Journal of Ambient Intelligence and Smart Environments 12 (2020) 455–456
DOI 10.3233/AIS-200577
IOS Press

Preface to JAISE 12(6)

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1. This issue

This issue of JAISE is composed of five regular papers and one PhD report. The review process for the regular papers in this issue was supervised by our editors Chen Chen, Carles Gomez, Jun Luo, Andres Muñoz Ortega, and Kevin Wang, whom we thank for their service.

Internet of Things (IoT) platforms and relevant technologies have revolutionized numerous real-world applications in a diversity of fields including assisted living, healthcare, energy management, robotics and smart buildings. Most of these real-world IoT applications or platforms involve a vast amount of data stored in various formats and/or data models, thus hindering the capability of one IoT platform to be interoperable with other platforms for smooth communication or exchange of information due to the lack of common standards. The paper **"Integrating IoT platforms using the INTER-IoT approach: A case study of the CasAware project"** by Modoni et al. presents a flexible and extendible approach to integrate various IoT platforms based on a platform developed by an Italian research project for ambient assisted living. The CasAware platform is targeted to enhance the level of comfort and well-being of inhabitants of a smart home while optimizing energy consumption. Specifically, the INTER-IoT methodology and a set of software tools were employed to achieve IoT interoperability between the CasAware and other IoT platforms using different data models in order to provide additional IoT services.

In addition, the paper **"FireNot – An IoT based fire alerting system: Design and implementation"** by Sassani et al. proposes a low-cost yet efficient cloud-based IoT system named FireNot to warn and alert about fire incidents. The FireNot system uses smoke sensors to detect fires, Raspberry Pi micro-controllers utilizing the Google API for location detection, and then alerts the users through the Internet. The system is maintained and monitored by a simple Android application, and is intended to provide an extendible platform for adding more daily monitoring tasks.

Furthermore, IoT together with various fast evolving technologies may provide potential benefits to robotic systems being employed in a wide range of commercial, domestic and industrial applications. The paper **"The penetration of Internet of Things in robotics: Towards a web of robotic things"** by Kamilaris et al. carefully examines the potential of the Web of Things (WoT) together with the relevant architectures, characteristics, concepts, communication methods, hardware and software of the latest IoT technologies for use in existing robotic systems, specific sensors and actuators to be incorporated in IoTbased robots and related application areas.

Besides, ambient intelligence and IoT technologies are tightly integrated in many smart environments including smart homes and ubiquitous healthcare systems for smart living. The paper **"Ubiquitous healthcare on smart environments: A systematic mapping study"** by Tavares and Barbosa conducts a systematic mapping study to identify how smart environments have been applied to support ubiquitous healthcare. Specifically, the study examines which techniques and technologies have been most widely used for ubiquitous healthcare, and explicitly addresses eight research questions in order to propose solutions for overcoming the relevant research gaps. The paper **"Lantern: A domain specific language for energy awareness in smart homes"** by Robinson et al. proposes a domain specific language (DSL) to support the software devel-

opment of energy-aware cyber-physical systems. Essentially, Lantern allows the development of applications that can effectively manage and reduce the carbon footprint of connected IoT or smart devices. In particular, the work focuses on the scenario of smart homes with statically defined locations in a specified smart environment.

This issue also includes a short report on the PhD thesis entitled **"Decentralized navigation model for multiagent cooperative robotic systems"** which was presented by Andrés Camilo Jiménez Alvarez at the Distrital University Francisco José de Caldas.

2. Upcoming issues

The following is the list of upcoming issues of JAISE:

- January 2021: Thematic Issue on "Location-aware computing to mobile services recommendation: theory and practice".
- March 2021: Regular Issue.
- May 2021: Thematic Issue on "Trustworthy computing for secure smart cities".
- July 2021: Regular Issue.
- September 2021: Thematic Issue on "Deep learning-based real-time visual analytics in a smart city".
- November 2021: Regular Issue.

More information on the call for papers for future thematic issues is available on the webpage of JAISE at: http://www.iospress.nl/journal/journal-of-ambient-intelligence-and-smart-environments/.