

WICT14: December 2014, Malaysia
Bio-Inspired Techniques for Internet-of-Things (IoT)

Special Track Title: Bio-Inspired Techniques for Internet-of-Things (IoT)

Rationale of the need and objective of the track:

Internet-of-Things (IoT) is an emerging technology that enables inter-devices processing and communication to be accomplished within a well-defined system. Nowadays, the term has also been commonly used to define an ecological system with advanced connection mechanism of devices, systems, and services that crosses machine-to-machine (M2M) communications and includes a variety of protocols, domains, and applications.

There are several issues that need to be addressed when considering a development of IoT system. These include connectivity of heterogeneous devices, decentralized architecture, big data processing capability, as well as security and privacy.

Biologically-inspired computing techniques are able to handle most of these issues. Methods, algorithms and computational intelligence techniques based on the biological organisms such as ants, bees, fruit flies have been developed in order to enhance the performance and robustness of IoT systems.

The objectives are as follows:

- To present and discuss the most recent innovations and experiences in the field of bio-inspired computing for Internet-of-Things (IoT).
- To provide a platform for academia and practitioners to exchange ideas and to discuss challenging research issues in bio-inspired computations.

Specific topics of interest:

Recommended topics include but are not limited to the following:

Bio-Inspired Computing:

- Bio-inspired models and methods for Internet-of-Things (IoT)
- Bio-inspired algorithms and mechanisms
- Bio-inspired software and hardware systems
- Modeling and simulation of bio-inspired systems
- Design and performance issues of bio-inspired systems

Internet-of-Things (IoT)

- IoT models and deployment
- IoT-Cloud integration
- Real world IoT applications
- Smart homes
- Intelligent industrial processing
- IoT security
- Privacy and data protection in IoT

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