Preface

Juan Carlos Augusto [a] and Hamid Aghajan [b]

[a] *School of Computing and Mathematics and Computer Science Research Institute, University of Ulster, UK*
[b] *Department of Electrical Engineering, Stanford University, USA*

1. This thematic issue

The area of Smart Homes has undoubtedly attracted significant attention within our research community. A smart home is an environment equipped with sensors, user interfaces, actuators, networks, and data and decision fusion modules to offer helpful services to its occupants. Such services can often adapt to the preferences of the user through a period of observing or interacting with the user.

Sometimes the term Smart Homes is used to refer to a house with some automated services that are activated based on a certain measurement or an input by the user. A light control system employing a motion detector is a simple example of automated service actuation. The area of Smart Homes in its general definition refers to a system that employs decision making mechanisms that operate on the available contextual information, and by demonstrating sensitivity to the user's preferences and behavior model resembles human intelligence. In the light control application, the operation can for example be made adaptive to the user's behavior model after receiving an input from the user to dim the lights when watching TV at a certain time of the day and remembering the setting for the same or similar conditions in the future.

The idea of a smart home is indeed not new and during the 60's and 70's TV cartoons and science fiction books and movies used to project a fantasy of houses with doors that opened and closed automatically, or a team of robots that dealt with domestic chores and intelligently interacted with the home occupants. The hardware and software technologies have advanced to a level that enables realization of some of those fantasies today. We are not surprised when a door automatically opens as we approach it, and prototypes of robots that can handle various domestic tasks have been around for a number of years. The notion of a house that intelligently interacts with humans is not a far-fetched fantasy anymore.

This issue offers a glance to recent developments in the area of Smart Homes. The work presented in the papers in this issue serves as a snapshot of an area which is growing steadily and gaining momentum. The current challenge in many applications is to develop a system that can make sense of a sometimes unreliable input of sensory data and from that simplified depiction of reality be capable of understanding essential features for providing a service to the user. The state-of-the-art of the area is admittedly still a long way from realizing the ambitious dream of a human-like interaction system but is the steady progress on the road to that realization by building the necessary tools, techniques, and know-how.

2. Upcoming issues

The journal is organizing a **Thematic Issue on Synergetic Prosperity**, guest edited by Boris de Ruyter, Emile Aarts, and Manfred Tscheligi. The term Synergetic Prosperity refers to meaningful digital solutions that balance mind and body, and society and earth thus contributing to a prosperous and sustainable development of mankind. For the latest announcements and call for papers for the upcoming thematic and regular issues of JAISE please visit our web site at:

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