

PROGRAM GUIDE



CISIS-2019

The 13-th International Conference on
Complex, Intelligent, and Software Intensive Systems

and



IMIS-2019

The 13-th International Conference on
Innovative Mobile and Internet Services in Ubiquitous Computing

July 3th - July 5th, 2019

Sydney, Australia

Technically Co-Sponsored by:



Contents

CISIS-2019 Organizing Committee	3
Welcome Message of CISIS-2019 International Conference Organizers	4
Welcome Message from CISIS-2019 Workshops Co-Chairs	5
IMIS-2019 Conference Organizing Committee	6
Welcome Message of IMIS-2019 International Conference Organizers	7
Welcome Message from IMIS-2019 Workshops Co-Chairs	8
CISIS-2019 & IMIS-2019 Keynote I	9
CISIS-2019 & IMIS-2019 Keynote II	10
CISIS-2019 Main Conference and Workshops Program	11
Wednesday, July 3, 2019	11
08:00 Registration	11
09:00-10:00 Single Session: Opening Ceremony and CISIS-2019 & IMIS-2019 Keynote I	11
10:00-10:30 Coffee Break	11
10:30-12:30 Parallel Sessions	11
CISIS-S1: Cloud Computing	12
CISIS-S2: VANETs and WMNs	12
ECDS-S1: Complex Distributed Systems	12
12:30-14:00 Lunch Break	13
14:00-16:00 Parallel Sessions	13
CISIS-S3: Group Communication and Management	13
CISIS-S4: Intelligent Systems and Applications	13
HCCIEA-S1: Wireless Networks and Distributed Systems	13
16:00-16:30 Coffee Break	14
16:30-18:30 Parallel Sessions	14
CISIS-S5: Secure Systems and Service-Oriented Computing	14
CISIS-S6: FPGA Architecture and Parallel Systems	14
IINIC-S1: Intelligent and Natural Inspired Computing	15
19:00-21:00 Welcome Reception Party	15
Thursday, July 4, 2019	16
08:00 Registration	16
09:00-10:00 Single Session: CISIS-2019 & IMIS-2019 Keynote II	16
10:00-10:30 Coffee Break	16
10:30-12:30 Parallel Sessions	16
CISIS-S7: Smart Grid and Machine Learning	16
CISIS-S8: Multimedia Systems and Knowledge Management	16
VENOA-S1: Smart and Innovative Applications	17
12:30-13:30 Lunch Break	17
13:30-15:30 Parallel Sessions	17
IKDW-S1: Knowledge Creation and Innovation in Digital World	17
FCISIS-S1: Complex Intelligent and Software Intensive Systems	17
VENOA-S2: Advanced Networking and Multimedia	18
15:30-16:30 Coffee Break	18

IKDW-S2: Digital Knowledge Sharing and Management	18
SWISM-S1: Cloud Computing and Big Data	18
VENOA-S3: Intelligent Algorithms and Systems	19
19:00-21:00 Banquet Party	19
Friday, July 5, 2019	19
CISIS-2019 Organizing Committee Meeting and Discussion	19
IMIS-2019 Main Conference and Workshops Program	20
Wednesday, July 3, 2019	20
08:00 Registration	20
09:00-10:00 Single Session: Opening Ceremony and CISIS-2019 & IMIS-2019 Keynote I	20
10:00-10:30 Coffee Break	20
10:30-12:30 Parallel Sessions	20
IMIS-S1: Intelligent Algorithms and Systems	21
IMIS-S2: Multimedia Systems and Applications	21
OCC-S1: Optical Communication and Computing	21
12:30-13:30 Lunch Break	22
13:30-15:30 Parallel Sessions	22
IMIS-S3: Security and Privacy	22
IMIS-S4: Algorithms, Methods and Systems for Ubiquitous Computing	22
SMEUCE-S1: Sustainability Management of e-Business	22
16:00-16:30 Coffee Break	23
16:30-18:30 Parallel Sessions	23
IMIS-S5: Mobile and Wireless Networks	23
IMIS-S6: Smart Home and Energy Efficient Systems	23
SMEUCE-S2: Ubiquitous Commerce and Operation Management	23
19:00-21:00 Welcome Reception Party	24
Thursday, July 4, 2019	25
08:00 Registration	25
09:00-10:00 Single Session: CISIS-2019 & IMIS-2019 Keynote II	25
10:00-10:30 Coffee Break	25
10:30-12:30 Parallel Sessions	25
IMIS-S7: Information Security and Control	25
WAIS-S1: Information Security	25
ITAUC-S1: Intelligent Techniques and Ubiquitous Computing	26
12:30-13:30 Lunch Break	26
13:30-15:30 Parallel Sessions	26
MCNCS-S1: Mobile Networks and Cloud Computing	26
PISPIS-S1: Security and Internet Services	26
FINGNet-S1: Next Generation Networks	27
15:30-16:30 Coffee Break	27
16:30-18:30 Parallel Sessions	27
FIMIS-S1: Innovative Mobile and Internet Services	27
19:00-21:00 Banquet Party	27
Friday, July 5, 2019	27
IMIS-2019 Organizing Committee Meeting and Discussion	27
Time table	27

CISIS-2019 Organizing Committee

Honorary Co-Chairs

Makoto Takizawa, *Hosei University, Japan*

Jie Lu, *University of Technology Sydney (UTS), Australia*

General Co-Chairs

Leonard Barolli, *Fukuoka Institute of Technology, Japan*

Farookh Khadeer Hussain, *University of Technology Sydney (UTS), Australia*

Program Committee Co-Chairs

Omar Hussain, *University of New South Wales, Australia*

Hiroaki Nishino, *Oita University, Japan*

Kin Fun Li, *University of Victoria, Canada*

Workshops Co-Chairs

Mohammad Alshehri, *Taif University, KSA*

Tomoya Enokido, *Rissho University, Japan*

Beniamino Di Martino, *University of Campania Luigi Vanvitelli, Italy*

International Advisory Board

Yoshitaka Shibata, *Iwate Prefectural University, Japan*

David Taniar, *Monash University, Australia*

Minoru Uehara, *Toyo University, Japan*

Arjan Duresi, *IUPUI, USA*

Award Co-Chairs

Wenny Rahayu, *La Trobe University, Australia*

Nadeem Javaid, *COMSATS University Islamabad, Pakistan*

Olivier Terzo, *LINKS Foundation, Italy*

Hiroshi Shigeno, *Keio University, Japan*

International Liaison Co-Chairs

Akio Koyama, *Yamagata University, Japan*

Asma Alkalbani, *College of Applied Sciences, Oman*

Hui-Huang Hsu, *Tamkang University, Taiwan*

Flora Amato, *University of Naples Federico II, Italy*

Publicity Co-Chairs

Yahya AlHadhrami, *University of Technology Sydney (UTS), Australia*

Fumiaki Sato, *Toho University, Japan*

Markus Aleksy, *ABB AG Corporate Research Center, Germany*

Finance Chair

Makoto Ikeda, *Fukuoka Institute of Technology, Japan*

Local Arrangement Co-Chairs

Alka Vishwa, *University of Technology Sydney (UTS), Australia*

Ebtesam Almansour, *University of Technology Sydney (UTS), Australia*

Web Administrator Co-Chairs

Donald Elmazi, *Fukuoka Institute of Technology, Japan*

Miralda Cuka, *Fukuoka Institute of Technology, Japan*

Kevin Bylykbashi, *Fukuoka Institute of Technology, Japan*

Welcome Message of CISIS-2019 International Conference Organizers

Welcome to the 13-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2019), which will be held from July 3 to July 5, 2019, at University of Technology Sydney (UTS), Sydney, Australia in conjunction with the 13-th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2019).

The aim of the conference is to deliver a platform of scientific interaction between the three interwoven challenging areas of research and development of future ICT-enabled applications: Software Intensive Systems, Complex systems and Intelligent Systems. Software Intensive Systems are systems, which heavily interact with other systems, sensors, actuators, devices, other software systems and users. More and more domains are involved with software intensive systems, e.g. automotive, telecommunication systems, embedded systems in general, industrial automation systems and business applications. Moreover, the outcome of web services delivers a new platform for enabling software intensive systems. The conference is thus focused on tools, practically relevant and theoretical foundations for engineering software intensive systems.

Complex Systems research is focused on the overall understanding of systems rather than its components. Complex Systems are very much characterized by the changing environments in which they act by their multiple internal and external interactions. They evolve and adapt through internal and external dynamic interactions.

The development of Intelligent Systems and agents, which is each time more characterized by the use of ontologies and their logical foundations build a fruitful impulse for both Software Intensive Systems and Complex Systems. Recent research in the field of intelligent systems, robotics, neuroscience, artificial intelligence, and cognitive sciences are very important factor for the future development and innovation of software intensive and complex systems.

The CISIS-2019 is aiming at delivering a forum for in-depth scientific discussions amongst the three communities. The papers included in the proceedings cover all aspects of theory, design and application of complex systems, intelligent systems and software intensive systems. The conference received 166 papers and accepted 45 papers (about 27% acceptance rate), which were selected after a careful review process.

We are very proud and honored to have 2 distinguished keynote talks by Prof. Wanlei Zhou, University of Technology Sydney, Australia and Dr. Nadeem Javaid, COMSATS University Islamabad, Pakistan, who will present their recent work and will give new insights and ideas to the conference participants.

The organization of an International Conference requires the support and help of many people. A lot of people have helped and worked hard to produce a successful CISIS-2019 technical program and conference proceedings. First, we would like to thank all the authors for submitting their papers, the Program Committee Members, and the reviewers who carried out the most difficult work by carefully evaluating the submitted papers. We are grateful to Honorary Co-Chairs Prof. Makoto Takizawa, Hosei University, Japan and Prof. Jie Lu, University of Technology Sydney, Australia for their guidance and advices.

This year in conjunction with CISIS-2019 we have 7 International Workshops that complemented CISIS-2019 program with contributions for specific topics. We would like to thank the Workshops Co-Chairs and all workshops organizers for organizing these workshops.

Finally, we would like to thank Web Administrator Co-Chairs and Local Arrangement Co-Chairs for their excellent and timely work.

We hope you will enjoy the conference and have a great time in Sydney, Australia.

CISIS-2019 Organizers

CISIS-2019 General Co-Chairs

Leonard Barolli, *Fukuoka Institute of Technology (FIT), Japan*
Farookh Khadeer Hussain, *University of Technology Sydney (UTS), Australia*

CISIS-2019 Program Committee Co-Chairs

Omar Hussain, *University of New South Wales, Australia*
Hiroaki Nishino, *Oita University, Japan*
Kin Fun Li, *University of Victoria, Canada*

Welcome Message from CISIS-2019 Workshops Co-Chairs

Welcome to the Workshops of the 13-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2019), which will be held from July 3 to July 5, 2019 at University of Technology Sydney, Sydney, Australia.

We are pleased that for this edition of CISIS International Conference we have 7 International Workshops. Some of these workshops are in 9-th, 10-th, 11-th, 12-th and 13-th editions. The objective was to complement as much as possible the main theme of CISIS 2019 with specific topics of different workshops in order to cover topics from the three challenging areas of ICT-enabled applications: Software Intensive Systems, Complex Systems and Intelligent Systems

The list of workshops is as follows:

1. The 13-th International Workshop on Engineering Complex Distributed Systems (ECDS-2019)
2. The 12-th International Workshop on Intelligent Informatics and Natural Inspired Computing (IINIC-2019)
3. The 10-th International Workshop on Frontiers on Complex, Intelligent and Software Intensive Systems (FCISIS-2019)
4. The 10-th International Workshop on Virtual Environment and Network-Oriented Applications (VENOA 2019)
5. The 9-th International Workshop on Semantic Web/Cloud Information and Services Discovery and Management (SWISM-2019)
6. The 6-th International Workshop on Hybrid/Cloud Computing Infrastructure for e-Science Application (HCCIEA-2019)
7. The 1-st International Workshop on Knowledge Creation and Innovation in Digital World (IKIDW-2019)

These workshops bring to the researchers conducting research in specific themes the opportunity to learn from this rich multi-disciplinary experience. The Workshop Co-Chairs would like to thank CISIS-2019 International Conference Organizers for their help and support. We are grateful to the workshops organizers for their great efforts and hard work in proposing the workshops, selecting the papers, the interesting programs and for the arrangements of the workshops during the conference days. We are grateful to Web Administrator Co-Chairs for their excellent work and support.

We hope you enjoy the workshops program and proceedings.

Workshops Co-Chairs of CISIS-2019 International Conference

Mohammad Alshehri, *Taif University, Saudi Arabia*

Tomoya Enokido, *Rissho University, Japan*

Beniamino Di Martino, *University of Campania Luigi Vanvitelli, Italy*

IMIS-2019 Conference Organizing Committee

Honorary Co-Chairs

Makoto Takizawa, *Hosei University, Japan*
Jie Lu, *University of Technology Sydney (UTS), Australia*

General Co-Chairs

Leonard Barolli, *Fukuoka Institute of Technology, Japan*
Farookh Khadeer Hussain, *University of Technology Sydney (UTS), Australia*

Program Committee Co-Chairs

Omar Khadeer Hussain, *University of New South Wales, Australia*
Hae-Duck Joshua Jeong, *Korean Bible University, Korea*
Fang-Yie Leu, *Tunghai University, Taiwan*

Workshops Co-Chairs

Morteza Saberi, *University of New South Wales, Australia*
Hsing-Chung Chen, *Asia University, Taiwan*
Baojiang Cui, *Beijing University of Posts and Telecom, China*

Advisory Committee Members

Vincenzo Loia, *University of Salerno, Italy*
Arjan Duresi, *IUPUI, USA*
Kouichi Sakurai, *Kyushu University, Japan*

Award Co-Chairs

Kangbin Yim, *SCH University, Korea*
Tomoya Enokido, *Rissho University, Japan*
Antonio J. Jara, *HES-SO, Switzerland*

International Liaison Co-Chairs

Marek Ogiela, *AGH Univ. of Science and Technology, Poland*
Asma Alkalbani, *College of Applied Sciences, Oman*
Francesco Palmieri, *University of Salerno, Italy*
Kin Fun Li, *University of Victoria, Canada*
Elis Kulla, *Okayama University of Science, Japan*

Publicity Co-Chairs

Mohammad Ikram, *University of Technology Sydney (UTS), Australia*
Hiroaki Kikuchi, *Meiji University, Japan*
Nadeem Javaid, *COMSATS University Islamabad, Pakistan*
Keita Matsuo, *Fukuoka Institute of Technology, Japan*

Local Arrangement Co-Chairs

Ahmed AlMasoud, *University of Technology Sydney (UTS), Australia*
Abeer Merdad, *University of Technology Sydney (UTS), Australia*

Web Administrator Co-Chairs

Donald Elmazi, *Fukuoka Institute of Technology, Japan*
Miralda Cuka, *Fukuoka Institute of Technology, Japan*
Kevin Bylykbashi, *Fukuoka Institute of Technology, Japan*

Welcome Message of IMIS-2019 International Conference Organizers

Welcome to the 13-th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2019), which will be held from July 3-rd to July 5-th, 2019, at University of Technology Sydney (UTS), Sydney, Australia in conjunction with the 13-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2019).

This International Conference focuses on the challenges and solutions for Ubiquitous and Pervasive Computing (UPC) with an emphasis on innovative, mobile and internet services. With the proliferation of wireless technologies and electronic devices, there is a fast growing interest in UPC. UPC enables to create a human-oriented computing environment where computer chips are embedded in everyday objects and interact with physical world. Through UPC, people can get online even while moving around, thus having almost permanent access to their preferred services. With a great potential to revolutionize our lives, UPC also poses new research challenges. The conference provides an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of UPC.

For IMIS-2019, we received many paper submissions from all over the world. The papers included in the proceedings cover important aspects from UPC research domain. This year, we received 147 submissions and after a careful review process of 3 independent reviews per submission, 40 papers were accepted (about 27% acceptance rate).

It is impossible to organize such a successful program without the help of many individuals. We would like to express our great appreciation to the authors of the submitted papers, the program committee members, who provided timely and significant reviews, and special session chairs for their great efforts. We are grateful to Honorary Co-Chairs: Prof. Makoto Takizawa, Hosei University, Japan and Prof. Jie Lu, University of Technology Sydney, Australia for their advices and support.

This year in conjunction with IMIS-2019 we have 8 International Workshops that complemented IMIS-2019 program with contributions for specific topics. We would like to thank the Workshops Co-Chairs and all workshop organizers for organizing these workshops.

Finally, we would like to thank Web Administrator Co-Chairs and Local Arrangement Co-Chairs for their excellent and timely work.

We hope that all of you enjoy IMIS-2019 and find this a productive opportunity to learn, exchange ideas and make new contacts.

IMIS-2019 International Conference Organizers

IMIS-2019 General Co-Chairs

Leonard Barolli, *Fukuoka Institute of Technology (FIT), Japan*
Farookh Khadeer Hussain, *University of Technology Sydney (UTS), Australia*

IMIS-2019 Program Committee Co-Chairs

Omar Khadeer Hussain, *University of New South Wales, Australia*
Hae-Duck Joshua Jeong, *Korean Bible University, Korea*
Fang-Yie Leu, *Tunghai University, Taiwan*

Welcome Message from IMIS-2019 Workshops Co-Chairs

Welcome to the Workshops of the 13-th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2019), which will be held from July 3-rd to July 5-th, 2019 at University of Technology Sydney (UTS), Sydney, Australia.

This year we have 8 workshops, which will be held together with IMIS-2019. The objective was to complement as much as possible the main themes of IMIS-2019 with the specific topics of the different workshops to cover many topics of Ubiquitous and Pervasive Computing (UPC).

The list of workshops follows below:

1. The 13-th International Workshop on Advances in Information Security (WAIS-2019)
2. The 9-th International Workshop on Mobile Commerce, Cloud Computing, Network and Communication Security (MCNCS-2019)
3. The 9-th International Workshop on Intelligent Techniques and Algorithms for Ubiquitous Computing (ITAUC-2019)
4. The 9-th International Workshop on Future Internet and Next Generation Networks (FINGNet-2019)
5. The 8-th International Workshop on Frontiers in Innovative Mobile and Internet Services (FIMIS-2019)
6. The 8-th International Workshop on Sustainability Management of e-Business and Ubiquitous Commerce Engineering (SMEUCE-2019)
7. The 7-th International Workshop on Practical Issues on Security in Public Internet Services (PISPIS-2019)
8. The 1-st International Workshop on Optical Communication and Computing (OCC-2019)

We would like to thank IMIS-2019 International Conference Organizers for their help and support. We are grateful to the workshop organizers for their great efforts and hard work in proposing the workshops, selecting the papers, organizing interesting programs, and for the arrangements of the workshops during the conference days.

We are grateful to Web Administrator Co-Chairs for their excellent work and support.

We hope you enjoy the workshops programs and proceedings.

Workshops Co-Chairs of IMIS-2019 International Conference

Morteza Saberi, *University of New South Wales, Australia*

Hsing-Chung Chen, *Asia University, Taiwan*

Baojiang Cui, *Beijing University of Posts and Telecom, China*

CISIS-2019 & IMIS-2019 Keynote I

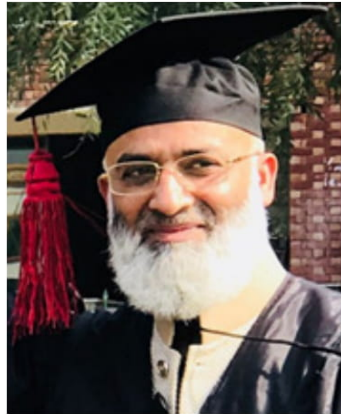


Prof. Wanlei Zhou, University of Technology Sydney, Australia

Trust, Security and Privacy in Low-Cost RFID Systems

Abstract: Radio Frequency Identification (RFID) enables the automatic identification of objects using radio waves without the need for physical contact with the objects. RFID has been widely used in various fields such as logistics, manufacturing, pharmaceutical, supply chain management, healthcare, defense, aerospace and many other areas, apart from touching our everyday lives through RFID enabled car keys, ePassports, clothing, electronic items and others. However, the wide adoptions of RFID technologies also introduce serious security and privacy risks as the information stored in RFID tags can easily be retrieved by any malicious party with a compatible reader. In this talk we will introduce some trust, security and privacy challenges in RFID technologies, and based on our research, we will outline a number of schemes for authentication, ownership transfer, secure search and grouping proof in Low-cost RFID systems.

CISIS-2019 & IMIS-2019 Keynote II



Dr. Nadeem Javaid, COMSATS University Islamabad, Pakistan

Intelligent Context Awareness in Internet of Agricultural Things

Abstract: Variability in climate and recession in water reservoirs, diminishing the agrarian sector ecosystem production day by day. There is an imperative requirement to restore robustness and ensure high production rate with the use of smart communication infrastructure. Moreover, the farmers will be able to make resource efficient decisions with the availability of modern monitoring systems like Internet of agricultural things (IoAT). However, the data generated through IoAT devices is disparate which needs to be handled intelligently to bring artificial intelligence (AI), machine learning (ML) and data analytic (DA) techniques into play. In this talk, we will recommend the intensive use of coordination between AI, ML and DA at middleware to optimize the performance of IoAT system along with context awareness. Additionally, it will enable horizontal functionality for diverse services to mitigate the problem of inter-operability. An analysis is carried out using TOWS matrix to consider the effects of internal and external factors on the performance of automation techniques collaboration. This analysis points out various opportunities to innovate the livelihood of agrarian society around the globe.



CISIS-2019

Main Conference and Workshops Program

Wednesday, July 3, 2019

08:00 Registration

**09:00-10:00 Single Session: Opening Ceremony and CISIS-2019 & IMIS-2019
Keynote I**

CISIS-2019 & IMIS-2019 Keynote Talk I (PLENARY ROOM)

Prof. Wanlei Zhou: Trust, Security and Privacy in Low-Cost RFID Systems

10:00-10:30 Coffee Break

10:30-12:30 Parallel Sessions

CISIS-S1: Cloud Computing**Chair: Philip Moore, Lanzhou University, China**

1. Consumers' Attitude Toward Cloud Services: Sentiment Mining of Online Consumer Reviews
Asma Musabah Alkalban
2. HPC, Cloud and Big-Data Convergent Architectures: the LEXIS Approach
Alberto Scionti, Jan Martinovic, Olivier Terzo, Etienne Walter, Marc Levrier, Stephan Hachinger, Donato Magarielli, Thierry Goubier, Stephane Louise, Antonio Parodi, Sean Murphy, Carmine D'Amico, Simone Ciccia, Emanuele Danovaro, Martina Lagasio, Frederic Donnat, Martin Golasowski, Tiago Quintino, James Hawkes, Tomas Martinovic, Lubomir Riha, Katerina Slaninova, Stefano Serra, Roberto Peveri
3. A UML Profile for the Service Discovery in the Enterprise Cloud Bus (ECB) Framework
Misbah Zahoor, Farooque Azam, Muhammad Waseem Anwar, Nazish Yousaf, Muhammad Kashif
4. IoT Cloud Platform based on Asynchronous Processing for Reliable Multi-user Health Monitoring
Nur Hakim Arif, Nico Surantha
5. Towards Cloud-Based Personalised Student-Centric Context-Aware e-Learning Pedagogic Systems
Philip Moore, Zhili Zhao, Hai Van Pham
6. Subprocess Transmission Strategies for Recovering from Faults in the Tree-based Fog Computing (TBFC) Model
Ryuji Oma, Shigenari Nakamura, Dilawaer Duolikun, Tomoya Enokido, Makoto Takizawa

CISIS-S2: VANETs and WMNs**Chair: Makoto Ikeda, Fukuoka Institute of Technology, Japan**

1. Implementation of a Fuzzy-based Simulation System and a Testbed for Improving Driving Conditions in VANETs
Kevin Bylykbashi, Donald Elmazi, Keita Matsuo, Makoto Ikeda, Leonard Barolli
2. Performance Analysis of WMNs by WMN-PSOHC-DGA Simulation System Considering Random Inertia Weight and Linearly Decreasing Vmax Router Replacement Methods
Admir Barolli, Shinji Sakamoto, Seiji Ohara, Leonard Barolli, Makoto Takizawa
3. Blueprint of Driving without Emission: EV with Intelligent Charging Stations Network
Xu Chen, Deliang Zhong, Shuhong You, Shuqi Yang, Na Deng, Shudong Liu, Yipeng Li
4. A Model-driven Approach for Load-Balanced MQTT Protocol in Internet of Things (IoT)
Humaira Anwer, Farooque Azam, Muhammad Waseem Anwar and Muhammad Rashid
5. Modelling a Smart Motorway
Edward Richardson, Philip Davies, David Newell

ECDS-S1: Complex Distributed Systems**Chair: Tomoya Enokido, Rissho University, Japan**

1. An Approximate Forecasting of Electricity Load and Price of a Smart Home using Nearest Neighbor
Muhammad Nawaz, Nadeem Javaid, Fakhar Ullah Mangla, Maria Munir, Farwa Ihsan, Atia Javaid and Muhammad Asif
2. Survey on Intelligent Chatbots: State-of-the-Art and Future Research Directions
Ebtesam H Almansor, Farookh Khadeer Hussain
3. A Novel Approach to Extend km Models with Object Knowledge Model (OKM) and Kafka for Big Data and Semantic Web with Greater Semantics
Dr.CSR Prabhu, R.Venkateswara Gandhi, Ajeet K. Jain, Vaibhav Sanjay Lalka, Dr.Sree Ganesh Thottempudi, Dr. PVRD Prasad Rao
4. Evaluation of Performance on N-wavelength V2X Wireless Network in Actual Road Environment
Akira Sakuraba, Yoshitaka Shibata, Noriki Uchida, Goshi Sato, Kazuaki Ozeki

12:30-14:00 Lunch Break**14:00-16:00 Parallel Sessions****CISIS-S3: Group Communication and Management****Chair: Makoto, Takizawa, Hosei University, Japan**

1. A Distributed Environment for Traffic Navigation Systems
Jan Martinovič, Martin Golasowski, Kateřina Slaninová, Jakub Beránek, Martin Šurkovský, Lukáš Rapant, Daniela Szturcová, Radim Cmar
2. Multi-criteria group decision making and group agreement quotient analysis based on the Delphi method
Song Lin, Li Shen, Caiquan Xiong, Xuan Li
3. Peer-to-Peer Based Web of Things Resource Management
Yangqun Li
4. Learning Agile Scrum Methodology using the Groupware Tool Trello through Collaborative Working
Nitin Naik, Paul Jenkins, David Newell
5. Message Ordering Based on the Object-Based-Causally (OBC) Precedent Relation
Takumi Saito, Shigenari Nakamura, Tomoya Enokido, Makoto Takizawa
6. Self-explanatory Capabilities in Intelligent Decision Support Systems in Resource Management
Maneerat Rumsamrong, Andrew Chiou, Lily Li

CISIS-S4: Intelligent Systems and Applications**Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

1. An Intelligent Predictive Analytics System for Transportation Analytics on Open Data towards the Development of a Smart City
Abdul-Rasheed A. Audu, Alfredo Cuzzocrea, Carson K. Leung, Keaton A. MacLeod, Nibrasul I. Ohin, Nadège C. Pulgar-Vidal
2. Intelligent Fall Detection with Wearable IoT
Farhad Ahamed, Seyed Shahrestani, Hon Cheung
3. IoT Node Selection and Placement: A New Approach based on Fuzzy Logic and Genetic Algorithm
Miralda Cuka, Donald Elmazi, Makoto Ikeda, Keita Matsuo, Leonard Barolli
4. A Framework for Early Detection of Antisocial Behavior on Twitter using Natural Language Processing
Ravinder Singh, Jiahua Du, Yanchun Zhang, Hua Wang, Yuan Miao, Omid Ameri Sianaki, Anwaar Ulhaq
5. A Method of Collecting Four Character Medicine Effect Phrases in TCM Patents based on Semi-supervised Learning
Deng Na, Chen Xu, Xiong Caiquan, Wang Chunzhi, Zhang Mingwu, Ye Zhiwei, Li Desheng, Yang Xuehong
6. The Spatiotemporal Prediction Model of Opioids Spread Trend Based on Grey Correlation
Tingting Rao, Caiquan Xiong, Yi Liang, Shishuang Deng

HCCIEA-S1: Wireless Networks and Distributed Systems**Chair: Olivier Terzo, LINKS Foundation, Italy**

1. Low Power Wireless Networks for Extremely Critical Environments
S. Ciccica, A. Scionti, G. Giordanengo, L. Pilosu, O. Terzo
2. Unmanned Aerial Vehicle for the Inspection of Environmental Emissions
S. Ciccica, F. Bertone, G. Caragnano, G. Giordanengo, A. Scionti, O. Terzo

3. A Classification of Distributed Ledger Technology Usages in the Context of Transactive Energy Control Operations
Fabrizio Bertone, Giuseppe Caragnano, Mikhail Simonov, Klodiana Goga, Olivier Terzo
4. Analysis of Job Scheduling Techniques in a HPC Cluster Deployed in a Public Cloud
Francesco Lubrano, Klodiana Goga, Olivier Terzo, Antonio Parodi, Martina Lagasio
5. Research on the Estimation Model of Soil Moisture Content Based on the Characteristics of Thermal Infrared Data
Fu Qiang Qin and Li Fang Wang

16:00-16:30 Coffee Break

16:30-18:30 Parallel Sessions

CISIS-S5: Secure Systems and Service-Oriented Computing

Chair: Marek R. Ogiela, AGH University of Science and Technology, Poland

1. Cognitive Personal Security Systems
Marek R. Ogiela, Lidia Ogiela
2. Design and Implementation of Security System for IPv6 Sensor Networks
Di Luo, Hao Wang, Shengwei Yi, Qiao Wang
3. Optimizing the Waiting Time for Airport Security Screening using Multiple Queues and Servers
Mohamad Naji, Ali Braytee, Ali Anaissi, Omid Ameri Sianaki, Ahmed Al-Ani
4. From BPMN Models to SoaML Models
Abderrahmane Leshob, Redouane Blal, Hafedh Mili, Pierre Hadaya, Omar Khadeer Hussain
5. HPC-as-a-Service via HEAppE Platform
Vaclav Svaton, Jan Martinovic, Jan Krenek, Thomas Esch, Pavel Tomancak
6. From an Annotated BPMN Model to a Use Case Diagram: DESTINY Methodology
Nourchène Elleuch Ben Ayed, Hanène Ben Abdallah

CISIS-S6: FPGA Architecture and Parallel Systems

Chair: Naohiro Hayashibara, Kyoto Sangyo University, Japan

1. Pipelined FPGA implementation of a Wave-Front-Fetch graph cut System
Naofumi Yoshinaga, Ryo Kamasaka, Yuichiro Shibata, Kiyoshi Oguri
2. A Self-Partial Reconfiguration Framework with Configuration Data Compression for Intel FPGAs
Shota Fukui, Yuichi Kawamata, Yuichiro Shibata
3. A Simple Heterogeneous Redundant Design Method for Finite State Machines on FPGAs
Takanori Itagawa, Ryo Kamasaka, Yuichiro Shibata
4. Comparative Analysis of Neural Networks and Enhancement of ELM for Short Term Load Forecasting
Rahim Ullah, Nadeem Javaid, Ghulam Hafeez, Salim Ullah, Fahad Ahmad, Ashraf Ullah
5. Message Dissemination using Nomadic Lévy Walk on Unit Disk Graphs
Koichiro Sugihara, Naohiro Hayashibara

IINIC-S1: Intelligent and Natural Inspired Computing**Chair: Donald Elmazi, Fukuoka Institute of Technology**

1. Evaluation of Mobile Health Services in Health Organizations
Alsaleh Saad
2. Intelligent Student Attendance Management System Based on RFID Technology
Bektassov Dias, Asif Mohammad, He Xu, Ping Tan
3. An Agent-based Intelligent Data Presentation Mechanism for Multifaceted Analysis
Kazuto Sasai, Hiroshi Matsumura, Ryota Fukutani, Gen Kitagata, Tetsuo Kinoshita
4. Application of Improved Ant Colony Algorithm in Path Planning
Zhe Li, Ruilian Tan, Baoxiang Ren
5. An Innovative Model based on FCRBM for Load Forecasting in the Smart Grid
Ghulam Hafeez, Nadeem Javaid, Muhammad Riaz, Khalid Umar, Zafar Iqbal and Ammar Ali
6. Proposal of Recollection Support System after Motorcycle touring with Eye Tracking
Takahiro Uchiya, Shotaro Sugiura, Ichi Takumi

19:00-21:00 Welcome Reception Party

- University of Technology Sydney
- Address: 15 Broadway, Ultimo NSW 2007, Australia

Thursday, July 4, 2019**08:00 Registration****09:00-10:00 Single Session: CISIS-2019 & IMIS-2019 Keynote II****CISIS-2019 & IMIS-2019 Keynote Talk II**

Dr. Nadeem Javaid: Intelligent Context Awareness in Internet of Agricultural Things

10:00-10:30 Coffee Break**10:30-12:30 Parallel Sessions****CISIS-S7: Smart Grid and Machine Learning**

Chair: Nadeem Javaid, COMSAT University Islamabad, Pakistan

1. Day Ahead Electric Load Forecasting by an Intelligent Hybrid Model based on Deep Learning for Smart Grid
Ghulam Hafeez, Nadeem Javaid, Muhammad Riaz, Ammar Ali, Khalid Umar, Zafar Iqbal
2. Smart Scheduling Strategy for Lightweight Virtualized Resources Towards Green Computing
Alberto Scionti, Carmine D'Amico, Simone Ciccica, Yuanyuan Li, Oliver Terzo
3. Realtime Road State Decision System based on Multiple Sensors and AI Technologies
Yoshitaka Shibata, Akira Sakuraba, Goshi Sato, Noriki Uchida
4. A Machine Learning Architecture Towards Detecting Denial of Service Attack in IoT
Yahya Al-Hadhrami, Farookh Khadeer Hussain
5. Smart Fire-Alarm System for Home
Jihoon Kang, Shreya Basnet, Sardar M Farhad

CISIS-S8: Multimedia Systems and Knowledge Management

Chair: Farookh Khadeer Hussain, University of Technology Sydney, Australia

1. Video Classification Using Deep Autoencoder Network
Farshid Hajati, Mohammad Tavakolian
2. Transferring Informal Text in Arabic as Low Resource Languages: State-of-the-art and Future Research Directions
Ebtesam H Almansor, Ahmed Al-Ani, Farookh Khadeer Hussain
3. Graph-based Semantic Query Optimization for Intensional XML Data
Abdullah Alrefae, Jinli Cao, Eric Pardede
4. Incremental Patent Semantic Annotation Based on Keyword Extraction and List Extraction
Xu Chen, Weixian Zong, Na Deng, Shudong Liu, Yipeng Li
5. Personalized Protocols for Data Division and Knowledge Management
Lidia Ogiela, Makoto Takizawa, Urszula Ogiela
6. Knowledge Sharing System Database Architecture for Global Knowledge Sharing
Alsaleh Saad, Haryani Haron

VENOA-S1: Smart and Innovative Applications**Chair: Hiroaki Nishino, Oita University, Japan**

1. A Proposal of Code Correction Problem for Java Programming Learning Assistant System
Nobuo Funabiki, Sai He, Htoo Htoo Sandi Kyaw, and Wen-Chun Kao
2. Practice of Programming Education Using Scratch and NekoBoard2 for High School Student
Kazuaki Yoshihara, Kenzi Watanabe
3. IntelligentBox for Web: A Constructive Visual Development System for Interactive Web 3D Graphics Applications
Kohei Noguchi and Yoshihiro Okada
4. A Study for Investigating Driver's Condition by Radar
Toshiyuki Haramaki and Hiroaki Nishino
5. Study on Autonomous Outing Support Service for the Visually Impaired
Eiji Aoki, Shinji Otsuka, Takeshi Ikenaga, Hideaki Kawano, Masaaki Yatsuzuka

12:30-13:30 Lunch Break**13:30-15:30 Parallel Sessions****IKDW-S1: Knowledge Creation and Innovation in Digital World****Chair: Ardian Adhiatma, Sultan Agung Islamic University, Indonesia**

1. Collective Engagement and Spiritual Wellbeing in Knowledge Based Community: A Conceptual Model
Olivia Fachrunnisa, Ardian Adhiatma, Heru Kurnianto Tjahjono
2. Financial Technology and E-Corporate Governance Model for Small Medium Enterprises
Mutamimah
3. Blue Accounting of the Marine Knowledge and Sustainable Seas : A Conceptual Model
Winarsih, Khoirul Fuad, Hendri Setyawan
4. Relational Selling Strategy On Smes Marketing Performance: Role Of Market Knowledge And Brand Management Capabilities
Hendar, Ken Sudarti, Intan Masfufah
5. Collaborative Agility Capital: A Conceptual Novelty To Support Knowledge Management
Tri Wikaningrum, Heru Sulisty, Imam Ghozali, Ahyar Yuniawan
6. Knowledge Management And Religiosity: A Conceptual Development Of Islamic Vanguard Spirit
Ken Sudarti and Moch. Zulfa

FCISIS-S1: Complex Intelligent and Software Intensive Systems**Chair: Omid Ameri Sianaki, Victoria University, Australia**

1. Design and Implementation of Cloud Service System based on Face Recognition
Hao Wu, He Xu, Peng Li
2. Analysis and Design of Group RFID Tag Security Authentication Protocol
Ke Zang, He Xu, Feng Zhu, Peng Li
3. Overcoming Data Security Challenges of Cloud of Things: An Architectural Perspective
Farhad Daneshgar, Omid Ameri Sianaki, Amna Ilyas
4. Construction and Parallel Implementation of Homomorphic Arithmetic Unit based on nuFHE
Liu Wenchao, Pan Feng, Wang Xu'an, Tu Guangsheng and Zhong Weidong

VENOA-S2: Advanced Networking and Multimedia**Chair: Nobuo Funabiki, Okayama University, Japan**

1. Evaluation of Searching Method for Various Contents Using Cache Routers with Transmission Records in Unstructured Peer-to-Peer Networks
Daiki Takeda and Shinji Sugawara
2. Web-Based Collaborative VR Training System for Operation of Radiation Therapy Devices
Kotaro Kuroda, Kosuke Kaneko, Toshioh Fujibuchi, Yoshihiro Okada
3. Designing a Simplified User Interface System for Smartphone Natives to Facilitate PC Operations
Keiji Urawaki and Makoto Nakashima
4. Development of Teaching Materials for Routing of Network Using a Full Color LED Tape as Physical Interface
Arisa Ishikawa, Kazuaki Yoshihara, Kenzi Watanabe
5. Classification of Arteriovenous Fistula Stenosis using Shunt Murmur Analysis and Random Forest
Fumiya Noda, Daisuke Higashi, Keisuke Nishijima, Ken'ichi Furuya

15:30-16:30 Coffee Break**IKDW-S2: Digital Knowledge Sharing and Management****Chair: Olivia Fachrunnisa, Sultan Agung Islamic University, Indonesia**

1. Digital Knowledge Supply Chain for Creative Industry: A Conceptual Framework
Ardian Adhiatma, Olivia Fachrunnisa, Mustafa
2. Effect of Islamic Leadership on Teacher Performance Through It Intervention Competency
Siti Sumiati, Erni Yuvitasari
3. Communal Identity and Shared Value toward Organizational Performance in the Context of Religious Knowledge Management
Nurhidayati and Olivia Fachrunnisa
4. Fraud Prevention on Village Government: The Importance of Digital Infrastructure Supervision
Provita Wijayanti, Nurhidayati, Rustam Hanafi
5. The Role of The Human Capital and Network in Maintaining the Sustainability of IMFI in the Digital Era: An Islamic Perspective
Widiyanto bin Mislana Cokrohadisumarto
6. Fostering Absorptive Capacity And Self- Efficacy On Knowledge Sharing Behavior And Innovation Capability: An Empirical Research
Heru Sulistyono and Tri Wikaningrum

SWISM-S1: Cloud Computing and Big Data**Chair: Beniamino Di Martino, University of Campania Luigi Vanvitelli, Italy**

1. Enabling Accountable Collaboration in Distributed, Autonomous Systems by Intelligent Agents
Flora Amato, Pasquale Femia and Francesco Moscato
2. Semantic Representation of Cloud Manufacturing Services and Processes for Industry 4.0
Beniamino Di Martino, Valeria Di Traglia, Ivan Orefice
3. Optimization and Validation of eGovernment Business Processes with Support of Semantic Techniques
Beniamino Di Martino, Alfonso Marino, Massimiliano Rak, Paolo Pariso
4. Analysis of Existing Open Standard Framework and Ontologies in the Construction Sector for the Development of Inference Engines
Di Martino, B., Mirarchi, C., Ciuffreda S., Pavan A.
5. Semantic Techniques for validation of GDPR compliance of Business Processes
Beniamino Di Martino, Michele Mastroianni, Massimo Campaiola, Giuseppe Morelli, Ernesto Sparaco

VENOA-S3: Intelligent Algorithms and Systems**Chair: Yoshihiro Okada, Kyushu University, Japan**

1. Effects of Equivalent Sources Arrangement on Spatial Interpolation of Impulse Responses
Masashi Yoshino, Ken'ichi Furuya
2. Automatic Determination of the Optimum Number of Updates in Synchronized Joint Diagonalization
Taiki Izumi, Yuuki Tachioka, Shingo Uenohara, Ken'ichi Furuya
3. Research of the Harvesting Date Prediction Method Using Deep Learning
Yukikazu Murakami, Kengo Miyoshi and Kazuhiro Shigeta
4. A Piano Performance Training System Based on Visual and Tactile Guidance
Hokuto Tsutsumi and Hiroaki Nishino

19:00-21:00 Banquet Party

- Mercure Sydney
- Address: 818-820 George St, Chippendale NSW 2007, Australia

Friday, July 5, 2019**CISIS-2019 Organizing Committee Meeting and Discussion**



IMIS-2019

Main Conference and Workshops Program

Wednesday, July 3, 2019

08:00 Registration

**09:00-10:00 Single Session: Opening Ceremony and CISIS-2019 & IMIS-2019
Keynote I**

CISIS-2019 & IMIS-2019 Keynote Talk I (PLENARY ROOM)

Prof. Wanlei Zhou: Trust, Security and Privacy in Low-Cost RFID Systems

10:00-10:30 Coffee Break

10:30-12:30 Parallel Sessions

IMIS-S1: Intelligent Algorithms and Systems**Chair: Hyunhee Park, Korea Bible University, Korea**

1. Performance Evaluation of WMNs by WMN-PSOHC System Considering Random Inertia Weight and Linearly Decreasing Inertia Weight Replacement Methods
Shinji Sakamoto, Seiji Ohara, Leonard Barolli and Shusuke Okamoto
2. Performance Analysis of WMNs by WMN-PSODGA Simulation System Considering Load Balancing and Client Uniform Distribution
Seiji Ohara, Admir Barolli, Shinji Sakamoto and Leonard Barolli
3. Hourly Electricity Load Forecasting in Smart Grid using Deep Learning Techniques
Abdul Basit Majeed Khan, Nadeem Javaid, Orooj Nazeer, Maheen Zahid, Mariam Akbar and Majid Hameed Khan
4. A Fuzzy-based System for Decision of Sightseeing Spots Considering Different Conditions
Yi Liu and Leonard Barolli
5. Electricity Load and Price Forecasting using Enhanced Machine Learning Techniques
Hamida Bano, Aroosa Tahir, Ishtiaq Ali, Raja Jalees ul Hussien Khan, Abdul Haseeb and Nadeem Javaid
6. Classifying Serious Depression based on Blood Test: A Machine Learning Approach
Hyunhee Park

IMIS-S2: Multimedia Systems and Applications**Chair: Noriki Uchida, Fukuoka Institute of Technology, Japan**

1. Image Recognition based Adaptive Array Antenna Controls for Winter Road Surveillance System in Local Mountain Area
Noriki Uchida, Goshi Sato, Yoshitaka Shibata
2. An Image Denosing Algorithm for Strong Noise Image Based on Structural Similarity of Contourlet Domain via Grey Relational Analysis
Lili Jiao
3. Personalized Topic Graph Generation Method using Image Labels in Image-Sharing SNS
Kunyoung Kim, Minhwan Kim, Jongmo Kim, and Mye Sohn
4. Construction of a Historical Information Visualization System by Superposition of Old Map
Tomoyuki Ishida and Hayato Ito
5. TensorFlow: A Vegetable Classification System and Its Performance Evaluation
Natwadee Ruedeeniraman, Makoto Ikeda, Leonard Barolli
6. Study on Resistance Parameter Setting of Acupuncture Treatment Training System
Meguru Yamashita, Shingo Sasaki, Akio Doi, Kiwamu Satoh, Hajime Ogawa

OCC-S1: Optical Communication and Computing**Chair: Indumathi T.S., Visvesvaraya Technological University, Bangalore, India**

1. Optimizing the Placement of Wavelength Converters in WDM
Ranya.S, Indumathi T.S.
2. Analysis of Fiber Bragg Grating Spectral Characteristics using Couple Mode Theory for Sensor Applications
Somesh Nandi, Indumathi T.S., Sai Priya R.V., Aparna Kori
3. A Study: Fiber Bragg Gratings and its Recent Applications
Tejasrikumar.Kori, Amogh.Kori, Akshata.Kori, Somesh.Nandi
4. Maximizing the Placement of Wavelength Converters in WDM Optical Networks using Adaptive Equal Opportunity Genetic Algorithm
Shruthi P C, Indumathi T S, Jagadeesh K C
5. Interpretation of Photonic Crystals with Hexagonal Symmetry
Harshada J Patil, Indumathi T S, Preeta Sharan, Somesh Nandi

12:30-13:30 Lunch Break**13:30-15:30 Parallel Sessions****IMIS-S3: Security and Privacy****Chair: Baojiang Cui, Beijing University of Posts and Telecommunications, China**

1. Cyber Security Situation Prediction Model Based on GWO-SVM
Hongxia Lu, Guidong Zhang, Yongjun Shen
2. Security Evaluation of Ring Oscillator PUF against Genetic Algorithm Based Modeling Attack
Yusuke Nozaki and Masaya Yoshikawa
3. Secure Kubernetes Networking Design Based on Zero Trust Model: A Case Study of Financial Service Enterprise in Indonesia
Nico Surantha and Felix Ivan
4. Key Technologies of Anomaly Detection Using PCA-LSTM
Gao Zhongshi, Su Yang, Ding Yi, Liu Yudong, Wang Xuan, Shen Junwei
5. Bidirectional LSTM: An Innovative Approach for Phishing URL Identification
Yuchen Liang, Jiangdong Deng, and Baojiang Cui

IMIS-S4: Algorithms, Methods and Systems for Ubiquitous Computing**Chair: Keita Matsuo, Fukuoka Institute of Technology, Japan**

1. Evaluation of a Two-way Tree-based Fog Computing (TWTBFC) Model
Yinzhe Guo, Ryuji Oma, Shigenari Nakamura, Dilawaer Duolikun, Tomoya Enokido and Makoto Takizawa
2. Real-time Ray Tracing Algorithm for Dynamic Scene
Tianhan Gao and Ying Li
3. A Dynamic Scene Recognition Method for Event-Based Social Network
Haidong Kang, Tianhan Gao, Nan Guo
4. A Static Instrumentation Method for ELF Binary
Wenchuan Yang, Yifei Wang, Baojiang Cui, Chen Chen
5. Design and Implementation of a Weather Measurement System Using Agile-Kanban
Takeru Kurita, Keita Matsuo and Leonard Barolli
6. Large-scale Electronic Voting based on Conflux Consensus Mechanism
Shuai Xiao, Xu An Wang, and Han Wang

SMEUCE-S1: Sustainability Management of e-Business**Chair: Kuei-Yuan Wang, Asia University, Taiwan**

1. The Effect of Personal Moral Philosophy on Perceived Moral Intensity in Hotel Industry
Chia-Ju Lu, Chiung-Chi Pen, Chiou-Shya Tornq
2. Study on Production & Marketing of Tea: A Company
Kuei-Yuan Wang, Xiao-Hong Lin, Chien-Kuo Han, Chi-Cheng Lin, Yi-Chi Liao, Tzu-Yun Ting, Ting-Shiuan Fang
3. The Influence of U.S. FED's Interest Rate-Raising Event Announcements on the Abnormal Returns in the Taiwan Stock Market
Xiao-Hong Lin, Kuei-Yuan Wang, Chien-Kuo Han, Yu-Sin Huang, Yi-Chi Liao, Tzu-Yun Ting, Ting-Shiuan Fang
4. The Relationship Between Dividend, Business Cycle, Institutional Investor and Stock Risk
Yung-Shun Tsai, Shyh-Weir Tzang, Chih-Hsing Hung, Chun-Ping Chang
5. Commercial Real Estate Evaluation: the Real Options Approach
Shyh-Weir Tzang, Chih-Hsing Hung, Chun-Ping Chang, Yung-Shun Tsai

16:00-16:30 Coffee Break**16:30-18:30 Parallel Sessions****IMIS-S5: Mobile and Wireless Networks****Chair: Tetsuya Shigeyasu, Prefectural University of Hiroshima, Japan**

1. A Fuzzy-based System for Actor Node Selection in WSANS: Simulation and Experimental Results
Donald Elmazi, Miralda Cuka, Makoto Ikeda, Keita Matsuo, Leonard Barolli
2. Wireless Sensor Network to Collect Training Data from Cycling
Cristian Alberoni, Ernesto Leon, Miguel A. Wister, Jose A. Hernandez-Nolasco
3. A Balanced Energy Efficient (BEE) routing scheme for Underwater WSNs
Wahab Khan, Wang Hua, Muhammad Ayaz, M.Shahid Anwar and Sadique Ahmad
4. Impact of Mobile Network Operators' Incentive for Public Health: A Study Based on Saudi 2030 Vision
Hamad Balhareth and Alsaleh Saad
5. Effects of Sharing Information for Available Routes by Ad-hoc Communication On a Disaster Stricken Area
Tetsuya Shigeyasu
6. An Implementation of LTE MAC-Layer Channel Multiplexing and Scheduling Mechanism Porting upon an FPGA Embedded System Platform to Support Massive NB-IoT Devices Accesses
Wen-Chung Tsai, Nien-Ting Huang, Song-Hao Huang, Ting-Ming Tsai

IMIS-S6: Smart Home and Energy Efficient Systems**Chair: Tomoya Enokido, Rissho University, Japan**

1. Modified Algorithm for Enhancing the Performance of Grid Systems in Task Scheduling
Osama AlFarraj, Ahmad Ali AlZubi, Salem Alkhalaf, Thamer Alhussain, Asma AlKhalaf
2. An Innovative Model based on FCRBM for Load Forecasting in the Smart Grid
Ghulam Hafeez, Nadeem Javaid, Muhammad Riaz, Khalid Umar, Zafar Iqbal and Ammar Ali
3. Service-aware Resource Allocation Based on RAN Slicing for Smart Grid
Sachula Meng, Zhihui Wang, Huixia Ding, Lili Sun, Delong Yang, Sai Wu, Xinzhi Cao, Xue Wang, Ying Wang, and Yuanbin Chen
4. The Improved Energy Consumption Laxity Based (IECLB) Algorithm to Perform Computation Processes
Tomoya Enokido, Dilawaer Duolikun, and Makoto Takizawa
5. Half Hourly Electricity Load Forecasting using Convolutional Neural Network
Abdul Basit Majeed Khan, Sajjad Khan, Sayeda Aimal, Muddassar Khan, Bibi Ruqia and Nadeem Javaid
6. RobotFarm: A Smart and Sustainable Hydroponic Appliance for Meeting Individual and Collective Needs
Silvia Angeloni and Giorgia Pontetti

SMEUCE-S2: Ubiquitous Commerce and Operation Management**Chair: Mei-Hua Huang, Asia University, Taiwan**

1. International Students' Career Intention-Resource Based View
Mei-Hua Huang, Onnavia Laura, Bae-Ling Chen, Chiung-Yen Chen
2. Do Institutional Investors Like Local Longevity Companies?
Mei-Hua Liao and Hidekazu Sone
3. Key Success Factors of Online Learning Website A Balanced Scorecard Perspective
Ying-Li Lin, Kuei-Yuan Wang, Mei-Lien Chen

4. A Deterministic Multi-item Inventory Model with Limited Warehouse Capacity
Ya-Lan Chan
5. Innovation Strategy of Productive Farm – A Case on Taiwan Mushroom Industry
Lin Shao-Chieh, Cheng Jen-Son, Cheh Shieh-Liang, Lu Chia-Ju
6. Social Impact Bonds (SIBs): Introduction and Cases Review
Shyh-Weir Tzang, Munkhzaya Usukhjargal, Chun-Ping Chang

19:00-21:00 Welcome Reception Party

- University of Technology Sydney
- Address: 15 Broadway, Ultimo NSW 2007, Australia

Thursday, July 4, 2019**08:00 Registration****09:00-10:00 Single Session: CISIS-2019 & IMIS-2019 Keynote II****CISIS-2019 & IMIS-2019 Keynote Talk II**

Dr. Nadeem Javaid: Intelligent Context Awareness in Internet of Agricultural Things

10:00-10:30 Coffee Break**10:30-12:30 Parallel Sessions****IMIS-S7: Information Security and Control**

Chair: Kangbin Yim, Soonchunhyang University, Korea

1. Blockchain-based Public Auditing Scheme for Shared Data
Han Wang, Xu An Wang, Shuai Xiao and Zichen Zhou
2. State-based Fuzzing for SIAP
Weiqi Li, Qian Wu, Baojiang Cui
3. Improved SM4 Encryption Algorithm based on Mixed Congruence Method
Jingling Zhao, Qingyang Bao, Yunze Ni
4. Capability-Based Information Flow Control Model in the IoT
Shigenari Nakamura, Tomoya Enokido, Leonard Barolli, and Makoto Takizawa
5. A Technical Survey on Methods for Detecting Rogue Access Points
Myoungsu Kim, Soonhong Kwon, Donald Elmazi, Jong-Hyok Lee, Leonard Barolli, Kangbin Yim

WAIS-S1: Information Security

Chair: Hiroaki Kikuchi, Meiji University, Japan

1. The Impact of Patients' Trust and Privacy on Use of Medical Mobile Applications
Alsaleh Saad, Hassan Kasim Haridi, Alzabin Sulaiman, Talal Alzabni
2. Conceptual security system design for mobile platforms based on human nervous system
Nanda Kumar Thanigaivelan, Ethiopia Nigussie, Seppo Virtanen, and Jouni Isoaho
3. Development of a Cyber Incident Information Crawler
Kazuki Ikegami, Michihiro Yamada, Hiroaki Kikuchi, Koji Inui
4. A Review of General Data Protection Regulation for Supply Chain Ecosystem
Avirup Dasgupta, Asif Qumer Gill, Farookh Hussain
5. Implementation of a Digital Signature in Backward Compatible QR Codes Using Subcell Division and Double Encoding
Nobuyuki Terura, Isao Echizen, Keiichi Iwamura
6. Examination and Comparison of Countermeasures Against Web Tracking Technologies
Takamichi Saito and Rikita Koshiba

ITAUC-S1: Intelligent Techniques and Ubiquitous Computing**Chair: Hsing-Chung Chen, Asia University, Taiwan**

1. Influential Reasonable Robust Virtual Machine Placement for Efficient Utilization and Saving Energy
Bibi Ruqia, Nadeem Javaid, Altaf Husain, Najeeba Muhammad Hassan, Hafiza Ghulam Hassan, Yumna Memon
2. The Hot Security Topics Analysis for the Announcements in ICANN Website by Using Web Crawler and Association Rule Technology
Hsing-Chung Chen, Tzu-Ya Chen, Shian-Shyong Tseng, Kang-Ming Chang, Fengming Chang, Mei-He Jiang
3. Using CBR Approach to Enhance Collaborative Design Ability
Shian-Shyong Tseng, Shih-Nung Chen, Tsung-Yu Yang, Edgar Chia-Han Lin
4. Performance Evaluations of Packet Encapsulation Using Scatter-Gather Direct Memory Access to Support Massive Devices Accesses for NB-IoT Small Cell
Wen-Chung Tsai, Nien-Ting Huang, Ting-Ming Tsai, Te-Jen Wang
5. Road Junction Identification in High Resolution Urban SAR Images Based on SVM
Jianghua Cheng, Tong Liu, Yueyong Zhou, Yanye Xiong

12:30-13:30 Lunch Break**13:30-15:30 Parallel Sessions****MCNCS-S1: Mobile Networks and Cloud Computing****Chair: Fang-Yie Leu, Tunghai University, Taiwan**

1. A LoRaWAN based Energy Efficient Data Encryption Method
Kun-Lin Tsai, Fang-Yie Leu, Shuo-Wen Chang, Jiun-Yi Lin, Huei-Tang Luo
2. Firewall Services Provided by Edge Computers under AMF and gNB in 5G
Sheng-Zheng Lin and Fang-Yie Leu
3. Air Pollution Source Identification by using Neural Network with Bayesian Optimization
Fang-Yie Leu and Jia-Sheng Ho
4. MIH and CRRM Handover in Trusted or Untrusted Environments
Mei-Yu Wu and Fang-Yie Leu
5. Applicable Dynamic Forensics Investigation via Client-Server Architecture with Myanfosis
Tin Maung Maung, Mie Mie Su Thwin

PISPIS-S1: Security and Internet Services**Chair: Kangbin Yim, Soonchunhyang University, South Korea**

1. Novel Encryption Method of GPS Information in Image File Using Format-Preserving Encryption
Changhyun Lee, Yeonju Choi, Hyeongmin Park, Kangbin Yim, Sun-Young Lee
2. Improvement of QR Code Access Control System Based on Lamport Hash Chain
Hyeongmin Park, Taeun Kim, Gaeul Kim, Wonyoung Jang, Kyungroul Lee, Sun-Young Lee
3. A Survey on Attack Cases Exploiting Computer Architectural Vulnerabilities
Kwangjun Kim, HeeDong Yang, Byeonggeun Son, Hanjae Yoon, Kangbin Yim, Manhee Lee
4. Unintended Certificate Installation into Remote IoT Nodes
Junghoon Park, Byeonggeun Son, Junyoung Park, Myoungsu Kim, Kangbin Yim

FINGNet-S1: Next Generation Networks**Chair: Hyunhee Park, Korean Bible University, Korea**

1. Malicious Adware Detection on Android Platform using Dynamic Random Forest
Kyungmin Lee and Hyunhee Park
2. A Smart Contract to Facilitate Goods Purchasing Based on Online Hagggle
Hsing-Chung Chen, Bambang Irawan, Chieh-Yang Shih, Cahya Damarjati, Zon-Yin Shae, Fengming Chang
3. Object Detection and Tracking based on Deep Learning
Yong-Hwan Lee and Wan-Bum Lee
4. Serendipity-based Recommendation Framework for SNS Users Using Tie Strength and Relation Clustering
Daeun Park, Jongmo Kim, Mye Sohn

15:30-16:30 Coffee Break**16:30-18:30 Parallel Sessions****FIMIS-S1: Innovative Mobile and Internet Services****Chair: Noriki Uchida, Fukuoka Institute of Technology, Japan**

1. Proposal of QoS controls by using OpenFlow for Heterogeneous Wireless Networks considered with the IoT Traffic Performance
Kanji Nakano and Noriki Uchida
2. Emotion Recognition Scheme via EEG Signal Analysis
Tianhan Gao and Song Zhou
3. A Review of Applying Blockchain Technology for Privacy Protection
Haoyu Ji and He Xu
4. Side Information Generation Algorithm Based on Weighted KSVD Dictionary*
Zhao Jingmei and Chen Rui
5. Controlled Quantum Dialogue Based on Logical Qubits
Hong-Mei Huang

19:00-21:00 Banquet Party

- Mercure Sydney
- Address: 818-820 George St, Chippendale NSW 2007, Australia

Friday, July 5, 2019**IMIS-2019 Organizing Committee Meeting and Discussion**

CISIS-2019 and IMIS-2019 Session Schedule
July 3 – 5, 2019
Sydney, Australia

Wednesday (July 3, 2019)		ROOM 1 (CB 11.04.203)	ROOM 2 (CB 11.04.202)	ROOM 3 (CB 11.04.300)	ROOM 4 (CB 10.04.470)	ROOM 5 (CB 10.04.440)	ROOM 6 (CB 10.04.430)
Slot	Time	Registration					
Session 1	09:00 – 10:00	CISIS-2019 and IMIS-2019 Keynote I (Plenary Room - CB11.00.405)					
Coffee Break	10:00 – 10:30	Coffee Break (CB11.00.401/405)					
Session 2	10:30 – 12:30	CISIS S1	CISIS S2	ECDS S1	IMIS S1	IMIS S2	OCC S1
Lunch	12:30 – 14:00	Lunch Break (CB11.00.401/405)					
Session 3	14:00 – 16:00	CISIS S3	CISIS S4	HCCIEA S1	IMIS S3	IMIS S4	SMEUCE S1
Coffee Break	16:00 – 16:30	Coffee Break (CB11.00.401/405)					
Session 4	16:30 – 18:30	CISIS S5	CISIS S6	IINIC S1	IMIS S5	IMIS S6	SMEUCE S2
Social Event	19:00 – 21:00	Welcome Reception Party					

Thursday (July 4, 2019)		ROOM 1 (CB 11.04.203)	ROOM 2 (CB 11.04.202)	ROOM 3 (CB 11.04.300)	ROOM 4 (CB 10.04.470)	ROOM 5 (CB 10.04.440)	ROOM 6 (CB 10.04.430)
Slot	Time	Registration					
Session 1	09:00 – 10:00	CISIS-2019 and IMIS-2019 Keynote II (Plenary Room - CB11.00.405)					
Coffee Break	10:00 – 10:30	Coffee Break (CB11.00.401/405)					
Session 2	10:30 – 12:30	CISIS S7	CISIS S8	VENOA S1	IMIS S7	WAIS S1	ITAUC S1
Lunch	12:30 – 13:30	Lunch Break (CB11.00.401/405)					
Session 3	13:30 - 15:30	IKDW S1	FCISIS S1	VENOA S2	MCNCS S1	PISPIS S1	FINGNet S1
Coffee Break	15:30 – 16:30	Coffee Break (CB11.00.401/405)					
Session 4	16:30 - 18:30	IKDW S2	SWISM S1	VENOA S3	FIMIS S1		
Social Event	19:00 – 21:00	Banquet Party					

Friday (July 5, 2019)		ROOM 1 (CB 11.04.203)	ROOM 2 (CB 11.04.202)	ROOM 3 (CB 11.04.300)	ROOM 4 (CB 10.04.470)	ROOM 5 (CB 10.04.440)	ROOM 6 (CB 10.04.430)
Slot	Time	CISIS-2019 and IMIS-2019 Steering Committee Meeting and Discussion					