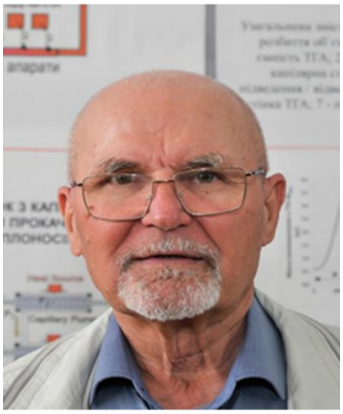

Name	Gennadiy GORBENKO
Position, Department/Faculty	Professor, Aerospace Thermal Engineering Department/Aviation Engine Faculty
Academic Degree, Academic Title	Doctor of Science, Professor
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ResearchGate:	-

EDUCATION:

Basic education (university, major, year of graduation):
Mechanical Engineer, Aviation engines, National Aerospace University "Kharkiv Aviation Institute", 1968

Postgraduate/Doctoral studies:
Doctor of Technical Sciences, Aviation Thermal Engines, Technical Thermal Physics and Industrial Heat Engineering, 1992

PhD in Technical Science, Aviation engines, 1978

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):
National Aerospace University "Kharkiv Aviation Institute", 1968 – 1978, Engineer, Postgraduate student, Research assistant

National Aerospace University "Kharkiv Aviation Institute", 1978 – 1996, Assistant, Associate Professor of Aerospace Thermal Engineering Department

National Aerospace University "Kharkiv Aviation Institute", 1998 – 2012, Head of Aerospace Thermal Engineering Department

National Aerospace University "Kharkiv Aviation Institute", 1996 – up to now, Professor of Aerospace Thermal Engineering Department

Teaching Experience:
National Aerospace University "Kharkiv Aviation Institute", 1978 – up to now, Associate Professor, 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.

RESEARCH ACTIVITIES:

Main Research Areas:
Engineering synthesis of thermal energy systems for aerospace and terrestrial facilities

Number of Publications (Scopus, WoS, others):
Prof. Gennady Gorbenko is the author of more than 110 scientific publications devoted to the development of innovative thermal control systems for aerospace engineering, thermal power engineering, refrigeration, and air conditioning technology.

Monographs, Textbooks:
Nikonov, A. A., Gorbenko, G. A., & Blinkov, V. N. (1991). Teploobmennyye kontury s dvukhfaznym te plonositelem dlya sistem termoregulirovaniya kosmicheskikh apparatov [Heat exchange circuits with a two-phase coolant for thermal control systems of spacecraft]. Moscow: Center for Scientific and Technical Information "Poisk", 302 p. (in Russian).

Participation in Scientific Conferences:
Prof. Gennady Gorbenko regularly participates in international and national conferences.
ICES 2025 - 54TH INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SYSTEMS.
Turna, R., Gorbenko, G., Buchko, O., Rohovyi, Ye. (2025, July). Challenges in Improving the Operational Efficiency of Two-Phase Heat Transfer Systems in Space.

TEACHING ACTIVITIES:

Courses Taught:
Engineering of Air Conditioning, Heating, and Refrigeration Systems

Author Courses, Academic Programs:
Engineering of Air Conditioning, Heating, and Refrigeration Systems

Methodological Materials, Textbooks:
Theoretical Foundations of Aerospace Heat Engineering. Parts 1, 2, 3. Thermodynamics. Fluid and Gas Dynamics. Heat Transfer. Lecture Notes. 2003–2006.

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);

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. https://doi.org/10.15407/pmach2021.04.027.

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 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. http://nti.khai.edu/ojs/index.php/aktt/article/view/aktt.2021.5.02 DOI: https://doi.org/10.32620/aktt.2021.5.02

4 A. Hodunov, G. Gorbenko, P. Gakal. The calculation of the heat control accumulator volume of two-phase heat transfer loop of a spacecraft thermal control system. //Journal of Aerospace technic and technology - 2021. - № 5 (175). - С. 15–23. http://nti.khai.edu/ojs/index.php/aktt/article/view/aktt.2021.5.02 DOI: https://doi.org/10.32620/aktt.2021.5.024.

5 Gorbenko G. Heat Transfer Coefficient Calculation for Developed Ammonia Boiling in the Evaporator Channel of a Thermal Sink / G. Gorbenko, R. Turna, A. Hodunov, E. Reshytov, Ye. Rohovyi // Вісник НТУ «ХПІ». Се-рія: Енергетичні та теплотехнічні процеси й устаткування. – 2022. – № 3–4(11–12). – С. 45–49. – Бібліогр.: 14 назв. – ISSN 2078-774X (print). – ISSN 2707-7543 (on-line). – DOI: https://doi.org/10.20998/2078-774X.2022.03.08.

6 Hodunov, A., Gorbenko, G., Turna, R., and Koval, P. “Determination of the Heat-Controlled Accumulator Volume for the Two Phase Thermal Control Systems of Spacecraft” SAE International, 2024, doi:10.4271/01-17-01-0008

7 Buchko, O., Gorbenko, G., Rohovyi, Y., Reshytov, E., & Turna, R. (2024). Determining the effect of non-condensable gas on a two-phase ammonia heat transfer loop of the satellite. East-ern-European Journal of Enterprise Technologies, 2(5 (128), 13–21. https://doi.org/10.15587/1729-4061.2024.301840

Links to Citation Database Profiles:

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ADDITIONAL INFORMATION:

IT Skills:
Microsoft Office, Python, Fortran.