PROGRAM GUIDE

CISIS-2016

The 10-th International Conference on
Complex, Intelligent, and Software Intensive Systems

and

IMIS-2016

The 10-th International Conference on
Innovative Mobile and Internet Services in Ubiquitous Computing

July 6th - July 8th, 2016

Fukuoka Institute of Technology (FIT), Fukuoka, Japan

Technically Co-sponsored by:

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Contents

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Welcome Message from CISIS 2016 General Co-Chairs

Welcome to the 10-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS 2016), which will be held from July 6-th to July 8-th, 2016, at Fukuoka Institute of Technology (FIT), Fukuoka, Japan in conjunction with the 10-th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS 2016).

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 2016 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 174 papers and accepted 42 papers (about 24% acceptance rate), which were selected after a careful review process.

We are very proud and honored to have 2 distinguished keynote talks by Prof. Fang-Yie Leu, Tunghai University, Taiwan and Prof. Hiroaki Nishino, Oita University, Japan, 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 2016 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 Chair Prof. Makoto Takizawa, Hosei University, Japan for his guidance and advices.

We would like to thank Makoto Ikeda, Fukuoka Institute of Technology, Japan; Florin Pop, University Politehnica of Bucharest, Romania and Farookh Hussain, University Technology Sidney, Australia as CISIS 2016 PC Co-Chairs for their efficient and timely work.

This year in conjunction with CISIS 2016 we have 10 International Workshops that complemented CISIS 2016 program with contributions for specific topics. We would like to thank the Workshop CoChairs: Tomoya Enokido, Rissho University, Japan; Olivier Terzo, Mario Boella Institute, Italy and all workshops organizers for organizing these workshops.

We thank Shinji Sakamoto and Yi Liu, Fukuoka Institute of Technology, Japan as Web Administrators for their excellent and timely work.

We would like to give special thanks to FIT and especially Mr. Yoji Unoki, Chairman of Board of Trustees of FIT for hosting CISIS-2016, providing the university facilities and his continuous support.

We would like to thank Fukuoka City and Fukuoka Convention Bureau for their great support, help, advices and local arrangement. We also appreciate the support from the Support Center for Advanced Telecommunications Technology Research Foundation (SCAT), Japan.

Finally, we would like to thank the Local Arrangement team of FIT for their support and good local arrangement for the conference.

We hope you will enjoy the conference and have a great time in Fukuoka, Japan.

CISIS 2016 General Co-Chairs

Leonard Barolli, *Fukuoka Institute of Technology (FIT), Japan*
Fatos Xhafa, *Technical University of Catalonia, Spain*

Welcome Message from CISIS 2016 Program Committee Co-Chairs

Welcome to the 10-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS 2016), which will be held from July 6-th to July 8-th, 2016, at Fukuoka Institute of Technology (FIT), Fukuoka, Japan in conjunction with IMIS 2016 International Conference.

This is the 10-th edition of the CISIS international conference, which has consolidated the conference as an important international event in the interconnected fields of Complex Systems, Intelligent Systems, and Software Intensive Systems. The goal of the conference is to bring together researchers from the different fields whose work is related to the above three challenging areas of ICT-enabled applications.

The CISIS 2016 conference edition was organized in 12 research tracks. The objective was to address and cover each main theme of the Software Intensive Systems, Complex Systems, and Intelligent Systems with a specific research track. The program for this conference is the result of hard and excellent work of many people, including authors, external reviewers, program committee members, track chairs, and conference officers. This year, we have selected 42 quality contributions among 174 papers received (about 24% acceptance rate). We believe that all of these papers not only provide novel ideas, new results, work in progress, and state-of-the-art techniques in this field, but also stimulate future research activities in the area of Complex Systems, Intelligent Systems, and Software Intensive Systems.

A lot of people have helped and worked hard to produce a successful CISIS 2016 event. We would like to express our sincere appreciation to all of them for their cooperation in completing the conference program under a very tight schedule. Firstly, we would like to thank CISIS 2016 General Co-Chairs: Prof. Leonard Barolli, Fukuoka Institute of Technology, Japan and Prof. Fatos Xhafa, Technical University of Catalonia, Spain for bringing together this important event. We are grateful to Honorary Chair Prof. Makoto Takizawa, Hosei University, Japan for his kind guidance and support. We would like to give special thanks to all Track Co-Chairs for their time, energy, and expertise to make CISIS 2016 very successful. Also, we thank the Program Committee Members and Reviewers for their hard work and their valuable comments that improved the quality of the presented papers. Last but not least, we would like also to thank Shinji Sakamoto and Yi Liu, Fukuoka Institute of Technology, Japan for their excellent work with the conference Website and Submission System management. Finally, we would like to thank the Local Arrangement Team of FIT for their support and good local arrangement for the conference.

We hope you will enjoy the conference and have a great time in Fukuoka, Japan.

CISIS 2016 Program Committee Co-Chairs

Makoto Ikeda, *Fukuoka Institute of Technology, Japan*
Florin Pop, *University Politehnica of Bucharest, Romania*
Farookh Hussain, *University Technology Sidney, Australia*

Welcome Message from the Workshops Co-Chairs of CISIS 2016 International Conference

Welcome to the Workshops of the 10-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS 2016), which will be held from July 6-th to July 8-th, 2016 at Fukuoka Institute of Technology (FIT), Fukuoka, Japan.

We are pleased that for this edition of CISIS International Conference we have 10 International Workshops. Some of these workshops are in 7-th, 8-th 9-th and 10-th editions. The objective was to complement as much as possible the main theme of CISIS 2016 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 10-th International Workshop on Engineering Complex Distributed Systems (ECDS 2016)

2. The 9-th International Workshop on Engineering Parallel and Multi-Core Systems (ePaMus 2016)

3. The 9-th International Workshop on Intelligent Informatics and Natural Inspired Computing (IINIC 2016)

4. The 7-th International Workshop on Autonomic Distributed Systems (ADiS 2016)

5. The 7-th International Workshop on Frontiers on Complex, Intelligent and Software Intensive Systems (FCISIS 2016)

6. The 7-th International Workshop on Virtual Environment and Network-Oriented Applications (VENOA 2016)

7. The 6-th Semantic Web/Cloud Information and Services Discovery and Management (SWISM 2016)

8. The 6-th International Workshop on Intelligent Computing In Large-Scale Systems (ICLS 2016)

9. The 5-th International workshop on Hybrid/Cloud computing Infrastructure for E-Science application (HCCIEA 2016)

10. The 1-st International Workshop on Motion Capture and Classification (MC2 2016)

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 2016 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 Shinji Sakamoto and Yi Liu, Fukuoka Institute of Technology, Japan for their excellent work and support as Web Administrators. We would like to give special thanks to the Local Organization Team of FIT, Fukuoka, Japan.

We hope you enjoy the workshops programs and proceedings.

Workshops Co-Chairs of CISIS 2016 International Conference

Tomoya Enokido, *Rissho University, Japan*
Olivier Terzo, *Mario Boella Institute, Italy*

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Koki Watanabe, *Fukuoka Institute of Technology, Japan*

Web Administrator Chairs
Shinji Sakamoto, *Fukuoka Institute of Technology, Japan*
Yi Liu, *Fukuoka Institute of Technology, Japan*

Welcome Message from the IMIS 2016 General Co-Chairs

Welcome to the 10-th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS 2016), which will be held from July 6-th to July 8-th, 2016, at Fukuoka Institute of Technology (FIT), Fukuoka, Japan in conjunction with the 10-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS 2016).

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 2016, 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 166 submissions and after a careful review process of 3 independent reviews per submission, 42 papers were accepted (about 25% 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 Chair Prof. Makoto Takizawa, Hosei University, Japan a for his advices and support. We would like to thank Noriki Uchida, Fukuoka Institute of Technology (FIT), Japan; Baojiang Cui, Beijing University of Posts and Telecommunications, China and Antonio J. Jara, HES-SO, Switzerland as PC Co-Chairs of IMIS 2016 for their timely work.

This year in conjunction with IMIS 2016 we have 10 International Workshops that complemented IMIS 2016 program with contributions for specific topics. We would like to thank the Workshop Co-Chairs: Kangbin Yim, SCH University, Korea; Francesco Palmieri, University of Salerno, Italy; Fang-Yie Leu, Tunghai University, Taiwan and all workshop organizers for organizing these workshops.

We thank Shinji Sakamoto and Yi Liu, Fukuoka Institute of Technology, Japan as Web Administrators for their excellent and timely work.

We would like to give special thanks to FIT and especially Mr. Yoji Unoki, Chairman of Board of Trustees of FIT for hosting IMIS 2016, providing the university facilities and his continuous support.

We would like to thank Fukuoka City and Fukuoka Convention Bureau for their great support, help, advices and local arrangement. We also appreciate the support from the Kajima Foundation, Japan.

Finally, we would like to thank the members of the Local Arrangement Team of FIT for their support and good local arrangement for the conference.

We hope that all of you enjoy IMIS 2016 and find this a productive opportunity to learn, exchange ideas and make new contacts.

IMIS 2016 General Co-Chairs

Leonard Barolli, *Fukuoka Institute of Technology (FIT), Japan*
Fatos Xhafa, *Technical University of Catalonia, Spain*

Welcome Message from IMIS 2016 Program Committee Co-Chairs

As PC Co-Chairs, we would like to welcome you to the 10-th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS 2016), which will be held from July 6-th to July 8-th, 2016, at Fukuoka Institute of Technology (FIT), Fukuoka, Japan in conjunction with the 10-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS 2016).

This is the 10-th edition of the IMIS International Conference, which is growing every year in quality and quantity. The goal of the conference is to bring together researchers from the different fields related to Ubiquitous and Pervasive Computing (UPC). The IMIS 2016 International Conference is organized in 13 research tracks, which address and cover each main theme of UPC with a specific set of research topics. The program for this conference is the result of hard and excellent work of many people, including authors, external reviewers, program committee members, track chairs, and conference officers. This year, we have selected 42 quality contributions among 166 papers received (about 25% acceptance rate). We believe that all of the papers selected not only provide novel ideas, new results, work in progress, and state-of-the-art techniques in this field, but also stimulate future research activities in the area of UPC.

As PC Co-Chairs, we would like to thank the many people that helped and worked hard to produce a successful IMIS 2016 event this year. We would like to express our sincere appreciation to all of them for their cooperation. Firstly, we would like to thank IMIS 2016 General Co-Chairs Prof. Leonard Barolli, Fukuoka Institute of Technology, Japan and Prof. Fatos Xhafa, Technical University of Catalonia, Spain for bringing together this important event. We are grateful to Honorary Chair Prof. Makoto Takizawa, Hosei University, Japan for his advices and support. We would like to give special thanks to all Track CoChairs for their time, energy, and expertise to make IMIS 2016 very successful. Also, we thank the Program Committee Members and Reviewers for their hard work and valuable comments that improved the quality of the presented papers. We would like to give special thanks to Shinji Sakamoto and Yi Liu, Fukuoka Institute of Technology, Japan for their excellent work as Web Administrators. Finally, we would like to thank the Local Arrangement Team of FIT for their support and good local arrangement for the conference.

We hope you will enjoy the conference and hope to see you in forthcoming editions.

IMIS 2016 Program Committee Co-Chairs

Noriki Uchida, *Fukuoka Institute of Technology (FIT), Japan*
Baojiang Cui, *Beijing University of Posts and Telecommunications, China*
Antonio J. Jara, *HES-SO, Switzerland*

Welcome Message from IMIS 2016 Workshops Co-Chairs

Welcome to the Workshops of the 10-th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS 2016), which will be held from July 6-th to July 8-th, 2016, at Fukuoka Institute of Technology (FIT), Fukuoka, Japan in conjunction with the 10-th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS 2016).

This year we have 10 workshops, which will be held together with IMIS 2016. The objective was to complement as much as possible the main themes of IMIS 2016 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 10-th International Workshop on Advances in Information Security (WAIS 2016)

2. The 6-th International Workshop on Mobile Commerce, Cloud Computing, Network and Communication Security (MCNCS 2016)

3. The 6-th International Workshop on Intelligent Techniques and Algorithms for Ubiquitous Computing (ITAUC 2016)

4. The 5-th International Workshop on Frontiers in Innovative Mobile and Internet Services (FIMIS 2016)

5. The 5-th International Workshop on Sustainability Management of e-Business and Ubiquitous Commerce Engineering (SMEUCE 2016)

6. The 5-th International Workshop on Extending Seamlessly to the Internet of Things (esIoT 2016)

7. The 5-th International Workshop on Advanced Communication Technologies and their Applications to Intelligent transportation systems, Cognitive radios and Sensor networks (ACTICS 2016)

8. The 5-th International Workshop on Frontiers in Innovative Mobile and Internet Services (FIMIS-2016)

9. The 4-th International Workshop on Practical Security Issues in Public Internet Services (PSIPIS 2016)

10. The 2-nd International Workshop on Big Data and IoT Security (BDITS 2016)

We would like to thank IMIS 2016 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 Shinji Sakamoto and Yi Liu, Fukuoka Institute of Technology, Japan for their excellent work and support as Web Administrators. We would also like to give special thanks to the Local Organization Team of FIT, Fukuoka, Japan.

We hope you enjoy the workshops programs and proceedings.

Workshops Co-Chairs of IMIS 2016 International Conference

Kangbin Yim, *SCH University, Korea*
Francesco Palmieri, *University of Salerno, Italy*
Fang-Yie Leu, *Tunghai University, Taiwan*

CISIS-2016 & IMIS-2016 Keynote I

Prof. Fang-Yie Leu, Tunghai University, Taiwan

How Data Replication and Early-fetch Policies Impact MapReduce Job Reliability and Energy Consumption

Abstract: Currently, MapReduce has been widely employed to tackle data-intensive tasks over a large-scale MapReduce cluster. But node failure in such a system is an unavoidable problem. MapReduce used several policies, such as data replication policies and early-fetch policy, to prevent data loss, reduce job failure probability and shorten job turnaround time. However, how these policies impact the job reliability (JR) and energy consumption (EC) of a MapReduce cluster is not clear. Here JR is defined as the reliability with which MapReduce cluster can complete a job, while EC is the energy consumed by the cluster to complete the job. In this talk, we would like to show the JR and EC of a MapReduce cluster on their policy combinations (POCOs) derived from two task assignment policies and two data replication policies. The conclusions enable MapReduce managers to comprehend how these POCOs impact the JR and EC of a cluster so that they can select suitable POCOs for their own MapReduce jobs and clusters.

CISIS-2016 & IMIS-2016 Keynote II

Prof. Hiroaki Nishino, Oita University, Japan

Sensing and Rendering: An Approach for Assisting Human Creative Activities

Abstract: Availability of high-performance low-cost processors and ubiquitous ICT infrastructure rapidly advance the embodiment of Cyber Physical System (CPS) in various research fields. CPS is a framework for seamlessly integrating physical objects into digital processing in a cyber world. It has originally been evolved in manufacturing for connecting various producing machines and their controlling computers. Now it is broadly interpreted as a concept for orchestrating human activities in the building of cyber-world applications. I would like to introduce an approach for assisting human creative activities by showing human-centered CPS applications incorporating multisensory technologies such as visualization and haptization. Some example systems such as a network topology visualization system through mobile augmented reality (AR), a skill acquisition system via haptic modality, and a personal 3D modeler for digital fabrication will be demonstrated in the talk.

CISIS-2016
Main Conference and Workshops Program

Wednesday, July 6, 2016

08:00 Registration

09:00-10:00 Single Session: Opening Ceremony and CISIS-2016 & IMIS-2016 Keynote I

CISIS-2016 & IMIS-2016 Keynote Talk I (PLENARY ROOM)

  Prof. Fang-Yie Leu: How Data Replication and Early-fetch Policies Impact MapReduce Job Reliability and Energy Consumption

10:00-10:30 Coffee Break

10:30-12:30 Parallel Sessions

CISIS-S1: Cloud Computing and Power Management

Chair: Olivier Terzo, Mario Boella Institute, Italy

1. OpenFlow Mesh Based Virtual Crossbar Network,
   Suguru Yasui, Minoru Uehara

2. Dynamic Approach to Scheduling Reconfigurable Scientific Workflows in Heterogeneous HPC Environments
   Alexey Cheptsov

3. The Extended Power Consumption Model to Perform Computation Type Application Processes on Virtual Machines
   Tomoya Enokido, Makoto Takizawa

4. Workload Management for Power Efficiency in Heterogeneous Data Centers
   Pietro Ruiu, Alberto Scionti, Joel Nider, Mike Rapoport

5. DrbCF: A Differentiated Ratio-Based Approach to Job Scheduling in Cloud Federation
   Phuong-Duy Nguyen, Nam Thoai

6. Accessing Cloud Services through Biometrics Authentication
   Pietro Ruiu, Giuseppe Caragnano, Giovanni L. Masala, Enrico Grosso

CISIS-S2: Fuzzy Systems and Soft Computing

Chair: Fatos Xhafa, Technical University of Catalonia, Spain

1. Effects of Sustained Communication Time on Reliability of JXTA-Overlay P2P Platform: A Comparison Study for Two Fuzzy-Based Systems
   Yi Liu, Shinji Sakamoto, Leonard Barolli, Evjola Spaho, Makoto Ikeda, Fatos Xhafa

2. A Fuzzy-Based System for Improving Node Security in MANET Clusters
   Mirjeta Alinci, Takaaki Inaba, Donald Elmazi, Evjola Spaho, Vladi Kolici, Leonard Barolli

3. A Fuzzy-Based Approach for Classifying Students' Emotional States in Online Collaborative Work
   Marta Arguedas, Luis Casillas, Fatos Xhafa, Thanasis Daradoumis, Adriana Peña, Santi Caballé

4. Performance Evaluation of a Fuzzy-Based Wireless Sensor and Actuator Network Testbed Considering Depth and RGB Sensors
   Keisuke Ebisu, Takaaki Inaba, Donald Elmazi, Makoto Ikeda, Elis Kulla, Leonard Barolli

5. A Survey on Fuzzy Logic Applications in Wireless and Mobile Communication for LTE Networks
   Ahmad Mudassir, Saleem Akhtar, Hesham Kamel, Nadeem Javaid

6. A Study on Determination of the Variance Faults of a Process Using Soft Computational Approaches
   Yuehjen E. Shao, Shih-Chieh Lin

FCISIS-S1: Robotics and Support Systems

Chair: Tatsushi Tokuyasu, Fukuoka Institute of Technology, Japan

1. Approaches to Understanding Hand Skill Acquisition
   Hiroki Taniguchi, Changshuai Liu, Tetsuya Morizono, Tatsushi Tokuyasu

2. Design of an Omnidirectional Wheelchair for Playing Tennis
   Keita Matsuo, Leonard Barolli

3. Improvement of Mesh Free Deforming Analysis for Maxillofacial Palpation on a Virtual Training System
   Kenji Yoshitomi, Tatsushi Tokuyasu, Kazuhiko Toshimitsu, Takaaki Nakayama, Kazutoshi Okamura, Kazunori Yoshiura

4. Development of Design Support System of a Lane for Cyclists and Pedestrians
   Shota Okamoto, Sen Takematsu, Shimpei Matsumoto, Takako Otabe, Takanori Tanaka, Tatsushi Tokuyasu

5. A Study on Evaluating Wearing Mobility of Wearable Robot Mechanisms
   Tetsuya Morizono, Shuhei Oda, Takashi Motomura, Kazuya Sakamoto, Shutaro Takeshita, Hiroyuki Matsubara

ECDS-S1: Distributed Systems and Applications

Chair: Takahiro Uchiya, Nagoya Institute of Technology, Japan

1. A Dependable Small World Communication Processor
   Hideki Mori

2. Development of Operations Support Mechanism for Wide-Area Distributed Agent Repositories
   Yoshitaka Kato, Takahiro Uchiya, Ichi Takumi, Tetsuo Kinoshita

3. Development of Distributed Backup System among Individuals by Introducing Deduplication
   Hiroaki Ishida, Takahiro Uchiya, Ichi Takumi, Tetsuo Kinoshita

4. Tourism Local Community System Using LOD
   Toshihiko Wakahara, Toshitaka Maki, Kazuki Takahashi, Akihiro Yamaguchi, Shinichiro Kimoto, Akinori Takagi, Yu Ichifuji, Noboru Sonehara

5. Proposal of Algorithm for Designating the Person in Charge of Page Turn of PEANUTS Considering the Concert Program
   Yasue Iijima, Shigeru Fujita, Susumu Konno

6. Avoiding Energy Holes in Underwater Wireless Sensor Networks with Balanced Load Distribution
   Irfan Azam, Abdul Majid, Tanveer Khan, Sajjad, Zahoor Ali Khan, Umar Qasim, Nadeem Javaid

12:30-14:00 Lunch Break

14:00-16:00 Parallel Sessions

CISIS-S3: Multimedia and e-Learning Systems

Chair: Santi Caballé, Open University of Catalonia, Spain

1. Analysis and Design of an eLearning Platform Featuring Learning Analytics and Gamification
   David Gañán, Santi Caballé, Robert Clarisó, Jordi Conesa

2. Intelligent Tutoring System for Learning Digital Systems on MOOC Environments
   David Baneres, Joaquin Saíz

3. Towards a Learning Analytics Support for Intelligent Tutoring Systems on MOOC Platforms
   David Baneres, Santi Caballé, Robert Clarisó

4. Evaluation of Analytic Projects in the Context of Higher Education
   Isabel Guitart, Jordi Conesa

5. Clusters of Trends Detection in Microblogging: Simple Natural Language Processing vs Hashtags – Which is More Informative?
   Tomasz Hachaj, Marek R. Ogiela

6. On Sharing and Synchronizing Groupware Calendars Under Android Platform
   Fatos Xhafa, Daniel Palou, Santi Caballé, Leonard Barolli

CISIS-S4: Complex and Scalable Systems

Chair: Makoto Takizawa, Hosei University, Japan

1. A Centrality-Based History Prediction Routing Protocol for Opportunistic Networks
   Amarpreet Bamrah, Isaac Woungang, Leonard Barolli, Sanjay Kumar Dhurandher, Glaucio H. S. Carvalho, Makoto Takizawa

2. Dense 3D Mapping Using Volume Reigstration from Monocular View
   Luke Lincoln, Ruben Gonzalez

3. Scalable Group Communication Protocols in the Peer-to-Peer Model of Topic-Based Publish/Subscribe Systems
   Hiroki Nakayama, Shigenari Nakamura, Tomoya Enokido, Makoto Takizawa

4. DEAC: Depth and Energy Aware Cooperative Routing Protocol for Underwater Wireless Sensor Networks
   Khayyam Pervaiz, Abdul Wahid, Mahin Sajid, Malik Khizar, Zahoor Ali Khan, Umar Qasim, Nadeem Javaid

5. A Model for Migration of Virtual Machines to Reduce Electric Energy Consumption
   Dilawaer Duolikun, Ryo Watanabe, Tomoya Enokido, Makoto Takizawa

6. Information Flow Control Models in Peer-to-Peer Publish/Subscribe Systems
   Shigenari Nakamura, Tomoya Enokido, Makoto Takizawa

FCISIS-S2: Complex and Scalable Systems

Chair: Hiroshi Maeda, Fukuoka Institute of Technology, Japan

1. Heuristic Algorithm Based Energy Management System in Smart Grid
   Naveed Ur Rehman, Hassan Rahim, Adnan Ahmad, Zahoor Ali Khan, Umar Qasim, Nadeem Javaid

2. Simulation of Optical Pulse Propagation in Nonlinear and Dispersive Medium by Constrained Interpolated Profile Method
   Hiroshi Maeda, Michael Cada, Jianming Jin, Kazuya Tomiura

3. Toward an Integrated Tool for Complex Environmental Systems Modeling: A Cellular Automata Approach
   Mustapha Ouardouz, Abdes-Samed Bernoussi, Mina Amharref

4. A Web Service for C Programming Learning and Teaching
   Yu Yan, Hiroto Nakano, Kohei Hara, Takenobu Kazuma, Aiguo He

ADiS-S1: Autonomic Distributed Systems

Chair: Elena Apostol, University Politehnica of Bucharest, Romania

1. Real-Time Processing of Heterogeneous Data in Sensor-Based Systems
   Andrei Dincu, Elena Apostol, Cătălin Leordeanu, Mariana Mocanu, Dan Huru

2. Distributed Platform for the Analysis of Cryptographic Algorithms
   Vlad-Cosmin Ozunu, Cezar-Costin Pîrvu, Cătălin Leordeanu, Valentin Cristea

3. Integrated Cloud Framework for Farm Management
   Cristian Radu, Elena Apostol, Cătălin Leordeanu, Mariana Mocanu

4. Energy-Aware Algorithms to Select Servers in Scalable Clusters
   Hiroki Kataoka, Atsuhiro Sawada, Dilawaer Duolikun, Tomoya Enokido, Makoto Takizawa

16:00-16:30 Coffee Break

16:30-18:30 Parallel Sessions

CISIS-S5: Wireless Communication Systems and Classification Techniques

Chair: Junichi Honda, Electronic Navigation Research Institute (ENRI), Japan

1. Experimental Results of a Raspberry Pi Based Wireless Mesh Network Testbed Considering TCP and LoS Scenario
   Tetsuya Oda, Masafumi Yamada, Ryoichiro Obukata, Leonard Barolli, Isaac Woungang, Makoto Takizawa

2. Influences of 3D Aircraft Model to ILS Localizer
   Junichi Honda, Hisashi Yokoyama, Hirohisa Tajima, Takuya Otsuyama

3. Numerical Analysis of Transmission Spectrum of X-shaped Photonic Crystal Waveguide for WDM System
   Hiroshi Maeda, Michael Cada, Yuting Bao, Jianming Jin, Kazuya Tomiura

4. Implementation and Evaluation of Never Die Network System for Disaster Prevention Based on OpenFlow and Cognitive Wireless Technology
   Goshi Sato, Noriki Uchida, Norio Shiratori, Yoshitaka Shibata

5. A Study of Malicious PDF Detection Technique
   Mai Iwamoto, Shunsuke Oshima, Takuo Nakashima

6. A Fast Classification Method of Isomorphic Polygons in Design Data of Large Scale Integrated Circuit
   Shuji Shoji, Akio Koyama

CISIS-S6: Bioinformatics and Intelligent Computing

Chair: Hui-Huang Hsu, Tamkang University, Taiwan

1. Biological Pathway Analysis for De Novo Transcriptomes through Multiple Reference Species Selections
   Chun-Cheng Liu, Chien-Ming Chen, Cin-Han Yang, Tun-Wen Pai, Phaik-Eem Lim, Siew-Moi Phang, Sze-Wan Poong, Kok-Keong Lee

2. Gene Ontology Based Clustering Analysis for Functionally Linked Genes and Cross-Species Comparison for SSR Biomarkers
   Yang-Chun Chang, Chien-Ming Chen, Tun-Wen Pai, Ronshan Cheng, Ming-Hsiung Chiu

3. Application of the Artifical Neural Network in Predicting the Direction of Stock Market Index
   Qiu Mingyue, Li Cheng, Song Yu

4. Investigation of Fitness Function Weight-Coefficients for Optimization in WMN-PSO Simulation System
   Shinji Sakamoto, Tetsuya Oda, Makoto Ikeda, Leonard Barolli, Fatos Xhafa, Isaac Woungang

5. A System for Phylogenetic Analyses over Alignments of Next Generation Sequence Data
   Yuki Nishimura, Toshiyuki Amagasa, Yuji Inagaki, Tetsuo Hashimoto, Hiroyuki Kitagawa

6. Performance Analysis of WMN-GA System for Different WMN Architectures and TCP Congestion-Avoidance Algorithms
   Ilir Shinko, Tetsuya Oda, Admir Barolli, Vladi Kolici, Leonard Barolli, Fatos Xhafa

VENOA-S1: Innovative Systems and Applications

Chair: Hiroaki Nishino, Oita University, Japan

1. A Proposal of Coding Rule Learning Function in Java Programming Learning Assistant System
   Nobuo Funabiki, Takuya Ogawa, Nobuya Ishihara, Minoru Kuribayashi, Wen-Chung Kao

2. Practice of Programming Education Using Scratch and NanoBoardAG for High School Students
   Kazuaki Yoshihara, Kenzi Watanabe

3. Flexible Screen Sharing System between PC and Tablet for Collaborative Activities
   Hiroyuki Masaki, Hitoshi Habe, Nobukazu Iguchi

4. Proposed of Automatic Collection System on Farm Work Recode by RFID
   Yukikazu Murakami, Mizuki Ando, Miyuu Miyamoto, Slamet Kristanto Tirto Utomo

5. Parameters of Noise Suppression Based on Wavelet Transform for Phonocardiographic Signals
   Shinya Kudo, Keisuke Nishijima, Shingo Uenohara, Ken'Ichi Furuya

6. A Study on the Optimum Number of Training Data in Snore Activity Detection Using SVM
   Keisuke Nishijima, Shingo Uenohara, Ken'ichi Furuya

MC2-S1: Motion Capture and Classification

Chair: Kin Fun Li, University of Victoria, Canada

1. Design of Sketch-Based Image Search UI for Finger Gesture
   Takayuki Kasai, Kosuke Takano

2. Real-Time Motion Capture: An Overview
   Xudong Zhu, Kin Fun Li

3. A Posture Detection System Using Consumer Wearable Sensors
Masatoshi Matsumoto, Kosuke Takano

4. Motion Retrieval Based on Semantic Code and Dynamic Bayesian Network Inference
Qinkun Xiao, Kin Fun Li, Ren Song

19:00-21:00 Welcome Reception Party

Oasis, Fukuoka Institute of Technology
B Building, 1-st Floor
For the location of Oasis restaurant, please check the Campus Map (No. 19) in the last page of the program.

Thursday, July 7, 2016

08:00 Registration

09:00-10:00 Single Session: CISIS-2016 & IMIS-2016 Keynote II

CISIS-2016 & IMIS-2016 Keynote Talk II

Prof. Hiroaki Nishino: Sensing and Rendering: An Approach for Assisting Human Creative Activities

10:00-10:30 Coffee Break

10:30-12:30 Parallel Sessions

CISIS-S7: Wireles Sensor Networks and VANETs

Chair: Evjola Spaho, Polytechnic University of Tirana, Albania

1. A Reliable and Interference-Aware Routing Protocol for Underwater Wireless Sensor Networks
   Abdul Majid, Irfan Azam, Tanveer Khan, Sangeen, Zahoor Ali Khan, Umar Qasim, Nadeem Javaid

2. SMIC: Sink Mobility with Incremental Cooperative Routing Protocol for Underwater Wireless Sensor Networks
   Mahin Sajid, Abdul Wahid, Khayyam Pervaiz, Malik Khizar, Zahoor Ali Khan, Umar Qasim, Nadeem Javaid

3. EEIRA: An Energy Efficient Interference and Route Aware Protocol for Underwater WSNs
   Anwar Khan, Nadeem Javaid, Hasan Mahmood, Sangeen, Zahoor Ali Khan, Umar Qasim

4. Comparative Analysis of Energy Management Solutions Focusing Practical Implementation
   Danish Mahmood, Nadeem Javaid, Umar Nouman, Afaq Urrahman, Zahoor Ali Khan, Umar Qasim

5. Estimation of Communication Range Using Wi-Fi for V2X Communication Environment
   Kenta Ito, Go Hirakawa, Yoshitaka Shibata

6. Evaluation of Single-Copy and Multiple-Copy Routing Protocols in a Realistic VDTN Scenario
   Evjola Spaho, Leonard Barolli, Vladi Kolici, Algenti Lala

HCCIEA-S1: Hybrid/Cloud Computing Infrastructure for e-Science Application

Chair: Olivier Terzo, Mario Boella Institute, Italy

1. BUSSOLA: A Cloud Collaborative Platform of Oriented Services to Passengers
   Lorenzo Mossucca, Klodiana Goga, Gianluca Spoto, Thomas Bolognesi, Giuseppe Caragnano

2. DemoGRAPE: Managing Scientific Applications in a Cloud-Federated Environment
   Alberto Scionti, Pietro Ruiu, Olivier Terzo, Luca Spogli, Lucilla Alfonsi, Vincenzo Romano

3. QoS Requirements for a Scientific Opportunistic Cloud
   Harold Castro, Juan D. Osorio

4. Automated Cloud Computing Approach for the Simulation of Chemo-Hydrodynamic Problems
   Luca Pilosu, Pietro Ruiu, Klodiana Goga, Marcello A. Budroni

VENOA-S2: Basic Network Services and Applications

Chair: Hiroaki Nishino, Oita University, Japan

1. Experimental Verification of Docker-Based Distributed Cloud Applications for Secured Mobile VoIP
   ByungRae Cha, Sun Park, JongWon Kim

2. A Content Searching Scheme Using Popularity and Link Degree of Nodes in Unstructured P2P Networks with Cache Routers
   Daiki Takeda, Shinji Sugawara

3. A System for Supporting Migration to Overlay OpenFlow Network Using OpenStack
   Keita Nomura, Yoshiaki Taniguchi, Nobukazu Iguchi, Kenzi Watanabe

4. Study on Cross-Cutting and Systematic Regional Community Networks
   Eiji Aoki, Zenjiro Oba, Ritsuko Watanabe

5. Proposal of a Malicious Communication Control Method Using OpenFlow
   Minoru Ikebe, Daiki Shimokawa, Kazuyuki Yoshida

IINIC-S1: Intelligent and Natural Inspired Computing

Chair: Elis Kulla, Okayama University of Science (OUS), Japan

1. A Neural Network Based User Identification for Tor Networks: Comparison Analysis of Activation Function Using Friedman Test
   Tetsuya Oda, Ryoichiro Obukata, Masafumi Yamada, Taro Ishitaki, Masahiro Hiyama, Leonard Barolli

2. Performance Evaluation of an Ambient Intelligence Testbed for Improving Quality of Life: Evaluation Using Clustering Approach
   Ryoichiro Obukata, Tetsuya Oda, Donald Elmazi, Leonard Barolli, Keita Matsuo, Isaac Woungang

3. Neuro-Adaptive Learning Fuzzy-Based System for Actor Selection inWireless Sensor and Actor Networks
   Elis Kulla, Donald Elmazi, Leonard Barolli

4. Demand Side Management Using Hybrid Bacterial Foraging and Genetic Algorithm Optimization Techniques
   Adia Khalid, Nadeem Javaid, Abdul Mateen, Bilal Khalid, Zahoor Ali Khan, Umar Qasim

5. Design and Implementation of Meal Information Collection System Using IoT Wireless Tags
   Kohei Kaiya, Akio Koyama

6. Application of Fuzzy Logic for Secure Handover in Wireless Cellular Networks
   Takaaki Inaba, Donald Elmazi, Shinji Sakamoto, Tetsuya Oda, Makoto Ikeda, Leonard Barolli

12:30-14:00 Lunch Break

14:00-16:00 Parallel Sessions

ePaMus-S1: Parallel, Networking and Multi-core Systems

Chair: Fatos Xhafa, Technical University of Catalonia, Spain

1. Enhancing Data Reuse in Cache Contention Aware Thread Scheduling on GPGPU
   Chin-Fu Lu, Hsien-Kai Kuo, Bo-Cheng Charles Lai

2. Core Point Paradigm and Evolution with Water Ripple Model
   Zhibing Yu, Kun Ma, Bo Yang

3. Hybrid Analysis for Mining Network Protocol's Hidden Behavior
   Yan-Jing Hu, Xu An Wang

4. Toward a Semantic Cache Supporting Version-Based Consistency
   Zhe Yang, Kun Ma, Jialin Zhong

ICLS-S1: Intelligent and Secure Networking Systems

Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan

1. A Multi-replica Associated Deleting Scheme in Cloud
   Yuanyuan Zhang, Jinbo Xiong, Xuan Li, Biao Jin, Suping Li, Xu An Wang

2. Fully Detection of Illegal Memory Access Defects
   Yukun Dong

3. Design and Implementation of an Extensible Network Device Management System
   Jianan Lin, Qiaoduo Zhang, Lingcui Zhang, Fenghua Li

4. Extensible Command Parsing Method for Network Device
   Ning Li, Lingcui Zhang, Qiaoduo Zhang, Fenghua Li

5. An ID-based Dynamic Authenticated Group Key Agreement Scheme with Optimal Round Complexity from Pairings
   Fei Li, Dongqing Xie, Wei Gao, Xu An Wang, Jianhua Yan

6. Implementation of Positioning Management System for Improtant Equipments Based on Internet of Things
   Yan Yang

VENOA-S3: Virtual Reality Systems and Applications

Chair: Hiroaki Nishino, Oita University, Japan

1. 3D Model Generation of Cattle by Shape-from-Silhouette Method for ICT Agriculture
   Yu Xiang, Shohei Nakamura, Hiroki Tamari, Shigeru Takano, Yoshihiro Okada

2. 3D Model Data Retrieval System Using KAZE Feature for Accepting 2D Image as Query
   Hideki Sagara, Shigeru Takano, Yoshihiro Okada

3. Creating Method for Real-Time CG Animation of Cooperative Motion of Both Hands for Mirror Box Therapy Support System
   Masato Tanaka, Makoto Fujimura, Toshio Higashi, Toru Kobayashi

4. Evaluating a Multimedia e-Learning System for CAD Drawing Course
   Dahlan Nariman

5. A Desktop 3D Modeling System Controllable by Mid-air Interactions
   Kanako Nakazato, Hiroaki Nishino, Toshitada Kodama

SWISM-S1: Semantic, Cloud and Agent-Based Computing

Chair: Beniamino Di Martino, Second University of Naples, Italy

1. Automatic Production of an Ontology with NLP: Comparison between a Prolog Based Approach and a Cloud Approach Based on Bluemix Watson Service
   Beniamino di Martino, Antonio Esposito, Salvatore D'Angelo, Alessandro Marrazzo, Angelo Capasso

2. Towards a Uniform Semantic Representation of Business Processes, UML Artefacts and Software Assets
   Beniamino di Martino, Antonio Esposito, Stefania Nacchia, Salvatore Augusto Maisto

3. A Security SLA-driven Methodology to Set-Up Security Capabilities on Top of Cloud Services
   Valentina Casola, Alessandra de Benedictis, Mădălina Eraşcu, Massimiliano Rak, Umberto Villano

4. An Agent-Based Model for Autonomous Planning
   Flora Amato, Francesco Moscato

19:00-21:00 Banquet Party

Hotel Centraza Hakata
Address: *4-23, Chuogai, Hakataeki, Hakata-ku, Fukuoka-shi, Fukuoka 812-0012, Japan*
E-Mail: *stay@centraza.com*
Web-site: http://www.centraza.com/english/index.html

How to go to Hotel Centraza Hakata from FIT:

Take JR train (Kagoshima Line, Trains Leaving Fukkodai-Mae station) to "Hakata" station. All the trains stop at Hakata station. The local trains operate every 20 minutes and it takes about 20 minutes from Fukkodai-Mae station to Hakata station. The rapid trains operate every 25 minutes and it takes about 15 minutes from Fukkodai-Mae station to "Hakata station". The ticket price is 280 yen and there is no difference in the ticket price between the local and rapid trains. Then, you can get to Hotel Centraza Hakata about 2 minites by walk.

Friday, July 8, 2016

CISIS-2016 Organizing Committee Meeting and Discussion

IMIS-2016
Main Conference and Workshops Program

Wednesday, July 6, 2016

08:00 Registration

09:00-10:00 Single Session: Opening Ceremony and CISIS-2016 & IMIS-2016 Keynote I

CISIS-2016 & IMIS-2016 Keynote Talk I (PLENARY ROOM)

Prof. Fang-Yie Leu: How Data Replication and Early-fetch Policies Impact MapReduce Job Reliability and Energy Consumption

10:00-10:30 Coffee Break

10:30-12:30 Parallel Sessions

IMIS-S1: Context and Location-Aware Computing

Chair: Hae-Duck J. Jeong, Korean Bible University, Korea

1. An Approach for Predicting Disease Outbreaks Using Fuzzy Inference among Physiological Variables
   Eunji Lee, Chang Choi, Minchang Lee, Kunseok Oh, Pankoo Kim

2. Image-Based Plant Recognition by Fusion of Multimodal Information
   Jen-Chang Liu, Chieh-Yu Chiang, Sam Chen

3. Mining Crowdsourcing Photos for Recognizing Landmark Areas
   Yi-Hau Liu, Shian-Hua Lin, Chun-Ku Lai, Chun-Che Huang, Cheng-Yu Lu

4. Component Extraction from Handwritten Chinese Characters for Font Synthesis in Personal Style Using Smart-phone APP
   Chen-Ying Hsieh, Jeng-Wei Lin

5. A Particle Filter Approach for Pedestrian Dead Reckoning Using Wearable Sensors
   Yi-Lin Hsu, Yan-Ju Chen, Sheng-Wen Shih

6. Performance Analysis of Amplify and Forward Technique in Region Based Cooperative Routing for Underwater Wireless Sensor Networks
   Sheraz Hussain, Nadeem Javaid, Muhammad, Israr Ahmad, Umar Qasim, Zahoor Ali Khan

IMIS-S2: Wireless Sensor Networks

Chair: Makoto Ikeda, Fukuoka Institute of Technology, Japan

1. A QoS-aware Actor Node Selection System for Wireless Sensor and Actor Networks Using Fuzzy Logic
   Donald Elmazi, Shinji Sakamoto, Elis Kulla, Tetsuya Oda, Makoto Ikeda, Leonard Barolli

2. AVN-AHH-VBF: Avoiding Void Node with Adaptive Hop-by-Hop Vector Based Forwarding for Underwater Wireless Sensor Networks
   Taimur Hafeez, Nadeem Javaid, Ahmad Raza Hameed, Arshad Sher, Zahoor Ali Khan, Umar Qasim

3. Geographic and Opportunistic Clustering for Underwater WSNs
   Syed Zarar, Nadeem Javaid, Arshad Sher, Ahmad Raza Hameed, Zahoor Ali Khan, Umar Qasim

4. Multi-sensor Based Low Power Sensing Model for Inferencing Location Context
   Deok-Ki Kim, Jae-Hyeon Park, Jung-Won Lee

5. Enhanced Energy Efficient Depth Based Routing Protocol for Underwater WSNs
   Malik Khizar, Abdul Wahid, Khayyam Pervaiz, Mahin Sajid, Umar Qasim, Zahoor Ali Khan, Nadeem Javaid

6. DRADS: Depth and Reliability Aware Delay Sensitive Routing Protocol for Underwater WSNs
   Usman Shakeel, Naeem Jan, Khizar, Umar Qasim, Zahoor Ali Khan, Nadeem Javaid

ITAUC-S1: Intelligent Techniques and Algorithms

Chair: Hsing-Chung Chen, Asia University, Taiwan

1. On the Robust Approach to Data Inconsistency Detection of Sensor Networks
   Tzu-Liang Kung, Chun-Nan Hung, Yuan-Hsiang Teng, Jui-Yu Hung, Lih-Hsing Hsu

2. A Framework of Cycle-Based Clustering on the Crossed Cube Architecture
   Tzu-Liang Kung, Chun-Nan Hung, Cheng-Kuan Lin, Hsiang-Chun Chen, Chia-Hui Lin, Lih-Hsing Hsu

3. Identification of Negative Comments on Internet Forums
   Jung-Kuei Chang, Wei-Yun Hsu, Te-Chan Chen, Hui-Huang Hsu

4. Security Awareness Investigation for Mobile User Examined by Using Association Rule Mining Method
   Hsing-Chung Chen, Pei-Chi Yeh, Ze-Min Lin, Qiu-Hua Ruan

5. Intelligent Management Model Based on CBR-SDA Approach – An Example of Smart Life Recommendation System for Choosing Clothes and Accessories
   Hsing-Chung Chen, Qiu-Hua Ruan, Pei-Chi Yeh, Ze-Min Lin

SMEUCE-S1: Knowledge Learning and Service Innovation

Chair: Mei-Hua Liao, Asia University, Taiwan

1. Exploring Value of e-Service Innovation: e-Service and Co-operation Complementarity
   Tin-Chang Chang, Shu-Hui Chuang

2. Can Workplace Friendship Reduce Social Loafing?
   Ching-Hui Shih, Yao-Hua Wang

3. Exploring the Performance of Service Innovation: Infrastructure Capability and Innovation Orientation Complementarity
   Shu-Hui Chuang, Shinyi Lin, Tin-Chang Chang

4. Old-Established Companies' Traditions and Innovations – Focusing on e-Business of Japan and Taiwan
   Mei-Hua Liao, Yu-Ci Xu, Hidekazu Sone

5. The Key Value-Drivers of Successful Travel Agency from the Perspective of Its Core Competence: Lion Travel versus Phoenix Tours
   Kuei-Yuan Wang, Cheng-Chun Kuo

12:30-14:00 Lunch Break

14:00-16:00 Parallel Sessions

IMIS-S3: Security and Privacy

Chair: Baojiang Cui, Beijing University of Posts and Telecommunications, China

1. Anomaly Detection Model Based on Hadoop Platform and Weka Interface
   Baojiang Cui, Shanshan He

2. An Emergency Communication System Based on UAV-assisted Self-Organizing Network
   Tianhan Gao, Fan Lang, Nan Guo

3. Dynamic Taint Tracking of Web Application Based on Static Code Analysis
   Jingling Zhao, Junxin Qi, Liang Zhou, Baojiang Cui

4. A Security Risk Assessment Framework for Smart Car
   Hee-Kyung Kong, Tae-Sung Kim, Myoung-Ki Hong

5. Understanding Factors Affecting Information Security Practice of Elementary School Students
   Seung-Jae Choi, Tae-Sung Kim

6. Achieving Virtualization Trustworthiness Using Software Mechanisms
   Francois Serman, Michael Hauspie

IMIS-S4: Big Data and Data Management

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

1. Rule-Based Action Recognition: Performance Comparison between Lua and GDL Script Language
   Tomasz Hachaj, Marek R. Ogiela

2. Efficiency of Strategic Data Sharing and Management Protocols
   Lidia Ogiela, Marek R. Ogiela, Urszula Ogiela

3. A New Multiple Label Propagation Algorithm for Linked Open Data
   Toshitaka Maki, Kazuki Takahashi, Toshihiko Wakahara, Akihiro Yamaguchi, Yu Ichifuji, Noboru Sonehara

4. Adaptive Array Antenna Control Methods on Delay Tolerant Networks for Road Surveillance Systems
   Noriki Uchida, Kenta Ito, Go Hirakawa, Yoshitaka Shibata

5. Energy-Aware Analysis of Synchronizing a Groupware Calendar
   Fatos Xhafa, Daniel Palou, Leonard Barolli, Makoto Takizawa

6. Improvement of Large Data Acquisition Method without the Interference on the CPU Load for Automotive Software Testing
   Jong-Hwan Shin, Ki-Yong Choi, Jeong-Woo Lee, Jung-Won Lee

WAIS-S1: Secure Systems

Chair: Hiroaki Kikuchi, Meiji University, Japan

1. Estimating CPU Features by Browser Fingerprinting
   Takamichi Saito, Koki Yasuda, Takayuki Ishikawa, Rio Hosoi, Kazushi Takahashi, Yongyan Chen, Marcin Zalasiński

2. An Authorization Scheme Concealing Client's Access from Authentication Server
   Takamichi Saito, Yuta Tsunoda, Daichi Miyata, Ryohei Watanabe, Yongyan Chen

3. Interactive History Sniffing Attack with Amida Lottery
   Hiroaki Kikuchi, Kota Sasa, Yuta Shimizu

4. A Proposal for Cyber-Attack Trace-Back Using Packet Marking and Logging
   Pengfei Li, Yaokai Feng, Junpei Kawamoto, Kouichi Sakurai

5. A Behavior-Based Method for Detecting DNS Amplification Attacks
   Longzhu Cai, Yaokai Feng, Junpei Kawamoto, Kouichi Sakurai

6. Generalized Graph-Based Visual Secret Sharing Schemes for Multiple Secrets
   Yuji Suga

SMEUCE-S2: Sustainability Management for e-Business and Professional Associations

Chair: Hsing-Chung Chen, Asia University, Taiwan

1. SEO Behavior of the Family Firms through Agency Theory Perspective
   Mei-Hua Liao, Wun-Huei Chen, Ying-Yun Lin

2. Antecedents and Outcomes of Trust in Professional Associations
   Mei Hua Huang, Chiung Yen Chen

3. Causal Analysis in Human Capital, R&D Assets and Financial Performance: Evidence from Taiwanese Firms Operating in China
   Ying-Li Lin, Fang-Hua Hsiao, Pei-Shan Li

4. The Impact of Stock Prices, Risks and Business Cycle on Overconfidence
   Yung-Shun Tsai, Chun-Ping Chang, Shyh-Weir Tzang, Yu-Jhen Liou

5. A Comparative Study of Valuation and Value Drivers in the Auto Lamp Industry: Two Cases of Auto Lamp Companies
   Chien-Wen Lai, Kuei-Yuan Wang, Tzu-Yu Lin

16:00-16:30 Coffee Break

16:30-18:30 Parallel Sessions

IMIS-S5: Energy Saving and Intelligent Computing

Chair: Tomoya Enokido, Rissho University, Japan

1. Automatic Synthesis of Best Practices for Energy Consumptions
   Matteo Cristani, Francesco Olivieri, Claudio Tomazzoli

2. Design and Evaluation of Algorithms to Energy-Efficiently Select Servers for Storage and Computation Processes
   Atsuhiro Sawada, Hiroki Kataoka, Dilawaer Duolikun, Tomoya Enokido, Makoto Takizawa

3. MobiL-AUV: AUV-Aided Localization Scheme for Underwater Wireless Sensor Networks
   Hammad Maqsood, Nadeem Javaid, Aqeb Yahya, Babar Ali, Zahoor Ali Khan, Umar Qasim

4. Bandwidth Estimation Based on MACD for DASH
   Van-Huy Vu, Tein-Yaw Chung

5. Performance Analysis of a Genetic Algorithm Based System for Wireless Mesh Networks Considering Weibull Distribution, DCF and EDCA
   Admir Barolli, Tetsuya Oda, Ilir Shinko, Leonard Barolli, Fatos Xhafa, Makoto Takizawa

6. A Vegetable Category Recognition System Using Deep Neural Network
   Yuki Sakai, Tetsuya Oda, Makoto Ikeda, Leonard Barolli

IMIS-S6: Multimedia Systems and Applications

Chair: Tomoyuki Ishida, Ibaraki University, Japan

1. Proposal of a Virtual Traditional Japanese Crafting Presentation System Mobile Edition
   Misaki Iyobe, Tomoyuki Ishida, Akihiro Miyakawa, Kaoru Sugita, Noriki Uchida, Yoshitaka Shibata

2. Template-Driven Medical Imaging Information Providing Process Using Semantic Relations Targeting Acute Myocardial Infarction
   Ye-Seul Park, Meeyeon Lee, Jung-Won Lee

3. Implementation of Voice Guidance Function for Sightseeing Contents Using Web Speech API
   Kaoru Sugita, Masao Yokota

4. Feedback of Laughter by Detecting Variation in Respiration Amplitude for Augmenting Laughter
   Makoto Fukumto, Ryoichi Nagamatsu

5. Improvement of Group Discussion System for Active Learning Using Smartphone
   Noriyasu Yamamoto

6. Design and Implementation of a C++ Memory Leak Detection Tool Based on Dynamic Instrumentation
   Liang Zhou, Siran Fu, Tao Guo, Lifang Han, Baojiang Cui

esIoT-S1: Internet of Things and Smart Homes

Chair: Antonio Jara, University of Applied Sciences Western Switzerland (HES-SO), Switzerland

1. Plug-and-Play Transducers in Cyber-Physical Systems for Device-Driven Applications
   Borja Bordel, Diego Sánchez De Rivera, Ramón Alcarria

2. Emergency Population Warning about Floods by Social Media
   Miguel A. Wister, J. A. Hernández-Nolasco, Pablo Pancardo, Francisco D. Acosta, Antonio Jara

3. Appliance Scheduling for Energy Management with User Preferences
   Nusrat Shaheen, Nadeem Javaid, Najmun Nisa, Amber Madeeha Zeb, Zahoor Ali Khan, Umar Qasim

4. Performance Evaluation of an IoT-based e-Learning Testbed Considering OLSR and WEP Protocols
   Masafumi Yamada, Tetsuya Oda, Yi Liu, Masahiro Hiyama, Keita Matsuo, Leonard Barolli

5. Optimal Scheduling in Smart Homes with Energy Storage Using Appliances' Super-Clustering
   Sakeena Javaid, Nadeem Javaid, Muhammad Shoaib Javaid, Sehrish Javaid, Umar Qasim, Zahoor Ali Khan

SMEUCE-S3: Ubiquitous Commerce and Operation Management

Chair: Mei-Hua Liao, Asia University, Taiwan

1. Successor Audit Partner Choice for Mandatory Audit Partner Rotation Companies
   Li-Jen He

2. An Investigation into Human Resources and Operating Performance between Competitive Strategies of Taiwan Public Accounting Firms
   Chiung Yen Chen, Mei Hua Huang

3. The Effect of Corporate Social Responsibility Initiatives on Internal Employee Motivation and Organizational Identification
   Chia-Ju Lu, Yi-Yu Shih, Shih-Ten Wang

4. The Hindsight of ADR Listing – An Empirical Study on M&A Activities for Acquirers Before-and-After ADR Listing
   Nien-Tzu Yang

5. Linking Dynamic Equity Valuations to Optimum Weighting in the Performance Compensation System
   Chung-Jen Fu, Chiung-Yao Huang

19:00-21:00 Welcome Reception Party

Oasis, Fukuoka Institute of Technology
B Building, 1-st Floor
For the location of Oasis restaurant, please check the Campus Map (No. 19) in the last page of the program.

Thursday, July 7, 2016

08:00 Registration

09:00-10:00 Single Session: CISIS-2016 & IMIS-2016 Keynote II

CISIS-2016 & IMIS-2016 Keynote Talk II

Prof. Hiroaki Nishino: Sensing and Rendering: An Approach for Assisting Human Creative Activities

10:00-10:30 Coffee Break

10:30-12:30 Parallel Sessions

IMIS-S7: Wireless and Mobile Networks

Chair: Fumiaki Sato, Toho University, Japan

1. HRB: A New MAC Level 2–Hop Broadcast Protocol with Directional Receiving
   Tetsuro Kuniyasu, Tetuya Shigeyasu

2. An Energy-Efficient Routing Protocol for Infrastructure-Less Opportunistic Networks
   Khuram Khalid, Isaac Woungang, Sanjay K. Dhurandher, Leonard Barolli, Glaucio H. S. Carvalho, Makoto Takizawa

3. An Intra-Cluster CoMP Based Sleep-Mode Scheme in Dense Heterogeneous Network
   Da Li, Wen'An Zhou, Xuhui Yang, Haitao Du

4. Hybrid Routing Scheme Combining with Geo-Routing and DTN in VANET
   Fumiaki Sato, Ryohei Kikuchi

5. Cooperative Load Balancing in OFDMA Small Cell Networks
   Tianrun Gao, Gaofeng Nie, Chenshan Ren, Hui Tian

6. On Timing of Handoff Decision Making on Heterogeneous Wireless Networks
   Tein Yaw Chung, Fong Ching Yuan, Hsun-Fu Liu

MCNCS-S1: Network Applications and Security

Chair: Fang-Yie Leu, Tunghai University, Taiwan

1. Identifying Variable-Power Appliances in Non-intrusive Load Monitoring Systems
   Hung-Yuan Chen, Yao-Chung Fan, Chien-Liang Lai, Huan Chen

2. Finite State Machine Based Real Time Scheduling for Microchip
   Fang-Yie Leu, Yi-Ting Hsiao

3. A Version Control-Based Continuous Testing Frame for Improving the IID Process Efficiency and Quality
   Sen-Tarng Lai, Fang-Yie Leu

4. A Secure and High Performance Wireless Sensor Network Based on Symmetric Key Matrix
   Yi-Li Huang, Fang-Yie Leu, Po-Hao Su, Ti-Hsun Sung, Sin-Cheng Liu

5. Cloud Encryption Using Distributed Environmental Keys
   Kun-Lin Tsai, Fang-Yie Leu, Yi-Fung Huang, Chi Yang, Cheng-Hsin Chang, King-Shing Yip, Yuchen Xue, Guan-Chi Lai

6. A Secure Official Vehicle Communication Protocol for VANET
   Xia-Yun Guo, Chin-Ling Chen, Chang-Qing Gong, Fang-Yie Leu

FINGNet-S1: Security Issues and Networks

Chair: Hae-Duck J. Jeong, Korean Bible University, Korea

1. Authentication for Mobile Open IPTV Service Security
   Jiyoung Lim, Inshil Doh, Kijoon Chae

2. A Group Authentication Scheme Based on Lagrange Interpolation Polynomial
   Shi Li, Inshil Doh, Kijoon Chae

3. Study on the Sustainable Migration to Software Defined Network for Nation-Wide R&E Network
   Hyoung Woo Park, IL Sun Hwang, Jongsuk Ruth Lee

4. EDISON Nanophysics: Web-Based e-Learning Platform for Education and Research in Nanoscience
   Inho Jeon, Chan-Ho Choi, Jerry H. Seo, Youngsik Joe, Kumwon Cho, Hoon Ryu

5. Analysis and Detection of Anomalous Network Traffic
   Hae-Duck J. Jeong, Hyeonggeun Kim, WonHwi Ahn, Jung-Hee Oh, Dawoon Lee, Sang-Kug Ye, Jongsuk R. Lee

PISPIS-S1: Security for Public Internet Services

Chair: Kangbin Yim, SCH University, Korea

1. A Brief Review on JTAG Security
   Kyungroul Lee, Yeunsu Lee, Hyeji Lee, Kangbin Yim

2. Impacts of Frequency Selectivity on the Error Performance of Time-Domain Equalizers in MIMO Systems
   Byeong-Gwon Kang, Seungyong Han, Sangjoon Park

3. Malicious Script Blocking Detection Technology Using a Local Proxy
   SangHwan Oh, HanChul Bae, SooJin Yoon, HwanKuk Kim, YoungTae Cha

4. Analysis on the Key Storage Mechanism of the CNG Library
   Kyungroul Lee, Hyeji Lee, Yeunsu Lee, Kangbin Yim

5. Issues and Implementation Strategies of the IoT (Internet of Things) Industry
   Yeon Seungjun, Jun Hyojung

6. A Novel Hybrid Algorithm Based on Hill Matrix and Haar Domain Sequence
   Guangming Yang, Zhenhua Tan, Fanghua Geng, Tianhan Gao

7. Invisible Secure Keypad Solution Resilient against Shoulder Surfing Attacks
   Dongmin Choi, Chang Choi, Xin Su

12:30-14:00 Lunch Break

14:00-16:00 Parallel Sessions

FIMIS-S1: Innovative Internet Service and Technologies

Chair: Akio Koyama, Yamagata University, Japan

1. The Expert System of Locomotive Running Gear Based on Sematic Network
   Jie Tao, Yilun Liu, Yiping Wen, Jiahui Su

2. Access Authentication Schemes for PMIPV6: A Survey
   Tianhan Gao, Nan Guo, Fanghua Geng, Xinyang Deng

3. A New Laboratory Assignment Support System for Undergraduate Students
   Kazuki Takahashi, Toshitaka Maki, Toshihiko Wakahara

4. Wireless Remote Patient Monitoring System: Effects of Interference
   Andrew Yearp, David Newell, Philip Davies, Russell Wade, Reza Sahandi

5. A Collaborative Safety Flight Control System for Multiple Drones
   Tomoki Okutake, Noriki Uchida, Noriyasu Yamamoto

6. Skyline Query Processing System for Taiwan Maps
   Tzu-Hsien Wang, Yuan-Ko Huang, Chiang Lee

ACTICS-S1: Next Generation Network Applications

Chair: Bhed Bahadur Bista, Iwate Prefectural University, Japan

1. Assessing Driving Behavior in Public Transportation through Mobile Crowd Sensing: A Concept Proposal for Macau Public Transportation System
   Fei Chun Ma, Sok Hán Tóng, João Cordeiro

2. A Scalable SDN-EPC Architecture Based on OpenFlow-Enabled Switches to Support Inter-domain Handover
   El Bouatmani Hamza, Shigetomo Kimura

3. Improving Energy Consumption of Epidemic Routing in Delay Tolerant Networks
   Bhed Bahadur Bista

4. Improved HydroCast: A Technique for Reliable Pressure Based Routing for Underwater WSNs
   Muhammad, Nadeem Javaid, Babar Ali, Aqeb Yahya, Zahoor Ali Khan, Umar Qasim

FINGNet-S2: Health and Video Streaming Services

Chair: Hae-Duck J. Jeong, Korean Bible University, Korea

1. Health Service Knowledge Management to Support Medical Group Decision Making
   Hyun Jung Lee, Mye Sohn

2. A Wireless Body Sensor Network and Its Applications: Rehearsal with a Smartphone
   WooSeok Hyun, Ilsun You, JoungSoon Jang, Fang-Yie Leu

3. Modified Active Shape Model for Realtime Facial Feature Tracking on iPhone
   Yong-Hwan Lee, Youngseop Kim, Heung-Jun Kim, In-Kyoung Shin, Hyochang Ahn, YuKyong Lee

4. Efficient Image Retrieval Using Image and Audio Features in Video Stream
   In-Kyoung Shin, Hyochang Ahn, Yong-Hwan Lee

BDITS-S1: Security and Anomaly Detection

Chair: Baojiang Cui, Beijing University of Posts and Telecommunications, China

1. An Improved Algorithm of Prefixspan
   Pengfei Li, Songling Shan

2. Research on the Identification of Software Behavior in Anomaly Detection
   Jun Yang, Xiangping Du, Liang Zhou, Songling Shan, Baojiang Cui

3. Research on the Vulnerability Predicting Analysis Model for Binary Executables
   Liang Xiaobing, Zhao Bing, Wang Rui, Liu Ying

4. The Performance Optimization Of Hadoop during Mining Online Education Packets for Malware Detection
   Xuan Tian, Baojiang Cui, Jiangdong Deng, Jun Yang

5. The Scheme of Detecting Encoded Malicious Web Pages Based on Information Entropy
   Shuang Liang, Yong Ma, Yanyu Huang, Jia Guo, Chunfu Jia

6. The Approach to Detect Abnormal Access Behavior Based on Naive Bayes Algorithm
   Yong Ma, Shuang Liang, Xuan Chen, Chunfu Jia

19:00-21:00 Banquet Party

Hotel Centraza Hakata
Address: *4-23, Chuogai, Hakataeki, Hakata-ku, Fukuoka-shi, Fukuoka 812-0012, Japan*
E-Mail: *stay@centraza.com*
Web-site: http://www.centraza.com/english/index.html

How to go to Hotel Centraza Hakata from FIT:

Take JR train (Kagoshima Line, Trains Leaving Fukkodai-Mae station) to "Hakata" station. All the trains stop at Hakata station. The local trains operate every 20 minutes and it takes about 20 minutes from Fukkodai-Mae station to Hakata station. The rapid trains operate every 25 minutes and it takes about 15 minutes from Fukkodai-Mae station to "Hakata station". The ticket price is 280 yen and there is no difference in the ticket price between the local and rapid trains. Then, you can get to Hotel Centraza Hakata about 2 minites by walk.

Friday, July 8, 2016

IMIS-2016 Organizing Committee Meeting and Discussion

Time Table

CISIS-2016 and IMIS-2016 Session Schedule
July 6 – 8, 2016
Fukuoka, Japan

Wednesday (July 6, 2016)		ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7	ROOM 8
Slot	Time	Registration							
Session 1	09:00 – 10:00	CISIS-2016 and IMIS-2016 Keynote I (Plenary Room)							
Coffee Break	10:00 – 10:30	Coffee Break							
Session 2	10:30 – 12:30	CISIS S1	CISIS S2	FCISIS S1	ECDS S1	IMIS S1	IMIS S1	ITAUC S1	SMEUCE S1
Lunch	12:30 – 14:00	Lunch Break							
Session 3	14:00 – 16:00	CISIS S3	CISIS S4	FCISIS S2	ADiS S1	IMIS S3	IMIS S4	WAIS S1	SMEUCE S2
Coffee Break	16:00 – 16:30	Coffee Break							
Session 4	16:30 – 18:30	CISIS S5	CISIS S6	VENOA S1	MC2 S1	IMIS S5	IMIS S6	ESIoT S1	SMEUCE S3
Social Event	19:00 – 21:00	*Welcome Reception Party*							

Thursday (July 7, 2016)		ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7	ROOM 8
Slot	Time	Registration							
Session 1	09:00 – 10:00	CISIS-2016 and IMIS-2016 Keynote II (Plenary Room)							
Coffee Break	10:00 – 10:30	Coffee Break							
Session 2	10:30 – 12:30	CISIS S7	HCCIEA S1	VENOA S2	IINIC S1	IMIS S7	MCNCS S1	FINGNet S1	PISPIS S1
Lunch	12:30 – 14:00	Lunch Break							
Session 3	14:00 – 16:00	ePaMuS S1	ICLS S1	VENOA S3	SWISM S1	FIMIS S1	ACTICS S1	FINGNet S2	BDITS S1
Social Event	19:00 – 21:00	*Banquet Party*							

Friday (July 8, 2016)		ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7	ROOM 8
Slot	Time	CISIS-2016 and IMIS-2016 Steering Committee Meeting and Discussion							

Campus Map

1 Building A
2 Building B
3 Building C
4 Building D
5 Building α
6 Building of Headquarters
7 FIT Arena
8 Club House
9 High Voltage Laboratory
10 Joto High School
11 Seminar House
12 High school Gym
13 High School Club house
14 Women's Dormitory (Cosmos)
15 Wajiro Ground
16 Otomega Pond
17 JR Fukkodai-mae Station (FIT Station)
18 FIT Hall
19 Restrant