

# MONDAY, 7.04

9:00 - 17:00	<b>REGISTRATION</b> Silesian Museum, LEVEL -4		
11:30 - 12:15	<b>OPENING CEREMONY</b> Auditorium, LEVEL -4		
12:15 - 13:15	<b>PLENARY 1 Prof. Gabriella Pasi</b> Auditorium, LEVEL -4 Chair: Prof. Janusz Kacprzyk		
13:15 - 14:30	<b>ORAL 1</b>		
	<b>Decision-Making and Classification in Complex &amp; AI in Human Behaviour Analysis</b> room A (LEVEL -3) Chairs: Prof. Michał Baczyński, Prof. Małgorzata Przybyła-Kasperek, Prof. Krzysztof Simiński	<b>Young.AI</b> room C (LEVEL -3) Chair: PhD Eng. Tomasz Wesołowski	<b>Generative Artificial Intelligence</b> room H (LEVEL -4) Chair: Prof. Urszula Boryczka
	4 Lessons Learned from Employing Monte Carlo Tree Search to Train Rule-Based Models for Intelligent Game Agents Maciej Świechowski	1 Evolutionary Design of Graph Neural Networks Structures for Graph Classification Maciej Krzywda, Szymon Łukasik, Amir H. Gandomi	8 The Fréchet Coefficient for GANs and Diffusion Models Evaluation Adrian Kucharski, Anna Fabijańska
	102 Dynamic Fatigue Prediction in Football: A Deep Learning-Driven Approach to Optimize Performance Tomasz Piłka, Paweł Dopierała, Wiktor Leszczyński, Paweł Łączkowski, Tomasz Górecki	36 Context-Aware Graph Querying for LLM-Based Code Generation on Low-Code platforms Arden Wołowiec, Dawid Korzępa, Anna Śmigiel, Krzysztof Raczynski, Patryk Żywica	18 Unmasking Bias and Reasoning Limitations in GPT Models: A Multilingual Evaluation of Open-Ended Question-Answering Artur Gunia, Zuzanna Wojciechowska
	126 Exploring potential of Expected Solution Point in group decision-making Andrii Shekhovtsov, Wojciech Sałabun	75 Recognizing selected sign language gestures using deep models Adam Łaput	91 Balancing the Load: Optimizing inference of generative model on example of Stable Diffusion Łukasz Popek, Piotr Biłski, Rafał Perz
	161 Analysis of Ranking Methods and Classifiers for Drift Detection using the Feature-based Drift Detector Benjamin Mensah Dadzie, Piotr Porwik, Tomasz Orczyk	80 An AI-driven approach to adapting the Expected Goals (xG) model to women's football Tomasz Lipowski, Tomasz Piłka	140 Using time series analysis to generate synthetic traffic data for LoRa network simulation Artur Frankiewicz
	192 FCA based preference representation for supporting consensus reaching Janusz Kacprzyk, Piotr Wasilewski, Sławomir Zadrozny	111 Employing Transfer Learning for Diabetic Retinopathy Using Deep Feature Extraction Paweł Niedziółka	154 AutoLoRA: Guiding LoRA-tuned Diffusion Models towards Diverse Outputs Artur Kasymov, Michał Stypułkowski, Maciej Zieba, Przemysław Spurek
14:30 - 15:15	<b>COFFEE BREAK</b> Foyer, LEVEL -4		
15:15 - 17:15	<b>PANEL 1: How to improve human trust in intelligent technologies</b> Auditorium, LEVEL -4 Moderator: Prof. Włodzisław Duch		
17:15 - 18:30	<b>PLATINUM SPONSORS PRESENTATION</b> Auditorium, LEVEL -4 Chair: Prof. Agnieszka Nowak-Brzezińska		
18:30 - 20:15	<b>POSTERS 1</b> Data Mining and Machine Learning & Knowledge Engineering & Artificial Intelligence in Bioinformatics Young.AI & Remote Sensing and Satellite Data Analysis Foyer, LEVEL -4		
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5	Unsupervised Deep Feature Extraction and Interpretation with Convolutional Autoencoding	Joanna Komorniczak	
9	Synthetic trips as a tool to analyse the probability of travelling by bicycle	Przemysław Wrona, Maciej Grzenda	
12	Any-quantile probabilistic forecasting framework based on neural networks	Grzegorz Dudek, Sławek Smył, Boris N. Oreshkin, Paweł	
14	Employing Sentence Space Embedding for Fake News Data Stream Classification	Paweł Zybiewski	
26	Sex recognition and explainability based on human skulls photos	Weronika Borek-Marciniec, Agata Bisiecka	
28	An information measure of synergy	Krzysztof Mních	
31	Cost-constrained multi-label group feature selection using shadow features	Tomasz Klonecki, Paweł Teisseyre, Jaesung Lee	
44	Text data mining: a case study of Reddit	Piotr Sokołowski, Marcin Szpyrka, Marcin Kosiba	
49	From Data to Decisions: Comparing Causal Discovery Methods on a Benchmark Dataset	Mikołaj Jarosławski, Dominik Sepiolo, Antoni Lięża	
53	Grammar Refinement in Grammatical Evolution Using Large Language Models	Dominik Sepiolo, Mikołaj Jarosławski, Antoni Lięża	
63	Stacking Ensemble for Face Authenticity Detection	Mirosław Kordos, Rafał Klinowski	
64	Focus Stacking in Dynamic Scenes	Mirosław Kordos, Błażej Mrzygłód	
71	A new feature selection method based on interval-valued aggregation functions	Wiesław Paja, Urszula Bentkowska, Aleksander Wojtowicz	
79	Semi-continuous Hidden Markov Models with time-variant transitions	Filip Wichrowski	
82	Enhancing Grammatical Evolution with Neural-Inspired CFG for Explainable AI	Jakub Skrzyński, Antoni Lięża	
83	APRIORI-GAT: Graph Attention Network with Association Edges for Text Classification	Alicja Polowczyk, Agnieszka Polowczyk, Marcin Woźniak	
88	Performance Comparison of Classifiers for Meta Instance Selection	Marcin Błachnik, Piotr Ciepliński, Anna Piechowska	
89	Secure and Explainable AI for Space	Krzysztof Kotowski, Przemysław Bieчек, Piotr Wilczyński, Dawid Płudowski, Agata Kaczmarek, Artur Janicki, Ramez Shendy, Jakub Nalepa, Evridiki Ntagiou	
135	Feature selection in traditional music classification	Paweł Grabczyński, Daniel Kostrzewa, Katarzyna Harężlak	
42	Ontology-Driven Pose Detection to Enhance AI Support for Jujitsu Referees	Dawid Drabek, Karolina Milewska, Artur Sierszen, Sławomir Kulikowski	
167	Cognitive technologies for explainable AI in sustainable decision support	Marcin Hernes, Agata Kozina	
195	Attribute hierarchization through exploiting data distribution	Kamil Jabłoński	

202	The attitude of Poles to new technologies – sociological research	Małgorzata Suchacka
58	The evolution of ProteinUnet – from image segmentation to protein structure prediction	Krzysztof Kotowski, Katarzyna Stapor
1	Evolutionary Design of Graph Neural Networks Structures for Graph Classification	Maciej Krzywda, Szymon Łukasik, Amir H. Gandomi
16	Imbalanced data problem in INTERCO detection	Juliusz Łosiński, Ireneusz Czarnowski
21	Selected approaches to handling class imbalanced data in the context of network and network services security	Mateusz Dampc, Ireneusz Czarnowski
30	RSSI-Based Device-Free Human Activity Recognition Using Machine Learning	Rafał Pasternak, Bartłomiej Płaczek
32	Machine Learning as Strategic Support for Players in League of Legends	Miron Pawlak
33	Enhanced N-BEATS for Mid-Term Electricity Demand Forecasting	Mateusz Kasprzyk
35	Explainable data analytics methods for multimodal data in 5G+ cellular networks	Michał Błaszczyk, Ireneusz Jabłoński, Aleksandra Knapińska, Krzysztof Walkowiak
36	Context-Aware Graph Querying for LLM-Based Code Generation on Low-Code platforms	Arden Wołowicz, Dawid Korzępa, Anna Śmigiel, Krzysztof Raczynski, Patryk Żywica
46	Automation of financial statement analysis through a system of intelligent word processing	Agata Strugała
51	The use of artificial intelligence and large language models in mathematics and computer science education	Rafał Hądzelek
75	Recognizing selected sign language gestures using deep models	Adam Łaput
80	An AI-driven approach to adapting the Expected Goals (xG) model to women's football	Tomasz Lipowski, Tomasz Piłka
108	Future Designer - generative AI meets interior design	Filip Nowicki, Arkadiusz Charliński
109	The influence of rule cluster representation methods on the efficiency of inference	Igor Gaibei, Agnieszka Nowak-Brzezińska
111	Employing Transfer Learning for Diabetic Retinopathy Using Deep Feature Extraction	Paweł Niedziółka
128	A Comparative Analysis of Agent - Based Modeling Frameworks	Antoni Zięciak, Paulina Gacek, Maciej Michałek, Arkadiusz Miła, Przemysław Orlikowski, Jakub Skrzyński
129	Augmentation of balanced tabular datasets - do you need deep learning?	Karol Wojtachnia, Paweł Ksieniewicz
139	Simulation of empathetic robot interaction in a swarm	Jerzy Kwiatkowski, Joanna Siwek
141	Free LLMs Hallucinate and Rarely Signal Their Limitations in Solving Legal Problems	Andrzej Porębski, Jakub Figura
150	Understanding Machine Unlearning with SHAP values	Maciej Mączyński
179	Study about creative process in generative art	Kamil Gajos, Urszula Boryczka
182	Continual Multi-Modal Learning: Accounting for and Leveraging Changing Embedding Space	Alicja Dobrzeńska
186	Deep Learning For Automated Brain Tumor Detection In MRI Images	Bartłomiej Barański, Beata Zielosko
187	Comparative Analysis of Disinformation Detection Models	Przemysław Orlikowski, Maciej Michałek, Arkadiusz Miła
188	Spatula trace generation and genetic algorithms in creating images from photographs	Jan Konieczny
194	Augmentation of Parking Information in OpenStreetMap using Aerial Imagery Analysis	Mateusz Mazur, Sebastian Ernst
199	A comparison of selected oversampling techniques for problem of detecting network attacks	Veronika Hordieieva, Ireneusz Czarnowski
200	Using Shapley Values for Concept Drift Detection	Piotr Sołtyś, Rafał Doroz
204	Application of numerical modelling in geophysics - a case study from Eastern Sudetes, Czech Republic	Małgorzata Sokołowska, Iwona Stan-Kłeczek
206	The Image of the Academic Community in Generative AI Models: A Case Study of Flux.1	Kamil Wałczyk, Joanna Maszybrocka
93	Injecting Remote Sensing Models with Domain-Aware Representation Priors	Zuzanna Gawrysiak, Krzysztof Krawiec
98	On adaptability of post-disaster building damage assessment models	Maciej Stefańczyk, Tomasz Owienko
106	Real-world hyperspectral image super-resolution with an auxiliary dataset	Paweł Kowaleczko, Michał Kawulok, Daniel Kostrzewa, Maciej Ziąja
133	On estimation of root-zone soil moisture using hyperspectral images and deep learning	Bogdan Ruszczak, Lukasz Tulczyjew, Michał Myller, Agata M. Wijata, Dominika Boguszewska-Mańkowska, Jakub Nalepa
144	A Simple and Efficient Method for GPS-less Drone Navigation Using Visual Cues	Marek Kraft

20:15 - 23:00

**OPENING RECEPTION**

Foyer, LEVEL -4

## TUESDAY, 8.04

9:00 - 16:30	<b>REGISTRATION</b> Silesian Museum, Building "A", LEVEL -4	
9:00 - 11:00	<b>PANEL 2: From curiosity to competence – how to teach about AI</b> Auditorium, LEVEL -4 Moderator: Prof. Halina Kwaśnicka	
11:00 - 11:30	<b>COFFEE BREAK</b> Foyer, LEVEL -4	
11:30 - 12:30	<b>PLENARY 2 Prof. Marta Kwiatkowska</b> Auditorium, LEVEL -4 Chair: Prof. Ireneusz Czarnowski	
12:30 - 14:00	<b>POSTERS 2</b> Natural Language Processing, Automatic Speech Recognition, and Conversational AI & Computer Vision & Robotics and Autonomous Systems Problem Solving and Optimisation & Interdisciplinary Topics in Artificial Intelligence & Reports on AI Business Projects Foyer, LEVEL -4	
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94	Data domain adaptation for machine learning for the purpose of the negative emotions in voice data recognition	Anna Bryniarska, Piotr Schneider, Dariusz Mikołajewski, Magdalena Igras-Cybulska, Aleksandra Kawala-Sterniuk
99	Dual-Agent RAG-Enhanced On-Premise LLMs for Scalable and Reliable Conversational AI	Michał Podpora, Marek Baranowski, Piotr Rogala, Piotr Kawa, Paweł Piróg, Anna Romaniewska, Aleksandra Kawala-Sterniuk, Mariusz Pelc, Wojciech Rogala
114	Automation of data extraction for evidence synthesis	Sebastian Krawczyk, Jan Karkowski, Paweł Jemiolo, Wojciech Kusa
165	Comparison of Large Language Models Supporting Polish Language Using Modified Needle in the Haystack Test.	Marcin Blachnik, Jakub Chmielewski
2	An Unorthodox Technique for Enhancing Monochrome Images of Natural Scenes	Andrzej Śluzek
29	Combining Local and Global Features using Transformer-Based Architecture for Efficient Low-Light Enhancement	Michał Wnucznyński
37	Comparative Study of Oklab Color Space for Fuzzy C-Means Image Segmentation	Maciej Chopcian, Piotr Dzierwa
45	Similarity Perception and its Alignment with Semantics in Deep Vision Networks	Katarzyna Filus, Mateusz Żarski
47	Temporally resilient graph neural network for multi-image super-resolution	Tomasz Tarasiewicz, Michał Kawulok
69	Multi-image super-resolution: Bridging the simulated-to-real domain gap	Bartosz Ciućka, Tomasz Tarasiewicz, Michał Kawulok
85	Challenges of Quantum Machine Learning using real devices	Tomasz Rybotycki, Piotr Gawron, Manish Gupta
138	Training 3D CNN on synthetic data for real drone tracking application	Jan Rodziejewicz-Bielewicz, Marek Wernikowski, Marcin Korzeń, Radosław Mantiuk
151	Anomaly Detection in Ground-Based Sky Imagery	Mateusz Piechocki, Marek Kraft
175	Tracking Hand Motion for Gesture-Based Interfaces: Evaluating AI-Based Pose Estimation with a Custom Benchmarking Tool	AdaM Nowosielski, Krzysztof Małeck, Kacper Dogiel
177	Evaluating the Impact of Feature Extractor Design on Multimodal Fatigue Detection Performance	Anton Smoliński, Paweł Forczmański, Adam Nowosielski
180	OMENN: One Matrix to Explain NeuralNetworks	Adam Wróbel, Mikołaj Janusz, Dawid Rymarczyk, Bartosz Zieliński
181	The PDNcore architecture for industrial anomaly detection	Oskar Graeb, Agata Giełczyk
197	Feature extraction for document structure analysis	Paweł Forczmański, Jakub Olszewski
10	Bridging the gap between Learning-to-plan, Motion Primitives and Safe Reinforcement Learning	Piotr Kicki, Davide Tateo, Puze Liu, Jonas Guenster, Jan Peters, Krzysztof Walas
38	Dual Purpose Fiducial Marker Localization System	Krzysztof Lichy, Barbara Morawska, Piotr Lipiński, Maciej Stępień, Bartłomiej Gryglak, Adam Sztamborski
39	Genetic programming iterative improvement algorithm for a concurrent real-time optimization in embedded system design process	Adam Górski, Maciej Ogorzałek
60	Leveraging D*Lite in Reinforcement Learning-Based Multi-Agent Path Planning	Kamil Młodzikowski, Dominik Belter
74	Self-Supervised Labelling of Training Data for Deep Learning-Based Point Cloud Registration	Bartosz Sułek, Konrad Cop, Hubert Baraniak
77	Beyond Constant Parameters Hyper Prediction Models and HyperMPC	Jan Węgrzynowski, Piotr Kicki, Grzegorz Czechmanowski, Maciej Krupka, Krzysztof Walas
84	Domain Randomization for Sim-to-Real Transfer in Racing Policies	Grzegorz Czechmanowski, Jan Węgrzynowski, Piotr Kicki, Krzysztof Walas
101	Learning Robot Locomotion for Multiple Embodiments	Maciej Krupka
113	On the importance of camera pose estimation in NeRF-based super resolution tasks	Mikołaj Zieliński, Eldaniz Babayev, Dominik Belter
116	Comparative Evaluation of Euclidean Distance Field Mapping Methods for Mobile-Manipulating Robots	Bartłomiej Kulecki, Marcin Czajka, Eldaniz Babayev, Dominik Belter
131	Monocular 3D Shape Estimation for Autonomous Driving	Piotr Skrzypczyński, Tomasz Nowak
137	Comparison of Path Planning Algorithms Utilizing Euclidean Distance Field Maps for Mobile-Manipulating Robots	Marcin Czajka, Bartłomiej Kulecki, Eldaniz Babayev, Dominik Belter
159	Acoustic beamforming for broadband sound source localization	Jędrzej Mońko, Piotr Lipiński
168	Mesh SLAM with refinement	Jakub Niedźwiedzi, Piotr Lipiński, Leszek Podśędkowski
185	A Data-Driven Approach to Flatness: Learning a Latent Representation for the Unicycle Model	Joanna Piasek-Skupna
7	How Powerful are Classic Graph Neural Networks for Malware Detection? A Case Study with Cartesian Genetic Programming	Maciej Krzywda, Szymon Łukasik, Amir H. Gandomi
117	Evaluating Forecast-Based optimisation Models in Fantasy Football Team Management	Weronika Wiechno, Bartosz Bartosiak, Piotr Duch
156	Migrant Selection in Island-Based Optimization	Adam Żychowski, Xin Yao, Jacek Mańdziuk
170	Application-Aware Multilayer Network Performance Improvement Through Traffic Prediction Model Differentiation	Aleksandra Knapieńska
183	Unsupervised Physics-Constrained Inverse Problem Solving in Electrical Capacitance Tomography	Mikhail Ivanenko, Damian Wanta, Waldemar Smoliak, Przemysław Wróblewski, Mateusz Midura

	48	Towards AI-assisted Science with PLAI4SCIENCE - new Polish Research Infrastructure	Krzysztof Grochla, Michał Romaszewski, Jarosław Sotor, Piotr Masłowski, Bartosz Belter
	50	Challenges associated with the integration of Large Multimodal Models for waste sorting	Katarzyna Kołodziej, Przemysław Głomb, Anna Zawadzka
	66	Classifiers Selection for Static Ensemble under TinyML Constraints — Preliminary Research	Tobiasz Puślecki, Krzysztof Walkowiak
	81	Harnessing Graph Neural Networks: A Comparative Study of Transformers and Autoencoders in Link Prediction for High-Energy Physics	Wojciech Gomułka, Maciej Krzywda, Piotr A. Kowalski, Szymon Łukasik, Tomasz Szumlak, Tomasz Bold, Amir H. Gandomi
	97	The Influence of the Vibration Data on the Axial Piston Pump Failures Prediction	Marcin Rojek, Marcin Blachnik
	107	On the One-Day Ahead Photovoltaic Power Generation Forecasting Using Weather Analysis	Paweł Parczyk, Robert Burduk
	123	Integration of Polish Large Language Models for smart home automation	Michał Pikus, Jarosław Wąs, Agata Kozina
	130	Agent Harmony – a new framework for efficient simulation of agent-based systems	Antoni Zięciak, Paulina Gacek, Jarosław Wąs
	134	Hierarchical Recognition of Tree Species	Agata Świetlik, Justyna Wylązłowska, Dominik Kopeć, Arkadiusz Tomczyk
	149	A Digital Twin based on NARX Recurrent Neural Network	Bartosz Chaber, Patryk Chaber
	153	Creating photorealistic landscapes for robot path planning with iterative GAN prompting	Andrzej Skulimowski, Arfa Hassan
	155	Development of an effective method for detecting small buildings in satellite images	Anna Zawadzka, Przemysław Głomb, Mateusz Żarski
	162	NLP technique in ERP modification documents comparision	Katarzyna Grobler-Debska, Edyta Kucharska, Adam Domagała
	164	Not just sentimental value! The true value of sentiment in financial forecasting	Tomasz Kostyra
	169	Intelligent system for detection and prevention of truck malfunctions	Przemysław Kudłacik
	176	Enhancing Shapley-based Explanations for Regression Time-series Models with Categorical Features: A Contextual Approach for Polish Electrical Load	Rafał Doroz, Bartosz Szostak, Magdalena Marker
	193	Graph Preparation for Machine Learning-based Road Parameter Estimation	Sebastian Ernst, Konrad Zaworski, Piotr Sokołowski
	90	Fuzzy neural network for anomaly detection	Łukasz Apiecionek, Rafał Moś
	157	Application of artificial intelligence in optimisation solutions for truck transport	Piotr Napieralski, Piotr Lipiński, Michał Morawski
	158	RufQC – An AI-Driven System for Measurement and Quality Control in Electric Guitar Manufacturing	Rafał Perz
	171	Web-based application for dried blood spots quality inspection	Rafał Okuński, Dawid Masłowski, Michał Czubenko
	178	Innovative sorting device using multi-form data and machine learning algorithms	Jan Jacewski
14:00 - 14:45	<b>LUNCH</b> Foyer, LEVEL -4		
14:45 - 16:15	<b>ORAL 2</b>		
	<b>Robotics and Autonomous Systems &amp; Neural Network and Deep Learning Systems room A (LEVEL -3)</b> Chairs: Prof. Piotr Lipiński, Prof. Aleksander Byrski	<b>Uncertainty in Artificial Intelligence room C (LEVEL -3)</b> Chairs: Prof. Agnieszka Jastrzębska, Prof. Beata Zielosko	<b>Data Mining and Machine Learning &amp; Medical Applications of Artificial Intelligence room H (LEVEL -4)</b> Chairs: Prof. Ireneusz Czarnowski, Prof. Julian Szymański
	60 Leveraging D*Lite in Reinforcement Learning-Based Multi-Agent Path Planning Kamil Młodzikowski, Dominik Belter	24 Fuzzy-Rough Approach to the Feature Extraction Teresa Mroczek, Zofia Matusiewicz	31 Cost-constrained multi-label group feature selection using shadow features Tomasz Klonecki, Paweł Teisseyre, Jaesung Lee
	74 Self-Supervised Labelling of Training Data for Deep Learning-Based Point Cloud Registration Bartosz Sulek, Konrad Cop, Hubert Baraniak	95 Towards concept drift detection based on rough-set based diagnostic attributes Łukasz Wawrowski, Piotr Biczuk	82 Enhancing Grammatical Evolution with Neural-Inspired CFG for Explainable AI Jakub Skrzyński, Antoni Ligeza
	131 Monocular 3D Shape Estimation for Autonomous Driving Piotr Skrzypczyński, Tomasz Nowak	103 Uncertainty of Aggregation: Investigating Dissimilarity between Honeycomb-Based Polygonal Grzegorz Moś	88 Performance Comparison of Classifiers for Meta Instance Selection Marcin Blachnik, Piotr Ciepliński, Anna Piechowska
	185 A Data-Driven Approach to Flatness: Learning a Latent Representation for the Unicycle Model Joanna Piasek-Skupna	136 A Framework for Explainable Deep Learning Systems Based on Rough Set Flow Graphs Krzysztof Pancerz, Piotr Kulicki, Andrzej Burda, Jaromir Sarzyński	6 Cell segmentation in spatial recordings of single EHT's cardiac cycle using shallow 2D U-Net trained with Focal Loss Maciej Szymkowski
	121 Enhancing Recommender Systems with Graph Neural Networks: Modeling User Interactions in Online Retail Eugene Alooeff, Mariia Bulychewa	152 Comparison of solution accuracy for linear equations using Moore's interval numbers and asymmetric interval numbers Wojciech Sałabun, Andrii Shekhovtsov	67 Comparative Pharmacokinetics of Nicotine from E-Cigarettes and Traditional Cigarettes: A PBPK Modeling and Machine Learning Approach Joanna Chwał, ARKADIUSZ BANASIK, Radosław Dzik, Piotr Pańtak, Ewaryst Tkacz
	190 Deep Differentiable Logic Gate Networks Based on Fuzzy Zadeh's T-norm Piotr Wasilewski, Chan Duong Nguy	189 Fuzzy Preference Templates in Multi-Criteria Decision-Making Leszek Rolka	125 Automated Symptom-Disease Association Discovery from Clinical Notes Paulina Gacek
16:15 - 16:45	<b>COFFEE BREAK</b> Foyer, LEVEL -4		
16:45 - 18:00	<b>POSTERS 3</b> <b>Medical Applications of Artificial Intelligence &amp; Neural Network and Deep Learning Systems &amp; Generative Artificial Intelligence</b> <b>Decision-Making and Classification in Complex Systems &amp; Uncertainty in Artificial Intelligence &amp; AI in Human Behaviour Analysis</b> Foyer, LEVEL -4		
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	6	Cell segmentation in spatial recordings of single EHT's cardiac cycle using shallow 2D U-Net trained with Focal Loss	Maciej Szymkowski
	27	Convolutional Neural Networks in Blood Cells Classification	Katarzyna Wiltoś, Marcin Woźniak
	56	Assessing Stability of Local Explanations: A Shapley-Based Metric for Temporal Data	Marcin Ostrowski, Katarzyna Kaczmarek-Majer, Olgierd Hryniewicz
	67	Comparative Pharmacokinetics of Nicotine from E-Cigarettes and Traditional Cigarettes: A PBPK Modeling and Machine Learning Approach	Joanna Chwał, ARKADIUSZ BANASIK, Radosław Dzik, Piotr Pańtak, Ewaryst Tkacz
	70	Estimating aortic arch calcification from chest X-ray scans	Joanna Wiekiera, Patryk Buchtyar, Krzysztof Gumiński, Alicja Idzikowska, Jakub Kula, Agata Sobczyk, Marcin Rojek, Łukasz Piórecki, Jakub Kufel, Michał Kawulok, Michał Kozielski

110	Modeling Retinal Cells with Neural Differential Equations	Daniel Jankowski, Kacper Dobek, Krzysztof Krawiec
112	Comparing UNET architectures in blood vessel segmentation task	Radoslaw Roszczyk
125	Automated Symptom-Disease Association Discovery from Clinical Notes	Paulina Gacek
198	AI-Driven Diagnostic of Pathogens in Blood Smears from Septic Patients	Agnieszka Sroka-Olksiak, Adam Pardyl, Dawid Rymarczyk, Aldona Olechowska-Jarząb, Katarzyna Biegun-Drożdż, Dorota Ochońska, Michał Wronka, Adriana Borowa, Tomasz Gosiewski, Miłosz Adamczyk, Henryk Telega, Bartosz Zieliński, Monika Brzychczy-Włoch
11	On Approximating and Quantizing Fully Connected Classifiers	Dariusz Puchala
13	HKAN: Hierarchical Kolmogorov-Arnold network without backpropagation	Grzegorz Dudek, Tomasz Rodak
62	Local Continual Learning	Patryk Krukowski, Jan Miksa, Paweł Wawrzyński, Przemysław Spurek
121	Enhancing Recommender Systems with Graph Neural Networks: Modeling User Interactions in Online Retail	Eugene Alooeff, Mariia Bulycheva
122	NUDGE Me Maybe? Neuro-Guided Graph Search for Symbolic Regression	Piotr Wyrwiński, Krzysztof Krawiec
146	Combining Probabilistic Neural Networks with a Convolution Neural Network as a feature transformer	Szymon Kucharczyk, Piotr Kowalski
172	Intrusion Detection Using Time-Aware LSTM and On-Ground Sensors	Marcin Bernas
190	Deep Differentiable Logic Gate Networks Based on Fuzzy Zadeh's T-norm	Piotr Wasilewski, Chan Duong Nguay
203	Quantum Perspectives of Convolutional Neural Networks	Andrzej Cieślik
3	Face Consistency Benchmark for GenAI Video	Michał Podstawski, Małgorzata Kudelska, Haohong Wang
8	The Fréchet Coefficient for GANs and Diffusion Models Evaluation	Adrian Kucharski, Anna Fabijańska
18	Unmasking Bias and Reasoning Limitations in GPT Models: A Multilingual Evaluation of Open-Ended Question-Answering	Artur Gunia, Zuzanna Wojciechowska
34	Qualitative Evaluation of LLM-Designed GUI	Bartosz Sawicki
40	MiraGe: Editable 2D Images using Gaussian Splatting	Joanna Waczyńska
52	GASP: Gaussian Splatting for Physics-Based Simulations	Piotr Borycki
57	PR-ENDO: Physically Based Relightable Gaussian Splatting for Endoscopy	Weronika Smolak-Dyżewska
59	MeshSplats: Mesh-Based Rendering with Gaussian Splatting Initialization	Rafał Tobiasz, Grzegorz Wilczyński, Marcin Mazur, Sławomir Tadeja, Przemysław Spurek
61	A Hypernetwork-Based Approach to KAN Representation of Audio Signals	Patryk Marszałek
73	GaussGAN: Gaussian Splatting based GAN	Tomasz Wojnar
76	VeGaS: Video Gaussian Splatting	Dawid Malarz, Weronika Smolak-Dyżewska, Kornel Howil
78	Gaussian Splatting With Prototypes	Rafał Kajca, Michał Miziołek
91	Balancing the Load: Optimizing inference of generative model on example of Stable Diffusion	Łukasz Popek, Piotr Biłski, Rafał Perz
118	Deepfake for the Good: Generating Avatars through Face-Swapping with Implicit Deepfake Generation	Jakub Steczkiewicz, Georgii Stanishevskii, Tomasz Szczepaniak, Przemysław Spurek, Jacek Tabor, Sławomir Tadeja
140	Using time series analysis to generate synthetic traffic data for LoRa network simulation	Artur Frankiewicz
142	WTF: Wipe That Fuzz	Dawid Baran, Przemysław Spurek
154	AutoLoRA: Guiding LoRA-tuned Diffusion Models towards Diverse Outputs	Artur Kasymov, Michał Stypułkowski, Maciej Zieba, Przemysław Spurek
173	SHIELD: Secure Hypernetworks for Incremental Expansion and Learning Defense	Łukasz Gorczyca, Patryk Krukowski, Kamil Książek, Przemysław Spurek
4	Lessons Learned from Employing Monte Carlo Tree Search to Train Rule-Based Models for Intelligent Game Agents	Maciej Świechowski
20	Unified and Diverse Coalition Formation: A Voting-Based Ensemble for Dispersed Data	Jakub Sacewicz, Małgorzata Przybyła-Kasperek
41	Hierarchical Tree-Based Learning Models: Investigating Bagging Integration and Height Optimization	Benjamin Addo, Małgorzata Przybyła-Kasperek
72	Foundations and Applications of Fuzzy and Rough Sets in Complex System Modeling: Perspective on Polish Scientific Contributions	Michał Baczyński, Małgorzata Przybyła-Kasperek
87	Multi-agent simulation of financial markets: micro and macro approach	Jakub Skrzyński
92	Rule-Based Classification Method for Independent Data Sources Using Pawlak Conflict Analysis Model	Katarzyna Kusztal, Małgorzata Przybyła-Kasperek
96	Riemannian Geometry for EEG-Based Assessment of Affective State Levels	Agnieszka Wosiak
102	Dynamic Fatigue Prediction in Football: A Deep Learning-Driven Approach to Optimize Performance	Tomasz Piłka, Paweł Dopierała, Wiktor Leszczyński, Paweł Łączkowski, Tomasz Górecki
126	Exploring potential of Expected Solution Point in group decision-making	Andrii Shekhovtsov, Wojciech Sałabun
127	Analysis and detection of manipulation in the pairwise comparisons method	Konrad Kułakowski, Michał Strada, Sebastian Ernst, Jacek Szybowski
161	Analysis of Ranking Methods and Classifiers for Drift Detection using the Feature-based Drift Detector	Benjamin Mensah Dadzie, Piotr Porwik, Tomasz Orczyk
163	Visualization and scoring of Context Drift detectors	Tomasz Orczyk, Benjamin Mensah Dadzie
24	Fuzzy-Rough Approach to the Feature Extraction	Teresa Mroczek, Zofia Matusiewicz
95	Towards concept drift detection based on rough-set based diagnostic attributes	Łukasz Wawrowski, Piotr Biczak
100	Pseudo-Labeling Methods for Qualitative Datasets	Weronika Łazarz, Agnieszka Nowak-Brzezińska
103	Uncertainty of Aggregation: Investigating Dissimilarity between Honeycomb-Based Polygonal Chains	Grzegorz Moś
105	A Novel Approach to Predicting the Risk of Depressive Episodes Using Entropy for Modeling Uncertainty While Preserving Data Privacy	Barbara Pekala, Dawid Kosior
136	A Framework for Explainable Deep Learning Systems Based on Rough Set Flow Graphs	Krzysztof Pancierz, Piotr Kulicki, Andrzej Burda, Jaromir Sarzyński
148	On the Threshold-Based Approximate Reasoning	Michał Baczyński, József Dombi
152	Comparison of solution accuracy for linear equations using Moore's interval numbers and asymmetric interval numbers	Wojciech Sałabun, Andrii Shekhovtsov
189	Fuzzy Preference Templates in Multi-Criteria Decision-Making	Leszek Rolka
205	Application of artificial intelligence techniques in weather prediction	Kornel Chromiński
43	From an Assistive Tool to a Co-Author: Ethical and Epistemic Challenges of AI Utilization in the Academic Environment	Doty Szymborska
86	Manipulation detection with LLMs	Aleksander Szczęsny, Wiktoria Mielewszczenko-Kowszewicz, Beata Bajcar, Jolanta Babiak, Berenika Dyczek, Grzegorz
104	Evaluating Transformer Architectures for EEG-Based Mental Fatigue Classification: A Comparative Approach	Agnieszka Wosiak
124	Adaptive Semi-Supervised Fuzzy C-Means for Handling Uncertain Medical Data	Marta Boratyn
<b>GUIDED TOUR IN THE SILESIA MUSEUM</b>		
Foyer, LEVEL -4		

18:00 - 19:15

20:00 - 23:30

**GALA DINNER**

Prodiż Restaurant, ul. Porcelanowa 23, Katowice

## WEDNESDAY, 9.04

9:00 - 12:45	<b>REGISTRATION</b> Silesian Museum, LEVEL -4		
9:00 - 11:00	<b>PANEL 3: From a good idea to a good business – transferring AI innovations from academia to companies</b> Auditorium, LEVEL -4 Moderator: Prof. Przemysław Biecek		
11:00 - 11:30	<b>COFFEE BREAK</b> Foyer, LEVEL -4		
11:30 - 12:30	<b>PLENARY 3 Prof. Krzysztof Krawiec</b> Auditorium, LEVEL -4 Chair: Prof. Halina Kwaśnicka		
12:30 - 14:00	<b>ORAL 3</b>		
	<b>Young AI &amp; Natural Language Processing, Automatic Speech Recognition, and Conversational AI</b> room A (LEVEL -3) Chairs: PhD Eng. Tomasz Wesołowski, Prof. Maciej Piasecki	<b>Interdisciplinary Topics in Artificial Intelligence &amp; Remote Sensing and Satellite Data Analysis</b> room C (LEVEL -3) Chairs: Prof. Maciej Grzenda, Prof. Przemysław Biecek, Prof. Jakub Nalepa, PhD Krzysztof Kotowski	<b>Computer Vision &amp; Problem Solving and Optimisation Systems</b> room H (LEVEL -4) Chairs: Prof. Andrzej Śluzek, Prof. Karol Opara
	139 Simulation of empathetic robot interaction in a swarm Jerzy Kwiatkowski, Joanna Siwek	66 Classifiers Selection for Static Ensemble under TinyML Constraints — Preliminary Research Tobiasz Puślecki, Krzysztof Walkowiak	2 An Unorthodox Technique for Enhancing Monochrome Images of Natural Scenes Andrzej Śluzek
	188 Spatula trace generation and genetic algorithms in creating images from photographs Jan Konieczny	107 On the One-Day Ahead Photovoltaic Power Generation Forecasting Using Weather Analysis Paweł Parczyk, Robert Burduk	29 Combining Local and Global Features using Transformer-Based Architecture for Efficient Low-Light Enhancement Michał Wnuczyński
	194 Augmentation of Parking Information in OpenStreetMap using Aerial Imagery Analysis Mateusz Mazur, Sebastian Ernst	149 A Digital Twin based on NARX Recurrent Neural Network Bartosz Chaber, Patryk Chaber	151 Anomaly Detection in Ground-Based Sky Imagery Mateusz Piechocki, Marek Kraft
	206 The Image of the Academic Community in Generative AI Models: A Case Study of Flux.1 Kamil Wałczyk, Joanna Maszybrocka	176 Enhancing Shapley-based Explanations for Regression Time-series Models with Categorical Features: A Contextual Approach for Polish Electrical Load Rafał Doroz, Bartosz Szostak, Magdalena Marker	175 Tracking Hand Motion for Gesture-Based Interfaces: Evaluating AI-Based Pose Estimation with a Custom Benchmarking Tool AdaM Nowosielski, Krzysztof Małecki, Kacper Dogiel
	94 Data domain adaptation for machine learning for the purpose of the negative emotions in voice data recognition Anna Bryniarska, Piotr Schneider, Dariusz Mikołajewski, Magdalena Igras-Cybulska, Aleksandra Kawala-Sterniuk	93 Injecting Remote Sensing Models with Domain-Aware Representation Priors Zuzanna Gawrysiak, Krzysztof Krawiec	197 Feature extraction for document structure analysis Paweł Forczmanski, Jakub Olszewski
		144 A Simple and Efficient Method for GPS-less Drone Navigation Using Visual Cues Marek Kraft	156 Migrant Selection in Island-Based Optimization Adam Żychowski, Xin Yao, Jacek Mańdziuk
14:00 - 14:45	<b>LUNCH</b> Foyer, LEVEL -4		
14:45 - 15:30	<b>CLOSING REMARKS</b> Auditorium, LEVEL -4		