



## **Special issue on “Artificial Intelligence for Cloud-based Internet of Things”**

The cloud-based Internet of Things (IoT) is used to connect a wide range of things such as vehicles, mobile devices, sensors, industrial equipments and manufacturing machines to develop a various smart systems it includes smart city and smart home, smart grid, smart industry, smart vehicle, smart health and smart environmental monitoring. A recent report from Juniper Research has discovered that “the number of IoT (Internet of Things) connected devices will number 38.5 billion in 2020, up from 13.4 billion in 2015: a rise of over 285%”. Similarly, “The Internet of Things: Consumer, Industrial & Public Services 2015-2020”, found that while the number of connected devices already exceeds the number of humans on the planet by over 2 times, for most enterprises, simply connecting their systems and devices remains the first priority. A recent report state that, “The overall Internet of Things market is projected to be worth more than one billion U.S. dollars annually from 2017 onwards”. As a result, data production at this stage will be 44 times greater than that in 2009, indicating a rapid increase in the volume, velocity and variety of data. Hence, IoT based smart systems generate a large volume of data often called big data that cannot be processed by traditional data processing algorithms and applications. Here will therefore, by difficulty in storing, processing and visualizing this huge data generated from IoT based system. However, there is highly useful information and so many potential values hidden in the huge volume of IoT based sensor data. IoT based sensor data has gained much attention from researchers in healthcare, bioinformatics, information sciences, policy and decision makers in governments and enterprises. Nowadays, Artificial intelligence methods play a significant role in various environments including business monitoring, healthcare applications, production development, research and development, share market prediction, business process, industrial applications, social network analysis, weather analysis and environmental monitoring. The Internet of Things (IoT) and Artificial intelligence will play a vital role in numerous ways in the future. There are multiple forces which are driving the growing need for both technologies and more and more industries, governments, engineers, scientists and technologists have started to implement it in manifold circumstances. The potential opportunities and benefits of both AI and IoT can be practiced when they are combined, both at the devices end as well as at server. For example, AI combined with Machine learning can study from the data to analyze and predict the future actions in advance, such as order replacements in marketing and failure of equipment in an industry just in time. Moreover, AI can be used with machine learning in smart-homes to make a truly grand smart home experience. Similarly, AI methods with IoT can be used to analyze the human behavior via Bluetooth signals, motion sensors, or facial-recognition technology and to make the corresponding changes in lighting and room temperatures.

This special issue aims to gather recent research works in emerging artificial intelligence methods, intelligent algorithms, machine learning algorithms and multi-agent systems for cloud-based Internet of Things.

Topics include, but are not limited to, the following:

- Automated reasoning and inference for cloud-based Internet of Things
- Case-based reasoning in cloud-based Internet of Things
- Cognitive aspects of AI in cloud-based Internet of Things
- Intelligent interfaces for cloud-based Internet of Things
- Knowledge representation in cloud-based Internet of Things
- Machine learning for cloud-based Internet of Things
- Multiagent systems for cloud-based Internet of Things
- Natural language processing for cloud-based Internet of Things
- Intelligent algorithms for cloud-based Internet of Things
- Agent based algorithms for cloud-based Internet of Things
- Swarm Intelligence, Nature Inspired algorithms for cloud-based Internet of Things
- Artificial intelligence and Genetic algorithms for cloud-based Internet of Things
- Machine learning and deep learning for cloud-based Internet of Things
- Fuzzy systems for cloud-based Internet of Things
- Neural networks for cloud-based Internet of Things

### **Important Dates**

Submission deadline: July 30, 2018

Notification of the first-round review: Sep 25, 2018

Revised submission due: Oct 25, 2018

Final notice of acceptance/reject: Nov 15, 2018

Camera Ready Due: Dec 25, 2018

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