Name	Viktoriia Abramova
Position, Department/Faculty	Associate Professor
Academic Degree, Academic Title	Candidate of Technical Science
Email:	v.abramova@khai.edu
Scopus Author ID:	55225531900
Web of Science ResearcherID:	NFT-1991-2025
ORCID iD:	0000-0001-5802-5858
Google Scholar:	https://scholar.google.com/citations?user=7ybpJ3AAAAAJ&hl=ru&oi=ao
ResearchGate:	https://www.researchgate.net/profile/Victoriya-Abramova

EDUCATION:

Basic education (university, major, year of graduation):
National Aerospace University, Kharkiv, Ukraine
Master's degree with honors, Telecommunications and Radio Engineering, Feb. 2011

Postgraduate/Doctoral studies:
Candidate of Technical science,
Remote Aerospace Research, Feb. 2015

Additional training, certification programs:
Cisco Academy, Kharkiv, Ukraine
CCNA1 Instructor, Computer Networks, Nov. 2020

WORK EXPERIENCE:

Professional Career (Workplace, Years, Position):
National Aerospace University, Dept. of Signal Receiving, Transmitting, and Processing
Mar. 2011 – Aug. 2015
Assistant Professor

National Aerospace University, Dept. of Signal Receiving, Transmitting, and Processing
Sep. 2015 – Aug. 2017
Senior Professor

National Aerospace University, Dept. of Information and Communication Technologies
Sep. 2017 – Present
Associate Professor

Teaching Experience:
14 years

Experience in International or National Projects:
8 national projects,
2 international projects

RESEARCH ACTIVITIES:

Main Research Areas:
Intellectual image and signal processing (quality enhancement based on preliminary distortions analysis)

Number of Publications (Scopus, WoS, others):
Overall – 89,
Scopus – 43,
WoS – 19

Monographs, Textbooks:

1. V. Lukin, S. Kryvenko, Fangfang Li, S. Abramov, V. Abramova, B. Kovalenko, I. Dohtiev, O. Arkhipov, N. Stojanović, B. Bondžulić, Quality of lossy compressed images and ways of its providing, In: Image processing: ways to improve quality, Scientific Route OÜ, Estonia, 2025, p. 2 – 39, URL: https://monograph.route.ee/rout/catalog/book/Quality_of_loss_compressed_images_and_ways_of_its_providing

2. Abramova V., Abramov S., Abramov K., Vozel B., Blind Evaluation of Noise Characteristics in Multichannel Images, In: Information Technologies in The Design Of Aerospace Engineering (Studies in Systems, Decision and Control), Springer, 2024, 507, pp. 209 - 229 Springer, DOI 10.1007/978-3-031-43579-9_4.

3. Лукін В.В., Єремеєв О.І., Абрамова В.В., Абрамов С.К., Рубель О.С., Окарма К., Лєх П., Фастович Я., Методи інтелектуальної обробки зображень та відео на основі метрик візуальної якості для перспективних застосувань, розділ в книзі «Innovation in modern science 2023», видавництво SWorld-NetAkhatAV, липень 2023, С. 51-98. https://desymp.promonograph.org/index.php/sge/article/view/sge20-02-010/1126

4. V Lukin, M Uss, S Abramov, I Vasilyeva, G Proskura, O Ieremeiev, V Abramova, O Rubel, N Kozhemiakina, V Naumenko, Automation in remote sensing data pre-processing, Space Research in Ukraine, Report to COSPAR, Periodyka, Kiev, 2021, pp. 96-103. ISBN 978-966-360-425-1

Participation in Scientific Conferences:

1. Брисін П. В., Абрамов С. К., Абрамова В. В., Лукін В. В. Прогнозування ефективності придушення шуму для одновимірного фільтру на основі дискретного косинусного перетворення // Modern problems of science, education and society. Proceedings of the 11th International scientific and practical conference. SPC "Sci-conf.com.ua". Kyiv, Ukraine. 2024. Pp. 347-353. URL: https://sci-conf.com.ua/xi-mizhnarodna-naukovo-praktichna-konferentsiya-modernproblems-of-science-education-and-society-8-10-01-2024-kiyiv-ukrayina-arhiv/.

2. V. Abramova, S. Abramov, V. Lukin, I. Grigelionis, L. Minkevičius, G. Valušis, Problems of terahertz images quality enhancement, Advanced Properties and Processes in Optoelectronic Materials and Systems (Apropos 19), Vilnius, Lithhuania, October 1-4, 2024, S8-O3.

3. Analysis of statistical and spatial spectral characteristics of distortions in lossy image compression / V. Abramova, V. Lukin, S. Abramov, K. Abramov, E. Bataeva // 2022 IEEE 2nd Ukrainian Microwave Week, November 14 – 18, 2022, https://doi.org/10.1109/UkrMW58013.2022.10036949

4. Terahertz Imaging System Using Adaptive DCT-based Image Denoising / V. Abramova, S. Abramov, V. Lukin, I. Grigelionis, L. Minkevičius, G. Valušis // 2022 IEEE 2nd Ukrainian Microwave Week, November 14 – 18, 2022, https://doi.org/10.1109/UkrMW58013.2022.10037046

5. A Fast Procedure for Image Lossy Compression by ADCTC Using Prediction of Distortions' MSE / V. Abramova, S. Kryvenko, S. Abramov, V. Makarichev, V. Lukin // Integrated Computer Technologies in Mechanical Engineering, October 28-30, 2022. – P. 625 – 635. - https://link.springer.com/chapter/10.1007/978-3-031-36201-9_52.

TEACHING ACTIVITIES:

Courses Taught:
Modern Information Technologies in Science and Education;
Distributed Service Systems;
Satellite and Terrestrial Data Transmission Systems;
Routing and Switching in Information Systems;
Intellectual Processing of Remote Sensing Data.

Methodological Materials, Textbooks:
1. Абрамова В.В. Распределенные сервисные системы [Текст]: учеб. пособие / В. В. Абрамова, С. К. Абрамов.– Х.: Нац. аэрокосм. ун-т им. Н. Е. Жуковского «Харьк. авиац. ин-т», 2016. – 112 с.
2. Радіорелейні та супутникові системи зв'язку [Текст] : навч. посіб. / В. В. Абрамова, С. К. Абрамов, О. С. Рубель. – Харків : Нац. аерокосм. ун-т ім. М. Є. Жуковського «Харків. авіац. ін-т», 2018. – 116 с.
3. Розподілені сервісні системи [Електронний ресурс] : навч. посіб. / В. В. Абрамова, С. К. Абрамов. – Харків : Нац. аерокосм. ун-т ім. М. Є. Жуковського «Харків. авіац. ін-т», 2020. – 109 с.
4. Технології і системи електричного та оптичного зв'язку : навч. посіб. / С. К. Абрамов, В. В. Абрамова, К. Д. Абрамов. - Харків. - Нац. аерокосм. ун-т ім. М. Є. Жуковського "Харків. авіац. ін-т", 2024. - 69 с . - http://library.khai.edu/library/fulltexts/metod/

GRANTS AND PROJECTS:

Participation in International and National Projects:
2013 – 2015, "Dnipro" (Ukraine – France), "Development and improvement of methods and algorithms for hyperspectral images filtering in component and vector modes for established noise models. Testing on model and real multichannel images"
2017 – 2019, "Dnipro" (Ukraine – France), "Smart Processing of Big Data with application to Multichannel Remote Sensing Images"

Grants, Scholarships, Academic Mobility Programs:
2022, Marius Jakulis Jason Foundation within the special program 'For Ukraine's Science'.
2022 – 2023, support of Ukrainian scientists by the Research Council of Lithuania (P-LUPAR-22-54)

PROFESSIONAL ACHIEVEMENTS AND AWARDS:

Membership in Professional Associations:
EuMA

SELECTED PUBLICATIONS:

Key Articles (Scopus, WoS, others):

1. M. V. Shuba, D. Seliuta, V. Abramova. Standing Wave Pattern Suppression in the Terahertz Frequency Domain Spectroscopy by Means of Windowed Fourier Filtering, J. Infrared Millim. Terahertz Waves, Vol. 10762, Article ID 0964, 12 p. (2024). Doi: 10.1007/s10762-023-00964-9. (**Q2**)

2. V. Abramova, V. Lukin, S. Abramov, S. Kryvenko, P. Lech, K. Okarma, A Fast and Accurate Prediction of Distortions in DCT-Based Lossy Image Compression, Electronics 2023, 12 (2347), 2023, pp. 1 – 24. (**Q2**)

3. V. Abramova, S. Abramov, V. Lukin, I. Grigelionis, L. Minkevičius, G. Valušis, Investigation of blur kernel of terahertz images, Lithuanian Journal of Physics, 63(3), 2023, pp. 113–130. (**Q4**)

4. V. Abramova, S. Abramov, V. Lukin, I. Grigelionis, L. Minkevičius, G. Valušis, Improvement of terahertz images by adaptive discrete cosine transform (DCT)-based denoising, Lithuanian Journal of Physics, 62(4), 2022, pp. 267–276. (**Q4**)

5. S. Abramov, V. Abramova, V. Lukin, K. Egiazarian, Prediction of Signal Denoising Efficiency for DCT-based Filter, Telecommunications and Radio Engineering, 78(13), 2019, pp. 1129-1142. (**Q3**)

6. R.V. Tsekhmystro, V.V. Abramova, A.S. Rubel, M.L. Uss, G.A. Proskura, O.S. Rubel, Noise characteristics estimation in real-world images using convolutional neural network in mobile platform, Radioelectronic and Computer Systems, 2(90), 2019, pp. 60 – 70. (**Q4**)

7. S.K. Abramov, V.V. Abramova, S.S. Krivenko, V.V. Lukin, Analysis and forecasting of one-dimentional signals filtration efficiency based on discrete cosinus conversion, Radioelectronic and Computer Systems, 3(91), 2019, pp. 19 – 29. (**Q4**)

8. O. Rubel, S. Abramov, V. Abramova, V. Lukin, Use of similarity metrics in template-based detection of objects in images, Telecommunications and Radio Engineering, 78(14), 2019, pp. 1249 – 1261. (**Q3**)

9. V. Lukin, S. Abramov, V. Abramova, J. Astola, K. Egiazarian, Denoising of Multichannel Images with References, Telecommunications and Radio Engineering, 76(19), 2018, pp. 1719 – 1748. (**Q3**)

10. S. Abramov, V. Abramova, V. Lukin, K. Egiazarian, Denoising of multichannel images with nonlinear transformation of reference image, Telecommunications and Radio Engineering, 77(9), 2018, pp. 769 – 786. (**Q3**)

11. S. K. Abramov, V. V. Lukin, V. V. Abramova, K. D. Abramov, I. V. Kaluzhinov, 3D-model based approach for estimating maximum distance of UAV visual detection, Telecommunications and Radio Engineering, 77(20), 2018, pp. 1837-1844. (**Q3**)

12. V. Abramova, V. Lukin, S. Abramov, O. Rubel, B. Vozel, K. Chehdi, J. Astola, K. Egiazarian, On Requirements to Accuracy of Noise Variance Estimation in Prediction of DCT-Based Filter Efficiency, Telecommunications and Radioengineering, 75(2), 2016, pp. 139 –154. (**Q3**)

13. V.V. Lukin, S. K. Abramov, V.V. Abramova, J.T. Astola, K.O. Egiazarian, DCT-based Denoising in Multichannel Imaging with Reference, Telecommunications and Radioengineering, 75(13), 2016, pp. 1167 –1191. (**Q3**)

14. V. V. Abramova, S. K. Abramov, V. V. Lukin, Iterative Method for Blind Evaluation of Mixed Noise Characteristics on Images, Information and Telecommunication Sciences, 6(1), 2015, pp. 8 – 14.

15. V. Abramova, A Blind Method for Additive Noise Variance Evaluation Based on Homogeneous Region Detection Using the Fourth Central Moment Analysis, Telecommunications and Radioengineering, No. 74(18), 2015, pp. 1651 – 1669. (**Q3**)

16. V. Abramova, S. Abramov, V. Lukin, A. Roenko, B. Vozel, Automatic estimation of spatially correlated noise variance in spectral domain for images, Telecommunications and Radioengineering, 73(6), 2014, pp. 511 – 527. (**Q3**)

17. V.V. Abramova, S.K. Abramov, V.V. Lukin, K.O. Egiazarian, J.T. Astola, On required accuracy of mixed noise parameter estimation for image enhancement via denoising, *EURASIP Journal on Image and Video Processing*, **2014**:3, 2014. (**Q3**)

ADDITIONAL INFORMATION:

Language Proficiency:
Ukrainian – native speaker,
Russian – native speaker,
English – B2 (Pearson certificate, 2021),
Lithuanian – A2

IT Skills:
Matlab, Delphi