Name	Heorhii Zemlianko
Position, Department/Faculty	Associate Professor, Department of Computer Systems, Networks and Cybersecurity, Faculty of Radio Electronics, Computer Systems and Infocommunications
Academic Degree, Academic Title	Doctor of Philosophy in Cybersecurity
Email:	g.zemlynko@csn.khai.edu
Scopus Author ID:	57214232232
Web of Science ResearcherID:	AEX-6319-2022
ORCID iD:	0000-0003-4153-7608
Google Scholar:	https://scholar.google.com/citations?user=k66HEqcAAAAJ&hl=ru
ResearchGate:	https://www.researchgate.net/profile/Heorhii-Zemlianko-2?ev=hdr_xprf

EDUCATION:

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

National Aerospace University "Kharkiv aviation institute", Master of Science Degree in Computer engineering, 2019

Postgraduate/Doctoral studies:

National Aerospace University "Kharkiv aviation institute", Doctor of Philosophy in Cybersecurity - PhD, Computer and Information Systems Security/Information Assurance, 2024

Additional training, certification programs:

- Certificate "Big Course on AI in Education", PROGRESSIVE (45 hours), 2025
- Certificate "MOOC Coalition Erasmus + Inclusive student-centred pedagogy", European University for Customised Education (EUNICE) (75 hours), 2025
- Certificate "In-depth practical course "Algorithmization and programming: modern methods of training and automated testing"", Public Institution "Kharkiv Cluster of Information Technologies" (60 hours), 2025
- Certificate "Teaching in Times of War", National University "Kyiv-Mohyla Academy" (30 hours), 2024
- Certificate "Cybersecurity", Coursera - Google, 2023

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):

1. January 2019 – December 2019 – National Aerospace University "Kharkiv Aviation Institute", Dispatcher.
2. January 2019 – December 2019 – Aerospace Lyceum based on the National Aerospace University "Kharkiv Aviation Institute", teacher of information technology.

3. February 2020 – August 2024 – National Aerospace University "Kharkiv Aviation Institute", assistant of the department of Computer Systems, Networks and Cybersecurity department.
4. September 2024 – August 2025 – National Aerospace University "Kharkiv Aviation Institute", PhD in Cybersecurity, senior lecturer of the department of Computer Systems, Networks and Cybersecurity department.
5. September 2025 – till now – National Aerospace University "Kharkiv Aviation Institute", PhD in Cybersecurity, Associate Professor of the Computer Systems, Networks and Cybersecurity department.

Teaching Experience:
February 2020 – till now – National Aerospace University "Kharkiv aviation institute"

Experience in International or National Projects:
The international project:
- "Internet of Things: Emerging Curriculum for Industry and Human Applications" (ALIOT, №573818-EPP-1-2016-1-UK-EPPKA2-CBHE-JP) during 2016-2019, under the EU ERASMUS+ program.

Budget research topics:
- "Scientific foundations and methods for ensuring the trustworthiness of UAV fleets of intelligent systems for monitoring potentially dangerous and military objects" SR № 0121U112172 during 2021-2023.
- "Methods, models, and information technologies for increasing the reliability and safety of complex IT systems at the stages of development and implementation" SR № 0121U113842 during 2021-2023.
- "Methods, software and hardware, and information technologies for the development and modernization of trustworthy computer systems, networks, and IT infrastructures" SR № 0117U05349 during 2018-2020.
- "Methodology of sustainable development and information technologies of green computing and communications" SR № 0118U003822 during 2018-2020.

RESEARCH ACTIVITIES:

Main Research Areas:
Smart city technologies and digital security, Internet of Things (IoT) systems, Information security and data protection, Cyber risk analysis, Database systems, Smart Grid technologies, Telecommunications and network technologies, Intelligent systems, Smart systems security.

Number of Publications (Scopus, WoS, others):
More than 10 scientific publications (Scopus – 7, WoS – 3)

Monographs, Textbooks:
1. Zemlianko, H., Pievniev, V., Nikolas, B., & Kharchenko, V. S. (2023). Rozrobka modeli zahroz dlia bezpilotnykh litalnykh aparptiv. U V. S. Kharchenko & O. I. Morozova (Red.), Metody ta tekhnolohii zabezpechennia yakosti ta bezpeky intelektualnykh system (s. 159–177). Vydavnytstvo «Yuston». https://dspace.library.khai.edu/xmlui/handle/123456789/5307
2. Plakhteyev A., Zemlianko, H., & Kharchenko, V. (2020). Prototyping and rapid development of

iot systems in context of edge computing. Integrated computer technologies in mechanical engineering (s. 257–267). Springer International Publishing. https://doi.org/10.1007/978-3-030-37618-5_23
3. Zemlianko, H. (2025). Metody ta zasoby dlia zabezpechennia kiberbezpeky systemy bahatofunktsiinykh flotiv bezpilotnykh aparativ v umovakh kombinovanykh kiberatak: Monohr. (V. Kharchenko, Red.). Kharkiv: FOP Brovin O.V.

Participation in Scientific Conferences:
IEEE Dependable Systems, Services and Technologies (DESSERT), International workshop on reliability engineering and computational intelligence (RECI), Intelligent Information Technologies & Systems of Information Security (IntelITSIS), Integrated Computer Technologies in Mechanical Engineering (ICTM).

TEACHING ACTIVITIES:

Courses Taught:
"Programming IoT Systems", "Building and Cybersecurity of the Internet of Things", "Databases", "Database Organization and Security", "Blockchain Technologies and Cryptocurrency Security", "Blockchain Technologies"

Author Courses, Academic Programs:
"Programming IoT Systems", "Building and Cybersecurity of the Internet of Things", "Databases", "Database Organization and Security

Methodological Materials, Textbooks:
1. Plakhtieiev A. P., Zemlianko H. A. Navchalno-metodychne zabezpechennia dystsypliny "Prohramne zabezpechennia mikroprotsesornykh system" dlia bakalavriv. Kharkiv : M-vo osvity i nauky Ukrainy, Nats. aerokosm. un-t im. M. Ye. Zhuk. "Kharkiv. aviats. in-t", Kaf. kompiuter. system, merezh i kiberbezpeky, 2019. 85 s. URL: http://library.khai.edu/library/fulltexts/doc/_001D2_Programne.pdf.
2. Plakhtieiev A. P., Zemlianko H. A. Navchalno-metodychne zabezpechennia dystsypliny "Prohramne zabezpechennia mikroprotsesornykh system zakhystu informatsii" dlia bakalavriv. Kharkiv : M-vo osvity i nauky Ukrainy, Nats. aerokosm. un-t im. M. Ye. Zhuk. "Kharkiv. aviats. in institute", Kaf. kompiuter. system, merezh i kiberbezpeky, 2019. 85 s. URL: http://library.khai.edu/library/fulltexts/doc/_001D2_ Programne5.pdf.

GRANTS AND PROJECTS:

Participation in International and National Projects:
The international project:
- "Internet of Things: Emerging Curriculum for Industry and Human Applications" (ALIOT, №573818-EPP-1-2016-1-UK-EPPKA2-CBHE-JP) during 2016-2019, under the EU ERASMUS+ program.

Budget research topics:
- "Scientific foundations and methods for ensuring the trustworthiness of UAV fleets of intelligent systems for monitoring potentially dangerous and military objects" SR № 0121U112172 during 2021-2023.

- "Methods, models, and information technologies for increasing the reliability and safety of complex IT systems at the stages of development and implementation" SR № 0121U113842 during 2021-2023.
- "Methods, software and hardware, and information technologies for the development and modernization of trustworthy computer systems, networks, and IT infrastructures" SR № 0117U05349 during 2018-2020.

"Methodology of sustainable development and information technologies of green computing and communications" SR № 0118U003822 during 2018-2020.

Grants, Scholarships, Academic Mobility Programs:
Scientific scholarship of Ukrainian Ministry Cabinet, 2024-2026.

PROFESSIONAL ACHIEVEMENTS AND AWARDS:

Honorary Titles: -

Distinctions, Awards, Prizes:
- Scientific scholarship of Ukrainian Ministry Cabinet, 2024-2026.
- Diploma of the 2nd degree. Competition "Young Innovator". Nomination "Best Innovative Proposal", Department of Scientific and Information Support of Innovation Processes, 2024
- Diploma of the 3rd degree, winner of the University Cup in Programming among teachers UCUP-2025, QBit, 2025

Membership in Professional Associations:
- Reviewer for the International Journal of Information and Communication Sciences, Science Publishing Group (SciencePG), USA
- Reviewer for the PriMera Scientific Engineering, PriMera Scientific Publications, USA
- Reviewer for the Medicon Engineering Themes, Medicon Open Access, Singapure
- Reviewer for the IJITS, International Journal on Information Technologies and Security, Bulgaria
- Member of the technological society from the German industrial company Phoenix Contact

INTERNATIONAL ACTIVITIES:

Internships: -

Cooperation with Foreign Universities: -

Teaching/Lecturing Abroad: -

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):
1. Pevnev, V., Frolov, A., Tsuranov, M., & Zemlianko, H. (2022). Ensuring the data integrity in infocommunication systems. International Journal of Computing, 228–233. https://doi.org/10.47839/ijc.21.2.2591
2. Zemlianko, H., & Kharchenko, V. (2023). Cybersecurity risk analysis of multifunctional UAV fleet

systems: A conceptual model and IMECA-based technique. Radioelectronic and Computer Systems, (4), 152–170. https://doi.org/10.32620/reks.2023.4.11
3. Torianyk, V., Kharchenko, V., & Zemlianko, H. (2021). IMECA based assessment of internet of drones systems cyber security considering radio frequency vulnerabilities. U IntelITSIS (s. 460–470). CEUR Workshop Proceedings.
4. Zemlianko, H., & Kharchenko, V. (2023). Imesa-analiz kiberbezpeky system bahatofunktsionalnykh flotiv bpla pry kombinovanykh atakakh: Bazovi modeli ta vybir kontrzakhodiv. Measuring and Computing Devices in Technological Processes, (4), 225–233. https://doi.org/10.31891/2219-9365-2023-76-30
5. Pevnev, V., Tsuranov, M., Zemlianko, H., & Amelina, O. (2021). Conceptual model of information security. Lecture notes in networks and systems (s. 158–168). Springer International Publishing. https://doi.org/10.1007/978-3-030-66717-7_14
6. Pevnev, V., Plakhteev, A., Tsuranov, M., Zemlianko, H., & Leichenko, K. (2022). "Smart city" technology: Conception, security issues and cases. Integrated computer technologies in mechanical engineering - 2021 (s. 207–218). Springer International Publishing. https://doi.org/10.1007/978-3-030-94259-5_19
7. Zemlianko, H., & Kharchenko, V. (2024). Ensuring cybersecurity of the cyber physical system of combined fleets of unmanned aerial, ground and sea vehicles. U Integrated computer technologies in mechanical engineering - 2023 (s. 392–403). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-60549-9_29

Books, Chapters in Collective Monographs:

1. Zemlianko, H., Pievniev, V., Nikolas, B., & Kharchenko, V. S. (2023). Rozrobka modeli zahroz dlia bezpilotnykh litalnykh aparptiv. U V. S. Kharchenko & O. I. Morozova (Red.), Metody ta tekhnolohii zabezpechennia yakosti ta bezpeky intelektualnykh system (s. 159–177). Vydavnytstvo «Yuston». https://dspace.library.khai.edu/xmlui/handle/123456789/5307
2. Anatoly, P., Zemlianko, H., & Kharchenko, V. (2020). Prototyping and rapid development of iot systems in context of edge computing. Integrated computer technologies in mechanical engineering (s. 257–267). Springer International Publishing. https://doi.org/10.1007/978-3-030-37618-5_23
3. Zemlianko, H. (2025). Metody ta zasoby dlia zabezpechennia kiberbezpeky systemy bahatofunktsiinykh flotiv bezpilotnykh aparativ v umovakh kombinovanykh kiberatak: Monohr. (V. Kharchenko, Red.). Kharkiv: FOP Brovin O.V.

Links to Citation Database Profiles:

- **Scopus**: https://www.scopus.com/authid/detail.uri?authorId=57214232232
- **Research Gate**: https://www.researchgate.net/profile/Heorhii-Zemlianko-2
- **Web of Science**: https://www.webofscience.com/wos/author/record/AEX-6319-2022
- **Google Scholar**: https://scholar.google.com/citations?user =k66HEqcAAAAJ&hl=ru
- **ORCID**: https://orcid.org/0000-0003-4153-7608
- **KhAI library**: https://library.khai.edu/ua/authors/zemlyanko-georgyaj-andryajovich
- **Academia**: https://independent.academia.edu/HeorhiiAndreevichZemlianko
- **ScholarProfile**: https://scholarprofiles.com/HeorhiiZemlianko

ADDITIONAL INFORMATION:

Language Proficiency:

Ukrainian, Russian, English

IT Skills:

1. **Technical professional skills:**
    a. **Development of interfaces and web technology**: UI/UX-design, HTML/CSS, Prototyping (Figma, Adobe XD), Photoshop, CorelDraw, Adaptive layout, web-based, Adobe Creative Cloud, Illustrator, InDesign.
    b. **Programming and hardware integration**: Arduino/Raspberry Pi, Microcontroller development (ESP32, STM32), Algorithmic thinking and code optimization, Testing and debugging (unit-tests, tools like JUnit, Selenium), C/C++, Python, Go, C#, VisualBasic, Assembler, JavaScript, HTML5, CSS3, MS Visual Studio, CubeMX, XOD, GitHub, VS Code, WebStorm.
    c. **Database and analytics**: Design of relational and NoSQL databases, Data visualization (Tableau, Matplotlib), Creation of dashboards, Writing API documentation, Operation manuals, Integration of circuits and diagrams (Mermaid, draw.io), Replit, MySQL Workbench.
2. **Pedagogical and communication skills**: Development of interactive materials, Design of presentations with emphasis on visual learning, Preparation of laboratory work with real-world cases, Project management, Adaptation of language to the level of the audience, Creation of rubrics, Use of flow diagrams (flowcharts), H5P, OBS Studio.Gradescope.
3. **Research competences**: Data systematization (working with Pandas, SPSS), Statistical analysis, Publishing ethics and article review, Construction of research models, Ethical audit of experiments, RStudio, Zotero, Grammarly.
4. **Management and organizational skills**: Agile course planning, LMS configuration (Moodle, Google Platform, eLearn, Canvas, Zoom, Microsoft Teams), Time management, Peer-review systems implementation, Generation of non-standard solutions for training tasks, Typography, Color schemes, Google Workspace, Plagiarism Checker X, Articulate 360.

Social and Community Activities:

Hobbies: Drawing, Traveling, Photo, Collecting postage stamps

Community Activities:

- Reviewer for the International Journal of Information and Communication Sciences, Science Publishing Group (SciencePG), USA
- Reviewer for the PriMera Scientific Engineering, PriMera Scientific Publications, USA
- Reviewer for the Medicon Engineering Themes, Medicon Open Access, Singapure
- Reviewer for the IJITS, International Journal on Information Technologies and Security, Bulgaria
- Member of the board of organizers of the SCIFiC conference, as well as the administrator of the conference website
- Member of the international society "Internet Governance - Middle East", Internet Society
- Member of the international society "Internet of Things", Internet Society
- Member of the technological society from the German industrial company Phoenix Contact