18th International Conference on Ubiquitous Computing and Ambient Intelligence

UCAmI 2026

www.ucami.org

Montreal, Canada

Îlot Balmoral

October 14th to 16th, 2026

Conference Background & Goals

Ubiquitous Computing (UC), as envisioned by Weiser in 1991, has recently evolved to a more general paradigm known as Ambient Intelligence (AmI) represents a new generation of user-centred computing environments and systems. These solutions aim to find new ways to obtain a better integration of information technology in everyday life devices and activities.

AmI environments are integrated by several autonomous computational devices from modern life ranging from consumer electronics to mobile phones. Ideally, people in an AmI environment will not notice these devices, however, they will benefit from the services these solutions provide. Such devices are aware of the people present in such environments and can react to their gestures, actions, and context. Recently the interest in AmI environments has grown considerably due to the new challenges posed by society, demanding highly innovative services, such as vehicular ad hoc networks (VANET), Ambient Assisted Living (AAL), e-Health, Internet of Things, Home Automation, amongst others. The focus of this edition of the UCAmI Conference will be "Technologies in the Creation of Sustainable Ambient Intelligence Solutions".

Publication

All accepted papers will be included in **Proceedings published by Springer (SCOPUS Indexed).** Selected papers will be invited to submit extended versions of the work to a series of dedicated Special Issues journals:

- Cooming soon

Journals will be announced shortly on our website (link at the top of the email)

Important Dates

Abstract submission:	**May, 15th 2026**
Paper submission:	~~June, 15th 2026~~ **July, 1st, 2026**
Notifications:	**August 15th, 2026**
Camera-ready version:	**September 1st, 2026**
Conference dates:	**October 14th to 16th, 2026**

TRACKS

AmI FOR HEALTH & A^{3}L (AMBIENT, ACTIVE & ASSISTED LIVING) (Topics)

- The role of AI and machine learning in promoting A3L
- The role of Social Determinants of Health in Tech-Driven Care
- Smart homes and mobile ecosystems to promote health and independent living
- User-centered design and user experience in health environments.
- Evaluation and validation of ambient assisted living systems and applications
- Synthetic Data for A3L: Collection, Cleaning, Processing, Distribution, and Storage
- Activity recognition and behavior analysis in A3L environments
- Ambient assisted living and chronic disease management
- Business models and commercialization of ambient assisted living products and services
- Improving healthcare using medical digital twin technology
- Digital interventions for depression, mental health issues and quality of life improvement
- Education, training, and e-Learning systems in Health domains
- Mobile, affective, and multimodal interfaces for A3L
- Preventive care in A3L environments

INTERNET OF EVERYTHING (IOT, PEOPLE & PROCESSES) AND SENSORS (Topics)

- IoE (IoT included) enabling technologies, techniques and methods
- IoE application and services
- Current and future trends in IoE
- IoE societal impacts and Ethical implications of IoE
- IoE interoperability, integration and performance
- IoE experimental results and deployment scenarios
- Human factors in IoE
- Applications of hybrid sensor networks
- Design and evaluation of interfaces for smart devices in the IoT ecosystem
- Personalization of interactions in IoT
- Robotic integration in Smart Environments
- AI for the embedded IoT/IoE and Edge computing

(AI)^2 - ARTIFICIAL INTELLIGENCE FOR AMBIENT INTELLIGENCE (Topics)

- Transparency and Explainability of AI
- AI & Machine learning for sustainable development goals
- Resource optimization and conservation in ambient intelligence using AI
- AI-powered advanced human interaction
- AI assisted interaction for disabled people
- Emotion recognition in ambient intelligence
- Signal analysis through neural networks
- Deployable deep learning models in low resources systems
- Synthetic data generation for interaction research
- Computer vision applied in ambient intelligence
- AI in smart classrooms
- Using massive data to support decision-making in AmI environments
- Evaluation methods for AI in interactive systems
- Data pre-processing techniques for multimodal data
- Bias mitigation strategies in AI for human interaction
- Natural interaction through LLMs
- LLM pruning techniques

Special Sessions

ROBOTS AS AGENTS IN INTELLIGENT HEALTHCARE ENVIRONMENTS (Topics)

- Co-design and co-creation of robots for health
- User experience of robots in health care environments
- Ethical, legal and social issues in health care robot implementation
- Robots for health in special populations: pediatrics
- Robots for health in special populations: older adults
- Sensing solutions for health care environments
- Affect and emotion modeling in socially assistive robots
- Robots for health care data collection
- Generative AI implementation in social robots for health
- Care provider perspectives on social robots in health environments
- Robot integration with other health care solutions
- Human–robot interaction in clinical settings
- Evaluation frameworks for healthcare robotics
- Deployment and scalability of healthcare robots