

# Preface

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## 1. This issue

Many designers of ambient intelligence systems have incorporated user gestures into practical applications with the goal of delivering adaptive and personalized interactions. However, these gestures are designed in an ad-hoc and designer-centric approach, and while their use offers great opportunities for natural and intuitive interactions, there are currently no established rules for creating the set of gestures for a given application. This designer-centric approach may cause confusion for the users in the future when multiple applications rely on user gestures for daily services they offer. It also contradicts the goals of ambient intelligence in which interaction should be personalized and adapted to each user. The paper “*Nomadic gestures: A technique for reusing gesture commands for frequent ambient interactions*” by Vatavu introduces the concept of a user-centric gesture set which is defined by the user and can be used in a multitude of applications. The set of gestures are carried by users on their mobile phones and are uploaded to the ambient display prior to interaction. The interface will then associate the user’s own gestures with the tasks available in the system.

The term of ambient services is used to emphasize the association of context-aware services with the user’s geographic area, which is also called the ambient service domain. Service domains have sharp and clear boundaries in many current ambient services. However because of both inaccurate positioning systems and the typical fuzzy phrases used in many cases to define ambient service domains, it may be necessary to define service domains in a framework which can handle geographic uncertainty. Otherwise, if the boundaries of a spatial object are modeled in a crisp fashion, some data related to that object may be missed when location reports arrive with fuzziness. The paper “*Ambient shopping advertisement using rough service domain*” by Bassiri et al.

employs the rough set theory as a simple but powerful tool to model uncertainty associated with ambient service domains and based on that, develops and tests a case study of ambient services in a shopping center.

Human action recognition has remained an interesting and challenging topic in the area of computer vision and pattern recognition. The research topic is motivated by many applications such as automated visual surveillance, human-robot interaction, video retrieval, and motion-based human identification. The main purpose of these systems is to track human bodies and recognize human action in image sequences. The paper “*Fitting distal limb segments for accurate skeletonization in human action recognition*” by Althloothi et al. presents a new approach for detecting distal limb segments for accurate fitting of a human skeleton model in visual data for human action representation and recognition.

The paper “*Collective communication for dense sensing environments*” by Jakimovski et al. is an invited paper which follows up the award to the best paper in the 2011 edition of the International Conference on Intelligent Environments<sup>1</sup>. This article describes a novel method to overcome limitations in transmission and processing of data which affects most current data transmission systems. The authors explain the technological framework, the theory and algorithms associated with it, and set forth a successful application of this innovation to a manufacturing problem.

## 2. Upcoming issues

As announced in the first issue of this volume, JAISE is now published every two months. This re-

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<sup>1</sup>See more details at: <http://iospress.metapress.com/content/f8g3k03mn7612008/fulltext.pdf>.

flects the increase in submissions and requests from our community to have a higher frequency of publications which can better match the rapid pace of the technical landscape. The journal will keep the tradition of alternating Thematic Issues with Regular Issues. Hence, the issue to be published in May will be a Thematic Issue focused on *A Software Engineering Perspective on Smart Applications for AmI*. This will be followed by a regular issue in July and another Thematic Issue scheduled for September with a focus on *Ambient Assisted Living*.

More information on the call for papers to the future thematic issues is available on the webpage of JAISE at: <http://jaise-journal.org/>.

### **3. 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.