Volodymyr Hrytsyk, professor. Virtual Reality Department Professor of Lviv Polytechnic National University

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Summary:
- My primary responsibility in the research comprises audio-visual pattern recognition methods and means for Computer Vision systems.
- Systems and means of Artificial Intelligence.

Education:

1991-1996   I.Franko State University in Lviv, Applied Mathematics Department.

Qualification: Mathematics.

Professor title at Ternopil Technical Ivan Puluj's University   since 2016.

May 2013 <u>Full Sci. Dr. degree</u> "System and means of Artificial Intelligence", (Kharkiv)

Title: "Models and means of adaptive processing of videostreams for Computer Vision Systems"

June 2004   <u>PhD. degree</u> "System and means of Artificial Intelligence"   (Lviv)

Title: "Neural Network technology of analysis and classification of situation for Information analytic systems"

Fellowships (International):

Summer School in Complexity Science (Imperial College London).
    Wye, Kent. United Kingdom.   9th July – 17th July 2007

Course "Computational Contact Mechanics" (CISM, Italy)   September 25, 2006 – Sep 29, 2006

Course "Nonsmooth Mechanics of Solids" (CISM, Italy)   October 4, 2004 — Oct 8, 2004

Fellowships (National):
- Personal grant of the Chief of Lviv's state administration for known researchers and specialists at   2008 year.
- Personal grant of the Chief of Lviv's state administration for known researchers and specialists at   2007 year.
- Personal grant of the Chief of Lviv's state administration for known researchers and specialists at   2006 year.

Scientific experience: I have strong experience as a participant in National and International scientific projects (more than 15), the main ones:

Research Experience (main points):

2012-2014 Applied study "Development, study and implementation of methods and means of control and quality management for software"; Role: the study of image quality evaluation methods. Agreement № DF 196-12 (Ukrainian Education Ministry).

2007-2008 Principal Investigator "The development of theoretical foundations of computer vision and visual perception, processing and transmission of data for different areas of information infrastructure (" Computer Vision ") project of the State Fund of Fundamental Research of the Ministry of Education and Science of Ukraine. №Ф25.1/112.

2004-2006 Principal investigator and Executive Chief. Project "Information videoscope of ultrahigh-resolution for investigation of programmed death (apoptosis) of human tumor cells", (STCU Project №1702) financed by the Italian and Canadian governments;

2001-2003 Research engineer in the Project "Fundamentals of synthesis multidimensional neuronet based on universal neuro-like elements and neuro systems" tender on the order of the Ministry of Ukraine on Science and Technology;

1997-1999 Research engineer in the Project "Development of Information Technologies of Functioning, Programming and Adjusting Neuron Systems for Parallel Signals Processing", granted by Science and Technology Center in Ukraine (STCU Project №412), financed by the USA.

Other projects:

years	Universities works	Financing/customer	Role:
2017-2018	НДР №ДБ 229-17. Title**:** "Research of cognitive properties of homogeneous computing environments and their synthesis in high-performance information technologies of computer vision",	The project is financed by the Ukrainian Fundamental Research Department of the Ukrainian Education Ministry	Manager and principal investigator
2015	ДІ 220-15. Title: «Substantiation of technologies for the production of feed and fuel briquettes from vegetable raw materials and sapper with the development of technological equipment».	Ukrainian Education Ministry	researcher
2013	"Development, study, and implementation of methods and means of control and quality management for software" Agreement № DF 196-12 (Ukrainian Education Ministry).	Ukrainian Education Ministry	researcher

State scientific-research institute of Information Infrastructure works (national programs):

- Research and development work "Development of a highly effective system for the analysis, recognition and perception of high-resolution and sensitivity of audio-video information for a figurative computer", SSRIII, state registration number №0103006336 (development of high-resolution methods for image analysis and construction of test images), 2003;
- "Theoretical research and creation of high-performance data processing systems in real time for various subject areas of knowledge of the implementation of information and analytical systems", DNIIIII, 2007-2009.

- "Development of theoretical foundations of information and computer vision of vision and perception of processing and transmission of data for various subject areas of knowledge of information infrastructure (project "Computer vision"), Ministry of Education and Science of Ukraine F 25.1 / 112, 2007;
- "Creation of research complexes of devices for multichannel debugging and control of parameters of television transmitters", RRT concern of the Ministry of Transport and Communications of Ukraine, DNIIIII, No. 25, 2006-2008.
- Analysis of the existing elemental base for the hardware implementation of systems with parallel organization of the computational process of computer vision in information-control systems of real time", Ministry of Industrial Policy of Ukraine, Lviv Radio Engineering Research Institute, DNIIIII, No. 90-05, 2005;
- "Development of the concept of the use of information resources as the basis for the formation and adjustment of a comprehensive program for the creation of a unified national communications system in Ukraine", the State Committee for Communication and Informatization of Ukraine, the National Academy of Sciences of Ukraine, DNIIIII, 2001;
- "Development of elements of the system of information and analytical support of local state administrations and self-government bodies", DNIIIII, 2001;
- "Creation of the information system of integrated development of the Western region of Ukraine as one of the variants of the typical system of territorial and administrative management" (Contract No. 202-18 and / 4-00 dated August 07, 2000 with the State Committee for Communications and Informatization of Ukraine);
- The Concept of Creation and Development of the National Information Resources System", National Agency for Informatization under the President of Ukraine, National Academy of Sciences of Ukraine, DNIIIII, 1998;
- "Development of information technology for the selection, processing, and presentation of information of the economic, socio-political and ecological and natural purpose for modeling, forecasting and decision-making" (# 1-7 / 3-97 with the National Agency for Informatization under the President Ukraine);
- 05.02.02 / 007-95 "Development of new principles, methods, algorithms, expert systems, software for selecting and processing information for the purpose of structural analysis of recognition and classification of images, physical processes, situations, scenes, ensuring high survivability and resource management"
- "Fundamentals of synthesis of multidimensional neural networks based on universal neural elements and neural-like systems ", Ministry of Education and Science of Ukraine", № Ф 7/383-2001 р. Role: methods, algorithms, software tools for high-performance data processing];
- 06.02.02 / 033-92 "Information technology and software-oriented system for image processing and implementation of computational processes in real-time systems."

Publication activities:

Scopus ID: 57219859769

https://scholar.google.com.ua/citations?hl=uk&user=03JVYTYAAAAJ&view_op=list_works

https://orcid.org/0000-0002-9696-5805

Other activities:

2025   in procession. Organizing the workshop 'Cognitive Metaverse: beyond Traditional reality' as part of CSIT'2025, an IEEE and Scopus-indexed conference.

since 2023, MDPI journals reviewer (from 2023, over 70 reviews as of 05.2025):
- [Applied Sciences](#) (ISSN 2076-3417)
- [Symmetry](#) (ISSN 2073-8994)
- [Sustainability](#) (ISSN 2071-1050)
- [Mathematics](#) (ISSN 2227-7390)
- [Sensors](#) (ISSN 1424-8220)
- [JPM](#) (ISSN 2075-4426)
- [J. Imaging](#) (ISSN 2313-433X)
- [*ASI*](#) (ISSN 2571-5577)

2016-2021 member of the program committee of International Conferences on Artificial Intelligence, ISDMCI'2016-2021;

2007-2015 Member of the organization committee of International Conferences on Artificial Intelligence (address of this year – ISDMCI'2015 "http://isdmci.org.ua");

-Positions (main):

2025- now the Department of Virtual Reality Systems, Lviv Polytechnic National University. <u>Position: Professor</u> and <u>The Advanced Research Projects Laboratory Head.</u>

2017—2025 Professor of Automated Control Systems, Department of Lviv Polytechnic National University. <u>Position: Professor.</u>

2016-2017 Professor of Software Engineering, Cathedra of the Department of Computer Information Systems and Program Engineering faculty, Ternopil Ivan Pul'uj National Technical University. <u>Role: teaching and research</u>

2014-2016 Professor of Computer Systems and Networks, the cathedra of the Department of Computer Information Systems and Program Engineering faculty, Ternopil Ivan Pul'uj National Technical University. <u>Role: teaching and research</u>

2013-2014 Docent of Ternopil Ivan Pul'uj National Technical University, computer systems and networks department. Ukraine. <u>Role: teaching</u>

2010 – 2013   Sen. scientific researcher of the Department of LRRE Institute

2004 – 2010   Chief of the Department of Information Technologies and Analytic Systems of the State Scientific Research Institute of Information Infrastructure

2000 – 2004 Research worker.

1996-2000   Research engineer.

Second/Part-time works:

2017-2018   Professor of Software Engineering cathedra of Department of Computer Information Systems and Program Engineering faculty, Ternopil Ivan Pul'uj National Technical University. Role: teaching and research

2012-2013 Associate Professor of Computer Systems and Networks, Department of Computer Information Systems and Program Engineering faculty, Ternopil Ivan Pul'uj National Technical University. Role: teaching

2009 – 2014 (except 2011-2012) College of Computer Science and Management. Bielsko-Biala. Poland. Role: Visiting professor position.

2000 – 2007 College of Computer Science. Lodz. Poland. Position: Associate Professor.

2004 – 2007 Technical College of Lviv Polytechnic National University. Lviv. Ukraine. Role: Teacher.

2002 – 2004 Lviv's professional lyceum of computer technologies. Ukraine. Master of industrial training (teacher and class-curator).

1999-2001 College of Computer Science and Management. Bielsko-Biala. Poland. Role: Professor Assistant position.

Languages:

Ukrainian (native language), *Russian* (*advanced level*); *English*, *Polish* (*upper intermediate level*); Spanish – basic level.

Other languages: HTML, Python

Courses: Python, Computer Vision.