

Monday, 23.06.2025

13:00 Registration

14:00–16:30 WISHWell'2025 - 14th International Workshop on Intelligent Environments Supporting Healthcare and Well-being

Chairs: Juan Carlos Augusto, Anton Gradišek

Keynote:

Empowering Autonomy at Home: DIY Cognitive Assistance in Smart Homes

Sylvain Giroux

Depth cameras for frailty assessment: a dataset for automatic balance tests evaluation

Mario Quinde, Bruno Rioja, Oscar Belmonte-Fernandez, Gerardo Castillo, Miguel Castro*

On the Opportunities and Risks of Generative AI in Mental Health

Shweta Premanandan, Jennifer Gross, Sofia Ouhbi*

Towards Mobile Deep Venous Function Assessment: An Algorithmic Approach

Vincent Abt, Sergio Staab, Florian Kirchbuchner, Arjan Kuijper*

Towards a Unified Architecture for Remote Patient Monitoring

Federico Bergamini, Giovanni Donato Gallo, Daniela Micucci*

14:00 Tutorial on Explainable and Robust AI for Industry 4.0 & 5.0 (X-RAI)

Bruno Velosi

15:00–15:30 Coffee Break & Networking

16:30–18:00 Fraunhofer IGD Demo Tour

18:00 Welcome Reception

Tuesday, 24.06.2025

08:30	Registration
09:30	Tutorial: Which Missing Feature Should I Acquire If My Data Is Streaming? An Introduction to Active Feature Acquisition on Data Streams <i>Christian Beyer</i>
09:30–12:15	WORIE'25 - 14th International Workshop on the Reliability of Intelligent Environments <i>Chairs: Adityaraj Singh Santokhee, Juan Carlos Augusto, Carlos Rodriguez Dominguez</i> Keynote: Privacy Preserving in Edge Intelligence: Evaluation and Insights <i>Bahman Javadi*</i> Keynote: Accurate and Cost-Scalable Visual-Geometric Matching for indoor IoT Services <i>Junji Takahashi</i> Rule-Based Adaptive Energy Optimization for Neural Network-Based Energy-Efficient Transmission in Intelligent Systems <i>David Emmanuel*, Nimesha Gamage, Anil Fernando</i> Quality Model Tool for Intelligent Environments: Initial Findings from a Literature Review <i>Mrinal Sharma*</i> CAWN: Calibration-less Wi-Fi Sensing with NeRF <i>Natsumi Yoda*, Ryota Kokubu, Yui Yamashita, Yuusuke Kawakita, Yoshito Tobe</i> Middleware for Assisted Living Homes (MiddAALware) <i>Omer Faruk Kacar</i>
10:30–11:00	Coffee Break & Networking
12:15–13:30	Lunch Break
13:30	Tutorial: Introducing a Quality Enhanced Process for Developing Intelligent Environments <i>Aditya Santokhee</i>
13:30–16:15	ALLEGET'25 – 5th International Workshop on Artificial Intelligence and Machine Learning for Emerging Topics <i>Chairs: Andrés Muñoz Ortega, Raquel Martínez-España, Fernando Terroso, Andrés Bueno-Crespo</i> From ambient to space and back. . . with a little help from machine learning <i>Bogdan Ruszczak</i> The Role of semantic Models in constraining Pattern Recognition in Modern AI Systems <i>Felix Schaller</i> Vertical Projected Area Measurement Method Using Semantic Segmentation for Crop Growth Prediction <i>Rintaro Ito*, Nobutada Fujii, Tekehide Soh, Shinichi Nakano</i> Leveraging Artificial Intelligence to Forecast Bird Sightings and its Visualization with Augmented Web Technologies <i>Juan Morales-García, Paula Gonzalez-Martínez, Jose Melgarejo-Hernandez, Paula García-Tapia-Mateo*, Irene Garriogos, Jose-Norberto Mazon</i> Configuring the transformer-based electricity market predictions using ant colony optimization <i>Jakub Sahs, Bogdan Ruszczak*</i> Reinforcement Learning in de novo Molecular Design: Comparative Review of REINVENT 4, MoLDQN, and ORGANIC <i>Arjun Subramanian*, Connor Taylor</i>
14:40–15:15	Coffee Break & Networking

Wednesday, 25.06.2025

08:00	Registration
09:00–09:15	Conference Opening
09:15–09:15	Keynote I: Role of Edge Computing in Age of Machine Learning and Resource Constraints <i>Klara Nahrstedt</i>
10:15–10:45	Coffee Break & Networking
10:45–11:45	Edge- and LLM-Enabled Technologies
	The Meliferea chatbot: Harnessing large language models to interact with geoanalytical services using natural human language <i>Andreas Kamilaris*, Valentijn Embrecht</i>
	Integrated Underwater Data Transmission and Object Detection System Using TinyML and Multi-Hop Networks <i>Ch Madhu Bhushan, Shahedul Haque Laskar*, Jahnava Sai Garikapati, Sai Srihitha Polapragada, S Hemanth Durga Kumar, Firoj Gazi, MD Muzakkir Hussain</i>
	Leveraging Edge Resources for Indoor Localization for Improved Accuracy <i>Meka Naga Nandini Devi*, MD Muzakkir Hussain, Shahedul Haque Laskar, Firoj Gazi</i>
11:45–12:30	Understanding Human Behavior
	Exploring Tradeoffs of Annotation Cost and Model Accuracy with Contrastive Learning for Yoga Pose Classification <i>Zolboo Damiran*, Tomokazu Matsui, Yuki Matsuda, Hirohiko Suwa, Keiichi</i>
	Human Activity Recognition in Smart Homes Using IMU Wristbands: A Comparative Study of Sampling Strategies and Machine Learning Models <i>Nada Chabih*, Keven Rice, Kevin Bouchard, Sébastien Gaboury, Julien Maitre</i>
12:30–13:30	Lunch Break
13:30–14:30	Keynote II: An innovative space communication system for expanding CPS into space <i>Sumi Morioka</i>
14:30–15:00	Coffee Break & Networking
15:00–15:45	Intelligent Healthcare Systems
	Improving Sleep Quality Classification Through Synthetic Sensor-Based Medical Data Generation <i>Silvia Maria Massa*, Matteo Fenu</i>
	AI-Driven Differential Diagnosis: Leveraging RAG and LLMs in Intelligent Healthcare Systems <i>Simone Pinna*, Silvia Maria Massa, Daniele Riboni</i>
17:00–19:00	Guided tour of the Mathildenhöhe world cultural heritage site
19:00	Gala Dinner

Thursday, 26.06.2025

08:00	Registration
09:00–09:10	Opening
09:10–10:10	Keynote III: Scalable and Energy-Efficient Distributed Machine Learning <i>Dirk Kutscher</i>
10:10–10:40	Coffee Break & Networking
10:40–12:00	Technologies for Smart Cities
	Supporting Energy Consumption Prediction: A Sustainable Approach <i>Zahra Ziran*, Ala Arman, Massimo Mecella, Francesco Muzi, Giuseppe Piras</i>
	Detecting Noise Pollution through a Spatio-temporal Deep Learning Model: A Case Study of Barcelona <i>Marc Semper*, Manuel Curado, Jose F. Vicente</i>
	Cost-effective ADAS for inter-vehicle distance estimation using computer vision and deep learning <i>Gabriel Guerrero-Contreras*, Sara Balderas-Díaz, Alejandro Díaz-Gomez, Immaculade Medina-Bulo, Juan José Domínguez-Jiménez</i>
	Explainable Artificial Intelligence for Audio-based Detection of Emergency Vehicles <i>Sara Balderas-Díaz*, Gabriel Guerrero-Contreras, Andrés Muñoz, Dalila Durães, Paulo Novais</i>
12:00–12:45	Doctoral Colloquium
	SPUR: Enhancing Cyclist Safety through Digital City Twins – A Data-Driven Infrastructure Planning and VR Simulation Approach <i>Michael Disser</i>
	Design of Immersive Environments to Enhance Learning for People with Disabilities <i>Camilla Poggianti</i>
	ACCESS: Accessibility to Clinical Care for People with ASD through Anxiety Management <i>Elisa Salatti</i>
12:45–13:45	Lunch Break
13:45–15:00	Agriculture and Wildlife
	Forecasting Sterility Mosaic Disease in Pigeonpea Using Dynamic Bayesian Networks and 3D Point Cloud High-throughput Scanning Platform <i>Vojtech Mikes*, Alexander Kocian, Jana Kholova, Jan Masner, Adam Kleczkowski, Mamta Sharma, Stefano Chessa, Alexander Galba, Pavel Simek</i>
	Protecting Endangered Birds with Edge-AI: Real-Time Detection of Invasive Cats in Natural Parks <i>Floreál Acebrón, Erika Rosas, Juan Carlos Cano, Pietro Manzoni, Esther Sebastian, José María Cecilia*</i>
	Effectiveness of bird species identification using Birdnet: Case study at the La Mata coastal lagoon <i>Ousman Seye, Esther Sebastián-González, David Ortiz, Carlos T. Calafate*, José María Cecilia</i>
	Evaluation of time-series models for evapotranspiration prediction in smart agriculture <i>Martín González, Casino Virginia Sanches*, Carlos T. Calafate, José Juan López-Espín, José María Cecilia</i>
15:00–15:30	Coffee Break & Networking
15:30–16:30	Short Paper Session
	Improving Multi-Camera View Recommendation with Temporal and Camera Embedding <i>Kuan-Ying Lee, Quian Zhou, Klara Nahrstedt*</i>
	Collaborative Lightweight LLM Agents for Daily Activity Summarization on Edge Devices <i>Kentaro Inohara, Hirozumi Yamaguchi*, Tatsuya Amano, Hamada Ríszk</i>
	An Intelligent System for Healthcare Service Logging in a Medium-Sized Language <i>Maj Smerkolj*, Rok Susič, Tomo Jarc, Gizem Gültekin Várkonyi, Anton Gradišek</i>
	CNN-Swin Backbones in Radar Object Detection for Autonomous Vehicles using Raw ADC Signals <i>Iqbal Banwait*, Niclas Zeller, Javad Alirezaie*</i>
16:30	Awards and Closing