



Volodymyr Hnatushenko

Date of birth: 26/01/1975 | **Phone number:** (+380) 505919350 (Mobile) | **Email address:**

vgnat@ukr.net | **Website:** https://it.nmu.org.ua/en/HR_staff/prepods/Hnatushenko.php |

Address: av. Dmytra Yavornytskoho, 19, 49005, Dnipro, Ukraine (Work)

ABOUT ME

Professor Volodymyr Hnatushenko is a leading expert in Artificial Intelligence, Advanced Information Systems, and Computational Modeling. He serves as Head of the Department of Information Technology and Computer Engineering and the Scientific and Educational Center for Geoinformation and Aerospace Technologies at Dnipro University of Technology. His research focuses on the automated processing of large-scale multispectral aerospace datasets and on developing scientific foundations for new methods and technologies for the AI-aerospace monitoring of anthropogenic impacts across various ecosystems. Together with his students, he has established foundational information technologies for neural-network-based processing, recognition, and interpretation of multispectral images. Professor Hnatushenko has authored over 450 scientific publications and holds numerous patents. A Senior Member of IEEE and member of SPIE, he has chaired program committees for international conferences and serves as a key expert for the Ministry of Education and Science of Ukraine. He has successfully supervised 1 Doctoral and more than 10 PhD dissertations.

WORK EXPERIENCE

SENIOR LECTURER – DEPARTMENT FOR FOREIGN STUDENTS OF DNIPROPETROVSK NATIONAL UNIVERSITY –
01/2003 – 09/2003 – DNIPRO, UKRAINE

- information technology

PROJECT HORIZON EUROPE PROGRAMME "MARIE SKŁODOWSKA-CURIE ACTIONS (MSCA)" 101080374 - OPTIQ-HORIZONMSCA-2021-SE-01 "NON-STANDARD DATA AND IMAGE PROCESSING - FROM NONLINEAR OPTICS TO QUANTUM COMPUTING" (OPTIQ) – 01/08/2024 – Current

PROJECT "SAFE ARTIFICIAL INTELLIGENCE: EUROPEAN LEGAL DIMENSION." JEAN MONNET'S ACTIONS IN THE FIELD OF HIGHER EDUCATION TEACHING AND RESEARCH WITHIN THE FRAMEWORK OF THE EC ERASMUS+ PROGRAM – 01/09/2024 – Current

PROJECT "SMARTGRID-SYSTEM OF ENERGY-EFFICIENT LOW-CARBON ELECTRICITY SUPPLY FOR CONSUMERS" –
01/01/2023 – Current

ASSOCIATE PROFESSOR – DEPARTMENT OF ELECTRONIC TELECOMMUNICATIONS OF DNIPROPETROVSK NATIONAL UNIVERSITY – 09/2003 – 09/2009 – DNIPRO, UKRAINE

PROFESSOR – DEPARTMENT OF ELECTRONIC TELECOMMUNICATIONS OF DNIPROPETROVSK NATIONAL UNIVERSITY – 09/2009 – 09/2012 – DNIPRO, UKRAINE

GRANT OF THE PRESIDENT OF UKRAINE – GRANTS OF THE PRESIDENT OF UKRAINE TO DOCTORS OF SCIENCES FOR SCIENTIFIC RESEARCH – 2011 – KYIV, UKRAINE

HEAD R&D – EOS DATA ANALYTICS – 2013 – 2019 – DNIPRO, UKRAINE

- neural network processing and recognition of multispectral images
- mathematical and computer modeling of processes and systems

UNIVERSITY DEPARTMENT HEAD, PROFESSOR – COMPUTER SCIENCE AND INFORMATION TECHNOLOGIES OF OLES HONCHAR DNIPRO NATIONAL UNIVERSITY – 09/2012 – 06/2019 – DNIPRO, UKRAINE

PROFESSOR – DEPARTMENT OF GEOINFORMATION SYSTEMS OF THE DNIPRO UNIVERSITY OF TECHNOLOGY – 07/2019 – 01/2020 – DNIPRO, UKRAINE

SCIENTIFIC ADVISER OF R&D PROJECT "ALGORITHMIC AND SOFTWARE SOLUTIONS OF INFORMATION TECHNOLOGIES" – MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE – 2019 – 2021 – KYIV, UKRAINE

EXPERT – NATIONAL AGENCY FOR HIGHER EDUCATION QUALITY ASSURANCE – 2019 – Current – KYIV, UKRAINE

SCIENTIFIC ADVISER OF R&D PROJECT "MODELS AND INFORMATION TECHNOLOGIES FOR PROCESSING AND ANALYZING DATA IN COMPLEX COMPUTER SYSTEMS AND NETWORKS" – MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE – 2021 – 2024 – KYIV, UKRAINE

UNIVERSITY DEPARTMENT HEAD, PROFESSOR – INFORMATION TECHNOLOGY AND COMPUTER ENGINEERING OF THE DNIPRO UNIVERSITY OF TECHNOLOGY – 02/2020 – Current – DNIPRO, UKRAINE

PROJECT "PROVIDING OF ACADEMIC FREEDOM AND INCLUSION THROUGH DIGITALIZATION" – AFID – EU ERASMUS+ PROGRAM – 2023 – Current

INFORMATION TECHNOLOGIES OF CRYPTOGRAPHIC PROTECTION AND DATA AUTHENTICATION FOR MOBILE AND SATELLITE COMMUNICATION SYSTEMS – NATIONAL RESEARCH FOUNDATION OF UKRAINE. – 01/08/2025 – Current – UKRAINE

● **EDUCATION AND TRAINING**

01/09/1990 – 29/03/1994 Dnipro, Ukraine

JUNIOR SPECIALIST Dnipropetrovsk College of Automation and Telemechanics (now the University of Customs and Finance)

01/09/1994 – 06/1999 Dnipro, Ukraine

MASTER'S DEGREE Dnipropetrovsk State University (now Oles Honchar Dnipro National University)

01/11/1999 – 31/10/2002 Dnipro, Ukraine

PH.D. IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGY Oles Honchar Dnipro National University

2009 Kyiv, Ukraine

DOCTOR OF TECHNICAL SCIENCES (DR.-ING. HABIL.) IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGY Kyiv National University of Construction and Architecture

16/07/2020 – 17/07/2020

INTENSIVE TRAINING COURSE "TECH SUMMER FOR TEACHERS" Softserve

27/12/2021 – 07/02/2022 Krakow, Poland

INTERNATIONAL INTERNSHIP IN THE COMPUTER SCIENCE PROGRAM University of Science and Technology in Krakow, Wroclaw University of Science and Technology

ADVANCED TRAINING IN THE FIELD OF KNOWLEDGE 12 "INFORMATION TECHNOLOGIES" Dnipro
University of Technology

Interindustry educational and scientific institute of continuous full-time distance education of Dnipro University of Technology. 6 ECTS credits, 01/22/2024-06/21/2024

HIVE PROJECT «HEI INNOVATION FOR KNOWLEDGE INTENSIVE ENTREPRENEURSHIP» (HORIZON
EUROPE)

108 hours / 3.6 ECTS credits. Certificate HST № 29-2324-2024

LANGUAGE SKILLS

Mother tongue(s): **UKRAINIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B1	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

GIS Softwares such as ArcGIS, QGIS, Swat extension, ArcHydro.....others | Cisco packet treacer | Microsoft Office

PUBLICATIONS

2021
[Intelligent System for Building Separation on a Semantically Segmented Map](#)

Write here the description...

Hnatushenko V. , Zhernovyi V., Udovik I., Shevtsova O. IT & Systems of Information Security

2023
[Application of two-dimensional Padé-type approximations for image processing](#)

Olevskyi V.I., Hnatushenko V.V. Radio Electronics, Computer Science, Control., 2023, № 1, P.99-106.

2023
[Automated building damage detection on digital imagery using machine learning](#)

Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu, 2023, № 6. P.134-140

2019
[Complex Approach of High-Resolution Multispectral Data Engineering for Deep Neural Network Processing](#)

Hnatushenko V., Zhernovyi V. Computational Intelligence and Decision Making, 659–672

[Machine learning for automatic extraction of water bodies using Sentinel-2 imagery](#)

Kashtan V., Hnatushenko V. Radio Electronics, Computer Science, Control., 2024, № 1, P.118-127.

2023

IMPROVEMENT OF THE ALGORITHM FOR SETTING THE CHARACTERISTICS OF INTERPOLATION MONOTONE CURVE

Informatyka, Automatyka, Pomiary W Gospodarce I Ochronie Środowiska, 13(4), 44–50

2024

Enhancing the quality of CNN-based burnt area detection in satellite imagery through data augmentation

Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII-1/W2-2023, 1749–1755

2022

Decentralized Information System for Supply Chain Management Using Blockchain

International Workshop on Intelligent Information Technologies and Systems of Information Security

2020

On Satellite Image Segmentation via Piecewise Constant Approximation of Selective Smoothed Target Mapping

Applied Mathematics and Computation, Vol.389, 2020, Id 125615, 26p.

2018

Accuracy evaluation of automated object recognition using multispectral aerial images and neural network

Proc. SPIE 10806, Tenth International Conference on Digital Image Processing

2003

The use of geometrical methods in multispectral image processing

Gnatushenko V. Journal of Automation and Information Sciences, Volume 35 (12), 1-8

2024

The use of generative artificial intelligence in software testing

System technologies. 2(151), 2024. P. 113-123

2024

Decision-Making Methods and Models for Intelligent Business Analytics Systems in Online Tourism

International Conference on Computational Linguistics and Intelligent Systems

2024

Geoinformation Technology for Modeling and Mapping Flooding Territory in the Event of the Dnipro Hydroelectric Power Station Dam Failure.

Kashtan, V., Ivanov, D., Hnatushenko, V. (2024). Volume 1. Lecture Notes on Data Engineering and Communications Technologies, vol 219. Springer, Cham.

2024

Architecture of a Computer Decision Support System for CADx Breast Cancer

Aziukovskyi, O., Hnatushenko, V. et al. (2024). Volume 1. ISDMCI 2024. Lecture Notes on Data Engineering and Communications Technologies, vol 219. Springer, Cham.

2024

Intelligent Sentinel satellite image processing technology for land cover mapping

Kashtan V.Yu., Hnatushenko V., Laktionov I.S., Diachenko H.H. Intelligent Sentinel satellite image processing technology for land cover mapping. Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu, 2024, № 5. P.143-150.

2024

Aircraft detection with deep neural networks and contour-based methods

Radionov Y. D., Kashtan V. Yu., Hnatushenko V. V., Kazymyrenko O.V. Aircraft detection with deep neural networks and contour-based methods. Radio Electronics, Computer Science, Control., 2024, № 4, Pp.121-129.

2019

Luminescent Analysis of ZnS:Mn Single-Crystal Lattice Changes During Plastic Deformation. Journal of Applied Spectroscopy

Prokofiev, T. A., Ivanchenko, A. V., Gnatushenko, V. V. (2019). Luminescent Analysis of ZnS:Mn Single-Crystal Lattice Changes During Plastic Deformation. Journal of Applied Spectroscopy. doi:10.1007/s10812-019-00802-8

2024

Creating effective Translation and Localization Strategies to promote Korean Culture on the Ukrainian-language Internet

Hnatushenko V., Vovk N., Sydoruk M.

Journal Name: CLW-2024

2024

Methodology for Calculating the Geological Structure Complexity Index Using Remote Sensing Data to Improve the Efficiency of Machine Learning

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Volodymyr Hnatushenko, Serhii Nikulin, Vita Kashtan and Olga Korobko

Journal Name: ICST-2024

2024

Development of UAV Image Processing Algorithms for Early Detection of Fires in Natural Ecosystems

V. Hnatushenko, T. Bulana, B. Molodets, D. Boldyrie

Journal Name: APUAVD

2024

Intelligent Sentinel satellite image processing technology for land cover mapping

Kashtan V.Yu., Hnatushenko V., Laktionov I.S., Diachenko H.H.

Journal Name: Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu | **Volume, Issue and Pages:** № 5. P.143-150

2024

Neural Network-Based Analysis of Forest Fire Aftermath in Class-Imbalanced Remote Sensing Earth Image Classifi

Hnatushenko, V., Hnatushenko, V., and Soldatenko, D.

Journal Name: Remote Sens. Spatial Inf. Sci. | **Volume, Issue and Pages:** XLVIII-3-2024, 223–229

2024

Information System for Air Quality Assessment and Data Processing

Hnatushenko V., Bulana T., Gomilko I., Molodets B., Boldyriev D.

Journal Name: IT&I-2024

2024

Aircraft detection with deep neural networks and contour-based methods

Radionov Y. D., Kashtan V. Yu., Hnatushenko V. V., Kazymyrenko O.V.

Journal Name: Radio Electronics, Computer Science, Control. | **Volume, Issue and Pages:** № 4, Pp.121-129

2024
[Information System to Enhance Agricultural Production Efficiency Based on Sustainable Development Prin](#)

Hnatushenko V., Shuleshko V., Bulana T., Molodets B.

Journal Name: AdvAIT-2024

2025
[Computer-Aided Diagnosis Models for Breast Cancer Detection Decision Support Systems.](#)

Aziukovskyi O., Gadiatskyi V., Hnatushenko V., Ivanov D., Olevskyi V. and Zavizion V.

Journal Name: International Journal of Computing | **Volume, Issue and Pages:** 24(1), 72-80

2025
[Intelligent technology for land cover monitoring due to amber mining on optical satellite images](#)

Kashtan V.Yu., Hnatushenko V.V.

Journal Name: Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu | **Volume, Issue and Pages:** № 3. P.156-164

2025
[Flood Forecasting with Sentinel-2 Images Using Machine Learning](#)

Journal Name: Int. Arch. Photogramm. Remote Sens | **Volume, Issue and Pages:** XLVIII-G-2025, 583–588

2025
[Intelligent electricity load forecasting method using ARIMA-LSTM-Random Forest](#)

Aziukovskyi O., Hnatushenko V., Kashtan V., Polyanska A., Jamróz A.

Journal Name: Journal of the Polish Mineral Engineering Society | **Volume, Issue and Pages:** Vol. 1 No. 1 (2025).

2025
[Deep learning-based segmentation of multi-temporal satellite imagery for flood detection.](#)

Kashtan V., Hnatushenko V.

Journal Name: CoLInS-2025 | **Volume, Issue and Pages:** P.103-114

2025
[Aircraft detection in aerial imagery based on YOLO architectures.](#)

Journal Name: ISW-2025 | **Volume, Issue and Pages:** P.196-208

2025
[A hybrid neural network architecture for semantic-contextual analysis of emotions in social media.](#)

Kashtan Vita, Hnatushenko Volodymyr, Ovcharenko Maksym, Ivanko Artem

Journal Name: MoDaST 2025 | **Volume, Issue and Pages:** Pp.15-28

2025
[Information technology for detecting cars on aerial imaging using a modified YOLO-OBB architecture](#)

Hnatushenko Volodymyr, Kashtan Vita, Kazymyrenko Oleksii

Journal Name: MoDaST 2025 | **Volume, Issue and Pages:** Pp. 293-304

2025
[Hybrid quantum CNN-based information technology for building semantic segmentation in aerial imagery](#)

Kashtan Vita, Hnatushenko Volodymyr, Babets Dmytro, Cyran Krzysztof, Wereszczyński Kam

2025

[A neural network approach to semantic segmentation of vehicles in very high resolution images](#)

Kashtan V. Yu., Hnatushenko V. V., Udovyk I. M., Kazymyrenko O. V., Radionov Y. D.

Journal Name: Radio Electronics, Computer Science, Control | **Volume, Issue and Pages:** № 3(74), Pp.77-85

2025

[Hybrid ARIMA-LSTM-Random Forest Model for Electricity Load Forecasting](#)

Authors: Hnatushenko V., Kashtan V., Jamróz A. | **Journal Name:** Physical and Chemical Geotechnologies | **Volume, Issue and Pages:** 9(1), 091008

2025

[Decision support methodology for smart regulation of electric power consumption in mine drainage systems](#)

Authors: Hnatushenko V., Tkachenko S., Beshta L. | **Journal Name:** Information Technology and Implementation (IT&I-2025) | **Volume, Issue and Pages:** P.156-165

2025

[Post-Quantum Authentication and Authorization Using the Niederreiter Code-Theoretic Scheme](#)

Authors: Korolov R., Hnatushenko V., Korchenko A., Sokol V., Udovyk I. and Kurtseitov T. | **Journal Name:** 9th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT) | **Volume, Issue and Pages:** pp. 1-4.

2025

[Utilization of cloud infrastructure for dataset markup](#)

Authors: Syzonenko R., Klymenko S., Hnatushenko V. | **Journal Name:** he 5th International Conference on Information Technologies

2026

[Neural network method for invariant recognition of vehicles in aerospace images](#)

Authors: Kashtan V., Kazymyrenko O.V., Hnatushenko V. | **Journal Name:** Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu | **Volume, Issue and Pages:** № 1. P.130-137

2026

[An Intelligent GIS-Based Approach to Flood Prediction and Mapping from Multiple Data Sources](#)

Authors: Hnatushenko Volodymyr, Kashtan Vita, Hnatushenko Viktoriia | **Journal Name:** AVN | **Volume, Issue and Pages:** 133(2026)1. P.26-33. | **Publisher:** Allgemeine Vermessungs-Nachrichten

● **NETWORKS AND MEMBERSHIPS**

2016 – CURRENT IEEE
Senior Member IEEE

2020 – CURRENT INDEPENDENT AGENCY FOR ACCREDITATION AND RATING, Republic of Kazakhstan
Expert

2014 – CURRENT Ministry of Education and Science of Ukraine, Kyiv
Member of the expert council of the Department for Attestation of Highly Qualified Personnel and Licensing

● **HONOURS AND AWARDS**

2005
Holder of a fellowship of the Cabinet of Ministers for young scientists from 2005 to 2007 – Cabinet of Ministers of Ukraine

2010
Holder of a fellowship of the Verkhovna Rada of Ukraine "for the most talented young scientists"

2024
Medal "For Merit" (2024) – Dnipro University of Technology, Dnipro, Ukraine

2024
Gratitude of the Ministry of Education and Science of Ukraine (2024)

2024
Gratitude of the IT Dnipro Community (2024)

2024
Gratitude of the Presidium of the National Academy of Sciences of Ukraine (2024)

2025
For Training a Scientific Generation – Award of the National Academy of Sciences of Ukraine
