Journal of Ambient Intelligence and Smart Environments 14 (2022) 423–424
DOI 10.3233/AIS-220626
IOS Press


# Preface to JAISE 14(6)

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## 1. This issue

This regular issue of JAISE is composed of four articles. The review process for the manuscripts in this issue was supervised by our editors Stefano Chessa, Elena Verdu, Carles Gomez, and Brenda Bannan, whom we thank for their service.

Jaundice is one of the most common disorders among newborns, causing significant mortality rates in infants born prematurely. In order to reduce the death rate of neonates, it is necessary to monitor premature babies for jaundice. The paper **Care living instrument for neonatal infant connectivity solution (CliNicS) in smart environment** by Sivasankari et al. proposes an inexpensive and non-invasive method based on measuring the wavelength of reflected light from the skin of newborns to detect jaundice, which is caused by raised levels of Bilirubin in the blood. The same setup is also used for treating the newborn with a different wavelength of light for reducing the level of Bilirubin.

Convolutional neural networks (CNN) have been utilized for various applications based on learning optimal decisions in different conditions. The paper **Study on the CNN model optimization for household garbage classification based on machine learning** by Xie et al. proposes a garbage classification methodology based on CNN, which functions under different light intensities and weather conditions.

Smart devices, such as smart phones, voice assistants and social robots, provide users with a range of input modalities like speech, touch, gestures, and vision. In recent years, advancements in processing of these input types have enabled more natural interaction experiences for users in applications such as automated speech, face, and gesture recognition, dialog generation, and emotion expression. Challenges in developing applications in this domain include insufficient computing resources for executing AI methods, the requirements of near real-time response by the system, seamless switching between devices and services at any time and from anywhere, and provision of personalized and privacy-aware services. The paper **A cloud-based middleware for multi-modal interaction services and applications** by Avenoğlu el at. proposes a cloud-based middleware for developing multi-modal interactive applications and integrating applications into AI services. The middleware supports services offered by different developers based on different protocols and smart devices with various capabilities and protocols, and enables application developers to concentrate on user interaction capabilities of their services.

Caring for the elderly in their home environment demands availability of family members or caregivers to provide assistance throughout the daily activities. However, emerging situations require special attention by the caregivers and need to be detected in a timely and accurate manner for such attention to be properly afforded. The paper **An IoT-based smart healthcare system using location-based mesh network and big data analytics** by Lin et al. proposes a system based on the IoT technology which supports a variety of interconnected devices comprising

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wearable devices and contact sensors, as well as location-based mesh networks such as WiFi and Bluetooth low-energy connections. The system continuously senses various parameters revealing the daily status of the elderly user and integrates data from fixed environmental sensors embedded in furniture and mobile devices. The network collects and processes the location and physiological data of the user and transmits them to the cloud and provides real-time monitoring of the user and timely detection of health risks.

## 2. Upcoming issues

The following is a list of upcoming issues of JAISE:

- March 2023: Thematic Issue on Current Trends in Energy Management, Sustainability and Security for Intelligent Environments.
- June 2023: Regular Issue.
- September 2023: Thematic Issue on Applications in Integrated Intelligent Infrastructures.
- December 2023: Regular Issue.

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