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|--------------------|---|---|--|--|
| 08:00 - 09:00      | Registration<br>Location: Foyer   |   |  |  |
| 09:00 - 09:20      | Opening Session, including Greetings from the University of Leipzig by Prof. Dr. Jens-Karl Eilers (Vice-Rector for Excellence Development: Research and Transfer)<br>Location: Room HS 015                            |   |  |  |
| 09:20 - 10:20      | <b>Keynote Lecture 1</b><br>Speaker: Prof. Dr. Krzysztof Czarnecki<br>Topic: Driving Towards the Future: Hybrid Models for Human Behavior Prediction in Traffic<br>Chair: Prof. André Ludwig<br>Location: Room HS 015 |   |  |  |
| 10:20 - 10:50      | Group Photo & Coffee Break<br>Location: Foyer   |   |  |  |
| Parallel Session 1 |   |   |  |  |
| 10:50 - 12:50      | Location: Room 026  | Location: Room 133  | Location: Room 134   | Location: Room 143   |
|                    | <b>Special Session: MLRWD 1</b><br>Chair: Dr. Przemysław Juszczuk<br>(6 presentations)<br><br>On-line: 175, 182<br>On-site: 35, 55, 176, 207  | <b>Deep Learning Techniques</b><br>Chair: Prof. André Ludwig<br>(6 presentations)<br><br>On-line: 229, 13, 75, 90, 169<br>On-site: 37 | <b>Special Session: SIRENE</b><br>Chair: Prof. Michał Choraś<br>(6 presentations)<br><br>On-line: 57, 170<br>On-site: 184, 28, 38, 127 | <b>Special Session: DIPMAI</b><br>Chairs: Prof. Debora Gil and Dr. Mihail Gaianu<br>(6 presentations)<br><br>On-line: 27, 148, 32, 34<br>On-site: 96, 95 |
| 12:50 - 13:50      | Lunch Break<br>Location: Cantine  |   |  |  |
| Parallel Session 2 |   |   |  |  |
| 13:50 - 15:10      | Location: Room 026  | Location: Room 133  | Location: Room 134   | Location: Room 143   |
|                    | <b>Data Mining and Machine Learning 1</b><br>Chair: Prof. Marcin Hernes<br>(4 presentations)<br><br>On-line: 208<br>On-site: 22, 112, 151   | <b>Special Session: IADS</b><br>Chair: Prof. Małgorzata Przybyła-Kasperek<br>(4 presentations)<br><br>On-line: 65, 136, 166, 186      | <b>Natural Language Processing 1</b><br>Chair: Dr Marcin Pietranik<br>(4 presentations)<br><br>On-line: 20, 231<br>On-site: 152, 88    | <b>Special Session: DICV 1</b><br>Chair: Dr Daniel Kostrzewa<br>(4 presentations)<br><br>On-line: 84<br>On-site: 76, 94, 107                             |

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|--------------------|---|--|--|---|
| 15:10 - 15:30      | Coffee Break<br>Location: Foyer   |  |  |   |
| Parallel Session 3 |   |  |  |   |
|                    | Location: Room 026  | Location: Room 133   | Location: Room 134   | Location: Room 143  |
| 15:30 - 17:10      | <b>Knowledge Engineering and Application for Industry 4.0 1</b><br>Chair: Prof. Sinh Van Nguyen<br>(5 presentations)<br>On-line: 10, 118, 47<br>On-site: 211, 215 | <b>Computational Intelligence for Digital Content Understanding</b><br>Chair: Dr. Mihail Gaianu<br>(5 presentations)<br>On-line: 190, 24, 194<br>On-site: 89, 91 | <b>Social Networks and Intelligent Systems 1</b><br>Chair: Prof. Dariusz Barbuca<br>(5 presentations)<br>On-line: 123, 233, 234, 125<br>On-site: 135 | <b>Cooperative Strategies for Decision Making and Optimization</b><br>Chair: Prof. Jarosław Wątróbski<br>(5 presentations)<br>On-line: 130, 228, 199<br>On-site: 217, 212 |
| 18:00 - 21:00      | Welcome Reception<br>Location: Faculty of Economics and Management Science, Grimmaische Strasse 12, 04109 Leipzig   |  |  |   |

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| Day 2, Tuesday, 10 September 2024 |  |
| 08:00 - 09:00                     | Registration<br>Location: Foyer  |
| 09:00 - 10:00                     | <b>Keynote Lecture 2</b><br>Speaker: Prof. Dr. Klaus Solberg Söilen<br>Topic: Deciphering the Evolution of Collective Intelligence: A Bibliometric Journey<br>Chair: Prof. Ngoc Thanh Nguyen<br>Location: Room HS 015  |
|                                   | Technical Break  |
| 10:10 - 11:10                     | <b>Keynote Lecture 3</b><br>Speaker: Prof. Dr. Jarosław Jankowski<br>Topic: Impact on information dissemination processes in complex networks - from influence maximization towards continuous efforts to improve or suppress process dynamics<br>Chair: Prof. Adrianna Koziarkiewicz<br>Location: Room HS 015 |
| 11:10 - 11:30                     | Coffee Break<br>Location: Foyer  |

| Parallel Session 1 |  |  |  |   |
|--------------------|--|--|--|---|
| 11:30 - 12:50      | Location: Room 026   | Location: Room 133   | Location: Room 134   | Location: Room 143  |
|                    | <b>Natural Language Processing 2</b><br>Chair: Dr. Krisztián Buza<br>(4 presentations)<br>On-line: 15, 56<br>On-site: 64, 158  | <b>Special Session: Doctoral Track</b><br>Chair: Dr. Thanh Ngo Nguyen<br>(3 presentations)<br>On-line: 63, 185<br>On-site: 193                                     | <b>Special Session: CCINLP 1</b><br>Chair: Prof. Ismail Biskri<br>(4 presentations)<br>On-line: 83, 134<br>On-site: 26, 206  | <b>Special Session: CSDMO 1</b><br>Chair: Prof. Ireneusz Czarnowski<br>(4 presentations)<br>On-line: 100<br>On-site: 67, 74, 131        |
| 12:50 - 13:50      | Lunch<br>Location: Cantine   |  |  |   |
| Parallel Session 2 |  |  |  |   |
| 13:50 - 15:50      | Location: Room 026   | Location: Room 133   | Location: Room 134   | Location: Room 143  |
|                    | <b>Cybersecurity, Blockchain Technology, and Internet of Things</b><br>Chair: Prof. Janusz Bobulski<br>(5 presentations)<br>On-line: 12, 54, 191, 230<br>On-site: 132      | <b>Collective Intelligence and Collective Decision-Making</b><br>Chair: Prof. Bogumiła Hnatkowska<br>(5 presentations)<br>On-line: 210<br>On-site: 62, 150, 44, 80 | <b>Knowledge Engineering and Application for Industry 4.0 2</b><br>Chair: Dr. Bernadetta Maleszka<br>(6 presentations)<br>On-line: 115<br>On-site: 72, 117, 196, 203, 14 | <b>Special Session: MLRWD 2</b><br>Chair: Dr. Przemysław Juszcuk<br>(6 presentations)<br>On-line: 81, 220, 223<br>On-site: 30, 137, 181 |
| 15:50 - 16:10      | Coffee Break<br>Location: Foyer  |  |  |   |
| 16:10 - 17:10      | <b>Panel Discussion</b><br>Topic: Collective Computational Intelligence - current challenges and opportunities<br>Chair: Prof. Piotr Jedrzejowicz<br>Location: Room HS 015 |  |  |   |
| 19:00 - 22:00      | Gala Dinner at Ratskeller Leipzig  |  |  |   |

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|--------------------|---|---|---|--|
| 08:30 - 09:30      | <b>Keynote Lecture 4</b><br>Speaker: Prof. Dr. Sören Auer<br>Topic: Towards Neuro-Symbolic AI with Knowledge Graphs and Generative AI<br>Chair: Dr. Philippe Krajsic<br>Location: Room HS 015 |   |   |  |
| 09:30 - 09:50      | Coffee Break<br>Location: Foyer   |   |   |  |
| Parallel Session 1 |   |   |   |  |
| 09:50 - 10:50      | Location: Room 026  | Location: Room 133  | Location: Room 134  | Location: Room 143   |
|                    | <b>Special Session: DICV 2</b><br>Chair: Prof. Rainer Unland<br><br>(3 presentations)<br><br>On-line: 143<br>On-site: 201, 205  | <b>Collective Intelligence in Healthcare</b><br>Chair: Dr. Marcin Maleszka<br><br>(3 presentations)<br><br>On-line: 153, 227<br>On-site: 31 | <b>Social Networks and Intelligent Systems 2</b><br>Chair: Prof. Maciej Piasecki<br><br>(3 presentations)<br><br>On-line: -<br>On-site: 105, 119, 173 | <b>Special Session: CSDMO 2</b><br>Chair: Prof. Tomasz Dzido<br><br>(3 presentations)<br><br>On-line: -<br>On-site: 155, 52, 99                  |
| Parallel Session 2 |   |   |   |  |
| 10:50 - 12:10      | Location: Room 026  | Location: Room 133  | Location: Room 134  | Location: Room 143   |
|                    | <b>Special Session: ADMDL</b><br>Chair: Prof. Rainer Unland<br><br>(4 presentations)<br><br>On-line: 8, 85, 165, 174<br>On-site: -  | <b>Special Session: CCINLP 2</b><br>Chair: Prof. Ismail Biskri<br><br>(4 presentations)<br><br>On-line: 40, 111<br>On-site: 225, 43         | <b>Special Session: AISC</b><br>Chair: Prof. Ualsher Tukeyev<br><br>(4 presentations)<br><br>On-line: 9, 53<br>On-site: 78, 92                        | <b>Data Mining and Machine Learning 2</b><br>Chair: Dr. Ewa Ratajczak-Ropel<br><br>(4 presentations)<br><br>On-line: 39, 189, 42<br>On-site: 114 |
| 12:10 - 12:50      | Awards Ceremony and Closing Session<br>Location: Room HS 015  |   |   |  |
| 12:50 - 13:50      | Lunch<br>Location: Cantine  |   |   |  |
| 14:00 - 16:30      | Excursion (Seightseeing Bus Tour Leipzig)   |   |   |  |

Special Session: Machine Learning in Real-World Data (MLRWD) 1

Chair: Dr. Przemysław Juszczuk

Location: Room 026

**An Automated and Verbose Approach for Detecting Anomalies in Cloud Computing Platform Using Logs** - (ID: 35, On-site)

Arthur Vervaet, Yousra Chabchoub, Mar Callau-Zori and Raja Chiky

**Blood glucose prediction in Type 1 Diabetes based on Long Short-Term Memory** - (ID: 55, On-site)

Bogdan-Petru Butunoi, Cristina Stolojescu-Crisan and Viorel Negru

**Processing the 3D Heritage Data Samples based on Combination of GNN and GAN** - (ID: 176, On-site)

Lam Duc Vu Nguyen, Sinh Van Nguyen, Sonh Thanh Le, Minh Khai Tran and Marcin Maleszka

**A Clustering Approach for Personalized Coaching Applications** - (ID: 207, On-site)

Annika Van Buren, Audrey Kwan, Harald Rietdijk, Talko Dijkhuis, Patricia Conde-Cespedes, Hilbrand Oldenhuis and Maria Trocan

**Stress at work: Exploring Affective Computing A Systematic Literature Review and a Glimpse into Future Research** - (ID: 175, On-line)

Iris Mezieres, Abir Gorraab, Rébecca Deneckère, Nourhène Ben Rabah and Bénédicte Le Grand

**Multistep Time Series Forecasting of Energy Consumption based on Stacked Deep LSTM Network Architecture** - (ID: 182, On-line)

Minyar Sassi Hidri

Deep Learning Techniques

Chair: Prof. André Ludwig

Location: Room 133

**Detection and localization of COVID-19 on chest radiographs by Deep Learning algorithms** - (ID: 37, On-site)

Ahmed Balaazi, Najeh Nafti, Asma Ben Abdallah and Mohamed Hedi Bedoui

**On the Effect of Quantization on Deep Neural Networks Performance** - (ID: 229, On-line)

Jihene Tmamna, Rahma Fourati and Hela Ltifi

**GANet - Learning tabular data using global attention** - (ID: 13, On-line)

Hung Bui and Bac Le

**Hybrid Convolutional Network Fusion: Enhanced Medical Image Classification with Dual-Pathway Learning from Raw and Enhanced Visual Features** - (ID: 75, On-line)

Musaev Javokhir, Abdulaziz Anorboev, Sarvinoz Anorboeva, Yeong-Seok Seo, Ngoc Thanh Nguyen and Dosam Hwang

**Interpreting results of VGG-16 for COVID-19 diagnosis on CT images** - (ID: 90, On-line)

Hai Thanh Nguyen, Tuyet Ngoc Huynh, Tan Tai Phan, Hoang Thanh Huynh, Nguyen and Huynh Ngoc Pham

**A hybrid approach using 2D CNN and attention-based LSTM for Parkinson's Disease Detection from video** - (ID: 169, On-line)

Emna Krichene, Islem Jarraya, Thameur Dhieb, Zohra Mahfouf, Mohamed Neji, Nouha Farhat, Emna Smaoui, Tarek M. Hamdani, Mariem Damak, Chokri Mhiri, Habib Chabchoub, Khmaies Ouahada and Adel M. Alimi

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Special Session: Security and reliability of information, networks and social media (SIRENE)

Chair: Prof. Michał Choraś

Location: Room 134

**Detection of Fake Facial Images and Changes in Real Facial Images** - (ID: 184, On-site)

Janusz Bobulski and Mariusz Kubanek

**On Plagiarism and Software Plagiarism** - (ID: 28, On-site)

Rares Folea and Emil-Ioan Slusanschi

**From Detection through Display to Understanding: Bridging AI and UI in Disinformation and Fake News Analysis** - (ID: 38, On-site)

Rafał Kozik, Aleksandra Pawlicka, Marek Pawlicki and Michał Choraś

**Strategies to Use Harvesters in Trustworthy Fake News Detection Systems** - (ID: 127, On-site)

Krzysztof Cabaj, Marcin Kowalczyk, Marcin Gregorczyk, Michał Choraś, Rafał Kozik and Wojciech Mazurczyk

**Enhancing Social Network Trust with Improved EigenTrust Algorithm** - (ID: 57, On-line)

Fatma Mlika, Wafa Karoui and Lotfi Ben Romdhane

**Enhanced Intrusion Detection based Hybrid Meta-Heuristic Feature Selection** - (ID: 170, On-line)

Ali Hussein Ali, Boudour Ammar, Maha Charfeddine and Bassem Ben Hamed

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Special Session: Digital Image Processing for Medical and Automotive Industry (DIPMAI)

Chair: Prof. Debora Gil

Location: Room 143

**Impact of acquisition parameters on the performance of radiomic systems** - (ID: 96, On-site)

Debora Gil, Guillermo Torres, Sonia Baeza Mena, Antoni Rosell Gratacós and Carles Sanchez

**Complete Convolutional Neural Networks Environment For Computer Vision Problems With Nvidia Drive AGX Xavier** - (ID: 32, On-line)

Sorin Valcan and Mihail Gaianu

**The Development Of An Application-Specific Instruction Set Processor Specialized On A Convolutional Neural Network Trained On MNIST** - (ID: 34, On-line)

Dávid Nevezi-Strango, Daniel Grosu and Sorin Valcan

**CNN Classifier for Helicobacter pylori detection in immunohistochemically stained gastric WSI** - (ID: 95, On-site)

Pere Lloret, Pau Cano, Eva Musulen and Debora Gil

**A New MLEM Reconstruction Algorithm for Ultra-low Dose PET** - (ID: 148, On-line)

Robert Cierniak

**Cerebral cortex extraction methods based on a priori knowledge for T1-weighted MRI images** - (ID: 27, On-line)

Hajer Ouerghi, Olfa Mourali and Ezzeddine Zagrouba

Parallel Session 2 (13:50 - 15:10)

Data Mining and Machine Learning 1

Chair: Prof. Marcin Hernes

Location: Room 026

**ROCKET with dynamic convolution for time series classification** - (ID: 22, On-site)

Krisztian Buza and Margit Antal

**Prediction of the delay time of public transportation using machine learning** - (ID: 112, On-site)

Alicja Piaskowska, Marcin Hernes, Ewa Walaszczyk, Agata Kozina and Kateryna Czerniachowska

**Testing the robustness of Machine Learning models through mutations** - (ID: 151, On-site)

Manuel Méndez, Miguel Benito-Parejo and Mercedes Garcia Merayo

**Using Brain-Computer Interface and Artificial Intelligence Algorithms for Language Learning** - (ID: 208, On-line)

Marta Kuchciak, Marcin Sieradzki, Wojciech Cebula, Katarzyna Bialas and Michal Kedziora

Special Session: Innovative Applications in Data Science (IADS)

Chair: Prof. Małgorzata Przybyła-Kasperek

Location: Room 133

**Rough Set Decision Rules for Usage-Based Churn Modeling in Mobile Telecommunications** - (ID: 65, On-line)

Małgorzata Przybyła-Kasperek and Piotr Sulikowski

**Enhancing Focused Ant Colony Optimization for Large-Scale Traveling Salesman Problems through Adaptive Parameter Tuning** - (ID: 136, On-line)

Rafał Skinderowicz

**New Presence-Dependent Binary Similarity Measures for Pairwise Label Comparisons in Multi-label Classification** - (ID:166, On-line)

Agnieszka Wosiak and Rafał Woźniak

**Outlier detection in Human Activity Recognition Systems** - (ID: 186, On-line)

Agnieszka Duraj and Daniel Duczumiński

Natural Language Processing 1

Chair: Dr Marcin Pietranik

Location: Room 134

**Three-stage extraction of spatial relationships using markers** - (ID: 152, On-site)

Michał Olek and Maciej Piasecki

**Interpretable Dense Embedding for Large-Scale Textual Data via Fast Fuzzy Clustering** - (ID: 88, On-site)

Olzhas Kozbagarov, Rustam Mussabayev, Alexander Krassovitskiy and Nursultan Kuldeyev

**A Quadruplication Multilingual and Multilevel Topic Seeding Approach Towards a Bottom-Up Graph Generation and Enhancement** - (ID: 20, On-line)

Amani Mechergui, Wahiba Ben Abdessalem Karaa and Sami Zghal

**uMentor: LLM-powered Chatbot for Harnessing Technology Books in Digital Library** - (ID:231, On-line)

Lan.T.K Nguyen, Long.D Pham and Hoa.N Nguyen

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Special Session: Recent Advances of Deep learning and Internet of Things in Computer Vision-related Applications (DICV) 1

Chair: Dr Daniel Kostrzewa

Location: Room 143

**Strengthening Network Intrusion Detection in IoT Environments with Self-Supervised Learning and Few Shot Learning** - (ID: 76, On-site)

Safa Ben Atitallah, Maha Driss, Wadii Boulila and Anis Koubaa

**Toward Intelligent Ethnicity Recognition and Face Anonymization: An IncepX-Ensemble Model Approach** - (ID: 107, On-site)

Faisal Jamil, Saad Khan, Tariq Alsboui, Simon Parkinson and Harun Jamil

**Intelligent Handling of Noise in Federated Learning with Co-training for Enhanced Diagnostic Precision** - (ID: 94, On-line)

Farah Farid Babar, Faisal Jamal and Faiza Fareed Babar

**Multi-objective and Randomly Distributed Fuzzy Logic-based Unequal Clustering in Heterogeneous Wireless Sensor Networks** - (ID: 84, On-line)

Mohd Adnan, Tazeem Ahmad, Saima Rafi, Abdullah and Anudeep Vurity

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Parallel Session 3 (15:30 - 17:10)

Knowledge Engineering and Application for Industry 4.0 1

Chair: Prof. Sinh Van Nguyen

Location: Room 026

**Testing usability of different implementations for VR interaction methods** - (ID: 211, On-site)

Marek Kopel, Maciej Walczyński and Piotr Wyrostek

**Usability Assessment of the Use-Case Model Textual Specification Language** - (ID: 215, On-site)

Bogumila Hnatkowska and Joanna Pszon

**Retrofitting a Legacy Cutlery Washing Machine using Computer Vision - (ID: 10, On-line)**

Hua Leong Fwa

**Automatic Detection of Ambulance Vehicles in Day and Night Conditions in Surveillance Videos - (ID: 118, On-line)**

Kazimierz Choroś

**Tools for Identifying and Preventing Loneliness in Older Adults - (ID: 47, On-line)**

Christos Mettouris, Evangelia Vanezi, Leonie Cammerlander, Paul Schober, Andria Hadjicosta, Sotiria Moza, Matthias Rohringer, Irena Zemaitaityte, Jan Kellerer, Eva Schulc, Raminta Bardauskiene, Paolo Zaramella, Alberto Maistrello and George Angelos Papadopoulos

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Computational Intelligence for Digital Content Understanding

Chair: Dr. Mihail Gaianu

Location: Room 133

**Topic Modeling with Variable Neighborhood Search - (ID: 89, On-site)**

Alymzhan Toleu, Gulmira Tolegen and Rustam Mussabayev

**A Neuro-Symbolic Classification Algorithm Using Neural Cell Assemblies - (ID: 91, On-site)**

Florin Leon

**Fusing Visual and Textual Representations via Multi-layer Fusing Transformers for Vietnamese Visual Question Answering - (ID: 190, On-line)**

Cong Phu Nguyen, Huy Tien Nguyen and Tung Le

**Drought Debates in Arizona Newspapers - (ID: 24, On-line)**

Anne-Lise Boyer, Brigitte Juanals and Jean-Luc Minel

**Feature Explainability and Enhancement for Skin Lesion Image Analysis - (ID: 194, On-line)**

Thanh-An Nguyen and Bac Le

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Social Networks and Intelligent Systems 1

Chair: Prof. Dariusz Barbuca

Location: Room 134

**A deep learning approach to fine-grained political ideology classification on social media texts - (ID: 135, On-site)**

Erik-Robert Kovacs, Liviu-Adrian Cotfas and Camelia Delcea

**An Empirical Analysis of the Usage of Requirements Attributes in Requirements Engineering Research and Practice - (ID: 123, On-line)**

Krzysztof Wnuk, Lech Madeyski, Waleed Abdeen, Sneha Penmetsa and Navya Lingampalli

**Assessing Student Quality of Life: Analysis of Key Influential Factors - (ID: 233, On-line)**

Talshyn Sarsembayeva, Madina Mansurova, Adrianna Koziarkiewicz, Adai Shomanov, Almagul Kurmanova and Alma Maulenova

**An Adaptive Network Model for Interpersonal Emotion Regulation in Multimodal Human-Bot Interaction - (ID: 234, On-line)**

**Using Multilevel Temporal Factorisation to Model Structure and Dynamics for Higher-Order Adaptive and Evolutionary Processes** - (ID: 125, On-line)

Jan Treur

Cooperative Strategies for Decision Making and Optimization

Chair: Prof. Jarostaw Wątróbski

Location: Room 143

**Exploring the Potential of Generative Models in Promoting Local Language News Consumption** - (ID: 217, On-site)

Md Mahbub Ul Alam and Doina Logofătu

**An evolutionary algorithm and a clustering technique to select good subsets of test for Finite State Machines** - (ID: 212, On-site)

Miguel Benito-Parejo, Manuel Méndez and Mercedes G. Merayo

**Cross-domain Abbreviation Disambiguation on Vietnamese Clinical Texts in Online Processing** - (ID: 130, On-line)

Chau Vo and Hua Phung Nguyen

**New methodology for attack patterns classification in deep brain stimulation** - (ID: 228, On-line)

Jihen Fourati, Mohamed Othmani and Hela Ltifi

**Discovering Spatial Prevalent Co-location Patterns by Once Scanning Datasets without Generating Candidates** - (ID: 199, On-line)

Vanha Tran, Thiloan Bui and Ducanh Khuat

Day 2, Tuesday, 10 September 2024

Parallel Session 1 (11:30 - 12:50)

Natural Language Processing 2

Chair: Dr. Krisztián Buza

Location: Room 026

**Advancements in Text Subjectivity Analysis: From Simple Approaches to BERT-Based Models and Generalization Assessments** - (ID: 64, On-site)

Margit Antal, Krisztian Buza and Szilárd Nemes

**Enhancing Low-Resource NER via Knowledge Transfer from LLM** - (ID: 158, On-site)

Gulmira Tolegen, Alymzhan Toleu and Rustam Mussabayev

**BABot: a Framework for the LLM-based Chatbot Supporting Business Analytics in e-Commerce** - (ID: 15, On-line)

Thinh Ngo Tran Gia, Thang Le Dinh and Cuong Pham-Nguyen

**BioBERT for Multiple knowledge-based question expansion and biomedical extractive question answering** - (ID: 56, On-line)

Imen Gabsi, Hager Kammoun, Asma Wederni and Ikram Amous

Special Session: Doctoral Track

Chair: Dr. Thanh Ngo Nguyen

Location: Room 133

**The New K-Means Initialization Method** - (ID: 193, On-site)

Bartosz Brejna, Marcin Pietranik and Adrianna Kozierekiewicz

**Delays in computing with parallel metaheuristics on HPC infrastructure** - (ID: 63, On-line)

Sylwia Bietaszek, Aleksander Byrski, Adam Nowak and Krzysztof Gądek

**Deep Learning for Cardiac Diseases Classification** - (ID: 185, On-line)

Hend Karoui, Sihem Hamza and Yassine Ben Ayed

Special Session: Computational Collective Intelligence and Natural Language Processing (CCINLP) 1

Chair: Prof. Ismail Biskri

Location: Room 134

**COVID-19 Detection based on Deep Features and SVM** - (ID: 26, On-site)

Mohamed Elamine Khoudour, Ismail Biskri and Nadia Ghazzali

**Efficient Argument Classification with Compact Language Models and ChatGPT-4 Refinements** - (ID: 206, On-site)

Marcin Pietroń, Rafał Olszowski and Jakub Gomułka

**Abstract Generation with Hybrid Model Supported by Relevance Matrix** - (ID: 83, On-line)

Dushan Kumarasinghe and Nisansa de Silva

**AMAMP: A Two-Phase Adaptive Multi-hop Attention Message Passing Mechanism For Logical Reasoning Machine Reading Comprehension** - (ID: 134, On-line)

Khai Phan, Tung Le and Nhi Thao Tran

Special Session: Cooperative Strategies for Decision Making and Optimization (CSDMO) 1

Chair: Prof. Ireneusz Czarnowski

Location: Room 143

**Reward-based Hybrid Genetic Algorithm for Solving the Class Scheduling Problem** - (ID: 67, On-site)

Kamil Pieper, Bartosz Roczniok and Ireneusz Czarnowski

**New results for some Tur\{a}n problem instances obtained using the reinforcement learning technique** - (ID: 74, On-site)

Tomasz Dzido

**Experimental Study on Link Prediction in Unweighted and Weighted Time-Evolving Organizational Social Network** - (ID: 131, On-site)

Pawel Szyman and Dariusz Barbucha

**Reinforcement Learning-Based Cooperative Traffic Control System** - (ID: 100, On-line)

Zoltán Barta, Szilárd Kovács and János Botzheim

Parallel Session 2 (13:50 - 15:50)

Cybersecurity, Blockchain Technology, and Internet of Things

Chair: prof. Janusz Bobulski

Location: Room 026

**Fuzzy Rule-Based Anomaly Explanation in Micro-Electromechanical Systems** - (ID: 132, On-site)

Hunor István Lukács, Tamas Fischl and János Botzheim

**Malware detection among contact tracing apps with deep learning** - (ID: 12, On-line)

Irene Kilanioti and George Angelos Papadopoulos

**Data Distribution-Based Change Detection Framework in SWaT Security Monitoring** - (ID: 54, On-line)

Máté Hekfusz, Vrushali Mahajan, Adolf Kamuzora and Imre Lendák

**Addressing Initialization and Data Ordering Issues in Latent Factor-Based Recommendation Systems** - (ID: 191, On-line)

Gia Hong Tiet, Thi Hoang Vy Ho, Thi Thanh Ha Do, Thi My Hang Vu, Le Thi Kim Nhung Ho, Cuong Pham-Nguyen and Nguyen Hoai Nam Le

**TabGAN-powered Data Augmentation and Explainable Boosting-based Ensemble Learning for Intrusion Detection in Industrial Control Systems** - (ID: 230, On-line)

Tuyen Nguyen Thanh, Phong Nguyen Hai, Minh Nguyen Quang and Hoa Nguyen Ngoc

Collective Intelligence and Collective Decision-Making

Chair: Prof. Bogumiła Hnatkowska

Location: Room 133

**Formalization of agent-based model of group learning** - (ID: 62, On-site)

Barbara Wędrychowicz and Marcin Maleszka

**Music genre classification using hybrid committees and voting mechanisms** - (ID: 150, On-site)

Daniel Kostrzewa, Piotr Berezka and Robert Brzeski

**Towards practical large scale traffic model of electric transportation** - (ID: 44, On-site)

Marcin Maleszka

**A Novel Multi-Criteria Approach Supporting Strong Sustainability Assessment** - (ID: 80, On-line)

Aleksandra Bączkiewicz, Jarosław Wątróbski and Robert Król

**A Collective Intelligence to Predict Stock Market Indices Applying An Optimized Hybrid Ensemble Learning Model - (ID: 210, On-line)**

Zakia Zouaghia, Zahra Kodja and Lamjed Ben Said

Knowledge Engineering and Application for Industry 4.0 2

Chair: Dr. Bernadetta Maleszka

Location: Room 134

**High learning hierarchical neural networks - (ID: 72, On-site)**

Leon Bobrowski

**A new method of detecting Alzheimer's disease - (ID: 117, On-site)**

Karol Kiciński, Marcin Pietranik and Adrianna Kozierekiewicz

**GCC Aware Glaucoma Detection Using Macula OCT Image Analysis Based on Deep Convolutional Neural Networks - (ID: 196, On-site)**

Dawit Haile, Hana Mekonen, Tesfaye Tadesse, Ondrej Krejcar and Kenzu Abdella

**Understanding Geometric Relationship Concepts in Few-Shot Learning - (ID: 203, On-site)**

Attila Bodnár, László Gulyás and Zoltán Kárász

**Applicability criterion of the Non Overlapping Template Matching algorithm from NIST Statistical Test Suite SP800-22 for long aperiodic patterns - (ID: 14, On-site)**

Piotr Jóźwiak and Krzysztof Zatwarnicki

**Enhanced Activity Recognition through Joint utilization of Decimal Descriptors and Temporal Binary Motions - (ID: 115, On-line)**

Mariem Gnouma, Sameh Yahya, Ridha Ejbali and Mourad Zaied

Special Session: Machine Learning in Real-World Data (MLRWD) 2

Chair: Dr. Przemysław Juszczak

Location: Room 143

**Modeling the Functioning of Decision Trees Based on Decision Rule Systems by Greedy Algorithm - (ID: 30, On-site)**

Kerven Durdymyradov and Mikhail Moshkov

**Detection of candidate skills from job offers and comparison with ESCO database - (ID: 81, On-line)**

Grzegorz Dzikowski, Grzegorz Madyda and Barbara Probiez

**Weak Supervised Asphalt Pavement Segmentation - (ID: 137, On-site)**

István Reményi, Zoltán Kárász and János Botzheim

**Improved CNN Model Stability and Robustness with Video Frame Segmentation - (ID: 181, On-site)**

Piotr Stefański and Tomasz Jach

**A heterogeneous ensemble of classifiers for sports betting: based on the English Premier League - (ID: 220, On-line)**

**Transforming Challenges: Siamese-based Vision Transformer for Robust Occluded Face Recognition** - (ID: 223, On-line)

Laila Ouannes, Anouar Ben Khalifa and Najoua Essoukri Ben Amara

Day 3, Wednesday, 11 September 2024

Parallel Session 1 (09:50 - 10:50)

Special Session: Recent Advances of Deep learning and Internet of Things in Computer Vision-related Applications (DICV) 2

Chair: Prof. Rainer Unland

Location: Room 026

**MBMD-LoRa Scalable LoRaWAN for Internet of Things: A Multi-Band Multi-Data Rate Approach** - (ID: 201, On-site)

Mukarram Al-Muhaya, Tawfik Al-Hadhrami, Omparakash Kaiwartya and David.J Brown

**M2M Interface for IoT Traffic Light with Computer Vision and AnyLogic PLE** - (ID: 205, On-site)

Madina Mansurova, Baurzhan Belgibayev, Sanzhar Abdrakhim, Assiya Boltaboyeva, Zhanel Baigarayeva and Talshyn Sarsembayeva

**Synergistic Feature Fusion for Improved Classification: Combining Dempster-Shafer Theory and Multiple CNN Architectures** - (ID: 143, On-line)

Ayyub Alzahem, Wadii Boulila, Maha Driss and Anis Koubaa

Collective Intelligence in Healthcare

Chair: Dr. Marcin Maleszka

Location: Room 133

**Modelling of drug-induced Liver Injury with multiple Machine Learning algorithms** - (ID: 31, On-site)

Wojciech Lesinski, Agnieszka Kitlas Golinska and Witold Rudnicki

**A Multi-View spatio-temporal EEG feature learning for cross-subject motor imagery classification** - (ID: 153, On-line)

Adel Hameed, Rahma Fourati, Boudour Ammar, Javier Sanchez-Medina and Hela Ltifi

**Temporal Focal Modulation Networks for EEG-Based Cross-Subject Motor Imagery Classification** - (ID: 227, On-line)

Adel Hameed, Rahma Fourati, Boudour Ammar, Javier Sanchez-Medina and Hela Ltifi

Social Networks and Intelligent Systems 2

Chair: prof. Maciej Piasecki

Location: Room 134

**Social Attraction Mutation: A Novel Method for Mutation Based on Attraction** - (ID: 105, On-site)

Márk Domonkos, Zhang Huanpeng, Natabara Máté Gyöngyössy and János Botzheim

**Extracting Common DNA Segments from the Complete Genomes of 7538 Viruses and Five selected Mammals** - (ID: 119, On-site)

Jing-Doo Wang and Yi-Chun Wang

**Time Series Analysis of Sentiment Polarity Trends: A Case Study** - (ID: 173, On-site)

Bernadetta Maleszka

Special Session: Cooperative Strategies for Decision Making and Optimization (CSDMO) 2

Chair: Prof. Tomasz Dzido

Location: Room 143

**Parallelized Population-based Multi-heuristic Approach for Solving RCPSP and MRCPSPP Instances** - (ID: 155, On-site)

Ewa Ratajczak-Ropel and Piotr Jedrzejowicz

**Comparison of the effectiveness of ANN and CNN in binary image classification** - (ID: 52, On-site)

Arkadiusz Mirakowski

**Efficiency of Specialized Genetic Operators in Non-Dominated Tournament Genetic Algorithm (NTGA2) applied to Multi-Objective Multi-Skill Resource Constrained Project Scheduling Problem** - (ID: 99, On-site)

Michał Antkiewicz, Paweł B. Myszkowski, Konrad Gmyrek, Adam Krzemiński and Jose Luis Calvo-Rolle

Parallel Session 2 (10:50 - 12:10)

Special Session: Anomalies Detection using Machine and Deep Learning (ADM DL)

Chair: Prof. Rainer Unland

Location: Room 026

**Daily activities forecasting for long-term elderly behavior change detection** - (ID: 174, On-line)

Dorsaf Zekri, Ahmed Snoun, Thierry Delot and Marie Thilliez

**Melanoma detection using CBR approach within a possibilistic framework** - (ID: 8, On-line)

Jihen Frikha Elleuch, Wiem Abbes and Dorra Sellami

**Multi-Method Analysis for Early Diagnosis of Alzheimer's Disease on Magnetic Resonance Imaging (MRI) using Deep Learning and Hybrid Methods** - (ID: 85, On-line)

Guesmi Dhouha and Ben Ayed Yassine

**Analysis of Network Intrusion Detection and Potential Botnets Identification Using Selected Machine Learning Techniques** - (ID: 165, On-line)

Patryk Zabawa and Michał Kedziora

Special Session: Computational Collective Intelligence and Natural Language Processing (CCINLP) 2

Chair: Prof. Ismail Biskri

Location: Room 133

**Refining Natural Language Inferences using Cross-Document Structure Theory** - (ID: 225, On-site)

Arkadiusz Janz, Marcin Oleksy, Tomasz Bernaś, Joanna Baran, Dominik Kurowski and Julia Moska

**Question Answering system to answer questions about technical documentation** - (ID: 43, On-site)

Szymon Olewniczak, Michał Maciszka, Kamil Paluszewski, Grzegorz Pozorski, Wojciech Rosenthal and Lukasz

**M2DS: Multilingual Dataset for Multi-document Summarisation** - (ID: 111, On-line)

K. M Hewapathirana, Nisansa de Silva and Chathurike Dayal Athuraliya

**Big Textual Data Analytics using Transformer-based Deep Learning for Decision Making** - (ID: 40, On-line)

Omar Haddad and Mohamed Nazih Omri

Special Session: AI and Speech Communication (AISC)

Chair: Prof. Ualsher Tukeyev

Location: Room 134

**Study Neural Model for Recognition of Ancient Turkic Orkhon Runes** - (ID: 78, On-site)

Meirbek Mukashev and Ualsher Tukeyev

**Hybrid approach text generation for low-resource language** - (ID: 92, On-site)

Diana Rakhimova, Eşref Adali and Aidana Karibayeva

**Recent methods and algorithms in speech segmentation tasks** - (ID: 9, On-line)

Dina Oralbekova, Orken Mamyrbayev, Turdybek Kurmetkan and Nurdaulet Zhumazhan

**Maximum Entropy Model of Synonym Selection in Post-Editing Machine Translation into Kazakh Language** - (ID: 53, On-line)

Assem Shormakova and Ualsher Tukeyev

Data Mining and Machine Learning 2

Chair: Dr. Ewa Ratajczak-Ropel

Location: Room 143

**nMTP-Miner: An efficient method for mining frequent maximal inter-transaction patterns** - (ID: 114, On-site)

Thanh-Ngo Nguyen

**Investigation of Machine Learning and Deep Learning Approaches for Early PM2.5 Forecasting: A Case Study in Vietnam** - (ID: 42, On-line)

Quang-Dieu Nguyen, Tu Anh Hoang Nguyen, Nguyen Tien Dat Pham, Trung Kien Nguyen, Phu Pham, Ngoc-Thanh Nguyen and Loan T.T. Nguyen

**Detection and Classification of olive leaves diseases using machine learning algorithms** - (ID: 39, On-line)

Mouna Dammak, Achraf Makhloufi, Badii Louati and Abdelaziz Kallel

**Efficiently discover multi-level maximal high-utility patterns from hierarchical databases** - (ID: 189, On-line)

Trinh D.D. Nguyen, N.T. Tung, Loan Nguyen and Bay Vo