University of Liverpool
National Aerospace University “Kharkiv Aviation Institute”
V.N. Karazin Kharkiv National University

Program of
5th International Workshop of IT-professionals on Artificial Intelligence
ProfIT AI 2025
(October, 15-17, 2025)

Liverpool, UK, 2025

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Yevgeniy Bodyanskiy – Kharkiv National University of Radioelectronics, Ukraine
Yuriy Syerov – Lviv Polytechnic National University, Ukraine

Time difference

Relevant only for online participants.

The conference time corresponds with the GMT+1 time zone, where the UK time is the reference point.

Country	Time zone	Time difference in hours in relation to the UK
UK	GMT+1	0
Algeria	GMT+1	0
Poland	GMT+2	+1
Slovakia	GMT+2	+1
Germany	GMT+2	+1
Ukraine	GMT+3	+2
India	GMT+5:30	+4:30
Vietnam	GMT+7	+6
Canada, ON	GMT-4	-5
USA, MD	GMT-4	-5
USA, NY	GMT-4	-5
USA, GA	GMT-4	-5

Section 1. Computer Vision & Signal Processing

October, 15th, 2025

Offline: University of Liverpool, School of Computer Science and Informatics

Online: Zoom link

12:00 PM – 2:00 PM (GMT +1)

Presentation timing: Each talk is max 10 minutes. Please aim for 7-8 minutes and keep 2-3 minutes for questions.

1. "Integrating AI and Remote Sensing for Monitoring War-Impacted Agricultural Lands: Damage Assessment and Remediation Tracking", *Sofiia Drozd, Andrii Shelestov, Nataliia Kussul*
2. "Improving Navigation Systems with Computer Vision Approaches", *Artem Panchenko, Denys Drobin, Kyrylo Rukkas, Anastasiia Morozova, Lyudmyla Polyakova, Iryna Zaretska*
3. "Intelligent GAN-Based Framework for High-Resolution Satellite Imagery Enhancement", *Viktor Sineglazov, Artem Holovachov*
4. "Deep Learning-Driven Fabric Classification: Distinguishing Natural and Synthetic Materials", *Olexander Mazurets, Olha Zalutska, Maryna Molchanova, Olena Sobko, Liudmyla Bukhantsova, Oksana Zakharkevich*
5. "Method for automated monitoring of moving objects using computer vision models", *Olena Yashyna, Tetiana Boiarska, Eduard Khomiak, Olena Havrylenko, Pavlo Hrynevych*
6. "Investigation of Machine Learning Techniques for Restoring the Quality of Compressed Audio", *Artem Panchenko, Denys Yarkin, Vyacheslav Frolov, Ievgen Meniailov, Maryna Vladymyrova, Victoriya Kuznietcova*
7. "Hybrid Quantum–Classical Machine Learning for Robust Satellite Image Classification on EuroSAT", *Akansha Singh, Krishna Kant Singh*
8. "Fingerprint descriptor model utilizing Euclidean minutiae features", *Yurii Pohuliaiev, Kirill Smelyakov*
9. "Analysis of the influence of cosine distance threshold values in a real-time face recognition system", *Maksym Holikov, Volodymyr Donets, Viktoriia Strilets, Kyryl Korobchinskyi*
10. "An Efficient Approach for Audio Deepfake Detection", *Quan Trong The*

Section 2. Natural Language Processing & Human-AI Interaction

October, 15th, 2025

Offline: University of Liverpool, School of Computer Science and Informatics

Online: Zoom link

2:00 PM – 4:00 PM (GMT +1)

Presentation timing: Each talk is max 10 minutes. Please aim for 7-8 minutes and keep 2-3 minutes for questions.

1. "Evaluation of Resemblyzer ability to authenticate the person by short audio records", *Mykhailo Trusov, Oleksii Turuta, Dmytro Uzlov*
2. "A Hybrid Neural Network and Bayesian Classification Framework for Multi-Class Disinformation Detection in Socially Oriented Systems", *Artem Khovrat, Volodymyr Kobziev, Andrii Strelchenko*
3. "Neural Network Assessment of Post-Traumatic Risk Behavior Using Social Media Posts Analysis", *Iurii Krak, Oleksandr Ovcharuk, Olexander Mazurets, Olena Sobko, Maryna Molchanova, Olexander Barmak*
4. "Text Classification System using Natural Language Processing and Machine Learning with Based on Generative Adversarial Networks", *Victor Sineglazov, Anna Lytovchenko*
5. "Deploying LLMs on CPU-only Environments with llama.cpp Library Set: MedLocalGPT Project Case", *Kyrylo Malakhov*
6. "A Distance-metric Approach to Expert Agreement In Multi-level Publications Classification", *Ihor Turkin, Andriy Chukhray, Oleksandr Liubimov, Lina Volobuieva*
7. "Approaching LLM alignment using Agents with RAG", *Vladyslav Fliahin, Olena Turuta, Oleksii Turuta*
8. "AI-Facilitated Software Project Generation from Natural Language Using Curated Code Snippets", *Artem Khovrat, Serhii Shchoholiev, Mariya Shirokopetleva, Volodymyr Kobziev, Volodymyr Strukov*
9. "Cognitive Interaction Layers for Neuro-Symbolic AI", *Yevheniia Babenko, Volodymyr Romanov*

Section 3. Methods & Infrastructure for Intelligent Systems

October, 16th, 2025

Offline: University of Liverpool, School of Computer Science and Informatics

Online: Zoom link

12:00 PM – 2:00 PM (GMT +1)

Presentation timing: Each talk is max 10 minutes. Please aim for 7-8 minutes and keep 2-3 minutes for questions.

1. "Online feature vector restoration in data stream mining tasks", *Volodymyr Kartashov, Yevgeniy Bodyanskiy, Nonna Kulishova, Yehor Kulishov*
2. "Markov's models of AI systems availability considering re-learning processes", *Vyacheslav Kharchenko, Yuriy Ponochovnyi, Heorhii Zemlianko*
3. "AI-based Intelligent System for Applied problems: Model Generation Web Application Architecture", *Oleksandr M. Khimich, Oleksandr V. Popov, Tamara V. Chistyakova, Elena A. Nikolaevskaya, Pavlo S. Yershov*
4. "Module Selection Optimization via Combinatorial Techniques in Intelligent Systems", *Liudmyla Koliechkina, Oksana Pichugina, Yurii Skob, Olena Dvirna*
5. "Formal verification of Aerospace Cyber-Physical System Software", *Yuriy Manzhos, Yevheniia Sokolova*
6. "Selecting a Simulation Runtime for Opinion Dynamics: Evaluating Elixir for Agent-Based Models", *Yurii Lytvynenko, Grygoriy Zholtkevych*
7. "Adaptive online bagging using the cascade approach", *Sergiy Popov, Iryna Pliss, Oleh Zolotukhin, Maryna Kudryavtseva*
8. "Using the gradient projection method in an intelligent cutting and packing system", *Mykola Popov, Oleksii Kartashov*
9. "Handling Hybrid Infrastructure Automation: Intelligent Management System with Anomaly Detection", *Ivan Byzov, Kyryl Korobchynskyi, Volodymyr Strukov*

Section 4. Applied Artificial Intelligence

October, 17th, 2025

Offline: University of Liverpool, School of Computer Science and Informatics

Online: Zoom link

12:00 PM – 2:00 PM (GMT +1)

Presentation timing: Each talk is max 10 minutes. Please aim for 7-8 minutes and keep 2-3 minutes for questions.

1. "A Neural Network-Driven Adaptive Approach for Maximum Coverage Location with Restricted Zones", *Sergiy Yakovlev, Yehor Havryliuk, Olha Matsyi, Andrii Hulianytskyi, Alexander Kirpich*
2. "Intelligent Framework for Monitoring Sustainable Development Goals within Project Portfolios and Programs", *Yuliia Husieva, Igor Chumachenko, Nataliia Dotsenko, Ihor Biletskyi, Ivan Nekrasov, Illia Khudiakov*
3. "Analysis of Influencing Factors in Planning Military UAV Missions using Machine Learning", *Oleksandr Prokhorov, Oleg Fedorovich, Yuliia Leshchenko, Oleksandr Kholodniak*
4. "Development of an intelligent innovative management system Printboost for the publishing and printing industry", *Volodymyr Mayik, Denis Boyarkin, Lyudmyla Mayik, Tetyana Holubnyk*
5. "Numerical modeling of hydrogen deflagration dynamics in enclosed space", *Yurii Skob, Oksana Pichugina, Oleksii Kartashov, Volodymyr Khalturin, Liudmyla Koliechkina, Elena Arshava*
6. "Operationalizing the Formalizability of Mathematics Problems for Intelligent Tutoring Systems: Taxonomy, Measurement Protocol, and Educational Impact", *Oleksandr Yevdokymov, Andriy Chukhray, Tetiana Stoliarenko*
7. "Governing AI in Education: A Cross-Organization Analysis of International Policy, Law, and Standards", *Dmytro Chumachenko, Ann Fitz-Gerald, Artem Artyukhov, Serhiy Lyeonov*

Section 5. Intelligent Systems in Healthcare

October, 17th, 2025

Offline: University of Liverpool, School of Computer Science and Informatics

Online: Zoom link

2:00 PM – 4:00 PM (GMT +1)

Presentation timing: Each talk is max 10 minutes. Please aim for 7-8 minutes and keep 2-3 minutes for questions.

1. "Localization-Guided Semantic Segmentation Framework for Breast Ultrasound Lesions Using BUS_UCLM", *Faycal Arioua, Faycal Touazi, Djamel Gaceb, Tayeb Benzenati, Ibtissem Telkhoukh, Nour Elhouda Magaz*
2. "Stochastic Initialization for Neural Networks Based on the Analysis of Biological Systems", *Oleh Zolotukhin, Yevgeniy Bodyanskiy, Valentin Filatov, Maryna Kudryavtseva, Yevhenii Yeriemieiev*
3. "Using Machine Learning Methods to Analyze HIV Incidence in Ukraine", *Yurii Parfeniuk, Dmytro Kurinniy, Kseniia Bazilevych, Ievgen Meniailov*
4. "AutoML-Driven ECG Classification of Cardiac Pathologies with Explainable AI", *Dmytro Tymoshchuk, Andriy Sverstiuk, Vitaliy Tymoshchuk, Lyubomyr Mosiy, Oksana Bahrii-Zaiats*
5. "Enhancing Skin Cancer Detection Using Curriculum Learning In Ensemble Deep Learning Context", *Riadh Meghatria, Djamel Gaceb, Fayçal Touazi, Boukert Tina, Ben Aidrene Sarah*
6. "Method of immunohistochemical slide analysis", *Serhii Potapov, Vitaliy Gargin*
7. "Forecasting of acute upper respiratory tract infection in Ukraine during the war conditions using LSTM model", *Mykola Butkevych, Kateryna Vasiuk, Iryna Trofymova, Tetyana Chumachenko*
8. "Exploring the Sphenoid Sinus as a Biometric Marker for Human Identification", *Victoriia Alekseeva, Marcus Krüger, Tom Graner, Severin Weiss, Marcus Frohme, Alina Nechyporenko*
9. "Predictive Modeling of Echocardiographic Parameters Using Electrocardiogram Features via Machine Learning Methods as a Tool for Assessing of Functional Status of Military Personnel", *Anton Popov, Vasyl Stasiuk, Illya Chaikovsky*