Name	Pavlo GAKAL
Position, Department/Faculty	Professor, Aerospace Thermal Engineering Department/Aviation Engine Faculty
Academic Degree, Academic Title	Doctor of Science, Associate Professor
Email:	p.gakal@khai.edu
Scopus Author ID:	6507533259
Web of Science ResearcherID:	https://www.webofscience.com/wos/author/record/NZO-4778-2025
ORCID iD:	0000-0003-3043-2448
Google Scholar:	https://scholar.google.com.ua/citations?user=paMhIQcAAAAJ&hl=uk
ResearchGate:	-

EDUCATION:

Basic education (university, major, year of graduation):
Master's Degree, Aviation engines, National Aerospace University "Kharkiv Aviation Institute", 1989

Postgraduate/Doctoral studies:
Doctor of Technical Sciences, Technical Thermal Physics and Industrial Heat Engineering, National Aerospace University "Kharkiv Aviation Institute", 2012

PhD in Technical Science, Technical Thermal Physics and Industrial Heat Engineering, National Aerospace University "Kharkiv Aviation Institute", 1995

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):
National Aerospace University "Kharkiv Aviation Institute", 1989 – 2004, Leading Researcher

National Aerospace University "Kharkiv Aviation Institute", 2004 – 2012, Associate Professor of Aerospace Thermal Engineering Department

National Aerospace University "Kharkiv Aviation Institute", 2012 – 2024, Head of Aerospace Thermal Engineering Department

National Aerospace University "Kharkiv Aviation Institute", 2024 – up to now, Professor of Aerospace Thermal Engineering Department

Teaching Experience:
National Aerospace University "Kharkiv Aviation Institute", 2004 – 2012, Associate Professor of Aerospace Thermal Engineering Department

Experience in International or National Projects:
In cooperation with Thales Alenia Space Corporation, it took part in the development of a thermal control system for a telecommunications satellite.

It carried out the project "Aircraft Engine Valves Thermal Management with Advanced Loop Heat Pipe (Clean Sky 2 Joint Undertaking (H2020 actions)" to develop a cooling system for aircraft engine components.

RESEARCH ACTIVITIES:

Main Research Areas:
Thermal control system design, heat and mass processes investigation and simulation.

Number of Publications (Scopus, WoS, others):

Prof. Pavlo Gakal is the author of over 90 research publications that are relevant to the development of innovative thermal management systems for aerospace industry with specific attention to system optimization also as to the numerical and physical behaviors simulation.

TEACHING ACTIVITIES:

Courses Taught:
Thermodynamics, Thermal Management Systems, Thermal Energy Systems Simulation

Author Courses, Academic Programs:
Thermodynamics, Thermal Management Systems, Thermal Energy Systems Simulation

GRANTS AND PROJECTS:

Participation in International and National Projects:

- Two-Phase Mechanically Pumped Loop Prototype of Thermal Control System for Spacecraft (STCU P-269 project);
- Aircraft Engine Valves Thermal Management with Advanced Loop Heat Pipe (Clean Sky 2 Joint Undertaking (H2020 actions));
- Hydrogen Demonstrator for Aviation (HORIZON Joint Undertaking Clean-Aviation (H2023 actions)).

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):

1. G. Gorbenko, P. Gakal, R. Turna and A. Hodynov, "Retrospective Review of a Two-Phase Mechanically Pumped Loop for Spacecraft Thermal Control Systems," *Journal of Mechanical Engineering,* vol. 24, no. 4, pp. 27 - 31, 2021.
2. G. Gorbenko, P. Gakal, R. Turna and A. Hodynov and E. Reshytov, “Heat transfer in evaporator of thermal sink in presence of subcooled boiling section,” *International Journal of Heat and Technology*, vol. 39, no. 2, pp. 375-382, 2021.
3. P. Gakal, I. Rybalchenko, O. Tretiak, V. Nazarenko, D. Mishkinis and I. Ušakovs, "Experimental investigation of the high-temperature loop heat pipe performances in harsh environmental

conditions," in *13th EASN International Conference on Innovation in Aviation & Space for opening New Horizons*, Salerno, Italy, 2023.

4. P. Gakal, D. Mishkinis, A. Leilands, I. Usakovs, R. Orlov and Y. Rogoviy, "Analysis of working fluids applicable for high-temperature," in *IOP Conf. Series: Materials Science and Engineering*, 2022.
5. G. Gorbenko, P. Koval, K. Yepifanov, P. Gakal and R. Turna, "Mathematical Model of Heat-Controlled Accumulator (HCA) for Microgravity Conditions," *SAE Int. J. Aerosp,* vol. 13, no. 1, pp. 5 - 23, 2020.
6. P. Gakal, I. Rybalchenko, O. Tretiak, V. Nazarenko, “Experimental investigation of the performance of a loop heat pipe-based cooling system under ultra-high bypass ratio turbojet engine conditions,” *Aerospace Technic and Technology,* No. 1, pp. 14-27, 2025.

Links to Citation Database Profiles:

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ORCID ID:	0000-0003-3043-2448
Google Scholar:	https://scholar.google.com.ua/citations?user=paMhIQcAAAAJ&hl=uk

ADDITIONAL INFORMATION:

IT Skills:
Microsoft Office, Python, Fortran.