Name	Oleksandr Shorinov
Position, Department/Faculty	Associate Professor of the Department of Aircraft Engine Manufacturing Technology of the Faculty of Aviation Engines
Academic Degree, Academic Title	Candidate of Technical Sciences, Associate Professor
Email:	o.shorinov@khai.edu
Scopus Author ID:	[57223082183]
Web of Science ResearcherID:	[JNS-0276-2023]
ORCID iD:	[0000-0002-5057-6679]
Google Scholar:	[https://scholar.google.com.ua/citations?hl=ru&user=xLOM1ccAAAAJ&view_op=list_works]
ResearchGate:	[https://www.researchgate.net/profile/Oleksandr-Shorinov?ev=hdr_xprf]

EDUCATION:

Basic education:

1) National Aerospace University "Kharkiv Aviation Institute", Master's degree in "Technology of Manufacturing of Aircraft Engines and Power Plants", 2014;

2) National Aerospace University "Kharkiv Aviation Institute", Master's degree in "Automation and Computer-Integrated Technologies", 2021.

Postgraduate/Doctoral studies:

National Aerospace University "Kharkiv Aviation Institute", speciality Processes of Physic-Technical Treatment, thesis defence date – 14/04/2019.

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):

- from September 1, 2021 to the present, Associate Professor of the Department of Aircraft Engine Manufacturing Technology of the National Aerospace University "Kharkiv Aviation Institute" (KHAI);

- from October 1, 2020 to September 1, 2021, Senior Lecturer of the Department of Aircraft Engine Manufacturing Technology of KHAI;

- from September 1, 2019 to October 1, 2020, Assistant Professor of the Department of Aircraft Engine Manufacturing Technology of KHAI;

- from October 1, 2018 to September 1, 2019, Head of the Laboratory of the Department of Aircraft Engine Manufacturing Technology of KHAI;

- from September 1, 2017 to October 1, 2018, Junior Research Fellow of the Department of Aircraft Engine Manufacturing Technology of KHAI;

- from March 1, 2013 until August 31, 2017, technician, engineer of the Department of Aircraft Engine Manufacturing Technology of KHAI.

RESEARCH ACTIVITIES:

Main Research Areas:
Protective and restorative coatings, coating deposition, surface engineering.

Number of Publications (Scopus, WoS, others):
>60

Monographs:
Coating deposition on aircraft engine parts by gas-thermal methods: monograph / Dolmatov A. I., Balushok K. B., Zorik I. V., Shorinov O. V., etc. // Zaporizhzhia: JSC "Motor Sich", 2020, 516 p. ISBN: 978-966-2906-91-2

Inventions, developments, patents:
1) Method for restoring worn surfaces of parts. Utility model patent 156794 Ukraine, МПК (2006) C 23 C 24/04. – O. V. Shorinov, A. I. Dolmatov, S. O. Polyviany – No. u2023 06080; application 14.12.2023; published 07.08.2024, Bull. No. 32.

2) Method for restoring surfaces of parts damaged by corrosion. Utility model patent 157916 Ukraine, МПК (2006) C 23 C 24/04. – O. V. Shorinov, A. I. Dolmatov, K. B. Balushok – No. u202400110; application 08.01.2024; published. 18.12.2024, Bull. No. 51.

3) Patent for a utility model of Ukraine 130211 МПК (2006) C22C 23/00 C23C 2/04 (2006.01) C23C 22/77 (2006.01) Method for obtaining protective and restorative coatings on products made of magnesium and its alloys / Shorinov O. V., Markovich S. Ye., Dolmatov A. I. // National Aerospace University "Kharkiv Aviation Institute". – u201806664; filed. 13.06.2018; published. 26.11.2018, Bulletin No. 22 – 6 p.

4) Patent for a utility model of Ukraine МПК (2006) H05B 3/00 F24H 3/02 (2006.01) F24H 3/04 (2006.01) Electric heater of compressed gas / Volkov A. O., Dolmatov A. I., Markovich S. Ye., Shorinov O. V. // National Aerospace University "Kharkiv Aviation Institute". – u201605620; filed 11.05.2018; published 10.12.2018, Bulletin No. 23 – 4 p.

5) Patent for a utility model of Ukraine 112960 F24H 3/04 (2006.01) Electric heater of compressed air / Shorinov O. V., Canales S. O., Markovich S. Ye., Dolmatov A. I. // National Aerospace University "Kharkiv Aviation Institute". – u201605620; filed on 25.05.2016; published on 10.01.2017, Bulletin No. 1 – 5 p.

Participation in Scientific Conferences:
- International Conference on Environmental Science and Civil Engineering – ESCE;
- Integrated Computer Technologies in Mechanical Engineering – ICTM;
- Advances in Design, Simulation and Manufacturing – DSMIE;
- Grabchenko's International Conference on Advanced Manufacturing Processes – InterPartner.

TEACHING ACTIVITIES:

Courses Taught:
Courses for students of the first and second levels of higher education: Engine Manufacturing

Technology (in Ukrainian and English); Repair Technologies of Aircraft Engines and Power Plants; Fundamentals of Aircraft Engines and Power Plants Manufacturing; Planning, Organization and Reporting of Research Activities.

Methodological Materials, Textbooks:

1) O. Shorinov, Yu. Neveshkin, M. Kalinichenko. Development of the CAM program for CNC machine manufacturing of the part. Kharkiv: KhAI, 2024. – 57 p.

2) O. Shorinov, O. Volkov, I. Zorik. Machining of Thermal Spray Coatings. Kharkiv: KhAI, 2024.–58 p.

GRANTS AND PROJECTS:

Participation in International and National Projects (from 2020 to present):

International:

1) Participation in the project "Cold Spray Radical Solutions for Aeronautic Improved Repairs (CORSAIR)" of the European Union Framework Program "FP7-TRANSPORT" (grant agreement No. 605207), 2015-2016.

2) participation in the TEMPUS project – "Interregional network for innovative development of ecosystems Technosphere (ECOTESY)" (544498-TEMPUS-2013-SE-TEMPUS-JPHES), 2015-2016,

National:

1) principal researcher; project title: "Development of technology and equipment for cold spraying of restorative coatings on aircraft parts" (№ ДР 0124U000553); executing institution: National Aerospace University "Kharkiv Aviation Institute"; 2024-2025; source of funding: state budget funds.

2) responsible executor; project title "Development of an integrated technology for formation of wear-resistant coatings based on NiTi and TiAl intermetallics on titanium alloy parts" (№ ДР 0125U000622); project level – national; customer – Ministry of Education and Science of Ukraine, executor National Aerospace University "Kharkiv Aviation Institute"; 2025-2027; source of funding – state budget funds.

3) responsible executor; project title "Development of aggregate technology of restoration and repair of aviation (helicopters) parts by cold spraying with post-process machining of deposited coating" (№ ДР 0122U001341); project level – national; customer – Ministry of Education and Science of Ukraine, executor National Aerospace University "Kharkiv Aviation Institute"; 2022-2023; source of funding - state budget funds.

4) executor; project title "Increasing productivity and environmental safety of processes of mechanical cutting, plastic deformation and coating of hard-to-machine materials of gas turbine engine parts" (№ ДР 0120U102116); project level - national; customer - Ministry of Education and Science of Ukraine, executor National Aerospace University "Kharkiv Aviation Institute"; 2020-2021; source of funding - state budget funds.

5) executor; project title "Scientific foundations of the creation of oxide and carbon nanostructures in plasma environment conditions" (No. 190/02.2020,
No. 162/02/0119); project level – national; customer – National Research Foundation of Ukraine; executor National Aerospace University "Kharkiv Aviation Institute"; 2020, 2021; source of financing – state budget funds.

For enterprises:

Responsible executor; project name "Application of protective and restorative coatings on aviation engine parts by gas-dynamic spraying" (№204/2020 (UGT)); project level – national; customer – JSC "Motor Sich"; executor National Aerospace University "Kharkiv Aviation Institute"; 2020–2023; source of financing – funds from enterprises, institutions, and organizations of Ukraine.

Grants, Scholarships, Academic Mobility Programs:
From November 2024 to the present - a scholarship holder of the Cabinet of Ministers of Ukraine scholarship for young scientists (resolution of the Presidium of the Committee for the National Prize of Ukraine named after Borys Paton No. 6 dated 11/5/2024)

PROFESSIONAL ACHIEVEMENTS AND AWARDS:

Distinctions, Awards, Prizes:
- 2023 - Diploma of the Kharkiv Regional Council;
- 2024 - Honorary Diploma of the Executive Committee of the Kharkiv City Council;
- 2025 - Certificate of Honor from the Kharkiv City Council.

Membership in Professional Associations:
October 2024 – present – Associated Member of the Council of Young Scientists at the Ministry of Education and Science of Ukraine.

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):
1) Shorinov, O., Dolmatov, A., Polyviany, S. The effect of process temperature and powder composition on microstructure and mechanical characteristics of low-pressure cold spraying aluminum-based coatings. Materials Research Express, 2023, 10(2), 026401. DOI: 10.1088/2053-1591/acb6f0 (Q2)

2) Shorinov, O., Dolmatov, A., Polyviany, S., Balushok, K. Optimization of cold spray process parameters to maximize adhesion and deposition efficiency of Ni+Al2O3 coatings. Materials Research Express, 2023, 10(12), 126401. DOI: 0.1088/2053-1591/ad11fd (Q2);

3) Shorinov, O.V., Polyviany, S.A. Simulation of gas flow with nanocomposite carbon containing powders in supersonic nozzle. Metallofizika i Noveishie Tekhnologii, 2022, 44(5), pp. 601–611. DOI: 10.15407/mfint.44.05.0601 (Q3);

4) Hu, W. J., Shorinov, O. Optimization of technological parameters for cold spraying using the response surface method. Journal of Engineering Sciences, 2024, 11(2), F1–F8. DOI: 10.21272/jes.2024.11(2).f1 (Q3);

5) Shorinov, O.V. Finite element analysis of thermal stress in Cu2O coating synthesized on Cu substrate. Archives of Materials Science and Engineering. – 2022. – Vol. 115, iss. 2. – P. 58–65. DOI: 10.5604/01.3001.0016.0753

Books, Chapters in Collective Monographs:

1) Hu, W., Shorinov, O., Tan, K., Cao, T. Study on Multi-Parameter of Cold Spraying Technology via RSM and BP+GA Methods. 5th International Conference on Artificial Intelligence and Advanced Manufacturing (AIAM 2023), 2021, 272-278. DOI: 10.1049/icp.2023.2950;

2) Volkov, A., Shorinov, O., Dolmatov, A., Balushok, K. Numerical Simulation of a Modified Nozzle for Cold Spraying. In: V. Tonkonogyi, V. Ivanov, J. Trojanowska, G. Oborskyi, I. Pavlenko (eds) Advanced Manufacturing Processes V. InterPartner 2023. Lecture Notes in Mechanical Engineering. Springer, Cham, 2024, 571–579. DOI: 10.1007/978-3-031-42778-7_53 (Scopus);

3) Shorinov, O., Balushok, K., Dolmatov, A., Danko, K., Neveshkin, Y. Comparative study of corrosion resistance of cold spraying aluminum based coatings on magnesium alloy. Ivanov, V., Pavlenko, I., Edl, M., Machado, J., Xu, J. (eds) Advances in Design, Simulation and Manufacturing VII. DSMIE 2024. Lecture Notes in Mechanical Engineering. Springer, Cham, 2024, 442–451. DOI: 10.1007/978-3-031-63720-9_39 (Scopus);

4) Shorinov, O., Volkov, A., Polyviany, S. Deposition of titanium-containing coatings by low-pressure cold spraying. In Nechyporuk, M., Pavlikov, V., Kritskiy, D. (eds.) Integrated Computer Technologies in Mechanical Engineering – ICTM 2021. Lecture Notes in Networks and Systems, vol. 367, pp. 565–574. Springer, Cham (2022). DOI: 10.1007/978-3-030-94259-5_48 (Scopus);

5) Shorinov, O. Calculation of Thermal Stresses in Oxide Layers Synthesized on Cu Substrates. In: Ivanov, V. et al. (eds). Advances in Design, Simulation and Manufacturing V. DSMIE 2022. Lecture Notes in Mechanical Engineering, 1, Springer, Cham, 2022, pp. 485-493. DOI: 10.1007/978-3-031-06025-0_48 (Scopus).

ADDITIONAL INFORMATION:

Language Proficiency:

Certificate of English language proficiency at level B2 according to CEFR (Certificate Number: B6138517, date of issue 15.08/2021).