded by the National Research Foundation of Ukraine, under grant agreement No. 2023.04/0027, 2024-2025.
3. Senior Researcher, "Development of software and technical support for digital duplicates of processing aircraft parts with detonating gas mixtures", M. E. Zhukovsky National Aerospace University "Kharkiv Aviation Institute", 2021-2022, Ministry of Education and Science of Ukraine, https://nrat.ukrintei.ua/searchdoc/0223U000869/
4. Senior Researcher, "Development of technologies and technical solutions for automated industrial units for precision processing of parts of gas turbines with detonating gas mixtures", all-Ukrainian, National Aerospace University named after M. E. Zhukovsky "Kharkiv Aviation

Institute", 2019-2020, MES of Ukraine, https://nrat.ukrintei.ua/searchdoc/0221U101058/

5. Researcher, "Development of an automated complex for precision thermal pulse treatment with detonating gas mixtures", all-Ukrainian, M. E. Zhukovsky National Aerospace University "Kharkiv Aviation Institute", 2017-2018, Ministry of Education and Science of Ukraine, https://nrat.ukrintei.ua/searchdoc/0219U003579/
6. Researcher, "Development and research of technologies for the finishing of parts of aerospace equipment with intense heat flows", all-Ukrainian, National Aerospace University named after M. E. Zhukovsky "Kharkiv Aviation Institute", 2013-2014, MES of Ukraine, https://nrat.ukrintei.ua/searchdoc/0215U006171/

Grants, Scholarships, Academic Mobility Programs:
East-West European Network on Higher Technical Education Erasmus Mundus Action 2 Lot 8 program from 23.10.2013 to 22.08.2014 at the Czech Technical University in Prague

INTERNATIONAL ACTIVITIES:

Cooperation with Foreign Universities:

- Warsaw University of Technology, Warsaw, Poland.
- Czech Technical University in Prague

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):

1. Development of an automated complex for precision thermal pulse processing with detonating gas mixtures: scientific materials [Text]: monograph / S. I. Plankovsky, O. V. Shipul, E. V. Tsegelnyk, O. V. Trifonov, K. V. Korytchenko, O. O. Baranov, Yu. O. Sysoev, V. O. Garin, E. O. Aksyonov, V. V. Kombarov, S. O. Zaklinskyi; under the editorship S. I. Plankovskyi. - Kharkiv: National. aerospace University named after M. E. Zhukovsky "Kharkiv. aviation Institute of Technology", 2020. - 318 p. ISBN: 978-966-662-753-0 http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe
2. Shypul, O., Garyn, V., Tkachenko, D., Plankovskyy, S., & Tryfonov, O. (2023). Development of a Digital Twin for Gas Mixing in a Generator. Hungarian Journal of Industry and Chemistry, 51(1), 35–42. https://doi.org/10.33927/hjic-2023-06
3. Tryfonov, O., Shypul, O., Plankovskyy, S., & Garin, V. (2022). Numerical and experimental investigation of exhaust release at thermal pulse deburring. Eastern-European Jour-nal of Enterprise Technologies, 6, no. 1 (120), P. 6–15, Q2. https://doi.org/10.15587/1729-4061.2022.267798
4. Garin, V.O. Development of a digital twin for filling a tank with a gas mixture / V.O. Garin, D.A. Tkachenko, O.V. Shipul, S.O. Zaklinskyi, O.V. Trifonov, S.I. Plankovsky // Aviation and space technology and technology. – 2022. – No. 5 (183). - pp. 40-50. https://doi.org/10.32620/aktt.2022.5.03
5. Shypul, O., Garin, V., Tkachenko, D., Zaklinskyy, S., Tryfonov, O., Plankovskyy, S. (2022). Development of a Digital Twin of Reservoir Filling by Gas Mixture Component. In: Shkarlet, S., et al. Mathematical Modeling and Simulation of Systems. MODS 2022. Lecture Notes in Networks and Systems, vol 667. Springer, Cham. https://doi.org/10.1007/978-3-031-30251-0_7
6. O. Shypul, S. Plankovskyy, S. Zaklinskyy, O., Pavlenko, V. Garin. Determination of the mass of gas in a reservoir at filling with a mixture component under the pressure // ICTM 2021 – International Scientific and Technical Conference Integrated Computer Technologies In Mechanical Engineering

– Synergetic Engineering. November 28-29, 2021. Kharkiv, Ukraine. / Lecture Notes in Networks and Systems, 2022, Vol. 367, P. 166–177. https://doi.org/10.1007/978-3-030-94259-5_16
7. Shipul, O.V. Numerical and experimental study of tank filling with gas mixture component [Text] /O.V. Shipul, S.O. Zaklinskyi, V.V. Kombarov, O.A. Pavlenko, V.O. Garin // Aviation and space technology and technology. – 2021. – № 4 (172). – С. 63 – 72. https://doi.org/10.32620/aktt.2021.4.09
8. CFD model as a digital twin of the radiation state of the new safe confinement of the chernobyl NPP/Krukovskyi, P.G., Diadiushko, Y.V., Garin, V.O., Tryfonov, O.V. //Problems of Atomic Science and Technology, 2020, 128(4), pp. 54–62. ISSN 16829344. https://vant.kipt.kharkov.ua/ARTICLE/VANT_2020_4/article_2020_4_54.pdf

Books, Chapters in Collective Monographs:
Development of an automated complex for precision thermal pulse processing with detonating gas mixtures: scientific materials [Text]: monograph / S. I. Plankovsky, O. V. Shipul, E. V. Tsegelnyk, O. V. Trifonov, K. V. Korytchenko, O. O. Baranov, Yu. O. Sysoev, V. O. Garin, E. O. Aksyonov, V. V. Kombarov, S. O. Zaklinskyi; under the editorship S. I. Plankovskyi. - Kharkiv: National. aerospace University named after M. E. Zhukovsky "Kharkiv. aviation Institute of Technology", 2020. - 318 p. ISBN: 978-966-662-753-0 http://www.irbis-nbuv.gov.ua/cgi-bin/irbis_nbuv/cgiirbis_64.exe

Links to Citation Database Profiles:
1. https://www.researchgate.net/profile/Vadym-Garin?ev=hdr_xprf
2. https://www.scopus.com/authid/detail.uri?authorId=57219015898
3. https://orcid.org/0000-0001-7788-0593

ADDITIONAL INFORMATION:

Language Proficiency:
English – Upper Intermediate Level (B2).

IT Skills:
FEM Analyses: Ansys Workbench (Mechanical, CFX / CFD). CAD Programs: Solid Works.
Other Software: MS Word, Excel, CorelDRAW, Adobe Photoshop CS.

Social and Community Activities:
Qualified and Enthusiastic; Ability to Analytical Substantiation; Highly-Motivated; Good at Negotiation, Organization, Prioritization and goal setting, Project planning, Delegating; Ability to Communication, Leadership, Conflict management, Adaptability, Resourcefulness, Teamwork.