



## Program Overview

|                  |                 | Monday  |  | Tuesday                                   |  | Wednesday  |  | Thursday   |  |
|------------------|-----------------|---|--|---|--|--|--|--|--|
|                  | 08:45           | Registration<br>Lobby                                   |  | Registration                              |  | Registration   |  | Registration   |  |
| AM               | 09:00           | Tutorial 7<br>Auditório<br>Mário<br>Murteira            |  | Tutorial 1<br>Auditório<br>Mário Murteira | ALLEGET<br>Workshop<br>Auditório Caeano<br>Pereira | (9:00) Opening<br>(9:30) Keynote 1<br>Auditório Mário Murteira |  | (9:30)<br>Keynote 2<br>Auditório Caeano Pereira      |  |
|                  | 10:30           | ---   | ---  | ---                                       | ---  | ---  |  | ---  |  |
|                  | 11:00           | Tutorial 5<br>Auditório<br>Mário<br>Murteira            | Tutorial 9<br>Auditório<br>Caeano<br>Pereira           | Tutorial 8<br>Auditório<br>Mário Murteira | ALLEGET<br>Workshop<br>Auditório Caeano<br>Pereira | Conference<br>Track 1<br>Auditório Mário<br>Murteira           | Conference<br>Track 2<br>Auditório Caeano<br>Pereira | Conference<br>Track 4<br>Auditório Mário<br>Murteira | Conference<br>Track 5<br>Auditório Caeano<br>Pereira |
| Lunch            | 13:00           | ---   | ---  | ---                                       | ---  | ---  |  | ---  |  |
| PM               | 14:00           | Tutorial 4<br>Auditório<br>Mário<br>Murteira            | WISHWell<br>Workshop<br>Auditório<br>Caeano<br>Pereira | Tutorial 2<br>Auditório<br>Mário Murteira | WoRIE<br>Workshop<br>Auditório Caeano<br>Pereira   | Doctoral<br>Colloquium<br>Auditório Mário<br>Murteira          | Conference<br>Track 3<br>Auditório Caeano<br>Pereira | Keynote 3<br>Auditório Caeano Pereira                |  |
|                  | 16:00           | ---   | ---  | ---                                       | ---  | ---  |  | ---  |  |
|                  | 16:30<br>-18:00 | Tutorial 6<br>Auditório<br>Mário<br>Murteira            | WISHWell<br>Workshop<br>Auditório<br>Caeano<br>Pereira | Tutorial 3<br>Auditório<br>Mário Murteira | WoRIE<br>Workshop<br>Auditório Caeano<br>Pereira   | Posters<br>Auditoriums "Hall"                                  |  |  |  |
| Social<br>Events |                 | (19:00 - 20:30)<br>Welcome reception<br>Ts/Ws<br>CLUB i |  |   |  | (20:30 – 22:30)<br>Gala Dinner<br>Museu da Cerveja             |  |  |  |

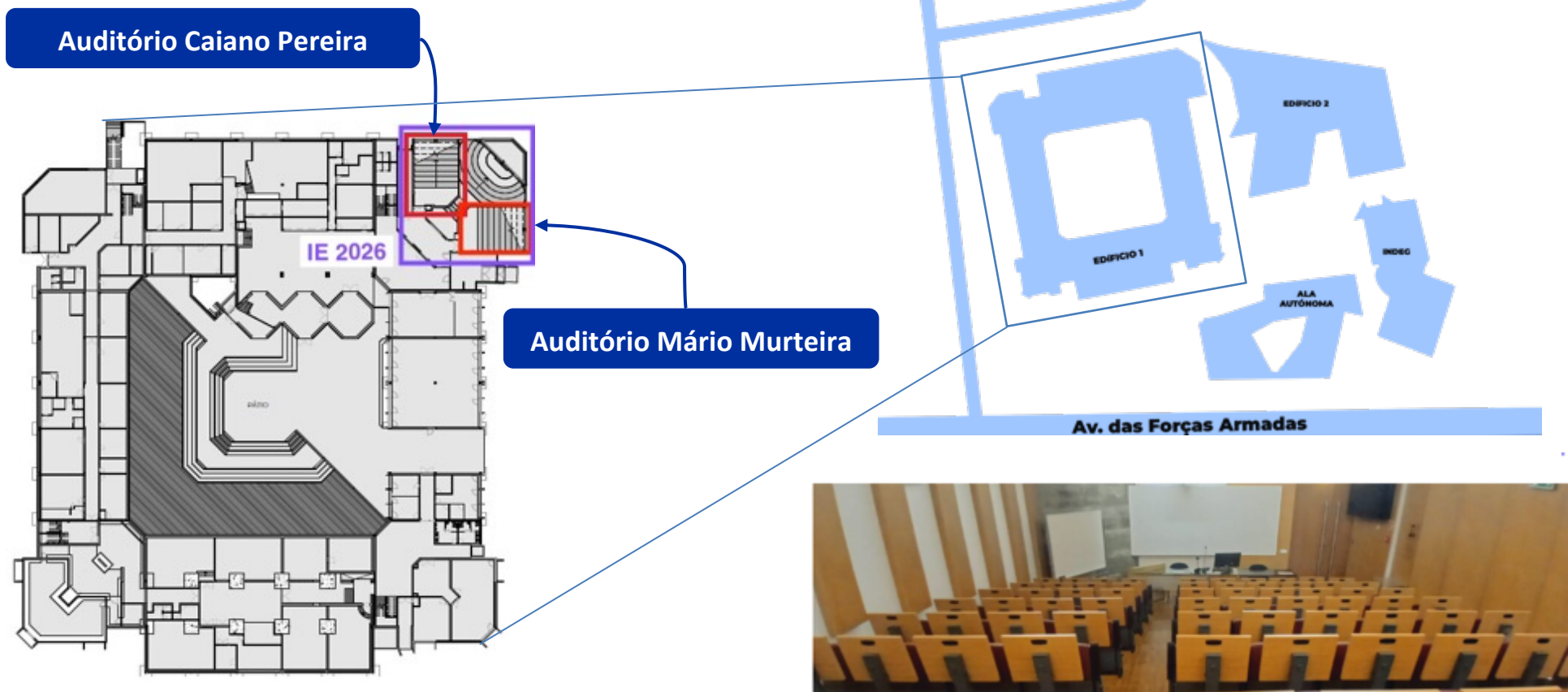
Presentation Mode: Full papers and Doctoral Colloquium papers will be presented through slides with 20' for presentation and 10' for Q&A. Short papers will be presented through posters.



IE2026

## Rooms

Iscte – University Institute of Lisbon | Building 1 (Edifício 1)



- The registration desk will be next to the Auditoriums
- The poster session will be at the auditoriums hall

## Coffee Break

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Coffee breaks will be held in the auditoriums hall

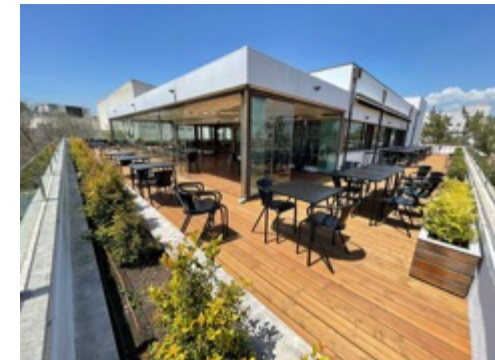
## Lunch

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Iscte, “Club I” Restaurant

<https://www.instagram.com/iterrace.pt/>

(Vegetarian and Halal dishes are available)



## Gala Dinner

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Museu da Cerveja

<https://ovalordotempo.pt/marcas/museu-da-erveja>

**Address: Terreiro do Paço – Ala Nascente, nº 62 a 65,  
1100-148, Lisboa**

Note: Vegetarian, Vegan and Halal dishes will be served to participants who expressed this interest on the conference registration form.





# Program

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## Keynotes

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**Keynote 1** | From Transparency to Agency: Interactive Explanations for User Empowerment by Prof. Katrien Verbert (KU Leuven, Belgium)

**Keynote 2** | Invisibles: A New Frontier in Biomedical Signal Acquisition and Processing by Prof. Hugo Plácido da Silva (IST, Portugal)

**Keynote 3** | Human-Interactive Robot Learning in Daily Environments – A Path Toward Situated Intelligence by Prof. François Michaud (Université de Sherbrooke, Canada)

More details for each Keynote: <https://ie2026.pt/index.php/keynotes/>

## Tutorials

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**Tutorial 1:** Batteryless IoT Sensing Solutions for Sustainable Environmental Monitoring (Jimmy Fernandez Landivar, ESAT, KU Leuven, Belgium)

**Tutorial 2:** Advances in Vision-Based Technologies for UAV Autonomous Navigation, Path Planning, and Cooperative Systems with UGVs (Guanchong Niu, Guangzhou Institute of Technology, Xidian University, China)

**Tutorial 3:** Large Language Model-Enabled Participatory Platforms for Intelligent Urban Systems (Chaimae Asaad, UIR, Morocco; Hicham Chabili, Bravent, Spain)

**Tutorial 4:** From Concept to Code: Building a Digital Twin for Virtual Power Plant Simulation with Python (Gian Marco Paldino & Gianluca Bontempi, Université Libre de Bruxelles, Belgium)



**Tutorial 5:** Technology in Physiotherapy: Innovative Tools for Enhanced Patient Care (Ivan Miguel Pires, Universidade de Aveiro, Portugal; Mário Lopes, University of Porto, Portugal)

**Tutorial 7:** Emotion Recognition for Intelligent Environments: EEG-based Affective Computing and Self-Adaptive Systems (Paúl Cárdenas-Delgado, Priscila Cedillo, Julia Nicole Abril Cabrera, Camila Verónica Granda Salamea, Universidad de Cuenca, Ecuador)

**Tutorial 6:** Digital Twin for Intelligent Parcel Sorting: Real-Time Management and Optimization in Logistics Networks (Wei Zhang, The Chinese University of Hong Kong, Shenzhen, China)

**Tutorial 8:** Age of Information: Fundamentals, Applications, and Beyond (Zhengchuan Chen, Chongqing University, China; Howard H. Yang, Zhejiang University, China; Nikolaos Pappas, Linköping University, Sweden)

**Tutorial 9:** Spatio-Temporal Trajectory Foundation Model: Recent Advances and Future Directions (Sean Bin Yang & Yan Lin, Aalborg University, Denmark; Jilin Hu, East China Normal University, China)

*More details for each tutorial: <https://ie2026.pt/index.php/tutorials/>*

## **Workshops**

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- **ALLEGET**– Workshop on Artificial intelligence and machine learning for Emerging Topics
- **WISHWell** – Workshop on Intelligent Environments Supporting Healthcare and Well-being
- **WORIE** – Workshop on the Reliability of Intelligent Environments

Check with each Workshop organizing team each workshop is organized differently.

*More details for each Workshop here: <https://ie2026.pt/index.php/workshops/>*



## Papers to be presented at the conference

### Doctoral Colloquium:

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Mixture of Experts Approach for Cross-Lingual Detection of AI-Generated Arabic Text  
by Kaoutar Zita et al.

Narrative Time and Historical Causality: A Computational Framework for Temporal and Causal Reasoning in First-Person Sources  
by Prince Gharbin et al.

Noise and Sequence Length in Time-Series Forecasting: A Unified Evaluation of Transformers, DLinear, LSTM, and GRU  
by Salma Albelali et al.

Understanding Multimodal LLM Behavior in Arabic Image Captioning  
by Dahimi Khaoula et al.

### Short Papers (presented through Posters):

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A Detail-Oriented Auto-Encoder for Subtle Anomaly Detection in Human Activity Recognition  
by Jordan Masakuna et al.

An Interactive Visualization of a Single-LLM Multi-Agent Educational System  
by Alberto Matilla et al.

Calibration-Free BLE Cattle Zone Localization via Simulation-Based MAP-Driven Rank Matching  
by Seonghun Lee et al.

Can Mixed Reality Support Fall Prevention?  
by Tim Waechter et al.



Coverage-Aware Centrality Strategies for Sparse Sensor Placement in GNN-Based Wastewater Level Estimation  
by Revin Naufal Alief et al.

Empowering Data-driven Smart Cycling Initiatives: A Comprehensive Analysis of Existing Datasets for Bike Maintenance  
by Daniel Costa et al.

Fine-Tuning Vision-Language Models for Video Question Answering in Livestock Monitoring  
by Seonghun Lee et al.

PRT-M: A Modular and Scalable Robot Transformer for Task Automation and Adaptive Object Manipulation in Intelligent Environments  
by Erik Peña Medina et al.

Using Image Processing and Machine Learning to Distinguish between Benign and Dangerous Insect Species in Photographs and Videos  
by Gordon Hunter et al.

Vision-Based Pose Measurement System for Intermodal Containers  
by Chao Mi et al.

### **Long Papers:**

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#### **Conference Track 1: “Human Activity Recognition I”**

A Domain-Specific Neural Network for High-Accuracy mmWave-only Human Activity Recognition  
by Noel D'Avis et al.

LiDAR point cloud feature learning with one-class SVM for efficient human recognition in indoor environment  
by Hadil Eltaif et al.

MuRAL: A Multi-Resident Ambient Sensor Dataset Annotated with Natural Language for Activities of Daily Living  
by Julien Cumin et al.



System for Movement-based Behavior Modeling and Anomaly Detection in Security Contexts  
by Lorena Quesada-Ilmert et al.

### Conference Track 2: "Applications I"

A Hybrid Framework for Mid-Term Household Energy Consumption Forecast  
by Mehrnaz Miri et al.

Interactive Web Platform for Real-Time Earthquake Integration and Tsunamigenic Classification  
by Juan Morales-García et al.

Lost Person Detection in Aerial Search and Rescue Operations: A Robust Approach Using Optimized YOLO Models  
by Carlos T. Calafate et al.

Vision-Based Autonomous Waste Bin Fill-Level Monitoring with a Micro Aerial Vehicle  
by André Kirsch et al.

### Conference Track 3: "Sustainability"

AI-Based Estimation of Multi-Depth Soil Humidity  
by Virginia Casino Sánchez et al.

Positional Encodings for Graph Neural Networks in Intelligent Water Infrastructure  
by Daniel Seidel et al.

SIAGeTrans: Traffic Optimization based on Game Theory and IoT  
by Morgana Campbell et al.



#### Conference Track 4: “Applications II”

A Proof of Concept for a Digital Twin of an Ultrasonic Fermentation System  
by Andrea Vitaletti et al.

Edge-Based Auto-Labeling for Multiclass TinyML Application in IoT Environments  
by Floreal Linuesa et al.

Multi-Agent Educational System with a Single Large Language Model: An Ablation Study of Memory Configurations and Efficiency  
by Alberto Matilla et al.

Toward Trustworthy Visual AI: Efficient Multi-Layer Class Activation Mapping for Interpretable Sign Language Recognition  
by Elisa Cabana et al.

#### Conference Track 5: “Human Activity Recognition II”

Explainable Temporal Attention for Anomaly Detection in Medical Time-Series Data  
by Soumia Benkrid et al.

Human Step Movement Imitation for Training Privacy-Aware Intelligent Environments  
by Jan Dünneweber et al.

Optimized Gaussian large language model (LLM) reprogrammed for temporal predictions  
by Stefano Stefenon et al.

Robust Cascaded Posture Classification Network Under Different Sleep Conditions  
by Selwan Abdussalam et al.