



<b>Name</b>	Iryna Vasylieva
<b>Position, Department/Faculty</b>	Associate Professor of the Department of Information-Communication Technologies named after O. O. Zelensky / Faculty of Radioelectronics, Computer Systems and Infocommunications
<b>Academic Degree, Academic Title</b>	Candidate of Technical Sciences Associate Professor
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<b>Google Scholar:</b>	<a href="https://scholar.google.com.ua/citations?hl=uk&amp;user=HcirqjIAAAAJ">https://scholar.google.com.ua/citations?hl=uk&amp;user=HcirqjIAAAAJ</a>
<b>ResearchGate:</b>	<a href="https://www.researchgate.net/profile/Irina-Vasileva-4">https://www.researchgate.net/profile/Irina-Vasileva-4</a>

## EDUCATION:

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

Engineer-Designer-Technologist of Radio Equipment  
Kharkov Aviation Institute named after N.Ye. Zhukovsky, Department of Aviation Radio-Electronic Devices [1985–1991]

### Postgraduate/Doctoral studies:

Candidate of Technical Sciences in Remote Aerospace Research  
Higher Attestation Commission of Ukraine [2007]

### Additional training, certification programs:

Cisco Certificate of Course Completion “CCNAv7: Introduction to Networks” [09/04/2020]  
Cisco Certificate of Course Completion “CCNAv7: Switching, Routing, and Wireless Essentials” [06/08/2020]  
Certificates of completion of courses at the University's Faculty of Advanced Studies

## WORK EXPERIENCE:

### Professional Career (Workplace, Years, Position):

Kharkiv Aviation Institute named after N.Ye. Zhukovsky, Department of Design and Production of Electronic Equipment [1991–1995] – Senior Laboratory Assistant with Higher Education  
Kharkiv Aviation Institute named after N.Ye. Zhukovsky, Department of Design and Production of Electronic Equipment [1995–1998] – Postgraduate Student  
Kharkiv Aviation Institute named after N.Ye. Zhukovsky, Department of Design and Production of Electronic Equipment [1998–2000] – 1st Category Engineer  
State Aerospace University named after N.Ye. Zhukovsky "Kharkiv Aviation Institute", Department of Production of Aircraft Electronic Systems [2000–2008] – Assistant  
National Aerospace University named after N.Ye. Zhukovsky "Kharkiv Aviation Institute", Department



of Aircraft Electronic Systems Production [2008–2018] – Associate Professor  
National Aerospace University "Kharkiv Aviation Institute", Department of Information and  
Communication Technologies named after O.O. Zelensky [2018–till now] – Associate Professor

### **Teaching Experience:**

Teacher of the Department of Production of Aircraft Electronic Systems  
State Aerospace University named after N.Ye. Zhukovsky "Kharkiv Aviation Institute" [2000–2008]  
Teaching courses: Physical and theoretical foundations of designing electronic equipment,  
Fundamentals of microelectronics, Mathematical methods and models for designing electronic  
equipment

Teacher of the Department of Aircraft Electronic Systems Production  
National Aerospace University named after N.Ye. Zhukovsky "Kharkiv Aviation Institute" [2008–2018]  
Teaching courses: Modeling of technical systems using geoinformation technologies, Mathematical  
methods of information technology, Machine vision and image processing, Pattern recognition  
methods, Optimization methods

Teacher of the Department of Information and Communication Technologies named after O.O.  
Zelensky  
National Aerospace University "Kharkiv Aviation Institute" [2018–till now]  
Teaching courses: Fundamentals of electrical circuit theory, Modeling and optimization of  
telecommunication systems and networks, Switching and information distribution systems, Systems  
analysis and mathematical modeling of information systems, Network technologies, Optimization  
methods in machine learning, Modeling of large systems and complexes

### **Experience in International or National Projects:**

Participation in National and International Projects including (in recent years):  
State budget Project "Methods of processing multi-channel images in mobile systems based on  
forecasting and machine learning", state registration No. 0121U112176 [2021–2023]  
Ukrainian-French project "Processing of multichannel remote sensing data based on machine  
learning" [2021–2022]  
US-Polish-Ukrainian Project "Exploratory Research on Generative Compression for Compressive  
Lidar" [2024–2026]

## **RESEARCH ACTIVITIES:**

### **Main Research Areas:**

Methods of pattern recognition, computer vision, digital image processing, statistical analysis,  
mathematical modeling and simulation of systems

### **Number of Publications (Scopus, WoS, others):**

Over 70 scientific publications, including indexed articles in Scopus and Web of Science databases,  
multiple conference proceedings and applied research outputs

### **Monographs, Textbooks:**

Co-author of 3 monographs in the field of processing remote sensing data

### **Participation in Scientific Conferences:**

Regular participant (more than 30) and speaker at international and all-Ukrainian scientific  
conferences on radio electronics, telecommunications and computer technology (Ukraine, Poland,





Slovakia, online forums)

## TEACHING ACTIVITIES:

### Courses Taught:

Systems analysis and mathematical modeling of information systems, Network technologies, Optimization methods in machine learning, Modeling of large systems and complexes

### Author Courses, Academic Programs:

Author of the courses “Systems analysis and mathematical modeling of information systems”, “Modeling of large systems and complexes”

Developer of academic content for “Optimization methods in machine learning”

### Methodological Materials, Textbooks:

Co-author of teaching aids and methodological manuals for the courses taught.

Development of electronic resources and video materials for hybrid and online teaching (LMS: Mentor)

## GRANTS AND PROJECTS:

### Participation in International and National Projects:

International grant No. 7116 “Exploratory Research on Generative Compression for Compressive Lidar” [01/10/2024 – 30/09/2026]

## PROFESSIONAL ACHIEVEMENTS AND AWARDS:

### Honorary Titles:

Certificate of the Ministry of Education and Science of Ukraine [2025]

Honorary Certificate from the National Aerospace University “Kharkiv Aviation Institute” [2024]

Honorary Certificate of the Kharkiv City Council [2023]

### Distinctions, Awards, Prizes:

“IKARY KHAI-2016”, 2nd place in the nomination “Teacher of professionally oriented disciplines”

### Membership in Professional Associations:

Public organization "Ukrainian Scientific and Educational IT Society"

## INTERNATIONAL ACTIVITIES:

### Cooperation with Foreign Universities:

West-Pomeranian University of Technology in Szczecin (Poland) [2024–till now]

University of Delaware (New Ark, USA) [2024–till now]

## SELECTED PUBLICATIONS:

### Key Articles (Scopus, WoS, others):

Discrete Atomic Transform-Based Lossy Compression of Three-Channel Remote Sensing Images with Quality Control / Makarichev, V., Vasilyeva, I., Lukin, V et al. // Remote Sensing. – 2022. – Vol. 14



(1), 125 – 35 P. <https://doi.org/10.3390/rs14010125>

Lossy Compression of Multichannel Remote Sensing Images with Quality Control [Text] / V. Lukin, I. Vasilyeva, S. Krivenko et al. // Remote Sensing (IF 4.509), 2020, 12, 3840. – 35 p. <https://doi.org/10.3390/rs12223840>

**Books, Chapters in Collective Monographs:**

Processing of Multichannel Remote Sensing Data Using Neural Networks / V. Lukin, M. Uss, I. Vasilyeva et al // Intellectual capital is the foundation of innovative development: Engineering, Computer Science, Agriculture. Monographic series «European Science». Book 18. Part 3. 2023, pp. 85–130. <https://doi.org/10.30890/2709-2313.2023-18-03-002>

Some aspects of processing of multichannel remote sensing data using neural networks / V. Lukin, O. Ieremeiev, I. Vasilyeva et al // Prospective global scientific trends: Informatics, Architecture, Innovative technology, Ecology. Monographic series «European Science». Book 19, Part 2, 2023. – Ch. 1. – PP. 7–60. <https://doi.org/10.30890/2709-2313.2023-19-02-001>

**Links to Citation Database Profiles:**

<https://www.scopus.com/authid/detail.uri?authorId=57216485550>

<https://scholar.google.com.ua/citations?hl=uk&user=HcirqjlAAAAJ>

**ADDITIONAL INFORMATION:**

**Language Proficiency:**

Ukrainian, Russian, English

**IT Skills:**

Microsoft Office (Word, Excel, PowerPoint) / Zoom, Google Meet / Google Drive / Python, MathCAD, MATLAB

**Social and Community Activities:**

Student group curator

