

Preface

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1. Indexing of JAISE

JAISE has achieved the status of being accepted for indexing by Scopus and by Thomson Reuters. These are the two main indexing organizations serving scientific journals. Both have agreed to index JAISE from the very first issue onwards. Thomson Reuters handles JCR which attaches an Impact Factor coefficient. The Impact factor of JAISE will be listed for the first time in January 2012 since three years of history is needed to build the statistics behind the Impact Factor.

This achievement is an evidence that JAISE is reaching out to a significant number of leading researchers in the fields related to Ambient Intelligence and Smart Environments, and is moving in the right direction. We are now one of the few journals in this technical area with indexing in both Scopus and Thomson Reuters. We wish to extend our sincere thanks to our advisory and editorial boards, authors and reviewers, and to our readers for their support throughout the history of JAISE which made this achievement possible.

2. This issue

This issue of JAISE consists of five articles that address issues about the design and operation of smart environment systems and algorithms.

The operation of smart homes often demands a level of technical knowledge or programming ability that is out of the reach of most users. This limitation not only impedes the adoption of new technology and applications but it may also result in limited flexibility or adaptivity of smart home solutions. The paper “*Flexible Management of Smart Homes*” by Turner presents an approach for flexible management of smart homes with an emphasis on home automation and telecare applications. The aim is to allow end users to manage their homes without having to deal with the technical

aspects of the system. This is achieved at three levels of the system’s operation which need interactions with the user: managing home components and their interactions in a simple and intuitive fashion, stating policies for how the home system should react to events, and defining high-level goals for what the user wishes to achieve. The paper also offers an updated list of available protocols and modules for home automation and telecare from components to commercial systems and from architectures to languages that support defining policies.

Research on Ambient Intelligence has resulted in myriad application scenarios and testbed deployments of future smart homes. However, a clear gap can be noticed between research-level designs and what is currently perceived as practical and acceptable real applications. The paper “*What Would You Ask to Your Home if It Were Intelligent? Exploring User Expectations about Next-Generation Homes*” by Bonino and Corno investigates the question of whether this separation is due to the natural distance between research and engineered applications or to the mismatching of needs and solutions. The paper scans the results of a survey about user expectations with respect to intelligent homes and discusses issues such as user perceptions about what intelligent homes can do, and to what extent current research solutions, as well as commercially available systems, address these emerging needs. The paper concludes that most user concerns about smart homes involve comfort and household tasks which can be currently addressed by existing commercial systems or combinations of them.

A key aspect of ubiquitous computing is using sensor networks to effectively and unobtrusively infer human activities in their environments. A typical approach is to first label and decompose activities as sequences of actions with certain probabilities, and then use these predefined activity models for recognition and prediction. This approach, however, may not cap-

ture the internal goals of different actions, and it can only deal with explicitly defined activity models. The paper “*Goal-Directed Human Activity Computing*” by Xiang, Tian, and Mori presents a model inspired by the merger of traditional activity theory and qualitative process theory. A formal activity ontology is proposed for capturing the internal semantic relations between different atomic activities such as actions and processes. Then a number of representative inference rules are introduced to predict the future activities based on the activity ontology.

Advances in computer vision and pattern recognition research have resulted in video surveillance systems with automated scene analysis capabilities. However, methods based on the interaction of a system equipped with such ability and a human operator in order to actively cope with and handle anomalous events have not been widely reported. The paper “*A Bio-inspired System Model for Interactive Surveillance Applications*” by Dore, Pinasco, Ciardelli, and Regazzoni takes a step in this direction by proposing a framework for designing interactive surveillance systems. The aim of the proposed system is to react to situations in a preventive way using actuators installed in the monitored environment. An application is discussed in which a guard is supported in pursuing an intruder. The guard is localized and tracked and then multi-modal guidance messages to pursue the detected intruder are communicated to him on a mobile device.

In single-user home monitoring applications, measurements of gait velocity with passive PIR sensors have been shown to be an effective method of capturing this indicator of mobility and indirectly of cognitive function. However, passive measurements of velocity are nonspecific with regard to who generated each measurement or walking event, and hence

are not useful in multi-person smart home applications. The paper “*On the Disambiguation of Passively Measured In-home Gait Velocities from Multi-person Smart Homes*” by Austin, Hayes, Kaye, Mattek, and Pavel proposes a method based on Gaussian mixture models combined with infrequent clinical assessments of gait velocity to model in-home walking speeds of two or more residents.

3. Book review

In the book review section of this issue, Egon van den Broek provides an overview of the book *Safe-guards in a world of ambient intelligence: A social, economic, legal, and ethical perspective* edited by Wright, Gutwirth, Friedewald, Vildjiounaite, and Punie.

4. Upcoming issues

The next issue of JAISE will be a thematic issue on *Virtual and Mixed Reality Intelligent Environments*. More information on the call for papers to the upcoming thematic issues is available on the webpage of JAISE at: <http://www.iospress.nl/loadtop/load.php?isbn=18761364>.

5. Upcoming events

As usual for an area active like AmI there are interesting events around the world. The last pages of this issue provide information on some interesting upcoming events.