Wednesday 20

	ROOM 7	ROOM 8	ROOM 11
8:30 - 9:00	Registration		
9:00 - 9:30	Opening		
9:30 - 10:30	Invited talk: Inverse problems in the age of AI (Prof. Pier Luigi Dragotti)		
10:30 - 11:00	COFFEE BREAK		
11:00 - 13:00	Session 4	Session 5	Session 2
13:00 - 15:00	Sitting lunch		
15:00 - 16:30	Session 3	Session 7.1	Special Session 1
16:30 - 17:00	COFFEE BREAK		
17:00 - 18:00	Special Session 2	Session 9.1	Special Session 5.1
	19:00 WELCOME RECEPTION		

Thursday 21

	ROOM 7	ROOM 8	ROOM 11
8:45 - 10:00			Special Session 3.1
9:00 - 10:00	Session 6	Session 9.2	
10:00 - 10:30	COFFEE BREAK		
10:30 - 11:30	Invited talk: Bringing Deep Learning and reasoning closer (Prof. Plamen Angelov)		
11:30 - 13:15	Special Session 4.1	Special Session 8	Session 7.2
13:15 - 15:00	Sitting lunch		
15:15 - 17:15	Special Session 4.2	Session 1	Special Session 3.2
	19:00 SOCIAL EVENT: City of Arts and Sciences tour 20:30 GALA DINNER		

Friday 22

	ROOM 7	ROOM 8	ROOM 11
9:00 - 10:00	Special Session 5.2	Session 8.1	Special Session 9
10:00 - 10:30	COFFEE BREAK		
10:30 - 11:30	Invited talk: Human-Centered Artificial Intelligence: Challenges and Opportunities (Prof. Grzegorz J. Nalepa)		
11:30 - 12:45		Session 8.2	Special Session 10
12:50 - 13:15	CLOSING (only on-site)		

The conference will take place in the Nexus building (Building 6G).

The invited talks, the opening, and the closing sessions will be held in the auditorium, located on the ground floor.

Rooms 7, 8, and 11 are on the 2nd floor.

BOOKLET

Session 1: Diagnosis and treatment in medicine. Chair: Andrea Corradini

38: Tracking Healthy Organs in Medical Scans to Improve Cancer Treatment by Using UW-Madison GI Tract Image Segmentation. Bimal Kumar Sah, Doina Logofatu. **VIRTUAL**

61: A deep-learning approach for the identification of new subtypes of lung cancer. Andrea Corradini. **VIRTUAL**

15: Automatic classification of signal and noise in functional magnetic resonance imaging scans using convolutional neural networks. Georgian Anghelescu, Camelia Chira, Kristoffer Månsson.

56: Using Diffusion Models for Data Augmentation on Limited Rodent OCT Datasets. Fernando Garcia-Torres, Rocio del Amor, Sandra Morales, Alvaro Barroso, Björn Kemper, Jürgen Schnekenburger, Valery Naranjo. **VIRTUAL**

97: New Approach to Support the Breast Cancer Diagnosis Process Using Frequent Pattern Growth and Stacking Based on Machine Learning Techniques. John A Sanmartín, Paulina Azuero, Remigio I Hurtado. **VIRTUAL**

39: Low consumption models for disease diagnosis in isolated farms. Iago X Vázquez García, Ángel Miguel García-Vico, Huseyin Seker, Javier Sedano.

Session 2: Mental health and wellness. Chair: Debashis Naskar

74: Blueprint of Tomorrow: Contrasting Off-line and On-line Drawing Tasks for Alzheimer's Disease Screening. Nina Hosseini-Kivanani, Elena Salobrar-García, Lorena Elvira-Hurtado, Mario Salas, Christoph Schommer, Luis A. Leiva.

83: Age-unbiased Facial Emotion Recognition with Regularizing Self-attention Value Vector. Jaeil Park, Sung-Bae Cho. **VIRTUAL**

77: Digital Mental Health Apps: Key Features and User Engagement for Better Wellness. Diogo Emanuel Martinho.

65: Improving Speech Emotion Recognition: Novel Aggregation Strategies for Self-Supervised Features. Óscar Valls, Francisco Pastor Naranjo, Rocio del Amor del Amor, Lucía Gómez-Zaragozá, Javier Marín-Morales, Mariano Alcañiz Raya, Valery Naranjo.

19: CSSDH: An Ontology for Social Determinants of Health to Operational Continuity of Care Data Interoperability. Subhashis Das, Debashis Naskar, Sara Rodríguez González. **SHORT**

23: Drowsiness Detection Using Vital Sign Sensors and Deep Learning on Smartwatches. Vitor Augusto da Rosa Pereira, Rafael A Berri, Fernando S Osorio.

Session 3: Analysis and explainability in AI models. Chair: Stella Heras

132: Data Mining In Credit Card Approval: Feature Importance as a Comparison. Qingyu Ye, Simon Fong, Jiahui Yu, Antonio J. Tallón-Ballesteros.

55: Towards Reliable Drift Detection and Explanation in Text Data. Robert Feldhans, Barbara Hammer.

52: Causal Explanation of Graph Neural Networks. Hichem Debbi. **VIRTUAL**

57: Employing Explainable AI techniques for Air Pollution: An ante-hoc and post-hoc approach in dioxide nitrogen forecasting. Pedro Oliveira, Francisco Franco, Afonso Bessa, Dalila Durães, Paulo Novais.

Session 4: Natural Language Processing and text analysis. Chair: Pasqual Martí

18: Emotional Sequential Influence Modeling on False Information. Debashis Naskar, Subhashis Das, Sara Rodríguez González. **SHORT**

102: An Ontology-Lexicon-Driven Approach for Refining Sentiment Analysis Processes. Francisco Toldy, Orlando Belo. **VIRTUAL**

91: Using Data Augmentation For Improving Text Summarization. Daniel Constantine, Marian Cristian Mihaescu, Stella Heras, Jaume Jordán, Javi Palanca, Vicente Julian.

32: Towards a Communication Specification Language for Heterogeneous Service Orchestration based on Process Calculus and Holonic Multi-agent Systems. Tomislav Peharda, Markus Schatten, Bogdan Okreša Đurić.

72: Evaluating performance and trustworthiness of RAG systems for generating administrative text. Hugo Sánchez Navalón, Carlos Monserrat-Aranda, Dario Garigliotti, Cèsar Ferri.

Session 5: Computer vision and pattern recognition. Chair: Carlos Carrascosa

29: Pipeline for Semantic Segmentation of Large Railway Point Clouds. Hugo Gabrielidis, Stephane Vialle, Filippo Gattit.

30: Preliminary Investigation on Machine Learning and Deep Learning Models for Change of Direction Classification in Running. Pranay Jaiswal, Abhishek Kaushik, Fiona Lawless, Tiago Malaquias, Fergal McCaffery. **VIRTUAL**

93: A Divide-and-Conquer Approach for Container License Plate Detection Using Multi-Frame Analysis. João Geirinhas, Jacinto Estima, Catarina Silva. **VIRTUAL**

94: Smart Sign Language Decoder. Constantin Marius Costescu, Paul Stefan Popescu, Marian Cristian Mihaescu.

70: Refining Multiple Instance Learning with Attention Regularization for Whole Slide Image Classification. Ilán Carretero, Pablo Meseguer, Rocio del Amor del Amor, Valery Naranjo.

22: Padel two-dimensional tracking extraction from monocular video recordings. Álvaro Novillo, Victor Aceña, Carmen Lancho, Marina Cuesta, Isaac Martín de Diego.

Session 6: Optimization and Reinforcement Learning

9: Model-Based Meta-Reinforcement Learning for Hyperparameter Optimization. Jeroen Albrechts, Hugo M Martin, Maryam Tavakol.

31: Efficient Radar Scheduling Using Genetic Algorithms and Stochastic Heuristic Initialization. Tien Minh Dam, Long Viet Truong, Hung Viet Bui, Tuan Anh Nguyen, Tiem Manh Nguyen.

64: Cooperative-Competitive Decision-Making in Resource Management: A Reinforcement Learning Perspective. Artem Isakov, Danil Peregorodiev, Pavel Brunko, Ivan Tomilov, Natalia Gusarova, Aleksandra Vatian. **VIRTUAL**

Session 7.1: Social and economics. Chair: Peter Mitic

103: Characterising Class Imbalance in Transportation Mode Detection: An Experimental Study. Akilu R Muhammad, Ana Aguiar, Joao Mendes-Moreira. **VIRTUAL**

53: The contribution of social sciences driven user studies to the development of human-centered artificial intelligence. Magdalena Wójcik.

2: Quantitative Estimation of Reputation Risk. Peter Mitic.

112: A supervised clustering approach to detect similar soccer players. Andreu Simó Vidal, Juan M. Alberola, Victor Sanchez-Anguix.

Session 7.2: Social and economics. Chair: Sergio d'Antonio

27: Multimodal Visio-lingual Content Analysis to Detect Fake Content on Reddit. Adrián Girón Jiménez, Javier Huertas-Tato, David Camacho.

58: Predicting employee attrition in a multi-company setting. Adriano Gomes, Luis M Silva, João Pedro Cruz.
96: Hotel's Price Prediction Based on Country Specific Data. Andrei Balan, Paul Stefan Popescu, Marian Cristian Mihaescu.

14: Using Contrastive Learning to Map Stylistic Similarities in Narrative Writers. María Valero-Redondo, Javier Huertas-Tato, Sergio A. D'Antonio Maceiras, Alejandro Martín, David Camacho.

87: Topic modeling in Telegram channels during the Russia-Ukraine conflict. Arsenii Tretiakov, Sergio A. D'Antonio Maceiras, Alejandro Martín.

Session 8.1: Algorithms and models in Machine Learning. Chair: David Camacho

81: Contributions on Mixtures of Polynomials for Hybrid Bayesian Networks. Rafael Rumi, Juan Carlos Luengo, Dario Ramos-Lopez, Ana D Maldonado.

63: Loss Function Role in Processing Sequences with Heavy-Tailed Distributions. Aleksandra Vatian, Natalia Gusarova, Dmitrii Dobrenko, Artem Isakov, Ivan Tomilov, Mikhail Gritskikh. **VIRTUAL**

85: Assessing the Impact of Temporal Data Aggregation on the Reliability of Predictive Machine Learning Models. Ayah Barhrhouj, Bouchra Ananou, Mustapha Ouladsine. **VIRTUAL**

Session 8.2: Algorithms and models in Machine Learning. Chair: Bogdan Okreša Đurić
111: Noise tolerance and robustness ranking in Machine Learning models. Cristina Padro-Ferragut, M. José Ramírez-Quintana, Fernando Martínez-Plumed.
95: Structural and Semantic Data Layers in Time Series Analyses. Alexander Graß, Christian Beecks, Stefan Decker. **VIRTUAL** **SHORT**
28: MetaLIRS: Meta-learning for Imputation and Regression Selection. Işıl Baysal Erez, Jan Flokstra, Mannes Poel, Maurice Van Keulen.
16: How Resilient are Language Models to Text Perturbations? Daniel Romero, José Hernández-Orallo, Fernando Martínez-Plumed.

Session 9.1: Automation and industrial processes. Chair: Cèsar Ferri
49: Deep Learning Inference on Edge: A Preliminary Device Comparison. Manuel Luis González Hernández, Jorge Ruiz, Lidia Andrés, Randy Lozada, Erik S. Skibinsky, Jorge Fernández, Javier Sedano, Angel García Vico.
104: LeakG3PD: a Python generator and simulated Water Distribution System dataset. Matheus P Figueiredo, Lizandro Oliveira, Giancarlo Lucca, Adenauer C Yamin, Wesley Huckembeck, Tiago Lopes. **VIRTUAL**
12: Association Rules Mining with Auto-Encoders. Theophile P Berteloot, Richard Khoury, Audrey Durand. **VIRTUAL**

Session 9.2: Automation and industrial processes. Chair: Jaime Rincón
79: Automatic PDF Document Classification with Machine Learning. Sócrates Llácer Luna, Dario Garigliotti, Fernando Martínez-Plumed, Cèsar Ferri.
42: Fast and Scalable Recommendation Retrieval Model with Mixed Attention and Knowledge Distillation. Dmytro Androsov. **VIRTUAL**
106: Providing Informative Feedback in a Low-Cost Rehabilitation System using Machine Learning. Paul Rodrigues, Ivone Amorim, Bruno Cunha.

Special Session 1: Example-based Explainable Artificial Intelligence. Chair: Cèsar Ferri and Jan Arne Telle
124: Entity Examples for Explainable Query Target Type Identification with LLMs. Dario Garigliotti. **SHORT**
130: Near Hit and Near Miss Example Explanations for Model Revision in Binary Image Classification Tasks. Bettina Finzel, Judith Knoblach, Anna Thaler, Ute Schmid. **VIRTUAL**
33: Counterfactual Explanations for Sustainable Tourism Indicators. Javier Saugar López, Carmen Lancho, Marina Cuesta, Emilio L. Cano, Isaac Martín de Diego, Antonio Amado. **SHORT**

Special Session 2: Explainability and Fairness in Decision Support. Chair: Bapi Dutta
26: Clustering of Serious Game Traces using Formal Concept Analysis. Sébastien H Amoury, Karell Bertet, Damien Mondou.
17: Evaluative Customized Naïve Associative Classifier: promoting equity in AI for the selection and promotion of human resources. Claudia C. Tusell-Rey, Joel Pino-Gómez, Yenny Villuendas Rey. **VIRTUAL**
46: LORE4GroupRS: Explaining group recommendations supported by a local rule-based approach. Raciel Yera. **VIRTUAL**

Special Session 3.1: Developing AI Curricula for Pre-University Education. Chair: Abraham Prieto
123: Advancing Robotics Education: Integrating Large Language Models for Natural Language Programming in VET. Abraham Prieto García, Fran Bellas, Alejandro Romero.
115: What Students Should Learn and Teachers Must Know about Artificial Intelligence. Simone Opel, Andrea Linxen, Christian Beecks. **VIRTUAL** **SHORT**

119: Starting point in the introduction of AI in VET: Analysis and proposals in Spain. Ma.Concepcion C Fernandez Munin, Fátima García Doval. **VIRTUAL**

131: A Comprehensive Digital Solution for Identifying and Addressing Academic Risk in Middle Education. Renata Magalhães, Dalila Durães, Jose Machado, Antonio Costa, Paulo Novais.

Special Session 3.2: Developing AI Curricula for Pre-University Education. Chair: Dalila Duraes

117: Image Segmentation and Object Detection for Students with Different Skill Sets. Ziga Emersic, Gregor Hrastnik, Nataša Meh Peer, Vasja Lev Kirn, Aljaž Justin, Jovana Videnović, Luka Markićević, Peter Peer. **SHORT**

118: Educational Computer Vision Materials for Classification and Tracking of Objects. Ziga Emersic, Gregor Hrastnik, Nataša Meh Peer, Vasja Lev Kirn, Aljaž Justin, Jovana Videnović, Luka Markićević, Peter Peer. **SHORT**

36: Educational management as an ensure of high-quality standards, focused on the added value of a public university. Efren David Montes Vera, Marcos Chacón-Castro, Isbelia Pinilla de Serrano, Janio Jadán-Guerrero. **VIRTUAL**

67: Identification of Areas for Improvement in Digital Pedagogical Competencies through Information Technologies, Communication, and Artificial Intelligence: An Innovative Approach in Teacher Training. Paola Andrea Arciniegas García, Marcos Chacón-Castro, Elizabeth Durán Romero, Jose Gerardo G Chacon Rangel, Janio Jadán-Guerrero. **VIRTUAL**

Special Session 4.1: Federated Learning, Intelligent Fusion and Applications (FLIFA). Chair: Jaime Rincón

60: Federated Learning with Discriminative Naive Bayes Classifier. Pablo Torrijos Arenas, Juan C. Alfaro, Jose A Gamez, Jose Puerta.

113: Multi-Layered Asynchronous Consensus-based Federated Learning (MACoL). Miguel Rebollo, Carlos Carrascosa.

120: Comparative study of Federated Learning algorithms based on SPADE agents. Francisco Enguix, Saúl Cerdá Peris, Jaime Andres Rincon Arango, Carlos Carrascosa.

122: Robotic Precision Fitness: Accurate Pose Training for Elderly Rehabilitation. Jaime Andres Rincon Arango, Cedric Marco-Detchart.

Special Session 4.2: Federated Learning, Intelligent Fusion and Applications (FLIFA). Chair: Jaime Rincón

51: Comparing MAE and RMSE as fitness of Genetic Algorithm for optimizing Echo State Network hyperparameters with different probabilistic distributions. Fabian Corrêa Cardoso, Henrique Vaz de Araújo, Viviane Leite Dias de Mattos, Eduardo N Borges, Giancarlo Lucca, Bruno Lopes Dalmazo, Rafael A Berri. **VIRTUAL**

69: Advances in Home Care and Real-Time Vital Signs Monitoring. Giancarlo Lucca, Debora Bertaco, Luiz Oscar Homann de Topin, Jeferson Feijó, Bruno Dalmazo, Luciano Ribeiro, Vinicius Menezes. **VIRTUAL**

71: Exploring Data Symbion EI deep learning and model sharing modules. Giancarlo Lucca, Jeferson Lopes, Rafael Huszcza, Amanda Mendes, Eduardo N Borges, Pabrlo Borges, Leandro Pereira. **VIRTUAL**

88: A New Dataset for Analyzing Battery Failures in Wheelchairs. William M Manzolli, Tiago Rickes, Giancarlo Lucca, Adenauer C Yamin, Lizandro Oliveira. **VIRTUAL**

99: A Methodology for Automated Conversion of Axis-Aligned to Polygonal and Oriented Bounding Box Annotations in Aerial Imagery Object Detection. Daniela L Freire, Andre C P L F de Carvalho, Augusto José Peterlevitz, Mateus Chinelatto, Ricardo Dutra da Silva, Juan Rojas Perea. **VIRTUAL**

Special Session 5.1: Predictive and Prescriptive Models for Smart Cities' Applications. Chair: Jaume Jordán

109: CLARA: Semi-Automatic Retraining System. Mario Campos Mocholí, Oriol de la Pau Chacón Albero, Cedric Marco-Detchart, Vicente Julian, Jaime Andres Rincon Arango, Vicent Botti.

127: Optimizing vehicle coordination at multi-lane intersections using traffic control algorithms. Cesar L Gonzalez, Santiago Delgado, Juan M. Alberola, Luis Niño, Vicente Julian. **VIRTUAL**

125: A grid-based approach for ambulance dispatch in critical emergencies within static systems. Carlos Cubillas, Juan M. Alberola, Victor Sanchez-Anguix.

Special Session 5.2: Predictive and Prescriptive Models for Smart Cities' Applications

108: Sustainable demand-responsive transportation: A case study in rural Guimarães. Pasqual Martí, Jaume Jordán, Paulo Novais, Vicente Julian.

128: Optimizing Pedestrian Paths to Minimize Exposure to Urban Pollution Through Traffic Data Analysis. Silvia Nadal, Jaume Jordán, Victor Sanchez-Anguix, Juan M. Alberola, Vicente Julian, Vicent Botti.

129: Optimizing UCO Container Placement in Urb. Envs: A GA Approach. Joan Ciprià Moreno, Juan M. Alberola, Victor Sanchez-Anguix, Jaume Jordán, Vicente Julian, Vicent Botti.

Special Session 8: Anomaly Detection with Machine Learning and Cybersecurity

7: Dissecting Data Practices in Android Apps: A Comparative Study of Data Collection and Sharing Behaviors. Son Xuan Ha, Khanh Vo, Triet Nguyen. **VIRTUAL**

47: Indecision-aware Deep Active Anomaly Detection. Simone Amirato, Fabrizio Angiulli, Fabio Fassetti, Luca Ferragina.

45: Federated Learning for Vietnamese SMS Spam Detection using Pre-Trained PhoBERT. Hoang Quang Anh, Pham Tuan Anh, Pham Son Nguyen, Phan Duy Duy Hung. **VIRTUAL**

24: Benchmarking out of the box Open-Source LLMs for Malware Detection based on API Calls sequences. Alin C Simion, Gheorghe Balan, Dragos Gavrilut.

Special Session 9: Quantum Computing for Machine Learning and Optimization (Q4ML-Opt)

20: Hybrid Quantum Solvers in Production: how to succeed in the NISQ era?. Eneko Osaba, Esther Villar, Aitor Gomez-Tejedor, Izaskun Oregi. **VIRTUAL**

54: QUBO Optimization of Electrical Grid Topologies. Iñigo Perez Delgado, Aitor Moreno Fdz de Leceta, Alejandro Mata Ali. **VIRTUAL**

89: Three-Part Genetic Algorithm to Optimize the Outbound Train Loading Process Modelled as a Multiple Travelling Salesman Problem. Gonçalo Correia, Jacinto Estima, Alberto Cardoso.

Special Session 10: Computational intelligence on Renewable Energies and Sustainable Automation

78: Data analysis and anomaly detection in a wind farm with k-Nearest Neighbors. Bassel Weiss, Segundo Esteban, Matilde Santos Peñas. **VIRTUAL**

10: Towards Sustainable Precision: Machine Learning for Laser Micromachining Optimization. Luis Correas-Naranjo, Miguel Camacho-Sánchez, Laëtitia Launet, Milena Zuric, Valery Naranjo.

116: Development of a Database for Convolutional Neural Networks Simulating CFD Analysis. Fernando Herrera Marín, Matilde Santos Peñas, Jesus Enrique Sierra. **VIRTUAL**

133: 2D Convolutional Neural Networks for Alzheimer's Disease Classification from Brain MRI. Eva Tuba, Antonio J. Tallón-Ballesteros, Milan Tuba. **VIRTUAL**