

International Scientific and Technical Conference



Organized by:

**NATIONAL AEROSPACE UNIVERSITY
“KHARKIV AVIATION INSTITUTE”**



Patronized by:

**MINISTRY OF EDUCATION AND SCIENCE
OF UKRAINE**



November 19, 2025 – Kharkiv, Ukraine

ICTM-2025 COMMITTEES

STEERING COMMITTEE

Honorary Chair

Oleksii LYTIVNOV, Doctor of Law, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine).

Executive Chair

Dmytro KRITSKIY, Doctor of Philosophy, Associate Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine).

PROGRAM COMMITTEE (in alphabetical order)

An BO, Doctor of Philosophy, Associate Professor (Nanyang Technological University, Nanyang, Singapore);

Olha BEZKOROVAINA, Doctor of Philosophy, Engineering Team Lead 737CL/BCF/MAX – Airframe Engineering Boeing Poland LLC, Gdansk, Poland;

Yevgeniy BODYANSKIY, Doctor of Technical Sciences, Professor (Kharkiv National University of Radio Electronics, Kharkiv, Ukraine);

Dmytro CHUMACHENKO, Doctor of Philosophy, Associate Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Valeriy DANYLOV, Doctor of Technical Sciences, Professor (National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, Kyiv, Ukraine);

Mariia DOROSH, Doctor of Technical Sciences, Associate Professor (Chernihiv National University of Technology, Chernihiv, Ukraine);

Evgeniy DRUZHININ, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Istvan Gabor GYURIKA, Doctor of Philosophy, Associate Professor (University of Pannonia, Veszprem, Hungary);

Oleg FEDOROVYCH, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Robert GLEBOCKI, Doctor Habilitatus, Professor (Warsaw University of Technology, Warsaw, Poland);

Anatoliy GORBENKO, Doctor of Technical Sciences, Professor (Leeds Beckett University, Leeds, United Kingdom);

Oleksandr GREBENIKOV, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

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Leonid HULIANYTSKYI, Doctor of Technical Sciences, Senior Research Associate (V. M. Glushkov Institute of Cybernetics of the National Academy of Sciences of Ukraine, Kyiv, Ukraine);

Oleksandr KARATANOV, Doctor of Philosophy, Associate Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Vyacheslav KHARCHENKO, Laureate of State Prize of Ukraine in Science and Technology, Corresponding Member of the National Academy of Sciences of Ukraine, Honored inventor of Ukraine, Doctor of Technical Science, Professor, head of Computer Systems, Networks and Cybersecurity Department (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Elena KISELEVA, Corresponding Member of the National Academy of Science of Ukraine, Doctor of Physics and Mathematics, Professor (Oles Honchar Dnipro National University, Dnipro, Ukraine);

Oleg KOROSTELEV, Doctor of Technical Sciences (State Kyiv Design Bureau Luch, Kyiv, Ukraine);

Mykhaylo LOBUR, Doctor of Technical Sciences, Professor (Lviv Polytechnic National University, Lviv, Ukraine);

Vladimir LUKIN, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Vitaly MIROSHNIKOV, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Oleksii NIKOLAEV, Doctor of Physics and Mathematics, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Maryna NOVOZHYLOVA, Doctor of Physics and Mathematics, Professor (O. M. Beketov National University of Urban Economy in Kharkiv, Kharkiv, Ukraine);

Artem PEREPELTSYN, Doctor of Philosophy, Associate Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Olha POHUDINA, Doctor of Philosophy, Associate Professor (Polytechnic University of Bari, Bari, Italy);

Illia POLOSUKHIN (NEAR.ai, San Francisco, CA, USA);

Mykola PONOMARENKO, Doctor of Technical Sciences, Senior Research Associate (Tampere University, Tampere, Finland);

Volodymyr PONOMARYOV, Doctor of Technical Sciences, Professor (Instituto Politécnico Nacional, Mexico City, Mexico);

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Karol PRZYSTALSKI, Doctor of Philosophy (Jagiellonian University, Kraków, Poland);
Anatoliy SANIN, Doctor of Technical Sciences, Professor (Oles Honchar Dnipro National University, Dnipro, Ukraine);

Nataliya SHAKHOVSKA, Doctor of Technical Sciences, Professor (Lviv Polytechnic National University, Lviv, Ukraine);

Olga SHYPUL, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Oleksandr SOKOLOV, Doctor of Technical Sciences, Professor (Nicolaus Copernicus University, Toruń, Poland);

Yuriy STOYAN, Corresponding Member of the National Academy of Science of Ukraine, Doctor of Technical Sciences, Professor (A. Pidgorny Institute of Mechanical Engineering Problems of the National Academy of Sciences of Ukraine, Kharkiv, Ukraine);

Tibor SZALAY, Doctor of Philosophy, Associate Professor (Budapest University of Technology and Economics, Budapest, Hungary);

Andrzej TEODORCZYK, Doctor of Technical Sciences, Professor (Warsaw University of Technology, Warsaw, Poland);

Ihor TURKIN, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Valerii VOLOSUYUK, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Benoit VOZEL, Doctor of Philosophy, Associate Professor (University of Rennes 1, Rennes, France);

Charles K. WHITEHEAD, Doctor of Sciences, Professor (Cornell University, Ithaca, NY, USA);

Sergey YAKOVLEV, Doctor of Physics and Mathematics, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine);

Michael YUDELSON, Doctor of Philosophy (Carnegie Mellon University, Pittsburgh, PA, USA);

Volodymyr ZASLAVSKYI, Doctor of Technical Sciences, Professor (Taras Shevchenko National University of Kyiv, Kyiv, Ukraine);

Andrew ZAVGORODNIY, Doctor of Philosophy (LinkedIn, Milpitas, CA, USA).

Oleksandr ZABOLOTNYI, Doctor of Technical Sciences, Professor (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine).

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ORGANIZING TEAM

National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine

Publication Chair: Dmytro KRITSKIY. Secretary: Oleksandr KARATANOV.

Members (in alphabetical order): Andrii BYKOV, Tetiana BYKOVA, Dmytro CHUMACHENKO, Vasilisa KALASHNIKOVA, Olha KRYTSKA, Vitaliy KULANOV, Vitaly MIROSHNIKOV, Artem PEREPELITSYN, Olha POHUDINA, Mariia PYVOVAR, Olga SHYPUL.

THE OFFICIAL LANGUAGE OF THE ICTM-2025 IS ENGLISH

Time for presentations:

Paper presentation and discussion at the regular session – max 10 minutes.

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GENERAL SCHEDULE (UTC+2)

November 19, 2025 (Wednesday)

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|-------|--|--|--|--|--|
| 8:50 | TESTING SESSION and REGISTRATION OPENS: https://meet.google.com/rqn-uqgm-aec | | | | |
| 9:00 | CONFERENCE OPENING Oleksii LYTVYNOV , Honorary Chair of ICTM-2025, Acting rector of National Aerospace University “Kharkiv Aviation Institute”, Ukraine | | | | |
| 9:10 | Session 1 MECHANICAL ENGINEERING https://meet.google.com/rqn-uqgm-aec | Session 2 PROBLEMS OF STRENGTH https://meet.google.com/xhm-kkxn-nto | Session 3 CYBER- SECURITY & IoT https://meet.google.com/nxh-0000-uvg | Session 4 INFORMATION TECHNOLOGY https://meet.google.com/hes-wxih-cpo | Session 5 CONTROL SYSTEMS AND TESTING https://meet.google.com/vam-jggg-ibt |
| 10:30 | | | | | Session 6 HUMANITARIAN AND LEGAL ISSUES https://meet.google.com/nyp-vqfd-yab |
| 11:00 | | | | | |
| 11:10 | | | | | |
| 11:30 | | | | | |
| 12:00 | BREAK | BREAK | | BREAK | BREAK |
| 12:50 | CLOSING OF THE CONFERENCE: LOOKING TO THE FUTURE https://meet.google.com/nxh-0000-uvg | | | | |

November 19, 2025 – Kharkiv, Ukraine

GENERAL SCHEDULE (UTC+2)

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| <p>Session 1 MECHANICAL ENGINEERING</p> <p>https://meet.google.com/rqn-uggm-aec</p> <p>Olga SHYPUL – Chairman</p> | |
| 9:10 | <p>Methodology for Optimization of Parameters and Processes in Additive Manufacturing of Metallic Components for Aerospace Structures</p> <p>by Oleksandr Dzhurynskyi</p> <p><i>National Aerospace University “Kharkiv Aviation Institute”</i></p> |
| 9:20 | <p>Impact of Manufacturing Methods, Assembly of Units and Linking of Technological Equipment on the Selection of the Scale of Linear Dimensions of Free Flying Models</p> <p>by Oleksandr Betin, Petr Kyriienko, Denys Betin, Olena Betina</p> <p><i>National Aerospace University “Kharkiv Aviation Institute”</i></p> |
| 9:30 | <p>Cost-Efficient Methods for Manufacturing Composite Structures</p> <p>Kostiantyn Barakhov, Fedir Gagauz, Ivan Khomych, Pavlo Blyzniuk, Svitlana Purhina and Oleksii Vambol</p> <p><i>O.M. Beketov National University of Urban Economy in Kharkiv, National Aerospace University “Kharkiv Aviation Institute”, Donetsk National Technical University, Lviv Polytechnic National University</i></p> |
| 9:40 | <p>Control Factors in Growth of 1D and 2D Copper Oxide Nanostructures in Glow Discharge Plasma</p> <p>by Andrii Breus, Sergey Abashin, Yelyzaveta Baranova, Semen Holovko</p> <p><i>National Aerospace University “Kharkiv Aviation Institute”</i></p> |
| 9:50 | <p>Researching Influence of Volumetric Vortex Generators of Different Shapes on Aircraft Aerodynamic Characteristics</p> <p>by Oleksander Zhdanov, Olha Sushchenko</p> <p><i>State University “Kyiv Aviation Institute”</i></p> |
| 10:00 | <p>CFD-Based Study of Pressure Losses and Efficiency in the Thermopressors</p> <p>by Halina Kobalava, Victoria Kornienko, Ivan Kalinichenko</p> <p><i>Admiral Makarov National University of Shipbuilding</i></p> |

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GENERAL SCHEDULE (UTC+2)

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| 10:10 | Technical Implementation of a Dedicated Test Bench for FPV Drones Testing and Experimental Determination of its Basic Technical Characteristics by Serhii Nikulin, Oleksandr Zabolotnyi, Vitalii Siroklyn <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:20 | Technological Aspects of Producing Metal Attachments with Longitudinal Elements in “Metal–Composite” Joints by Kostiantyn Barakhov, Fedir Gagauz, Alla Garbuz, Andrii Voytovich, Oleksii Vambol <i>O.M. Beketov National University of Urban Economy in Kharkiv, National Aerospace University “Kharkiv Aviation Institute”, Lviv Polytechnic National University</i> |
| 10:30 | Calculation of the Take-off Mass of an Electric Multirotor Unmanned Aerial Vehicle in the First Approximation by Oleksii Kolesnyk, Artem Kolesnyk, Denys Betin <i>Reactive Drone LLC, National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:40 | New Approaches to Heteroscedasticity Analysis for Linear Regression Model by Valerii Kuzmin, Maksym Zaliskyi, Mykhailo Odarchenko, Oleksandr Bondarev <i>State University “Kyiv Aviation Institute”, Interregional Academy of Personnel Management</i> |
| 10:50 | Air-jet Engine Speed Characteristics Conversion for Objective Estimation of Their Efficiency Oleh Kislov, Arsenii Malov <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:00 | From Melting to Breakdown: Experimental Study of Energy-Efficient Aluminum Alloy Fragmentation under Supersonic Hot Gas Jets by Tetyana Nabokina, Oleksandra Nabokina <i>National Aerospace University “Kharkiv Aviation Institute”, Institute of Aerospace Engineering, Technische Universität Dresden, Gymnasium Luisenstift, Radebeul, Germany</i> |

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GENERAL SCHEDULE (UTC+2)

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| 11:10 | Approximation Methods of Time Sequences by Volodymyr Shutko, Olena Kolhanova, Lidiia Tereshchenko, Viktoriia Kravchenko, Antonii Shutko, Mykola Shutko, Mykola Bidnyi <i>State University “Kyiv Aviation Institute”, Krutyy Heroes Military Institute of Telecommunications and Information Technology</i> |
| 11:20 | Numerical Study of Nickel Particle Impact on a Titanium Substrate During Cold Spraying by Oleksandr Shorinov, Andrii Volkov, Nina Savchenko, Roman Ipatov and Dmytro Bilan <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:30 | Decision-Support Models Utilization for Creating Dual-Use Transport Category Aircraft Modifications by Liudmyla Kapitanova, Viktor Riabkov, Andriy Koryagin <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:40 | Quasi-Invariant Controller of the Angular Velocity and Torque of the Rotor of the Mobility Node of a Production Humanoid Robot by Oleksandr Lysenko, Olena Tachinina, Sergiy Ponomarenko, Valery Yavisya and Ihor Sushyn <i>National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”</i> |
| 11:50 | Parametric Visualisation of The Vehicle State –Dynamic Acoustic Portrait by Galyna Mygal, Olga Protasenko, Natalia Kobrina <i>Lviv Polytechnic National University, Simon Kuznets Kharkiv National University of Economics, National Aerospace University “Kharkiv Aviation Institute”</i> |
| 12:00 | TECHNICAL BREAK |
| 12:40 | CLOSING OF THE CONFERENCE: LOOKING TO THE FUTURE https://meet.google.com/nxh-oooo-uvy |

November 19, 2025 – Kharkiv, Ukraine

GENERAL SCHEDULE (UTC+2)

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| SESSION 2 – PROBLEMS OF STRENGTH https://meet.google.com/xhm-kkxn-nto Vitaly MIROSHNIKOV – Chairman | |
| 9:10 | Refinement of McCombs’ Method for Determining the Allowable Bending Load on Fasteners in Single-Shear Joints by Valentyn Pelykh <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:20 | Generalized Fourier Method for Analyzing Stress Distribution in a Layer with Cylindrical Cavity and Embedded Supports by Vitaly Miroshnikov, Oleksandr Savin, Mykhailo Kosenko, Olexii Ilin, Serhii Sverdlov <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:30 | Establishing the Shape of Oscillations and Stresses in the Wings During Forced Oscillations of a Glider as a Continuous Body with Concentrated Mass by Oleksii Lanets, Iryna Derevenko, Ihor Kishka, Ihor Nazar, Ivan Khomych, Oleh Soloviov <i>Lviv Polytechnic National University</i> |
| 9:40 | Impact on Nanocomposite Conical Shell with Isotropic Ring Konstantin Avramov, Boris Uspensky, Borys Liubarskyi, by Vitaly Miroshnikov, Igor Grebennik <i>National Aerospace University “Kharkiv Aviation Institute”</i> <i>Anatolii Pidhornyi Institute of Power Machines and Systems of the NASU,</i> <i>Kharkiv National University of Radio Electronics,</i> <i>National Technical University “Kharkiv Polytechnic Institute”</i> |
| 9:50 | Experimental Investigation of Shear Strength in Adhesive Joints of Composites by Kostiantyn Barakhov, Fedir Gagauz, Serhii Kurennov, Oleksii Vambol, Alla Garbuz <i>O.M. Beketov National University of Urban Economy in Kharkiv,</i> <i>National Aerospace University “Kharkiv Aviation Institute”,</i> <i>Norwegian paper mill,</i> <i>Lviv Polytechnic National University</i> |

November 19, 2025 – Kharkiv, Ukraine

GENERAL SCHEDULE (UTC+2)

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| 10:00 | Non-Stationary Problems of Thin-Walled Structures Deformation under Liquid Loading in Experimental Studies by Aleksandr Chuprynin <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:10 | Assessment of Fuel Tank Durability for Launch Vehicles: Transportation, Filling, and Launch by Dmytro Akimov, Kirill Degtyariov, Vasyl Gnitko, Denis Kriutchenko, Maksym Mishchenko, Elena Strelnikova <i>M. K. Yangel Yuzhnoye State Design Office, Anatolii Pidhornyi Institute of Power Machines and Systems of the NASU, Kharkiv National University of Radio Electronics, V. N. Karazin Kharkiv National University</i> |
| 10:20 | Experimental and Numerical Study of Impact Behaviors of Polylactic Acid Structures Manufactured by Additive Technology by Andrii Shyrovkov, Maryna Chernobryvko, Konstantin Avramov, and Oleg Berezovskyi <i>National Aerospace University “Kharkiv Aviation Institute”, Anatolii Pidhornyi Institute of Power Machines and Systems of the NASU, G.S.Pisarenko Institute for Problems of Strength of the NASU, Kharkiv National University of Radio Electronics</i> |
| 10:30 | Analysis of the Stress State of a Layer with Cylindrical Cavities under a Given Periodic Load by Nataliia Ukrayinets, Tetyana Alyoshechkina, Ihor Arkhypenko and Vitaly Miroshnikov <i>National Aerospace University “Kharkiv Aviation Institute”, O.M. Beketov National University of Urban Economy in Kharkiv</i> |

GENERAL SCHEDULE (UTC+2)

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| 10:40 | Analysis of the Dynamic Response of a Non-Contact Gas-Detonation Mine Clearing Device to Mine Detonations at Varying Burial Depths by Denys Tkachenko, Vadym Garin, Olga Shypul, Oleksiy Pavlenko, and Vitalii Myntiuk <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:50 | Effect of Nanodiamond-Modified Epoxy on the Tensile Properties of Unidirectional Carbon Fiber Laminates by Maryna Shevtsova, Oleksii Vambol, Tetyana Nabokina, Oleksii Kabus, Andrii Kondratiev <i>Vilnius Gediminas Technical University, Lviv Polytechnic National University, National Aerospace University “Kharkiv Aviation Institute”, O.M. Beketov National University of Urban Economy in Kharkiv, Dresden University of Technology, Institute of Lightweight Engineering and Polymer Technology</i> |
| 11:00 | TECHNICAL BREAK |
| 12:40 | CLOSING OF THE CONFERENCE: LOOKING TO THE FUTURE https://meet.google.com/nxh-oooo-uvq |

GENERAL SCHEDULE (UTC+2)

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| SESSION 3 – CYBERSECURITY & IoE https://meet.google.com/nxh-0000-uvg Artem PEREPELITSYN – Chairman | |
| 9:10 | Models for the Behavior of a Smart Home Taking into Account Dynamic Natural Conditions and Cataclysms by Danylo Kirichenko, Heorhii Zemlianko <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:20 | Research And Development of an Interactive Webar Platform For 3d Modeling and Visualization of Furniture in Real-World Environment by Maxim Andriychuk and Vitaliy Kulanov <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:30 | Architecture of a Radio Frequency Spectrum Monitoring Ecosystem with Verified Data Integrity by Yrii Afanasiev, Volodymyr Afanasiev, Sergey Andrieiev, Sergey Puzhai-Chereda, Oleksandr Korobetskyi <i>Kharkiv National University of Radio Electronics, National Aerospace University “Kharkiv Aviation Institute”, Ivan Kozhedub Kharkiv National Air Forces University</i> |
| 9:40 | Model of an Intelligent Assistant for a University by Daria Fedorenko and Heorhii Zemlianko, Vladimir Pevnev <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:50 | Increasing The Efficiency of the Process of Charging Batteries for Powering Technical Equipment by Viacheslav Oliinyk, Volodymyr Oliinyk, Oleksandr Zinchenko <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:00 | Development of a Digital Colour Measurement Sensor by Denys Onishchuk, Valyuzhenych Oleksandr, Iurii Khoroshailo <i>Kharkiv National University of Radio Electronics</i> |
| 10:10 | UAV/UGV-based System of Unexploded Ordnance Detection: Architecture and Augmented Reality Interface by Yevhenii Kanarskyi, Oleksandr Orehov, Vyacheslav Kharchenko and Anastasiia Stadnyk <i>National Aerospace University “Kharkiv Aviation Institute”</i> |

November 19, 2025 – Kharkiv, Ukraine

GENERAL SCHEDULE (UTC+2)

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| 10:20 | Development of a Software Simulator for UAV Mobility: a Tool for Analyzing and Improving the Efficiency of Network Communications by Kyrylo Leichenko <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:30 | Implementation of Microcontroller-based Thermostat with Hysteresis Function for Home Gas Boiler by Artem Perepelitsyn and Mykola Levun <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:40 | AI bots Impact on Web Server Load Level and Methods of Filtering Spam Requests by Oleksandr Godunov and Andrii Litvinov <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:50 | Development, Implementation and Prospects of Gamification Technology (Framework) in the Field of Cybersecurity Using The CTF VM Environment by Dmytro Uzun and Artem Tetskyi <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:00 | Model of Programming of Two Microcontrollers with Different Bootloaders over Same Serial Connection by Oleksandr Vdovichenko and Artem Perepelitsyn <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:10 | Creation of File Information Snapshots and Thumbnails in Compact Form for Autonomous Search and Preview by Artem Perepelitsyn, Andrii Litvinov and Alona Chepelevych <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:20 | Efficient Multiplexer Implementation on FPGAs: A Comparative Study of Architectural and Synthesis Techniques by Vitaliy Kulanov and Artem Perepelitsyn <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:30 | Analysis of Possibilities of Solar Panel Efficiency Improvement with use of Water Cooling by Oleksandr Zheltukhin, Artem Tetskyi and Artem Perepelitsyn <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:40 | Program Implementation of Bird Identification System based on Computer Vision and Deep Learning by Alona Chepelevych and Artem Perepelitsyn <i>National Aerospace University “Kharkiv Aviation Institute”</i> |

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GENERAL SCHEDULE (UTC+2)

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| 11:50 | Technologies for Creation of Applications with Graphical Interface for Open Source Operating Systems by Yurii Govor and Artem Perepelitsyn <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 12:00 | Trustworthiness Assessment: a Test Bench for AI-Enabled Critical Systems at the Edge by Yannick Fourastier, Vyacheslav Kharchenko, and Oleksii Neretin <i>Ukrainian Scientific-Educational IT-Society, National Aerospace University “Kharkiv Aviation Institute”</i> |
| 12:10 | AI-based and Cloud-EDGE solution for Automatic Wheat States Detection in Smart Agriculture by Maxim Ivanytskyi, Yuliya Averyanova, Yevheniia Znakovska, Nadiia Sauliak, Yevhenii Kirchuk <i>State University Kyiv Aviation Institute, Plant Breeding and Genetics Institute - National Center of Seed and Cultivar Investigation, Interregional Academy of Personnel Management</i> |
| 12:20 | Analysis Of Modern and Promising Approaches to Building Symmetric Crypto Algorithms and Their Components by Serhii Butenko <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 12:30 | Hybrid Energy-Efficient Street Lighting Complex for Smart City by Natalia Savchenko, Oksana Dovgalyuk and Andrii Tretiak <i>National Aerospace University “Kharkiv Aviation Institute”, National Technical University “Kharkiv Polytechnic Institute”, National University “Poltava Polytechnic named after Yuriy Kondratyuk”</i> |
| 12:40 | Analysis of factorization methods and their application to assess crypto resistance of RSA systems by Oles Yudin and Vladimir Pevnev <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 12:50 | CLOSING OF THE CONFERENCE: LOOKING TO THE FUTURE https://meet.google.com/nxh-oooo-uyg |

GENERAL SCHEDULE (UTC+2)

| SESSION 4 – INFORMATION TECHNOLOGY https://meet.google.com/hes-wxih-cpo Dmytro CHUMACHENKO – Chairman | |
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| 9:10 | LSTM-Based Simulation of Chronic Hepatitis C in Ukraine by Mykola Butkevych and Dmytro Chumachenko <i>National Aerospace University “Kharkiv Aviation Institute”, University of Waterloo, Balsillie School of International Affairs</i> |
| 9:20 | Approaches to Modeling the Trajectories of Stratospheric Gliders within Swarm-Based Systems for Three-Layer Territorial Monitoring by Alina Artomova, Dmytro Krytskyi and Ihor Artomov <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:30 | Cascade DataHub for Low-Latency Distributed Processing in Robotic Systems by Igor Binko, Dmytro Krytskyi and Oleg Fedorovych <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:40 | Intelligent Speed Control of a Collaborative Mobile Robot Using a Neuroadaptive Pid Controller by Vladyslav Yevsieiev, Nikolaj Starodubcev, Sergii Kulish, Yuliia Voloshyn <i>Kharkiv National University of Radio Electronics, National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:50 | Neural Networks in Software Engineering: Dataset-Driven Approaches to Code Review, Debugging, and Repair by Denys Seliutin, Olena Yashyna <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:00 | Research of Methods Increasing the Efficiency of Self- Similar Useful and Service Traffic Service by Bayram Ibrahimov, Elshan Hashimov, Kostiantyn Dergachov <i>Azerbaijan Technical University, National Aerospace University “Kharkiv Aviation Institute”</i> |

November 19, 2025 – Kharkiv, Ukraine

GENERAL SCHEDULE (UTC+2)

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| 10:10 | Post-filtering of Lossy Compressed SAR Images by Volodymyr Rebrov, Illia Cherepanov and Vladimir Lukin <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:20 | Video Plugins as Enablers of Video Content Integration: The Role in Modern Education by Vladyslav Pylypenko, Dmytro Novak, Volodymyr Statsenko, Sergey Bereznenko, Natalia Bereznenko <i>Kyiv National University of Technologies and Design, Volodymyr Dahl East Ukrainian National University, Taras Shevchenko National University of Kyiv,</i> |
| 10:30 | Optimizing Cloud-Based Learning Management System Deployment: An ILP Approach by Artem Moiseienko and Yuliia Kuznetsova <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:40 | Hybrid Deep Neural Network Pipeline for Detection and Classification of Building Remnants from UAV-Captured Imagery by Maryna Molchanova, Olexander Mazurets, Olena Sobko, Olha Zalutska, Volodymyr Didur <i>Khmelnyskyi National University</i> |
| 10:50 | Secure and Trust-Aware Routing in UAV Swarm Networks Based on Traffic Analysis and Lightweight Blockchain by Iegor Sopov, Alina Artomova <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:00 | Scalable 3D Modeling of Urban Spaces in Blender: A Data Flow Approach to Urban Change Analysis by Svitlana Danshyna, Artem Nechausov, Sergey Andrieiev and Kateryna Podorozhko <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:10 | TECHNICAL BREAK |
| 12:40 | CLOSING OF THE CONFERENCE: LOOKING TO THE FUTURE https://meet.google.com/nxh-oooo-uvg |

November 19, 2025 – Kharkiv, Ukraine

GENERAL SCHEDULE (UTC+2)

| SESSION 5 – CONTROL SYSTEMS AND TESTING https://meet.google.com/vam-jggg-ibt Vitaliy KULANOV – Chairman | |
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| 9:10 | Identification of Safety Categories Through Analysis of Unmanned Aerial Vehicle Trajectory Deviations by Nataliia Kuzmenko and Ivan Ostroumov <i>State University “Kyiv Aviation Institute”, Interregional Academy of Personnel Management</i> |
| 9:20 | Solutions for Ensuring Availability and Integrity of Navigation Information of Global Navigation Satellite Systems by Valerii Shvets, Oleksii Shaina, Larysa Myrutenko and Sergey Zhuravel <i>State University “Kyiv Aviation Institute”, Taras Shevchenko National University of Kyiv</i> |
| 9:30 | Estimation of Mid-Air Collision Risk in Regional Air Traffic Environments by Oleg Ivashchuk, Ivan Ostroumov <i>State University “Kyiv Aviation Institute”, Interregional Academy of Personnel Management</i> |
| 9:40 | Algorithm of Collision-Free Planning of Air Traffic Based on Departure Delay Control by Ivan Ostroumov and Tamara Halabir <i>Interregional Academy of Personnel Management, State University “Kyiv Aviation Institute”</i> |
| 9:50 | A Computer Vision System for the Detection and Tracking of Unmanned Aerial Vehicles Within the Observation Area by Vladyslav Bilozerskyi, Kostiantyn Dergachov <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:00 | Algorithm of Weighted Full Flight Data Processing for Aircraft Health Management System by Ievgenii Kuzmenko and Ivan Ostroumov <i>State University “Kyiv Aviation Institute”, Interregional Academy of Personnel Management</i> |

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| 10:10 | Analysis of Systematic and Random Coordinate Errors of Visual Landmarks and Their Effect on Positioning Algorithm Accuracy by Kostiantyn Dergachov, Oleksii Hurtovyi, Anatolii Yaremenko <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:20 | Models and Method for Decentralized Control of a Group of Collaborative Robot Manipulators in a Single Working Area with a Human Operator by Vladyslav Yevsieiev, Svitlana Maksymova, Sergii Kulish, Yuliia Voloshyn <i>Kharkiv National University of Radio Electronics, National Aerospace University “Kharkiv Aviation Institute”</i> |
| 10:30 | TECHNICAL BREAK |
| 12:40 | CLOSING OF THE CONFERENCE: LOOKING TO THE FUTURE https://meet.google.com/nxh-oooo-uvq |

GENERAL SCHEDULE (UTC+2)

| SESSION 6 – HUMANITARIAN AND LEGAL ISSUES https://meet.google.com/nyp-vqfd-yab Oleksandr KARATANOV – Chairman | |
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| 9:10 | An Integrated Model of a Project-Based Approach to Human Capital Development in the Context of Digital Transformation by Galyna Mygal, Olga Protasenko, Natalia Kobrina <i>Lviv Polytechnic National University, Simon Kuznets Kharkiv National University of Economics, National Aerospace University “Kharkiv Aviation Institute”</i> |
| 9:20 | Coping with Shocks and Prospects for Reform: An Analysis of Opportunities and Challenges for Ukrainian Railways by Oleh Strelko, Yuliia Berdnychenko, Yuliia Berdnychenko, Veronika Yeremenko, Artemii Bernatskyi <i>National Transport University, E. O. Paton Electric Welding Institute of the NASU,</i> |
| 9:30 | The Role of ESG in Advancing Sustainable Development through Environmental Innovations: Legal Perspectives from the European Experience by Olena Savchuk <i>Yaroslav Mudryi National Law University</i> |
| 9:40 | Strategic Challenges of Digital Transformation in Consumer Behavior for Business Management Systems by Oksana Morhulets, Oleksandra Olshanska, Olena Cherniavska, Volodymyr Pavlenko, Ihor Ponomarenko <i>National University of Life and Environmental Sciences of Ukraine, Kyiv National University of Technologies and Design, Swiss Centre of Excellence in Digital Transformation and Ecosystem Leadership, National University of Life and Environmental Sciences of Ukraine, State University of Trade and Economics</i> |

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| 9:50 | <p>Formation of Business Resilience for Enterprises in the Conditions of Crisis Challenges by Zarina Poberezhna, Oleksandr Trukhan <i>State University “Kyiv Aviation Institute”, Zhytomyr Institute of Private Joint-Stock Company “Higher Educational Institution «Interregional Academy of Personnel Management»</i></p> |
| 10:00 | <p>Criminological and Criminal Law Principles of Information Protection and Cybersecurity by Nataliia Filipenko, Serhii Lukashevych, Volodymyr Trofymenko, Hanna Spitsyna <i>National Aerospace University “Kharkiv Aviation Institute”, State Service of Special Communications and Information Protection of Ukraine, National Scientific Center “Hon. Prof. M. S. Bokarius Forensic Science Institute”</i></p> |
| 10:10 | <p>Digital Exploitation of Labour: Philosophical and Legal Foundations, Ethical Risks, and Prospects for Criminalization by Svitlana Gutsu, Svitlana Shyroka <i>National Aerospace University “Kharkiv Aviation Institute”</i></p> |
| 10:20 | <p>Remote Sensing of Peatland Moisture for Ignition Risk Assessment by Tetiana Klochko, Ihor Bereshko, Natalia Slomchynska, Kostiantyn Nosov, Viacheslav Vyshniakov <i>National Aerospace University “Kharkiv Aviation Institute”, V.N. Karazin Kharkiv National University, National University of Defense of Ukraine</i></p> |
| 10:30 | <p>Overcoming The Harmful Consequences for The Environment Caused by The Armed Aggression of The Russian Federation Against Ukraine (Based on Data from The Kharkiv Region) by Eleonora Darmofal, Serhii Lukashevych, Natela Shevtchenko, Vitalii Riutin, Daria Lukashevych, Alla Strebkova <i>National Aerospace University “Kharkiv Aviation Institute”, V.N. Karazin Kharkiv National University, Department for the Rational Use of Natural Resources and Environmental Impact Assessment of the Kharkiv Regional Military Administration</i></p> |

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| 10:40 | Neural Network-Based Approach for Early Detection of Narcissistic Personality Disorder from Online Communication by Iurii Krak, Oleksandr Ovcharuk, Olexander Mazurets, Maryna Molchanova, Olexander Barmak <i>Taras Shevchenko National University of Kyiv, Glushkov Institute of Cybernetics of NASU, Khmelnytskyi National University</i> |
| 10:50 | Development of Methodology for Airlines Competitiveness Assessment using Multi-criterion Approach by Zarina Poberezhna <i>State University “Kyiv Aviation Institute”</i> |
| 11:00 | Assessment of the Quality of Power Unit Control Processes Based on Their Economic Efficiency Criteria by Tetiana Fursova, Gennadii Kaniuk, Anna Fomenko, Ihor Babenko, Andrii Mezeria <i>V.N. Karazin Kharkiv National University, Wismar University of Applied Sciences Technology, Business and Design</i> |
| 11:10 | Efficiency Analysis of Using Resource Potential of Aviation Enterprise for Sustainable Development by Zarina Poberezhna, Maksym Zaliskyi, and Anton Levshuk <i>State University “Kyiv Aviation Institute”, Interregional Academy of Personnel Management</i> |
| 11:20 | Digitalization in Recruitment by Oleksandr Karatanov, Oleksii Tikhvynskyi <i>National Aerospace University “Kharkiv Aviation Institute”</i> |
| 11:30 | TECHNICAL BREAK |
| 12:40 | CLOSING OF THE CONFERENCE: LOOKING TO THE FUTURE https://meet.google.com/nxh-oooo-uvq |