Guest Editorial

Imran Sarwar Bajwa [a], George Roussos [b], Anna Helena Reali Costa [c] and William Grosky [d]

[a] *Associate Professor, Department of Computer Science, Islamia University Bahawalpur, Pakistan*
E-mail: imran.sarwar@iub.edu.pk
[b] *Professor, Birkbeck College, University of London, UK*
E-mail: g.roussos@bbk.ac.uk
[c] *Professor, University of São Paulo, São Paulo, Brazil*
E-mail: anna.reali@usp.br
[d] *Professor, Computer and Information Science, University of Michigan, USA*
E-mail: wgrosky@umich.edu

In the last few years, computing for smart environments, such as smart cities, smart homes, smart transportation, etc., has become a major trend in computing. The emergence of new techniques and applications of intelligent sensor-based processing has largely benefited the modern intelligent smart systems. Moreover, cognitive learning and brain inspired computing and other advanced artificial intelligence techniques that have been successfully employed in various areas of robotics, knowledge discovery, big data and other ICT domains, can accomplish impressive results in in-demand fields of computing such as smart environments, internet of things, etc.

We are honoured to present this special issue of the *Journal of Ambient Intelligence and Smart Environments* (JAISE) about the role of artificial intelligence (AI) in the field of Internet of Things (IoT) and their applications in the modern society. The editors of this special issue solicited contributions from the authors who submitted their papers in the domain of AI and IoT. Our call for papers was disseminated wide and was open to all scholars.

We are thankful to the honourable reviewers who graciously volunteered their time for this important scholarly activity. Furthermore, we thank the JAISE consortium, the Artificial Intelligence Research Group for supporting this special issue. Lastly, we thank the JAISE staff, particularly Dr. Aki Härmä and Dr. Kevin K. Wang for their support and excellent work in producing this issue.

In total, we received nineteen journal submissions and all submissions were deemed appropriate for refereeing. Eventually four were accepted after several rounds of reviews, yielding an acceptance rate of 21.05%.

The paper "**An intelligent framework for monitoring dengue fever risk using LDA-ANFIS**" by Sandeep Sood, Isha Mahajan, and Sahil Neelam presents a fog-based intelligent system to accurately diagnose the health status of the user for dengue fever (DeV) suffering using Naive Bayesian Network and sending real-time diagnostic alerts to the user's mobile phone from the fog subsystem. The proposed system also represents the DeV infected areas and risk prone areas on Google maps for an efficient warning alert system in real-time for the visiting or residential individuals in the affected areas.

In the paper "**A deep learning model to predict lower temperatures in agriculture**" by Miguel Ángel Guillén, Raquel Martínez-España, Antonio Llanes, Andrés Bueno-Crespo, and José María Cecilia, a novel framework using the deep learning technique for prediction and classification in decision-making procedures is discussed that is widely applied in different fields. The paper develops an intelligent framework based on a deep learning model for early prediction of crop frost to help farmers activate anti-frost techniques to save the crop.

The paper "**Deployment framework for the Internet of water meters using computer vision on ARM platform**" by Gaubert Santiago and Alberto Alvares presents a smart water meter using a computer vision method. The presented method is a contribution in the IoT area for efficient water management.

The paper "**Intention mining: A deep learning-based approach for smart devices**" by Khurram

Shahzad presents an intention mining approach for smart devices such as smartwatches and other wearables. The author performs several experiments using two deep-learning techniques and seven types of word embeddings to evaluate their effectiveness for intention mining. Finally, the recommendation sentences are synthesized to develop a deeper understanding of users' feedback on the selected products.