Name	Yuriy Manzhos
Position, Department/Faculty	Associate Professor, Department Software Engineering
Academic Degree, Academic Title	PhD of Information Techologies Associate Professor
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Education

- **PhD in Information Technologies**, Ministry of Education and Science of Ukraine — *2007*
  Dissertation: *Semantic models, methods, and information technology for increasing the reliability of software of information-control systems*
- **Master's Degree in Software Engineering** (Specialization: Software for Computer Systems and Automated Control), National Aerospace University — *2007*
- **Associate Professor**, Ministry of Education and Science of Ukraine — *2015*
- **Diploma with Distinction** in *Radioelectronic Devices*, National Aerospace University (KhAI) — *1984*

WORK EXPERIENCE

Academic Career

- **Associate Professor**, Department of Software Engineering, National Aerospace University (*2007–present*)
  - Teaching: Algorithms and Data Structures, Automated Testing, Relational Databases, C++/C# Programming, Reliability of software-hardware systems, Software Quality, Software Testing & Verification, Model-Oriented Software Development
  - Research: Metaprogramming, Verification and Validation, Cyber-Physical Systems, Software Quality & Reliability
- **Senior Lecturer**, Department of Software Engineering (*2001–2011*)
- **Assistant**, Department of Software Engineering (*1998–2001*)
- **Senior Lecturer**, Department of Economic-Mathematical Modeling (*1999–2007*)
- **Deputy Dean** (*1999–2006*)

Industrial Career

- **Software Engineer**, State Enterprise Research and Design Institute "Souz" (*1993–1998*)
- **Software Engineer**, JSC "HARTRON" (*1992–1993*)
- **Engineer → Lead Software Engineer**, Design Bureau of Electromechanical Instrument Engineering (Kharkiv), later HARTRON ARCOS Ltd. (*1983–1999*)
    - Participation in development of software and control systems for:
        - Cruise missile launch systems
        - Control software for silo-based light-class rockets
        - Observation satellites (3 types), relay satellite, solar research satellite
        - Orbital station modules ("Mir" and "Alpha")
- **Leading Software Engineer (part-time)**, HARTRON & Telesens Ukraine (*1999–2002*)

Other Roles

- **Expert**, National Agency for Quality Assurance in Higher Education (*2019–present*)
- **Chief Software Expert**, Kharkiv branch of Certification Center of Automated Control Systems (*2002–2008*)

Military Service

- Senior Technician / Group Leader for Identification Systems Maintenance
- Rank: **Senior Lieutenant, Air Forces of the USSR** (*1985–1988*)

Research Activities

- **Main Areas**: Metaprogramming, Cyber-Physical Systems, Software Verification & Validation, Reliability and Quality of Software
- **Publications**: Over 30 scientific papers (Scopus, Web of Science, national journals, conference proceedings)
- **Conferences**: Participant and speaker in 50+ international and national conferences (Ukraine, Poland, UK, Germany, online)

Selected Publications

- Manzhos, Y.; Sokolova, Y. *A Software Verification Method for the Internet of Things and Cyber-Physical Systems.* Computation, 11(7), 135, 2023.
- Manzhos, Y.; Sokolova, Y. *A type system for formal verification of cyber-physical systems C/C++ software.* Radioelectronic and Computer Systems, 2024(1), 127–142.
- Manzhos, Y., Sokolova, Y. *The Software Development Lifecycle of Cyber-Physical Systems.* Bulletin of KhNTU, 2024(1), 237–245.
- Manzhos, Y., Sokolova, Y. *The Method of Data Compression in Internet of Things Communication.* Radioelectronic and Computer Systems, 2020(4), 57–67.
- Manzhos, Y., Sokolova, Y. *A Method of IoT Information Compression.* International Journal of Computing, 21(1), 100–110.

Teaching Activities

- **Courses**: Algorithms and Data Structures, Automated Testing, Relational Databases, C++/C# Programming, Software Quality, Software Testing & Verification, Model-Oriented Development
- **Author Courses**: Automated Testing, Model-Oriented Software Development, Relation Data Base, Reliability of software-hardware systems
- **Materials**: Co-author of textbooks, developer of electronic resources (Moodle), video lectures

Additional Information

- **Languages**:
  - Ukrainian — Native
  - English — Intermediate
- **IT Skills**: MS Office, SciLab, Visual Studio, MySQL/PhpMyAdmin, Moodle, Zoom
- **Community**: Charity activities during the full-scale russian invasion
- **Personal Qualities**: Responsible, self-motivated, open-minded
- **Social and Community Activities:** Charity during the full-scale invasion of russi