

# Towards an Understanding of Artificial Intelligence via a transparent, open and explainable perspective

HORIZON TMA MSCA Doctoral Networks / HORIZON-MSCA-2023-DN-01 / grant  
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## Summer school on sensor fusion – SUT, Gliwice, Poland

### 20.07.2026 (Monday)

10:00 – 13:00 AEI Faculty, Akademicka 16, Gliwice / Auditorium F

#### TUAI Associated Partner Day - Lviv Polytechnic National University (LPNU)

10:00 **Prof. Viktor Khavalko** (LPNU) - *Image object recognition, analysis and classification technology*

10:30 **Prof. Tetyana Shestakevych** (LPNU) - *AI-Assisted Scoping for Multimodal VR Therapy: Establishing a Framework for Clinical Decision Support Systems*

11:00 **Prof. Oleksandr Muliarevych** (LPNU) - *Real-Time Decision-Making in Distributed Systems*

11:30-11:45 coffee break

11:45 **PhD Oleh Basystiuk** (LPNU) - *Multimodal Data Fusion Approaches in Intelligent Systems*

12:15 **PhD Olena Pavliuk** (LPNU/SUT) - *Human-Centric Sensor Fusion and Federated Learning for Energy-Aware Multi-Agent Control of Industrial Mobile Robots*

13:00 -14:00 lunch break

14:00 – 17:00 AEI Faculty, Akademicka 16, Gliwice / Auditorium F

14:00 **PhD Mühenad Bilal** (Technische Hochschule Ingolstadt, Germany) - *CNN-Based Classification of Optically Critical Cutting Tools with Complex Geometry - cooperation between science and industry in Germany*

LPNU - Student's Projects Presentations

16:00 **Anastasiia Zabolotna** (LPNU) *Lightweight Multimodal Fusion of PPG-Derived HRV and Motion Data for Sleep Stage Classification on Wearable Devices*

16:15 **Olena Litovska** (LPNU) - Wearable Sensors, PPG, Motion Artifact Removal, Human Activity Recognition, Deep Learning, Heart Rate Estimation

16:30 **Nikita Morkva** (LPNU) - *Sensor Fusion for Time-Series Feature Engineering in AGV Battery Forecasting*

16:45 **Ivan Hrytsev** (LPNU) - Sensor Fusion-Oriented Feature Engineering and Temporal Modeling for Voltage Prediction in AGV Systems

## **22.07.2026 (Wednesday)**

10:00 – 13:00 AEI Faculty, Akademicka 16, Gliwice / Auditorium F

10:00 – 12:00 Key note lecture - **Prof. Jean-Charles Lamirel**, University of Strasbourg, France

12:00 - 13:00 **Panel: EU–Ukrainian Scientific Cooperation – Opportunities and Barriers to Development**

13:00 -14:00 lunch break

14:00 – 17:00 AEI Faculty, Akademicka 16, Gliwice / Auditorium F

MSCA DN Doctoral Candidates' Research Presentations

14:00 **Donato Cerciello** (UPM) - *Explainable Time Series Analysis: Integrating a Neural Network and Visual Analytics for Pattern Discovery, Representation Learning, and Anomaly Detection*

14:30 **Leonardo Schiavo** (UPM) - *Enhancing time series analysis through transfer learning, pre-trained models and self-supervised learning*

15:00 **Milad Jafari** (UNIOVI) - *Reliable and Explainable AI solutions for chronic diseases*

15:30 **Juan Camilo España** (UNIOVI) - *Personalized Health Recommendation Systems Powered by Large Language Models*

16:00 **Pi-Wei Chen** (SUT) - *Enhancing Perception Accuracy through Collaborative Sensor Fusion Framework in Autonomous Systems*

16:30 **Alexandre Niyomugaba** (SUT) - *GPU-accelerated Edge computing for Federated Learning reasoning in industrial environments*

17:00 **Myroslav Mishchuk** (SUT) - *Explainable Artificial Intelligence for internal logistics systems in green manufacturing*

17:30 **Lingyu Qiu** (UNINA) - *Privacy-Preserving Federated Generative Models for Decentralised Data Synthesis*

## 23.07.2026 (Thursday)

10:00 – 13:00 AEI Faculty, Akademicka 16, Gliwice / Auditorium F

10:00 Key note lecture - **Prof. Przemysław Biecek**, Politechnika Warszawska - *Risks in AI systems, including ethical issues as well as risks related to technical debt and the lack of model interpretability.*

11:00 - 11:15 coffee break

11:15 – 12:45 Group exercises ( analysing potential AI-related risks and challenges in selected research papers or projects)

13:00 -14:00 lunch break

14:00 – 17:00 AEI Faculty, Akademicka 16, Gliwice / Auditorium F

14:00 – 15:00 AI Ethics a summary session presenting the outcomes of the group work.

MSCA DN Doctoral Candidates' Research Presentations – Part 2

15:00 **S M Asiful Huda** (UNINA) - *Decentralised Graph Neural Networks: Adaptation, Training and Interpretability in Federated Environments*

15:30 **Makhmoor Fiza Murk** (UNINA) - *Enhancing NLP Capabilities through Federated Learning and GNNs*

16:00 **Dina Tri Utari** (NTNU) - *Enhancing Trustworthy AI Integration in Safety-Critical Systems*

16:30 **Athanasia Kollarou** (NTNU) - *Sustainable Real-time Anomaly Detection for Practical Applications*

17:00 **Aji Pramono** (HVL) - *Trustworthy and Reliable Cyber-physical Systems*



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