11th International Symposium on Ambient Intelligence

University of L'Aquila, L'Aquila (Italy)
17th - 19th June, 2020

ISAmI

SCOPE

Ambient Intelligence (AmI) is a recent paradigm emerging from Artificial Intelligence (AI), where computers are used as proactive tools assisting people with their day-to-day activities, making everyone's life more comfortable.

Another main concern of AmI originates from the human computer interaction domain and focuses on offering ways to interact with systems in a more natural way by means user friendly interfaces. This field is evolving quickly as can be witnessed by the emerging natural language and gesture based types of interaction.

The inclusion of computational power and communication technologies in everyday objects is growing and their embedding into our environments should be as invisible as possible. In order for AmI to be successful, human interaction with computing power and embedded systems in the surroundings should be smooth and happen without people actually noticing it. The only awareness people should have arises from AmI: more safety, comfort and wellbeing, emerging in a natural and inherent way. ISAmI is the International Symposium on Ambient Intelligence, aiming to bring together researchers from various disciplines that constitute the scientific field of Ambient Intelligence to present and discuss the latest results, new ideas, projects and lessons learned.Brand new ideas will be greatly appreciated as well as relevant revisions and actualizations of previously presented work, project summaries and PhD thesis.

TOPICS

The topics of interest include, but are not limited to:

- Applications
- Ambient Assisted Living
- Ubiquitous Computing
- Artificial Intelligence for AmI
- Distributed Computing
- Domotics (Home Automation)
- Pervasive Computing
- Context Aware Computing
- Agent & Multiagent Systems for AmI
- Mobile Computing
- Robotics
- Computational Creativity
- Sentient Computing
- e-Health
- Context Modelling
- e Learning
- Memory Assistant

COMMITTEE

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SUBMISSION

Format
All papers must be formatted according to the AISC template, with a maximum length of 8 pages (4 pages en Doctoral Consortium), including figures and references: Microsoft Word Format, Latex Format.

Review process
ISAmI welcomes the submission of application papers with preference to the topics listed in the call for papers. All submitted papers will undergo a thorough review process; each paper will be refereed by at least three experts in the field based on relevance, originality, significance, quality and clarity.

The papers must consist of original, relevant and previously unpublished sound research results related to any of the topics of the conference

Submitting papers
ISAmI papers must be formatted according to the Springer AISC Template, with a maximum length of 8 pages in length (4 pages in Doctoral Consortium), including figures and references. All proposed papers must be submitted in electronic form (PDF format) using the Paper Submission Page.

Publication
Accepted papers will be included in ISAmI Proceedings. At least one of the authors will be required to register and attend the symposium to present the paper in order to include the paper in the conference proceedings.
All accepted papers will be published by AISC series of Springer Verlag.

Springer

Special Issues
Authors of selected papers from ISAmI 2020 will be invited to submit an extended and improved version to special issue in different journals.

DOCTORAL CONSORTIUM

The aim of the Doctoral Consortium is to provide a frame where students can present their on going research work and meet other students and researchers, and obtain feedback on future research directions.

The Doctoral Consortium is intended for students who have a specific research proposal and some preliminary results, but who are still far from completing their dissertation.

All proposals submitted to the Doctoral Consortium will undergo a thorough reviewing process with the aim to provide detailed and constructive feedback. The accepted submissions will be presented at the Doctoral Consortium and published in the conference proceedings.

WORKSHOP ON NEW APPLICATIONS FOR PUBLIC TRANSPORT (NAPT)

Scope

The aim of NAPT is to bring together leading researchers and scholars investigating in the area of transport. At NAPT, participants will present and discuss experiences and new software applications for mobility, focusing especially on public transport (PT), multimodality and new ideas about the use of PT in the circular economy.

The effects of mobility in the economy and environmental sustainability of the planet put administrations and Public Transport Operators (PTO) in a situation where there have to be significant changes towards improvement. There is a clear need for better usability to attract passengers, reduction of the effect of greenhouse gases produced, and combination of different uses for PT, including multimodality, shared vehicles and orientation to the circular economy.

There is global awareness of this problem and the actors are willing to change the trend. This willingness is evident in the mobility strategies of some of the most internationally relevant institutions, including the European Commission with all its policies and research programmes, and the governments of the different countries where urgent needs to improve PT arise. Passengers demand a higher quality of service. Also, more attention is being paid to cost efficiency and subsidy allocation. It is becoming common to equip public transport systems with automated data collection systems which are instrumental in finding effective solutions to those problems.

Software plays a key role in improving this sector. In particular, artificial intelligence and big data analytics software which make it possible to extract new knowledge or create innovative uses of PT that we would have deemed impossible a few years ago. This workshop aims to present the most innovative applications developed in this sector and the current lines of research whose results will have a direct impact on the public transport sector in the coming years.

Topics

Specific topics for this workshop include, but are not limited to software systems in the following domains (application areas):

- Public transport
- Traffic management
- Smart cities
- Location based systems
- Circular economy uses of Public Transport

Technology-based applications include, but are not limited to:

- Expert systems
- Routing algorithms
- Recommender systems
- Path planning
- Path finding
- User profile analysis
- Distributed systems and platforms
- Data visualization
- Cybersecurity
- Blockchain

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WORKSHOP ON NON-INTRUSIVE ACQUISITION AND FUSION OF CONTEXT INFORMATION IN AMBIENT INTELLIGENCE (NI-AFCIA)

Scope

Research on Ambient Intelligence (AmI) has been growing steadily in the last years, a proof of its interest, applicability and potential. While this growth moves the field forward, it also opens new grounds and possibilities for research.

Ambient Intelligence can be briefly described as the application of techniques of Artificial Intelligence (AI) towards the support of human users at several levels and in many different contexts such as the workplace, leisure environments or at home.

This support should be proactive, sensitive to the user's context and state, and based on a natural interaction between the computer and the user. To this end, the collection of context information is of utmost importance, allowing to properly describe, among others, the users, their activities and their surroundings. Particularly interesting in this scope is the non-intrusive acquisition and fusion of all this important information, i.e., methods for obtaining this information that do not require the user to perform explicit, conscious or specific actions.

In this workshop we will create a multi-disciplinary discussion forum that will bring together researchers from the different fields addressed to discuss new methods for non-intrusive acquisition and fusion of context information, new potential sources of information a, new supporting technologies and architectures and new potential applications.

Topics

In order to pursue the objective of this workshop, we are inviting researchers to contribute with original and previously unpublished work related to non-intrusive acquisition and fusion of context information in Ambient Intelligence, namely from fields such as but not limited to:

- Activity Detection and Recognition.
- Context-aware Computing.
- Cognitive Assistance.
- Distributed Computing.
- Human-computer Interaction.
- Intelligent Interfaces.
- Internet of Things.
- Indoor Positioning.
- m-Health.
- Sensor Fusion.
- Soft Sensors.
- Wearable computing.
- Non-intrusive sensing.
- Emotion detection.
- Affective computing.

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