



## **WI-IAT 2021 Special Session on Data Science and Web Intelligence**

### **Introduction**

The explosion of digital data created by mobile sensors, social media, surveillance, medical imaging, smart grids and the like-combined with new tools for analyzing it all-has brought us a Big Data era. We are facing the great challenges: how to deal with data which is more than we could actually understand and absorb and how to make efficient use of the huge volume of data? From both scientific and practical perspectives, research on "Data Science" goes beyond the contents of Big Data. Data Science can be generally regarded as an interdisciplinary field of using mathematics, statistics, databases, data mining, high-performance computing, knowledge management and virtualization to discover knowledge from data. It should have its own scientific contents, such as axioms, laws and rules, which are fundamentally important for experts in different fields to explore their own interests from data. A Blockchain is a secured, shared and distributed ledger that facilitates the process of recording and tracking resources without the need of a centralized trusted authority. The technology is scalable and robust and all participant nodes provide resources in a fair manner, which alleviates many-to-one traffic flow bottlenecks. The "International special session on Data Science and Web intelligence" will be a platform for researchers from data and some practitioners from industry and government to share their ideas, research results and experiences on studying of data.

### **Topics of Interest**

The topic of this special session will include but not limit to:

- Theory of Data Science
- Data Science of People
- Web of Data
- Data Science of Trust
- Data Science of Health
- Internet of Things
- Blockchain theories and algorithms for Data Science
- Blockchain architectures, protocols and algorithms
- Blockchain based security, privacy, and trust
- Network and computing optimization in blockchains
- Decentralization optimization in blockchain
- Scalable consensus algorithms
- Lightweight blockchain designs

- Innovative applications and research in blockchain
- Blockchain in information-centric networking
- Blockchain in smart grid
- Blockchain in artificial intelligence
- Blockchain in networking and edge/fog/cloud technologies
- Blockchain in e-health
- Blockchain in 5G technologies
- Blockchain in 5G technologies
- Blockchain in decentralized financing and payments
- Blockchain in social networking
- Blockchain in agriculture
- Blockchain in autonomous vehicles
- Blockchain in mobile cellular networks
- Blockchain standardization
- Blockchain tools, simulators and test-bed
- Private blockchain systems
- Decentralized storage in blockchain
- Security, privacy, and trust of blockchain and distributed ledger technologies
- Secure smart contracts
- Consensus mechanisms

#### **Workshop Chairs**

- Dr. Qing Liu, The Commonwealth Scientific and Industrial Research Organization (CSIRO), Australia
- Dr. Hui Zheng, Swinburne University of Technology, Australia, hui.zheng@aliyun.com
- Dr. Guangli Huang, Deakin University, Australia
- Dr. Peng Li, Nanjing University of Posts and Telecommunications, China

#### **Important Dates:**

Deadline for submission: Sep 15th, 2021

Paper acceptance notification: Oct 15th, 2021

Camera ready paper submission: Oct 30th, 2021