



Name	Fedir Gagauz
Position, Department/Faculty	Associate Professor, Department of Composite Structures and Aviation Materials
Academic Degree, Academic Title	Candidate of Technical Science (PhD), Associate Professor
Email:	f.gagauz@khai.edu
Scopus Author ID:	56440089400
Web of Science ResearcherID:	AER-9717-2022
ORCID iD:	0000-0001-6880-1857
Google Scholar:	ObXu3TAAAAAJ
ResearchGate:	https://www.researchgate.net/profile/Fedir-Gagauz-2?ev=hdr_xprf

EDUCATION:

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

Master in Design and Manufacturing of Composite Structures, National Aerospace University – Kharkiv Aviation Institute [01/09/1997 – 28/02/2003]

Postgraduate/Doctoral studies:

Candidate of Technical Science (PhD) [10/05/2007]

Associate Professor [25/01/2013]

Additional training, certification programs:

Professional Training Certificate: "Product design in a CAD system under the control of a PDM system", Pivdenne Design Office [20/09/2023 – 31/10/2023], 3 ECTS credits

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):

National Aerospace University – Kharkiv Aviation Institute [01/09/2007 – Current], Associate Professor of the Department of Composite Structures and Aviation Materials

National Aerospace University – Kharkiv Aviation Institute [01/05/2006 – 31/08/2007], Assistant Professor of the Department of Composite Structures and Aviation Materials

National Aerospace University – Kharkiv Aviation Institute [01/01/2004 – 31/12/2005], Junior Research Fellow of the Department of Composite Structures and Aviation Materials

Teaching Experience:

Teacher of the Department of Composite Structures and Aviation Materials, National Aerospace University – Kharkiv Aviation Institute [01/05/2006 – Current]

RESEARCH ACTIVITIES:

Main Research Areas:

Design and optimization of composite structures, Mechanics and strength of composite structures, FEM simulation of aircraft composite structures

Number of Publications (Scopus, WoS, others):

Over 60 scientific publications including papers in journals indexed in Scopus and WoS, patents, conference proceedings and applied research reports

Monographs, Textbooks:

Co-author of 6 textbooks in the fields of design of composite structures

Participation in Scientific Conferences:

Regular participant and speaker at international scientific and practical conferences with oral presentations in the field of design, manufacturing and strength analysis of composite structures

TEACHING ACTIVITIES:

Courses Taught:

Mechanics of Reinforced Materials, Mechanics and Strength of Composite Structures, Design of Composite Structural Elements, FEA in Engineering of Composite Structures

Author Courses, Academic Programs:

Author of the courses "Mechanics of Reinforced Materials", "Mechanics and Strength of Composite Structures", "Design of Composite Structural Elements", "FEA in Engineering of Composite Structures"

Methodological Materials, Textbooks:

Co-author of textbooks in the fields of design and strength analysis of composite structures
Developed materials for hybrid and online courses

GRANTS AND PROJECTS:

Participation in International and National Projects:

"Advanced Low-Cost Aircraft Structures – ALCAS", Funded under FP6-AEROSPACE, Grant agreement ID: 516092 [2005 – 2011]

"Composite fuselage section Wafer Design Approach for Safety Increasing in Worst Case Situations and Joints Minimizing – WASIS", Funded under FP7-TRANSPORT, Grant agreement ID: 265549 [2011 – 2014]

"Integrating the National Aerospace University "KhAI" into ERA", Funded under FP7-INCO, Grant agreement ID: 294311 [2011 – 2015]

"Strategic and Targeted Support for Europe-Ukraine Collaboration in Aviation Research – AERO-UA", Horizon 2020 Framework Programme, Grant agreement ID: 724034 [2016 – 2019]

"Directional composites through manufacturing innovation (DiCoMI)", Horizon 2020 Framework Programme, Grant agreement ID: 778068 [2018 – 2024]

"Optimal design of adhesive joints of composite structures of aerospace technology", Ministry of Education and Science of Ukraine/ National Aerospace University "Kharkiv Aviation Institute", Project ID: 0122U001784 [01/09/2023 – 31/12/2023]

PROFESSIONAL ACHIEVEMENTS AND AWARDS:

Distinctions, Awards, Prizes:

Prize of the President of Ukraine for young scientists [04/12/2007]



Diploma of the winner of the Professional Skills Competition "Icarus of KhAI", National Aerospace University "Kharkiv Aviation Institute" [2007]

Gratitude for active participation in the work of competition committee of All-Ukrainian Student Olympiad in the field of knowledge "Aerospace Engineering" [2016]

Gratitude for the high level of student preparation in the All-Ukrainian Student Research Paper Competition in Natural, Technical, and Human Sciences 2017-2018

Honorary Certificate from the National Aerospace University "Kharkiv Aviation Institute" [2021]

Gratitude from the Kharkiv City Mayor [2024]

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):

Topological optimization hybrid algorithm for the adhesive joint / O. Polyakov, O. Vambol, H. Barakhova, K. Vernadska, V. Cheranovskiy, F. Gagauz // Radio-electronic and Computer Systems, 2023, vol. 4, pp.43–52. <https://doi.org/10.32620/reks.2023.4.04>

Gagauz, F., Kryvenda, S. (2024). Preliminary Design Approach for Lattice Composite Keel Beam. In: Nechyporuk, M., Pavlikov, V., Krytskyi, D. (eds) Integrated Computer Technologies in Mechanical Engineering - 2023. ICTM 2023. Lecture Notes in Networks and Systems, vol 1008, pp.303–313. Springer, Cham. https://doi.org/10.1007/978-3-031-61415-6_26

Stress analysis of adhesive joints based on a one-dimensional discrete model / F. Gagauz, O. Vambol, S. Kryvenda, V. Pavlenko, S. Purhina // Open Information and Computer Integrated Technologies, 2025, vol.103, pp.57–69. <https://doi.org/10.32620/oikit.2025.103.05>

Skarka, W., Kurennov, S., Barakhov, K., Gagauz, F., Maksymovych, O., Vambol, O. The Calculation and Optimization Methodology of Repairable Elements of a UAV Structure. Aerospace, 2025, 12(5), 441. <https://doi.org/10.3390/aerospace12050441>

Experimental study of elastic and strength properties of adhesives / O. Vambol, F. Gagauz, S. Kurennov, K. Barakhov, A. Garbuz // Aerospace Technic and Technology, 2025, vol. 3, pp.30–39. <https://doi.org/10.32620/aktt.2025.3.03>

Vambol, O., Gagauz, F., Kaluzhynov, I. (2025). Technical Challenges of UAVs-Assisted Free Space Optical Communication in Some Regions of Ukraine. In: Lytvynov, O., Pavlikov, V., Krytskyi, D.(eds) Integrated Computer Technologies in Mechanical Engineering - 2024. ICTM 2024. Lecture Notes in Networks and Systems, vol 1473, pp.287–297. Springer, Cham. https://doi.org/10.1007/978-3-031-94845-9_24

Gagauz, F., Kurennov, S., Barakhov, K., Vambol, O. (2025). Experimental Study on Mechanical Properties of Adhesive Materials. In: Lytvynov, O., Pavlikov, V., Krytskyi, D. (eds) Integrated Computer Technologies in Mechanical Engineering - 2024. ICTM 2024. Lecture Notes in Networks and Systems, vol 1474, pp.513–522. Springer, Cham. https://doi.org/10.1007/978-3-031-94852-7_43

Miller, B., Maksymovych, M., Maksymovych, O., Gagauz, F. Optimization of Stresses near Reinforced Holes in Relation to Sustainable Design of Composite Structural Elements. Sustainability, 2025, 17(15), 7103. <https://doi.org/10.3390/su17157103>

Books, Chapters in Collective Monographs:

Karpov, Ya.S., Gagauz, F.M., Gagauz, P.M. (2004). Proektirovanie i konstruktivno-tehnologicheskie resheniya lonzheronnogo kryla iz kompozicionnyh materialov. Kharkiv: National Aerospace University "Kharkiv Aviation Institute", 143 p.

Karpov, Ya.S., Gagauz, F.M., Lyalyuhina, I.V. (2010). Proektirovanie i konstruktivno-tehnologicheskie resheniya balok i lonzheronov iz kompozicionnyh materialov. Kharkiv: National Aerospace University "Kharkiv Aviation Institute", 124 p.

Karpov, Ya.S., Gagauz, F.M., Vorobev, O.Yu. (2010). Proektirovanie i konstruktivno-tehnologicheskie resheniya sterzhnej iz kompozicionnyh materialov. Kharkiv: National Aerospace University "Kharkiv Aviation Institute", 70 p.

Karpov, Ya.S., Gagauz, P.M., Gagauz, F.M., Litvinova, T.A. (2010). Proektirovanie i konstruktivno-tehnologicheskie resheniya panelej iz kompozicionnyh materialov. Kharkiv: National Aerospace University "Kharkiv Aviation Institute", 180 p.

Gagauz, P.M., Gagauz, F.M., Karpov, Ya.S., Kryvenda, S.P. (2015). Proektirovanie i konstruirovanie izdelij iz kompozicionnyh materialov. Teoriya i praktika. Kharkiv: National Aerospace University "Kharkiv Aviation Institute", 672 p.

Gagauz, F.M., Kryvenda, S.P., Vambol, O.O., Taranenko, I.M., Pavlenko, V.M. (2025). Kompozytni konstrukciji v aviacijnij ta raketno-kosmichnij tekhnici. Kharkiv: National Aerospace University "Kharkiv Aviation Institute", 152 p.

ADDITIONAL INFORMATION:

Language Proficiency:

Ukrainian, English

IT Skills:

Microsoft Office, Google (Drive, Colab)

CAD skills: Solid Works, Autodesk Inventor

CAE skills: Mathcad, MSC Software (Patran/Nastran, Apex), SW Simulation, SW Flow Simulation, FEMAP, ANSYS Workbench