PP-RAI'2019

Polskie Porozumienie na rzecz Rozwoju Sztucznej Inteligencji

16-18.10.2019
Wrocław, Poland

Wrocław University of Science and Technology
Department of Systems and Computer Networks
wybrzeże Stanisława Wyspiańskiego 27
50-370 Wrocław, Poland

Harmonogram PP-RAI'19

Pa: Panel, RP: Referat plenarny, SP: Sesja plakatowa, mW: miniwykłady.

Wszystkie obrady oraz kolacje odbywać się będą w Centrum Konferencyjnym Politechniki Wrocławskiej - budynek D20 (Wrocław, Janiszewskiego 8).

Obiady będą wydawane w Strefie Kultury Studenckiej SKS (Hoene-Wrońskiego 10).

Środa, 16 października

13.00–13.30	**Rozpoczęcie konferencji**		
13.30–15.00	Pa	**Panel 1**	Oczekiwania wobec sztucznej inteligencji oraz jej wpływ na społeczeństwo i gospodarkę
15.00–15.15	**Przerwa**		
15.15–16.15	RP	**prof. Andrzej Czyżewski**	New applications of machine learning to multimedia technology
16.15–17.45	Pa	**Panel 2**	Jak poprawić widzialność polskich badań AI w środowisku międzynarodowym oraz jakie są szanse rozwoju polskiego środowiska AI
17.45–18.00	**Przerwa**		
18.00–19.00	RP	**dr inż. Tomasz Trzciński**	Learning binary image representations and the path towards 3D
19.00–21.00	**Kolacja oraz wręczenie nagród PSSI**		

Czwartek, 17 października

9.00–10.00	RP	**prof. Bolesław Szymański**	AI in Network Science: Challenges and Opportunities
10.00–10.30	mW		*Links between quantum computing and machine learning*
10.30–10.45	SP	**AAI+Young.AI** Advances in AI, session for young AI researchers	Krótkie prezentacje wybranych prac
10.45–12.15	SP		Sesja plakatowa
12.15–12.45	SP	**CV+RAS** computer vision, (R)obotics and (A)utonomous (S)ystems	Krótkie prezentacje wybranych prac
12.45–14.15	SP		Sesja plakatowa
14.15–15.30	**Przerwa obiadowa (stołówka SKS)**		
15.30–16.00	SP	**NLP+KE+NI** natural language processing, automatic speech recognition, and conversational AI, knowledge engineering, neuroinformatics	Krótkie prezentacje wybranych prac
16.00–17.30	SP		Sesja plakatowa.
16.00–17.30	Pa		**Panel grafy wiedzy w przemyśle i nauce**
17.30–19.00	Pa	**Panel 3**	Rola uczelni i ośrodków badawczych z perspektywy przemysłu
19.00–21.00	**Kolacja**		

Piątek, 18 października

9.00–10.30	Pa	**Panel 4**	Ekosystem AI w Polsce – kluczowe role i model współpracy ze szczególnym uwzględnieniem świata nauki
10.30–10.45	**Przerwa**		
10.45–11.45	RP	**prof. Piotr Faliszewski**	Multiwinner Elections: Algorithms and Experiments
11.45–12.15	SP	**ML+PS-O** machine learning, problem solving and optimization	Krótkie wybranych najlepszych prac
12.15–13.45	SP		Sesja plakatowa
13.45–14.00	**Zakończenie konferencji**		
14.00–15.15	**Przerwa obiadowa (stołówka SKS)**		

Referaty plenarne

New applications of machine learning to multimedia technology

Prof. dr hab. inż. Andrzej Czyżewski, prof. zw. PG, Katedra Systemów Multimedialnych, Politechnika Gdańska

Increasingly complex methods and algorithms for automated analysis and processing of signals, image, and video data are being developed recently. Our Multimedia Systems Department team contributed to research results in the above domains by participating in recent years in 5 international and more than 10 domestic projects. The topics selected to be covered in the talk illustrate the scope of the currently carried-out research in the department, concerning video and sound processing algorithms supported by machine learning and their applications.

Learning binary image representations and the path towards 3D

Dr inż. Tomasz Trzciński, Zakład Grafiki Komputerowej Instytutu Informatyki Politechniki Warszawskiej

Learning a compact and efficient representation of images, words or 3D shapes is critical to many real-life applications, including visual search, 3D reconstruction and object recognition. In this talk, we will present several methods that address this problem, starting from binary image descriptors learned with linear projections to unsupervised training of 3D point cloud representations built with Generative Adversarial Networks to be applied in the context of autonomous cars. We will start with binary local image descriptors trained with linear projections (D-BRIEF, ECCV'12) and boosting (BinBoost, CVPR'13) and then move on to more recent works on learning constellation descriptors with Siamese architecturs (SCoNE, ECCVW'18) and unsupervised learning with GANs (BinGAN, NeurIPS'18). We will conclude this talk with a few samples of our ongoing research on learning compact representations of 3D point clouds using various generative models.

Multiwinner Elections: Algorithms and Experiments

Dr hab. inż. Piotr Faliszewski, Katedra Informatyki, Wydzial Informatyki, Elektroniki i Telekomunikacji, AGH

In this talk I will quickly introduce the topic of multiwinner elections, which is studied within computational social choice (an area on the intersection of AI, political science, economics, operations research, and others). I will argue that there are plenty of applications of elections beyond politics—including various business applications, or applications in local institutions—and I will show that the problem of choosing a committee based on the preferences of a number of agents (the members of some society, be it natural or artificial) poses a number of challenges. In particular, I will show a few numerical experiments, illustrating the (strange) behavior or some popular voting rules, and some algorithms used in these experiments.

AI in Network Science: Challenges and Opportunities

Prof. Bolesław K. Szymański, Claire and Roland Schmitt Distinguished Professor of Computer Science and Professor of Cognitive Science, Rensselaer Polytechnic Institute, USA

Recent Network Science like many other disciplines of Science and Engineering embraced advance in AI and attempts to apply them to their problems. The biggest opportunity in these attempts is ability to model and predict dynamics processes on graphs but it is also the biggest challenge. Exciting developments in complex networks, with evolutionary networks, multilayer networks, and hierarchical networks are a source of plethora of AI challenges, fueling collaboration between network scientists and AI researchers.

This talk will start with a brief discussion of these developments and changing perspective on AI in the U.S. Then, the talk will follow with the description how the RPI CS Network Science group uses AI to solve some interesting problems in Network Science. The first example focuses on community detection, the second on viral news prediction, and the third on finding efficient spreaders of the information. In conclusions, the talk will provide a brief review of future challenges on generalizations of approaches describe earlier and on a vision of using an AI for freshwater lake ecosystem, the Jefferson Project done by RPI in collaboration with IBM Research.

Panele

Panel 1

Oczekiwania wobec sztucznej inteligencji oraz jej wpływ na społeczeństwo i gospodarkę,

moderator prof. dr hab. inż. Przemysław Kazienko – Politechnika Wrocławska

zaproszeni uczestnicy:

- prof. dr hab. Mikołaj Bojańczyk - Członek Rady Narodowego Centrum Nauki,
- Mateusz Gaczyński – Zastępca Dyrektora Departamentu Innowacji i Rozwoju Ministerstwa Nauki i Szkolnictwa Wyższego,
- Prof. dr hab. inż. Janusz Kacprzyk - Instytut Badań Systemowych PAN,
- Łukasz Medeksza – Zastępca Dyrektora Departamentu Strategii i Rozwoju Miasta, Urząd Miejski Wrocławia,
- Jan Staniłko – Dyrektor Departamentu Innowacji Ministerstwa Przedsiębiorczości i Technologii.

Panel 2

Jak poprawić widzialność polskich badań AI w środowisku międzynarodowym oraz jakie są szanse rozwoju polskiego środowiska AI,

moderator prof. dr hab. inż. Jacek Koronacki – Instytut Podstaw Informatyki PAN

zaproszeni uczestnicy:

- dr hab. inż. Jarosław Arabas,prof. PW – Politechnika Warszawska,
- prof. dr hab. inż. Krzysztof Krawiec – Politechnika Poznańska,
- dr hab. Lech Mankiewicz, prof. nadz. – Centrum Fizyki Teoretycznej PAN,
- dr hab. inż. Maciej Piasecki – Politechnika Wrocławska.

Panel 3

Rola uczelni i ośrodków badawczych z perspektywy przemysłu,

moderator dr hab inż. Mikołaj Morzy, prof. PP – Politechnika Poznańska

zaproszeni uczestnicy:

- Adam Dzwonkowski – Microsoft,
- Łukasz Grala – TIDK,
- prof. dr hab. inż. Halina Kwaśnicka – Politechnika Wrocławska,
- Jan Mizgajski – Avaya,
- dr inż. Witold Pawlus – Nokia,
- dr hab. inż. Dominik Ślęzak, prof. nadzw., Politechnika Warszawska.

Panel 4

Ekosystem AI w Polsce – kluczowe 4 role i model współpracy ze szczególnym uwzględnieniem świata nauki,

moderator Piotr Mieczkowski – DigitalPoland Foundation

zaproszeni uczestnicy:

- dr hab. inż. Jarosław Arabas,prof. PW – Politechnika Warszawska,
- dr Olaf Gajl – dyrektor OPI (Ośrodek Przetwarzania Informacji – Państwowy Instytutu Badawczy),
- prof. Jacek Leśkow – dyrektor NASK (Naukowa i Akademicka Sieć Komputerowa – Państwowy Instytutu Badawczy),

Panel

Grafy wiedzy w przemyśle i nauce,

moderator dr hab. inż. Agnieszka Ławrynowicz – Politechnika Poznańska

zaproszeni uczestnicy:

- dr hab. Maria Ganzha, prof. PW – Politechnika Warszawska,
- dr hab. inż. Maciej Piasecki – Politechnika Wrocławska,
- dr Szymon Klarman – Epistemik.

Sesje plakatowe

AAI (Advances in AI)

Semipresentable posets and fuzzy sets
Paweł Gładki (University of Silesia), Wojciech Borczyk (University of Silesia), Maciej Rostański (WSB University),

Multilayer quantum-classical neural network
Piotr Gawron (Institute of Theoretical and Applied Informatics, Polish Academy of Sciences), Aleksandra Krawiec (Institute of Theoretical and Applied Informatics, Polish Academy of Sciences),

Application of quantum annealing to combinatorial optimization problems
Piotr Gawron (Institute of Theoretical and Applied Informatics, Polish Academy of Sciences),

On Practical Aspects of MTE
Włodzimierz Filipowicz (Gdynia Maritime University),

Deep learning approach to rare CNV detection
Łukasz Neumann (Warsaw University of Technology),

Advanced model supporting football team building
Bartosz Ćwikliński (UTP), Agata Giełczyk (UTP), Michał Choraś (UTP),

Introduction to Quantum Machine Learning and Quantum Alghorithms
Zbigniew Puchała (Institute of Theoretical and Applied Informatics, Polish Academy of Sciences),

Near-term quantum computers and quantum computational supremacy
Michał Oszmaniec (CTP PAS),

Young.AI

Efficient Algorithm for Set-Valued Prediction in Multi-Class Classification

Marek Wydmuch (Poznan University of Technology), Krzysztof Dembczyński (Poznan University of Technology),

Text based meme classification

Piotr Bielak (Wroclaw University of Science and Technology), Michał Bieroński (Wroclaw University of Science and Technology); Michał Jóźwiak (Wroclaw University of Science and Technolgy),

Ensnemble data preprocessing based methods for imbalanced data stream classification

Jakub Klikowski (Wrocław University of Science and Technology),

Drifted Data Stream Classification using Oversampled Dynamic Ensemble Selection

Paweł Zyblewski (Wrocław University of Science and Technology),

Mixed-curvature Embedding of Human Diseases Network

Maciej Falkiewicz (Wroclaw University of Science and Technology),

Aggregate and individual approaches for building neural models for mid-term electric energy demand forecasting

Paweł Pełka (Politechnika Częstochowska),

Real-Time Polish Traffic Sign Recognition

Kacper Kania (Wrocław University of Science and Technology, Poland), Michał Kosturek (Wrocław University of Science and Technology, Poland),

Random Neural Networks (RANNs): a new general classifier inspired by Random Forest

Paweł Piasecki (Adam Mickiewicz University in Poznań), Tomasz Górecki (Adam Mickiewicz University in Poznań),

Classification of Tree Species from Limited Dataset of Bark Images Using Convolutional Neural Networks

Wojciech Czarnecki (Institute of Theoretical and Applied Informatics, Polish Academy of Sciences), Piotr Gawron (Institute of Theoretical and Applied Informatics, Polish Academy of Sciences),

Decision tree integration algorithm using static regions of competence and geometric representation

Jędrzej Biedrzycki (Wrocław University of Science and Technology),

Generation of context-free grammars for Grammar Inference methods

Łukasz Culer (Wrocław University of Science and Technology), Olgierd Unold (Wrocław University of Science and Technology), Agnieszka Kaczmarek (Wrocław University of Science and Technology),

Deep learning in EEG: Detection of error-related negativity in Eriksen flanker task

Krzysztof Kotowski (Silesian University of Technology), Katarzyna Stapor (Silesian University of Technology),

Identification of Players Ranking in E-Sport: CS:GO Study Case

Karol Urbaniak (West Pomeranian University of Technology),

Assessment of Electric City Buses in the Tendering Process: MCDA Case Study

Aleksandra Bączkiewicz (West Pomeranian University of Technology),

Effect of various normalization techniques on the TOPSIS method

Krzysztof Palczewski (West Pomeranian University of Technology, Szczecin),

Single particle diffusion classification by deep learning

Patrycja Kowalek (Wrocław University of Science and Technology), Hanna Loch-Olszewska (Wroclaw University of Science and Technology), Janusz Szwabiński (Wroclaw University of Science and Technology),

Multi-classifier system based on center of mass classifier

Szymon Wojciechowski (Wrocław University of Science and Technology),

Concept of Research into Cognitive Load in Human-Computer Interaction Using Biometric Techniques

Patient Zihisire Muke (Wrocław University of Science and Technology), Bogdan Trawiński (Wrocław University of Science and Technology),

Investigating initialization method in the process of facial landmarks detection in thermal images

Anton Smoliński (West Pomeranian University of Technology), Paweł Forczmański (ZUT),

Data imputation methods in classification task

Maciej Gąciarz (Wrocław University of Science and Technology), Mariusz Topolski (Wrocław University of Science and Technology),

Exploration of performance measurement methods for selected unsupervised machine learning algorithms

Filip Guzy (Wrocław University of Science and Technology),

A Cluster-Based Approach for AIS Data Analysis and Vessel Trajectory Reconstruction

Marta Mieczyńska (Gdynia Maritime University), Ireneusz Czarnowski (Gdynia Maritime University),

Aspect-based Sentiment Analysis Summarization using Rhetorical Analysis and Complex Networks

Łukasz Augustyniak (Wrocław University of Science and Technology), Tomasz Kajdanowicz (Wrocław University of Science and Technology), Przemyslaw Kazienko (Wrocław University of Technology, Poland),

RAS (Robotics and Autonomous Systems)

Kinematic Structures Detection and Estimation with Neural Network and Black-box Optimization

Dominik Belter (Politechnika Poznańska),

Usability of Reinforcement Learning Methods in the Task of Manipulation of Deformable Linear Objects

Michał Bednarek (Politechnika Poznańska), Krzysztof Walas (Poznan University of Technology),

Low Effort Cross-Modal Learning for 3-D LiDAR Data Segmentation in SLAM

Krzysztof Ćwian (Poznań University of Technology), Tomasz Nowak (Poznan University of Technology), Michał Nowicki (Poznan University of Technology); Piotr Skrzypczynski (Poznan University of Technology),

Machine learning approach to constrained path planning for intelligent articulated buses

Piotr Kicki (Poznan University of Technology), Tomasz Gawron (Poznan University of Technology), Maciej Marcin Michałek (Poznan University of Technology),

You Only Look Once Around: Learnable Object Detection for Bioinspired Visual Localization

Marta Rostkowska (Politechnika Poznańska),

Improving Person Re-identification by Segmentation-Based Detection Bounding Box Filtering

Marek Kraft (Poznan University of Technology, Institute of Control and Information Engineering),

From the Edge to the Datacenter: Evaluating the Throughput and Power Efficiency of Deep Learning Hardware Platforms

Marek Kraft (Poznan University of Technology, Institute of Control and Information Engineering),

NI (neuroinformatics)

Kernel Current Source Density (kCSD) as an example of applied Machine Learning

Jakub M Dzik (IBD-PAN), Marta Bejtka (IBD-PAN), Chaitanya Chintaluri (IBD-PAN; University of Oxford), Daniel Wójcik (IBD-PAN),

Computational investigation of biochemical foundations of learning and memory

Ziemowit Tomasz Slawinski (Nencki Institute of Experimental Biology, Polish Academy of Sciences), Joanna Jedrzejewska-Szmek (Nencki Institute of Experimental Biology, Polish Academy of Sciences), Daniel Wójcik (IBD-PAN),

PS+O (problem solving and optimization)

Social Impact Assessment and Multicriteria Optimization of AI Tools for Online Knowledge Provision

Andrzej M.J. Skulimowski (AGH University of Science and Technology),

Employing supervised learning algorithms in the task of dynamic spectrally-spatially flexible optical networks optimization

Paweł Ksieniewicz (Wrocław University of Science and Technology), Mirosław Klinkowski (National Institute of Telecommunications), Krzysztof Walkowiak (Wrocław University of Science and Technology),

Exploring Constraint Programming. Approaching a Practical Optimization Problem

Weronika T. Adrian (AGH University of Science and Technology), Mateusz Ślażyński (AGH University of Science and Technology), Antoni Ligęza (AGH University of Science and Technology), Marco Manna (University of Calabria), Marek Adrian (AGH University of Science and Technology), Krystian Jobczyk (AGH University of Science and Technology), Krzysztof Kluza (AGH University of Science and Technology), Bernadetta Stachura-Terlecka (AGH University of Science and Technology), Piotr Wiśniewski (AGH University of Science and Technology),

On the development of the ASDM method

Pawel Zawistowski (Warsaw University of Technology), Paweł Wawrzyński (Warsaw University of Technology), Łukasz Lepak (Warsaw University of Technology),

Ain't Nobody Got Time for Coding: Structure-Aware Program Synthesis from Natural Language

Jakub Bednarek (Poznan University of Technology), Karol Piaskowski (Poznan University of Technology), Krzysztof Krawiec (Poznan University of Technology),

Differential Evolution Strategy: a differential evolution version of the Covariance Matrix Adaptation Evolution Strategy

Jaroslaw Arabas (Warsaw University of Technology), Dariusz Jagodzinski (Warsaw University of Technology),

Optimization of ultra-thin magnetron sputtered aluminum films with the use of AI models

Eryk Warchulski (Warsaw University of Technology), Robert Mroczyński (Warsaw University of Technology), Jaroslaw Arabas (Warsaw University of Technology),

Influence of Traffic Type on Traffic Prediction Quality in Dynamic Optical Networks with Service Chains

Daniel Szostak (Wrocław University of Science and Technology),

Generalized Self-Adapting Particle Swarm Optimization algorithm with model-based optimization enhancements

Mateusz Zaborski (Warsaw University of Technology, Faculty of Mathematics and Information Science), Michał Okulewicz (Warsaw University of Technology, Faculty of Mathematics and Information Science), Jacek Mańdziuk (Warsaw University of Technology, Faculty of Mathematics and Information Science),

Dynamic signature verification using AI methods

Marcin Zalasiński (Częstochowa University of Technology), Krzysztof Cpałka (Częstochowa University of Technology),

The use of new space properties of binary vectors in the set partitioning problem

Zbigniew Pliszka (Wroclaw University of Science and Technology), Olgierd Unold (Wroclaw University of Science and Technology),

Population-based Algorithms for Selecting Parameters and Structures of Various Crisp and Fuzzy Systems

Krystian Łapa (Politechnika Częstochowska), Krzysztof Cpałka (Częstochowa University of Technology),

ML (machine learning)

Return of Investment in Machine Learning: Crossing the Chasm between Academia and Business

Jan Mizgajski (Avaya), Adrian Szymczak (Avaya), Piotr Żelasko (Avaya), Mikolaj Morzy (Poznan University of Technology), Łukasz Augustyniak (Wrocław University of Science and Technology), Piotr Szymański (Wroclaw University of Science and Technology),

Bayes optimal prediction for NDCG@k in extreme multi-label classification

Kalina Jasinska (Poznan University of Technology), Krzysztof Dembczyński (Poznan University of Technology),

New Methods of Generating Random Parameters in Feedforward Neural Networks with Random Hidden Nodes

Grzegorz Dudek (Czestochowa University of Technology),

Various Aspects of Data Distribution Monitoring Using the Restricted Boltzmann Machine

Maciej Jaworski (Czestochowa University of Technology), Leszek Rutkowski (Czestochowa University of Technology),

Boolean Biclustering Review and Perspectives

Marcin Michalak (Silesian University of Technology),

Solving Inconsistencies of the Perfect Clustering Concept

Mieczysław A. Kłopotek (Polish Academy of Sciences, Institute of Computer Science), Robert A. Kłopotek (Cardinal Stefan Wyszyński University, Faculty of Mathematics and Natural Sciences. School of Exact Sciences, Warszawa, Poland),

On the Shape of k-means Clusters and Their Motion Consistency

Mieczysław A. Kłopotek (Polish Academy of Sciences, Institute of Computer Science), Sławomir Wierzchoń (Polish Academy of Sciences, Institute of Computer Science), Robert A. Kłopotek (Cardinal Stefan Wyszyński University, Faculty of Mathematics and Natural Sciences. School of Exact Sciences, Warszawa, Poland),

Analytical Forms of Normalized and Combimnatorial Laplacians of Grid Graphs

Mieczysław A. Kłopotek (Polish Academy of Sciences, Institute of Computer Science),

SOUP-Bagging: a new approach for multi-class imbalanced data classification

Mateusz Lango (Poznan University of Technology), Jerzy Stefanowski (Poznan University of Technology),

Evaluation of Musical Data Representation for Music Information Retrieval

Mariusz Kleć (PJATK), Krzysztof Marasek (PJATK), Krzysztof Szklanny (PJATK),

Weighted Context-free Grammar Induction-a preliminary report

Olgierd Unold (Wroclaw University of Science and Technology), Mateusz Gabor (Wroclaw University of Science and Technology),

Preliminary tests of a real-valued Anticipatory Classifier System

Norbert Kozlowski (Wroclaw University of Science and Technology), Olgierd Unold (Wroclaw University of Science and Technology),

Streaming approach to Big Data analysis

Piotr Duda (Czestochowa University of Technology), Leszek Rutkowski (Czestochowa University of Technology),

Improving Evolutionary Instance Selection with Clustering and Ensembles

Mirosław Kordos (University of Bielsko-Biala), Marcin Blachnik (Silesian University of Technology),

SAFAIR: Secure and Fair AI Systems for Citizens

Michal Choras (ITTI Sp. z o.o. and UTP Bydgoszcz), Marek Pawlicki (UTP Bydgoszcz), Rafal Kozik (UTP Bydgoszcz),

MDFS – a statistical filter for multivariate interactions

Krzysztof Mnich (University of Białystok), Witold Rudnicki (University of Białystok), Radosław Piliszek (University of Białystok),

Prediction of Drug-induced Liver Injury using different integration techniques

Wojciech Lesiński (University of Białystok), Agnieszka Kitlas Golińska (University of Białystok), Krzysztof Mnich (University of Białystok), Witold Rudnicki (University of Białystok),

Robust Machine Learning protocol with estimation of biases

Witold Rudnicki (University of Białystok), Krzysztof Mnich (University of Białystok), Radosław Piliszek (University of Białystok), Aneta Polewko-Klim (University of Białystok), Wojciech Lesiński (University of Białystok), Bogumił Sapiński (University of Warsaw),

Recent Advances in Cross-Domain Sentiment Analysis of Polish Texts

Arkadiusz Janz (Wrocław University of Science and Technology), Jan Kocoń (Wroclaw University of Science and Technology),

KE (knowledge engineering)

Brief Overview of Research Directions in Artificial Intelligence Methods for Business Process Management

Krzysztof Kluza (AGH University of Science and Technology), Piotr Wiśniewski (AGH University of Science and Technology), Weronika T. Adrian (AGH University of Science and Technology), Antoni Ligęza (AGH University of Science and Technology), Marek Adrian (AGH University of Science and Technology), Bernadetta Stachura-Terlecka (AGH University of Science and Technology), Krystian Jobczyk (AGH University of Science and Technology),

Semantic Information Extraction and Knowledge Graph Analysis

Weronika T. Adrian (AGH University of Science and Technology), Marco Manna (University of Calabria), Antoni Ligęza (AGH University of Science and Technology), Marek Adrian (AGH University of Science and Technology), Krystian Jobczyk (AGH University of Science and Technology), Krzysztof Kluza (AGH University of Science and Technology),

Automatic Translation of Ontology Competency Questions into SPARQL-OWL Queries

Agnieszka Lawrynowicz (Poznan University of Technology), Dawid Wisniewski (Poznan University of Technology),

Towards data-event-driven approach in ADVISOR project

Dariusz Krol (Wroclaw University of Science and Technology),

Disambiguation of experts in the Chinese knowledge base

Robert Nowak (Politechnika Warszawska), Wiktor Franus (Warsaw University of Technology),

Mining Cardinality Restrictions in OWL

Jedrzej Potoniec (Poznan University of Technology),

Towards smart enterprises: supporting the business processes using artificial intelligence

Marcin Hernes (Wroclaw University of Economics),

Context-Based Inference in Technical Diagnostics

Anna Timofiejczuk (Silesian University of Technology),

CV (computer vision)

Automatic identification of vitreomacular pathologies based on optical coherence tomography scans

Agnieszka A Stankiewicz (Poznan University of Technology), Tomasz Marciniak (Poznan University of Technology), Adam Dąbrowski (Poznan University of Technology), Marcin Stopa (Poznan University of Medical Sciences), Elzbieta Marciniak (Poznan University of Medical Sciences),

Neural Network-based Compressed Image Improvement

Patryk Najgebauer (Czestochowa University of Technology), Rafal Scherer (Czestochowa University of Technology),

Break the curse of small datasets in computer vision tasks with transfer learning methods

Joanna Jaworek-Korjakowska (AGH University of Science and Technology), Andrzej Brodzicki (AGH University of Science and Technology), Dariusz Kucharski (AGH University of Science and Technology), Michał Piekarski (AGH University of Science and Technology, SOLARIS National Synchrotron Radiation Centre,Jagiellonian University, Krakow, Poland), Marek Gorgon (AGH University of Science and Technology),

Towards color visual cryptography with completely random shares

Leszek J Chmielewski (Warsaw University of Life Sciences - SGGW), Grzegorz Gawdzik (Warsaw University of Life Sciences - SGGW), Arkadiusz Orłowski (Warsaw University of Life Sciences - SGGW),

Handcrafted features for CNN - is it worth it?

Maciej Stefańczyk (Warsaw University of Technology, Institute of Control and Computation Engineering), Dawid Seredyński (Warsaw University of Technology, Institute of Control and Computation Engineering), Maciej Węgierek (Warsaw University of Technology, Institute of Control and Computation Engineering),

Band selection with Higher Order Multivariate Cumulants for small target detection in hyperspectral images

Przemysław Głomb (IITiS PAN), Krzysztof Domino (IITiS PAN), Michał Romaszewski (IITiS PAN), Michał Cholewa (IITiS PAN),

Unsupervised deep learning approach to hyperspectral anomaly detection

Bartosz Grabowski (IITiS PAN), Przemysław Głomb (IITiS PAN), Michał Romaszewski (IITiS PAN), Mateusz Ostaszewski (IITiS PAN),

Graph CNN with Filter Transformations for Structure Detection and Identification

Arkadiusz Tomczyk (Institute of Information Technology, Lodz University of Technology),

Application of GGD Based Preprocessing for Region Based Binarization of Degraded Document Images

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Semisupervised Segmentation using Autoencoder - Comparison of Convergence for Manual and Random Assignments

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NLP+ASR+CAI (natural language processing, automatic speech recognition, and conversational AI)

Comparison of topic modelling algorithms in text clustering problem

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Integrating Polish Language Tools and Resources in Spacy

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Sub-word units in Polish text generation.

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Fine-Grained Named Entity Recognition for Polish using Deep Learning

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Does the syntax matter for composing semantic representation of medical products therapeutic indications?

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