PROGRAM GUIDE

CISIS-2022

The 16-th International Conference on
Complex, Intelligent, and Software Intensive Systems

and

IMIS-2022

The 16-th International Conference on
Innovative Mobile and Internet Services in Ubiquitous Computing

Virtual Conference (Online Presentation)
June 29th - July 1st, 2022

Technically Co-Sponsored by:

FIT Fukuoka Institute of Technology 福岡工業大学

Contents

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Welcome Message of CISIS-2022 International Conference Organizers

Welcome to the 16th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2022), which will be held from June 29 to July 1, 2022, in conjunction with the 16th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2022).

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.

This conference 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.

We are very proud and honored to have 2 distinguished keynote talks by Prof. Keita Matsuo, Fukuoka Institute of Technology, Japan, and Dr. Anne Kayem, Hasso-Plattner-Institute, University of Potsdam, Germany, 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 technical program and conference proceedings. First, we would like to thank all 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 support.

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

We hope you will enjoy the conference proceedings.

IMIS-2022 Conference Organizing Committee

Honorary Chair

Makoto Takizawa, *Hosei University, Japan*

General Co-Chairs

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Welcome Message of IMIS-2022 International Conference Organizers

Welcome to the 16th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2022), which will be from June 29 to July 1, 2022, in conjunction with the 16th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2022).

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-2022, we received many paper submissions from all over the world. The papers included in the proceedings cover important aspects from UPC research domain.

We are very proud and honored to have 2 distinguished keynote talks by Prof. Keita Matsuo, Fukuoka Institute of Technology, Japan, and Dr. Anne Kayem, Hasso-Plattner-Institute, University of Potsdam, Germany, 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 IMIS-2022 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.

Finally, we would like to thank Web Administrator Co-Chairs for their excellent and timely work.We hope that all of you enjoy IMIS-2022 and find this a productive opportunity to learn, exchange ideas and make new contacts.

CISIS-2022 & IMIS-2022 Keynote I

Prof. Keita Matsuo, Department of Information and Communication Engineering, Fukuoka Institute of Technology (FIT), Fukuoka, Japan

Design and Implementation Issues of Omnidirectional Robots and Their Applications for Different Environments

Abstract: Intelligent robotic systems are becoming essential for increasing Quality of Life (QoL) and keeping health for growing population of elderly people. In our research, in order to solve human health problems and support elderly people, we consider the design and implementation of omnidirectional robots. In this talk, I will introduce our results to show how omnidirectional wheelchair robots can support people with disabilities at home and at workplace. In our work, we also consider the use of the omnidirectional wheelchair robots for playing tennis and badminton. I also will present the application of omnidirectional robot as a mesh router in Wireless Mesh Networks (WMNs) in order to provide a good communication environment.

CISIS-2022 & IMIS-2022 Keynote II

Dr. Anne Kayem, Internet Technologies and Systems Chair, Hasso-Plattner-Institute, Faculty of Digital Engineering, University of Potsdam, Germany

Is Privacy the Same as Security, or are they just two sides of the same coin?

Abstract: Almost every digital device either generates or consumes data in some form. The result is that the volumes of data collected grow exponentially each day. Data analytics proponents have mooted that it is now possible in some cases to actually predict future human behaviors based on data collected through tracking and various other means. On the other parallel, the question of privacy has become ever more important as users increasingly seek ways of guarding their personal data from exposure. This as such raises the question of what the distinction between privacy and security (data protection) is, and what the boundary between the two should be. For instance, the 2014 incident of a hacker faking the German minister of defense's fingerprints was considered to be a security breach. However, a closer look at this issue highlights the fact that distinguishing between whether or not this was a privacy breach that enabled a security breach, or vice versa, does not have a straight forward answer. In this talk, I aim to explain why in my view privacy is different from security and, while though both privacy and security are mutually interdependent, why it is important to make the distinction. The talk will be supported by various examples to characterize privacy and distinguish it from security. At the same time, I will also explain why the two concepts are in fact two sides of the same coin.

CISIS-2022
Main Conference and Workshops Program

Wednesday, June 29, 2022

Parallel Sessions

13:00-14:30 (Japan Standard Time zone: UTC+9)
06:00-07:30 (CEST Time Zone (Rome, Italy):UTC+2)
21:00-22:30 (Pacific Daylight Time (Victoria, CA):(UTC-7) - 1 day)

CISIS-S1: Multi-Agent Systems and IoT Applications

Chair: Kin Fun Li, University of Victoria, Canada

1. Examination of Robot System Detecting Smoke Condition in the Event of a Fire
   Yang Kun, Takahiro Uchiya

2. An Adaptive Resource Allocation Protocol for Dynamic Environments
   Mojtaba Malek Akhlagh, Jens Weber

3. An Overview of Emotion Recognition from Body Movement
   Laleh Takalloo, Kin Fun Li, Kosuke Takano

4. FPGA Implementation of an Object Recognition System with Low Power Consumption Using a YOLOv3-tiny-based CNN
   Yasutoshi Araki, Masatomo Matsuda, Taito Manabe, Yoichi Ishizuka, Yuichiro Shibata

IKIDW-S1: Knowledge Management and Sustainable Relationship

Chair: Kevin Bylykbashi, Fukuoka Institute of Technology, Japan

1. Achieving Sustainable Competitive Advantage Through Green Innovation, the Moderating Effect of Islamic Environmental Ethics and Islamic Business Ethics
   Budhi Cahyono, Marno Nugroho

2. Digital Social Capital and Financial Inclusion for Small Medium Enterprises
   Mutamimah Mutamimah, Pungky Saputri

3. Knowledge Absorptive Capacity Toward Sustainable Organizational Reputation in Digital Era
   Mulyana Mulyana, Erlinda Putri

4. The Role of Holistic Value Co-Creation Capability in Improving Sustainable Relationship
   Ken Sudarti, Wasitowati Wasitowati, Ari Pranaditya

5. Conceptual Paper Tax Avoidance and Firm Value in Manufacturing Companies: A Case Study for Companies in Indonesia
   Chrisna Suhendi, Luluk Muhimatul Ifada, Winarsih Winarsih

Parallel Sessions

15:00-16:30 (Japan Standard Time zone: UTC+9)
08:00-09:30 (CEST Time Zone (Rome, Italy):UTC+2)
23:00-00:30 (Pacific Daylight Time (Victoria, CA):(UTC-7) - 1 day)

CISIS-S2: Next Generation Wireless Networks

Chair: Makoto Ikeda, Fukuoka Institute of Technology, Japan

1. Performance Evaluation of Drone-based a Data Replication Method in Urban Disaster Scenario
   Makoto Ikeda, Seiya Sako, Masaya Azuma, Shota Uchimura, Leonard Barolli

2. A Wireless Sensor Network Testbed for Monitoring a Water Reservoir Tank: Experimental Results of Delay
   Yuki Nagai, Tetsuya Oda, Chihiro Yukawa, Kyohei Toyoshima, Tomoya Yasunaga, Aoto Hirata, Leonard Barolli

3. Remote Medical Assistance Vehicle in Covid-19 Quarantine Areas: A case study in Vietnam
   Linh Thuy Thi Pham, Tan Phuc Nhan Bui, Ngoc Cam Thi Tran, Hai Thanh Nguyen, Khoi Tuan Huynh Nguyen, Huong Hoang Luong

4. A Focused Beam Routing Protocol Considering Node Direction for Underwater Optical Wireless Communication in Delay Tolerant Networks
   Keita Matsuo, Elis Kulla, Leonard Barolli

IKIDW-S2: Knowledge Sharing and Creation

Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan

1. Customer Experience Management for ICT Industry Using SEM-PLS Analysis Technique
   Sri Safitri, Achmad Sudiro, Fatchur Rochman, Mugiono Mugiono

2. Increasing Repurchase Intention Through Personal Selling Capability, Customer Engagement, and Brand Trust
   Alifah Ratnawati, Erma Hastuti, Noor Kholis

3. E-Impulse Buying Improvement with Product Knowledge, Shopping Lifestyle, and Positive Emotion
   Lutfi Nurcholis, Nailus Saadah

4. Transformational Performance of Police of the Republic of Indonesia Through Smart Working
   Siti Sumiati, Verri Prasetyo

5. The Role of Tawhidic Paradigm in Knowledge Creation Process
   Nurhidayati Nurhidayati, Andhy Tri Adriyanto

6. Islamic Human Values for Career Adaptability and Career Success of Millennial Generation
   Ardian Adhiatma, Salsya Althof, Meita Triantiani

Parallel Sessions

17:00-18:30 (Japan Standard Time zone: UTC+9)
10:00-11:30 (CEST Time Zone (Rome, Italy):UTC+2)
01:00-02:30 (Pacific Daylight Time (Victoria, CA):(UTC-7))

CISIS-S3: Data Management and Multimedia Applications

Chair: Alfredo Cuzzocrea, ICAR-CNR and University of Calabria, Italy

1. Experimental Analysis and Verification of a Multi-Modal-Biometrics Identity Verification Framework based on the Dempster-Shafer Theory
   Alfredo Cuzzocrea, Majid Abbasi Sisara, Carmine Gallo

2. Breast Ultrasound Image Classification using EfficientNetV2 and Shallow Neural Network Architectures
   Hai Thanh Nguyen, Linh Ngoc Le, Trang Minh Vo, Diem Ngoc Thi Pham, Dien Thanh Tran

3. Steganographic Approaches for Carrier Related Information Hiding
   Marek R. Ogiela, Urszula Ogiela

4. 104 Fruits Classification using Transfer Learning and DenseNet201 Fine-Tuning
   Khanh Vo Hong, Tin Tang Minh, Hoa Le Duc, Nam Truong Nhat, Huong Luong Hoang

5. Transfer Learning with Fine-Tuning on MobileNet and GRAD-CAM for Bones Abnormalities Diagnosis
   Huong Hoang Luong, Lan Thu Thi Le, Hai Thanh Nguyen, Vinh Quoc Hua, Khang Vu Nguyen, Thinh Nguyen Phuc Bach, Tu Ngoc Anh Nguyen, Hien Tran Quang Nguyen

IKIDW-S3: Conceptual Frameworks and Risk Management

Chair: Kevin Bylykbashi, Fukuoka Institute of Technology, Japan

1. FAST: A Conceptual Framework for Reducing Fraud Financial Statement in Financial Business Practice
   Ahmad Hijri Alfian, Verina Purnamasari, Dian Essa Nugrahini

2. Risk Management and Islamic Value: A Conceptual Development of Al-Adl Financing Risk Management
   Jumaizi Jumaizi, Widiyanto Mislan, Eliya Tuzaka

3. The Consumption Value and Value Congruity: A Conceptual Development of Hasanah Value Congruity
   Ari Pranaditya, Ken Sudarti, Hendar Hendar

4. Resilience of Companies Listed in Jakarta Islamic Index (JII) During the Pandemic Covid-19
   Mutoharoh Mutoharoh, Naila Najihah

5. The Role of Institutional Investors in Lowering Information Asymmetry: Study on Mandatory Regulation of Integrated Reporting Implementation
   Naila Najihah, Mutoharoh Mutoharoh

CISIS-2022 Keynote I

19:00-20:00 (Japan Standard Time zone: UTC+9)
12:00-13:00 (CEST Time Zone (Rome, Italy):UTC+2)
03:00-04:00 (Pacific Daylight Time (Victoria, CA):(UTC-7))

CISIS-2022 Keynote Talk I

Prof. Keita Matsuo: Design and Implementation Issues of Omnidirectional Robots and Their Applications for Different Environments

Thursday, June 30, 2022

Parallel Sessions

13:00-14:30 (Japan Standard Time zone: UTC+9)
06:00-07:30 (CEST Time Zone (Rome, Italy):UTC+2)
21:00-22:30 (Pacific Daylight Time (Victoria, CA):(UTC-7) - 1 day)

VENOA-S1: Multimedia Systems and Applications

Chair: Yoshihiro Okada, Kyushu University, Japan

1. Efficient Content Sharing Using Dynamic Fog in Cloud-Fog-Edge Three-Tiered Network
   Kohei Yoshikawa, Shinji Sugawara

2. Study on the Comparison of Consumer Impression of E-commerce and Real Stores in the Fashion Tech Era, and the Effectiveness of VR Utilization
   Momoko Sakaguchi, Eiji Aoki

3. Introducing Speaker Vectors for Child Speech Synthesis in Neural Vocoders
   Satoshi Yoshida, Ken'ichi Furuya, Hideyuki Mizuno

4. Code Modification Problems for Multimedia Use in JavaScript-based Web Client Programming
   Khaing Hsu Wai, Nobuo Funabiki, Huiyu Qi, Yanqi Xiao, Khin Htet Mon, Yan Watequlis Syaifudin

5. Design and Implementation of an Immersive Network Collaborative Environment Using OpenPose with 360VR Camera and WebXR
   Wei Shi, Jingtao Xu, Yoshihiro Okada

6. Dental Treatment Training System Using Haptic Device and Its User Evaluations
   Yoshihiro Okada, Masaki Nomi

Parallel Sessions

15:00-16:30 (Japan Standard Time zone: UTC+9)
08:00-09:30 (CEST Time Zone (Rome, Italy):UTC+2)
23:00-00:30 (Pacific Daylight Time (Victoria, CA):(UTC-7) - 1 day)

CISIS-S4: Artificial Intelligence and Intelligent Computing

Chair: Pavel Krömer, VSB - Technical University of Ostrava, Czech Republic

1. Unnecessary Maneuvers as a Determinant of Driver Impatience in VANETs: Implementation and Evaluation of a Fuzzy-based System
   Kevin Bylykbashi, Ermioni Qafzezi, Phudit Ampririt, Elis Kulla, Leonard Barolli

2. A Fast Convergence RDVM for Router Placement in WMNs: Performance Comparison of FC-RDVM with RDVM by WMN-PSOHC Hybrid Intelligent System
   Shinji Sakamoto, Admir Barolli, Yi Liu, Elis Kulla, Leonard Barolli, Makoto Takizawa

3. A New Method for Optimization of Number of Mesh Routers and Improving Cost Efficiency in Wireless Mesh Networks
   Aoto Hirata, Tetsuya Oda, Yuki Nagai, Tomoya Yasunaga, Nobuki Saito, Kengo Katayama, Leonard Barolli

4. A Bi-objective Genetic Algorithm for Wireless Sensor Network Optimization
   Amit Dua, Pavel Krömer, Zbigniew J. Czech and Tomasz Jastrzab

5. A Fuzzy-based Approach for Handover in 5G Wireless Networks
   Phudit Ampririt, Ermioni Qafzezi, Kevin Bylykbashi, Makoto Ikeda, Keita Matsuo, Leonard Barolli

SWISM-S1: Semantic Computing

Chair: Beniamino Di Martino, University of Campania "Luigi Vanvitelli", Italy

1. Application of Business Process Semantic Annotation Techniques to Perform Pattern Recognition Activities Applied to the Generalized Civic Access
   Beniamino Di Martino, Mariangela Graziano, Luigi Colucci Cante, Antonio Esposito, Maria Epifania

2. A Semantic Representation for Public Calls Domain and Procedure: Housing Policies of Campania Region Case Study
   Beniamino Di Martino, Mariangela Graziano, Luigi Colucci Cante, Giuseppe Ferretti, Valeria De Oto

3. Semantic Based Knowledge Management in e-Goverment Document Workflows: A Case Study for Judiciary Domain in Road Accident Trials
   Beniamino Di Martino, Luigi Colucci Cante, Salvatore D'Angelo, Antonio Esposito, Mariangela Graziano, Pietro Lupi, Rosario Ammendolia

4. Towards the Identification of Architectural Patterns in Component Diagrams through Semantic Techniques
   Beniamino Di Martino, Piero Migliorato, Antonio Esposito

5. A Semantic Methodology for Security Controls Verification in Public Administration Business Processes
   Massimiliano Rak, Daniele Granata, Beniamino Di Martino, Luigi Colucci Cante

Parallel Sessions

17:00-18:30 (Japan Standard Time zone: UTC+9)
10:00-11:30 (CEST Time Zone (Rome, Italy):UTC+2)
01:00-02:30 (Pacific Daylight Time (Victoria, CA):(UTC-7))

CISIS-S5: Distributed Systems and Applications

Chair: Tomoya Enokido, Rissho University, Japan

1. Energy-Efficient Two-Phase Locking Protocol by Omitting Meaningless Read and Write Methods
   Tomoya Enokido, Dilawaer Duolikun, Makoto Takizawa

2. Dynamic Job Allocation on Federated Cloud-HPC Environaments
   Giacomo Vitali, Alberto Scionti, Paolo Viviani, Chiara Vercellino, Olivier Terzo

3. Taming Multi-node Accelerated Analytics: An Experience in Porting Matlab to Scale with Python
   Paolo Viviani, Giacomo Vitali, Davide Lengani, Alberto Scionti, Chiara Vercellino, Olivier Terzo

4. A Test Bed for Evaluating Graphene Filters in Indoor Environments
   Federico Stirano, Fabrizio Bertone, Giuseppe Caragnano, Olivier Terzo

SWISM-S2: Intelligent Systems and Semantic Techniques

Chair: Antonio Esposito, University of Campania "Luigi Vanvitelli", Italy

1. Machine Learning, Big Data Analytics and Natural Language Processing Techniques with Application to Social Media Analysis for Energy Communities
   Beniamino Di Martino, Vincenzo Bombace, Luigi Colucci Cante, Antonio Esposito, Mariangela Graziano, Gennaro Pezzullo, Gregorio D'Agostino, Alberto Tofani

2. Software Reuse Enabled by Machine Learning Based Source Code Analysis: a Case for Automated Classification of OpenSource Software with Respect to Requirements
   Dario Branco, Beniamino Di Martino, Luigi Cuccaro

3. Towards Machine Learning Enabled Analysis of Urban Mobility of Electric Motorbike: A Case Study for Improving Road Maintenance and Driver's Safety in La Coruna City
   Dario Branco, Beniamino Di Martino, Salvatore Venticinque, Alberto León Fernández, Valentin Porta

4. Towards Semantic Description of Symbology and Heraldry Using Ontologies
   Alba Amato, Giuseppe Cirillo, Francesco Moscato

5. ECListener: a Platform for Monitoring Energy Communities
   Gregorio D'Agostino, Alberto Tofani, Mariangela Graziano, Antonio Esposito, Luigi Colucci Cante, Gennaro Pezzullo, Vincenzo Bombace, Beniamino Di Martino

6. Porting of Semantically Annotated and Georeferenced Images to an Interoperability Framework
   Alba Amato, Rocco Aversa, Dario Branco, Salvatore Venticinque, Giuseppina Renda, Sabrina Mataluna

CISIS-2022 Keynote II

19:00-20:00 (Japan Standard Time zone: UTC+9)
12:00-13:00 (CEST Time Zone (Rome, Italy):UTC+2)
03:00-04:00 (Pacific Daylight Time (Victoria, CA):(UTC-7))

CISIS-2022 Keynote Talk II

Dr. Anne Kayem: Is Privacy the Same as Security, or are they just two sides of the same coin?

Friday, July 1, 2022

CISIS-2022 Organizing Committee Meeting and Discussion

IMIS-2022
Main Conference and Workshops Program

Wednesday, June 29, 2022

Parallel Sessions

13:00-14:30 (Japan Standard Time zone: UTC+9)
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IMIS-S1: Distributed Computing and Deep Learning

Chair: Hyunhee Park, Myongji University, Korea

1. Autonomous Migration of Virtual Machines to Reduce Energy Consumption of Servers
   Dilawaer Duolikun, Tomoya Enokido, Leonard Barolli, Makoto Takizawa

2. Hierarchical Output Model of CNN Learning using Multi Label Datasets
   Jiha Kim, Agostinho António José, Jeena Kim, Yongho Kim, Hyunhee Park

3. An Indicate System for Danger Detection and Its Soldering Motion Analysis
   Tomoya Yasunaga, Tetsuya Oda, Kyohei Toyoshima, Yuki Nagai, Chihiro Yukawa, Kengo Katayama, Leonard Barolli

4. Unsupervised Deep Image Set Hashing for Efficient Multi-label Image Retrieval
   Nan Guo, Cuixia Bai, Yunxia Yang

5. Hybrid Intelligence Approaches for Distributed Information Management
   Urszula Ogiela, Makoto Takizawa, Lidia Ogiela

Parallel Sessions

15:00-16:30 (Japan Standard Time zone: UTC+9)
08:00-09:30 (CEST Time Zone (Rome, Italy):UTC+2)
23:00-00:30 (Pacific Daylight Time (Victoria, CA):(UTC-7) - 1 day)

IMIS-S2: Security and Privacy

Chair: Tianhan Gao, Northeastern University of China, China

1. A Secure Data Sharing Scheme based on CP-ABE in VANETs
   Xinyang Deng, Tianhan Gao, Nan Guo, Kang Xie

2. An Anonymous Authentication Scheme based on Self-generated Pseudonym for VANETs
   Jiayu Qi, Tianhan Gao

3. Wavelet Transform based PID Sequence Analysis for IDS on CAN Protocol
   Md Rezanur Islam, Insu Oh, Munkhdelgerekh Batzorig, Myoung Su Kim, Kangbin Yim

4. Efficient CAN Dataset Collection Method for Accurate Security Threat Analysis on Vehicle Internal Network
   Yeji Koh, Seoyeon Kim, Yoonji Kim, Insu Oh, Kangbin Yim

5. Efficient Privacy-preserving Authentication and Group Key Agreement Scheme in Fog-enabled VANET
   Cong Zhao, Nan Guo, Tianhan Gao

ITAUC-S1: Multimedia Systems and Network Applications

Chair: Hsing-Chung Chen, Asia University, Taiwan

1. Mask-wearing Behavior Analysis by Using Expert Knowledge Acquisition Approach under Covid-19 Situation
   Hsing-Chung Chen, Yu-Lun Ho, Shian-Shyong Tseng

2. On the Conditional Pk-connectivity of Hypercube-based Architectures
   Tzu-Liang Kung, Yuan-Hsiang Teng

3. Super K1, p-connectivity of Locally Twisted Cubes
   Yuan-Hsiang Teng, Tzu-Liang Kung

4. A Study on Image Transmission Based on Hopping LoRa
   Ching-Chuan Wei, Kuan-Chun Chang, Chia-Chi Chang

5. A Conditional Local Diagnosis Algorithm on the Arrangement Graph
   Tzu-Liang Kung, Cheng-Kuan Lin, Yuan-Hsiang Teng

6. Application of Artificial Intelligence Technology in the Design of Hand Training and Intelligence Training for Patients with Dementia
   Wei-Chun Hsu, Hsing-Chung Chen

Parallel Sessions

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10:00-11:30 (CEST Time Zone (Rome, Italy):UTC+2)
01:00-02:30 (Pacific Daylight Time (Victoria, CA):(UTC-7))

IMIS-S3: Wireless and Mobile Networks

Chair: Shinji Sakamoto, Kanazawa Institute of Technology, Japan

1. A Fuzzy-based System for Assessment of Fog Computing Resources in SDN-VANETs
   Ermioni Qafzezi, Kevin Bylykbashi, Phudit Ampririt, Makoto Ikeda, Keita Matsuo, Leonard Barolli

2. Performance Evaluation of an AI-based Safety Driving Support System for Detecting Distracted Driving
   Masahiro Miwata, Mitsuki Tsuneyoshi, Makoto Ikeda, Leonard Barolli

3. Mesh Routers Placement by WMN-PSODGA Simulation System Considering Stadium Distribution and RDVM: A Comparison Study for UNDX and UNDX-m Methods
   Admir Barolli, Kevin Bylykbashi, Ermioni Qafzezi, Shinji Sakamoto, Leonard Barolli, Makoto Takizawa

4. A New Method for Improving Throughput Performance by Simultaneous Transmissions on Full-duplex Wireless Communication Systems
   Hikari Hashimoto, Tetsuya Shigeyasu

5. A Movement Adjustment Method for LiDAR Based Mobile Area Decision: Improving Control for AAV Mobility
   Nobuki Saito, Tetsuya Oda, Chihiro Yukawa, Kyohei Toyoshima, Aoto Hirata, Leonard Barolli

SMEUCE-S1: Ubiquitous Commerce and Operation Management

Chair: Kuei-Yuan Wang, Asia University, Taiwan

1. The Impact of Integrating Board Games into Chinese Teaching in the Elementary School on Learning Efficiency -An Example of the Indigenous Fifth and Sixth Graders in a Remote Area of Nantou County
   Chiou-Shya Torng, Ho Hsiao-Yi, Chai-Ju Lu

2. Impacts of COVID-19 on Stock Returns of the Cross-Border Transportation Industry
   Ying-Li Lin, Kuei-Yuan Wang, Ching-Ru Yang

3. Study on Business Continuity of Small and Medium-sized Firms in Japan: Focusing on Business Continuity Planning for Natural Disaster Risk
   Mei-Hua Liao, Hidekazu Sone

4. Comparing Investor Sentiment Between Growth and Value Stocks
   Mei-Hua Liao, Yen-Ju Chen, Chiung-Wen Yu, Ya-Lan Chan

5. Application of TOWS Matrix Analysis in a Precision Medicine Genetic Testing Company
   Kuei-Yuan Wang, Ying-Li Lin, Chien-Kuo Han, Chia-Wei Eddie Liang

6. Research on the Intention of the Elderly to Participate in Barrier-free Tours
   Ya-Lan Chan, Wen-Qian Li, Sue-Ming Hsu, Mei-Hua Liao

IMIS-2022 Keynote I

19:00-20:00 (Japan Standard Time zone: UTC+9)
12:00-13:00 (CEST Time Zone (Rome, Italy):UTC+2)
03:00-04:00 (Pacific Daylight Time (Victoria, CA):(UTC-7) - 1 day)

IMIS-2022 Keynote Talk I

Prof. Keita Matsuo: Design and Implementation Issues of Omnidirectional Robots and Their Applications for Different Environments

Thursday, June 30, 2022

Parallel Sessions

13:00-14:30 (Japan Standard Time zone: UTC+9)
06:00-07:30 (CEST Time Zone (Rome, Italy):UTC+2)
21:00-22:30 (Pacific Daylight Time (Victoria, CA):(UTC-7) - 1 day)

IMIS-S4: Multimedia Systems and Applications

Chair: Hai Thanh Nguyen, Can Tho University, Vietnam

1. Design and Implementation of a Haptics Based Soldering Education System
   Kyohei Toyoshima, Tetsuya Oda, Tomoya Yasunaga, Chihiro Yukawa, Yuki Nagai, Nobuki Saito, Leonard Barolli

2. 3D Reconstruction Based on the Depth Image: A Review
   Qingwei Mi, Tianhan Gao

3. Intelligent Helmet Supporting Visually Impaired People using Obstacle Detection and Communication Techniques
   Linh Thuy Thi Pham, Khoa Thanh Nguyen, Duyen Thuy Dao, Hai Thanh Nguyen, Huong Luong, Nhan Trong Pham Van

4. An Evacuation Support System for Promoting Distributed Evacuation in Evacuation Centers
   Tomoyuki Ishida, Ryosuke Nitama

5. Evaluation on Noise Reduction in Subtitle Generator for Videos
   Hai Thanh Nguyen, Tan Nguyen Lam Thanh, Tai Le Ngoc, Anh Duy Le, Tran Thanh Dien

Parallel Sessions

15:00-16:30 (Japan Standard Time zone: UTC+9)
08:00-09:30 (CEST Time Zone (Rome, Italy):UTC+2)
23:00-00:30 (Pacific Daylight Time (Victoria, CA):(UTC-7) - 1 day)

MCNCS-S1: Data Management and Intelligent Algorithms

Chair: Fang-Yie Leu, Tunghai University, Taiwan

1. An Efficient Disaster Recovery Mechanism for Multi-Region Apache Kafka Clusters
   Lung-Pin Chen, Leu-Fang Yei, Ying-Ru Chen

2. Detection and Defense of DDoS Attack and Flash Events by Using Shannon Entropy
   Shih-Ting Chiu, Heru Susanto, Fang-Yie Leu

3. 5G Base Station Scheduling
   Yi-Cheng Jian, Meng-Shao Chung, Heru Susanto, Fang-Yie Leu

4. Asymmetric Cryptography among Different 5G Core Networks
   Yu-Syuan Lu, Heru Susanto, Fang-Yie Leu

Parallel Sessions

17:00-18:30 (Japan Standard Time zone: UTC+9)
10:00-11:30 (CEST Time Zone (Rome, Italy):UTC+2)
01:00-02:30 (Pacific Daylight Time (Victoria, CA):(UTC-7))

FIMIS-S1: Wireless Networks and Intelliget Systems

Chair: Elis Kulla, Fukuoka Institute of Technology, Japan

1. MAC Layer Protocols for Underwater Acoustic Sensor Networks: A Survey
   Elis Kulla, Keita Matsuo, Leonard Barolli

2. An Intelligent Robot Vision System for Recognizing Micro-roughness on Arbitrary Surfaces: Experimental Result for Different Methods
   Chihiro Yukawa, Tetsuya Oda, Kyohei Toyoshima, Yuki Nagai, Tomoya Yasunaga, Chiaki Ueda, Leonard Barolli

3. Performance Evaluation of an Adaptive Anti-Packet Recovery Method Considering UAVs and Vehicles in an Urban Scenario
   Masaya Azuma, Shota Uchimura, Seiya Sako, Makoto Ikeda, Leonard Barolli

4. A Comparison Study of FC-RDVM and LDVM Router Placement Methods for WMNs by WMN-PSOHC Hybrid Intelligent System Considering Normal Distribution of Mesh Clients
   Shinji Sakamoto, Admir Barolli, Yi Liu, Elis Kulla, Leonard Barolli, Makoto Takizawa

IMIS-2022 Keynote II

19:00-20:00 (Japan Standard Time zone: UTC+9)
12:00-13:00 (CEST Time Zone (Rome, Italy):UTC+2)
03:00-04:00 (Pacific Daylight Time (Victoria, CA):(UTC-7))

IMIS-2022 Keynote Talk II

Dr. Anne Kayem: Is Privacy the Same as Security, or are they just two sides of the same coin?

Friday, July 1, 2022

IMIS-2022 Organizing Committee Meeting and Discussion

Online Meeting Schedule for CISIS-2022 and IMIS-2022
June 29 - July 1, 2022

1st day: Wednesday, 29 June, 2022	Room #1 Meeting ID: 861 2736 5786		Room #2 Meeting ID: 822 9537 5141		Room #3 Meeting ID: 875 6292 4867		Room #4 Meeting ID: 820 5108 4806	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
Slot 1 13:00-14:30 (UTC+9) Japan Standard Time 06:00-07:30 (UTC+2) CEST Time Zone (Rome, Italy) 21:00-22:30 (UTC-7) - 1 day: Pacific Daylight Time (Victoria, CA)	CISIS-S1	Kin Fun Li, Canada	IKIDW-S1	Kevin Bylykbashi, Japan	IMIS-S1	Hyunhee Park, Korea		
Slot 2 15:00-16:30 (UTC+9) Japan Standard Time 08:00-09:30 (UTC+2) CEST Time Zone (Rome, Italy) 23:00-00:30 (UTC-7) - 1 day: Pacific Daylight Time (Victoria, CA)	CISIS-S2	Makoto Ikeda, Japan	IKIDW-S2	Leonard Barolli, Japan	IMIS-S2	Tianhan Gao, China	ITAUC-S1	Hsing-Chung Chen, Taiwan
Slot 3 17:00-18:30 (UTC+9) Japan Standard Time 10:00-11:30 (UTC+2) CEST Time Zone (Rome, Italy) 01:00-02:30 (UTC-7) Pacific Daylight Time (Victoria, CA)	CISIS-S3	Alfredo Cuzzocrea, italy	IKIDW-S3	Kevin Bylykbashi, Japan	IMIS-S3	Shinji Sakamoto, Japan	SMEUCE-S1	Kuei-Yuan Wang, Taiwan
Slot 4 19:00-20:00 (UTC+9) Japan Standard Time 12:00-13:00 (UTC+2) CEST Time Zone (Rome, Italy) 03:00-04:00 (UTC-7) Pacific Daylight Time (Victoria, CA)	CISIS-2022 and IMIS-2022 Keynote #1: Prof. Keita Matsuo Meeting ID: 861 2736 5786							

2nd day: Thursday, 30 June , 2022	Room #1 Meeting ID: 861 2736 5786		Room #2 Meeting ID: 822 9537 5141		Room #3 Meeting ID: 875 6292 4867		Room #4 Meeting ID: 820 5108 4806	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
Slot 1 13:00-14:30 (UTC+9) Japan Standard Time 06:00-07:30 (UTC+2) CEST Time Zone (Rome, Italy) 21:00-22:30 (UTC-7) - 1 day: Pacific Daylight Time (Victoria, CA)			VENOA-S1	Yoshihiro Okada, Japan	IMIS-S4	Hai Thanh Nguyen, Veitnam		
Slot 2 15:00-16:30 (UTC+9) Japan Standard Time 08:00-09:30 (UTC+2) CEST Time Zone (Rome, Italy) 23:00-00:30 (UTC-7) - 1 day: Pacific Daylight Time (Victoria, CA)	CISIS-S4	Pavel Krömer, Czech Republic	SWISM-S1	Beniamino Di Martino, Italy	MCNCS-S1	Fang-Yie Leu, Taiwan		
Slot 3 17:00-18:30 (UTC+9) Japan Standard Time 10:00-11:30 (UTC+2) CEST Time Zone (Rome, Italy) 01:00-02:30 (UTC-7) Pacific Daylight Time (Victoria, CA)	CISIS-S5	Tomoya Enokido, Japan	SWISM-S2	Antonio Esposito, Italy	FIMIS-S1	Elis Kulla, Japan		
Slot 4 19:00-20:00 (UTC+9) Japan Standard Time 12:00-13:00 (UTC+2) CEST Time Zone (Rome, Italy) 03:00-04:00 (UTC-7) Pacific Daylight Time (Victoria, CA)	CISIS-2022 and IMIS-2022 #2: Dr. Anne Kayem Meeting ID: 861 2736 5786							

3rd day: Friday, 1 July, 2022	Room #1		Room #2		Room #3		Room #4	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
	CISIS-2022 and IMIS-2022 Steering Committee Meeting and Discussion							

Additional information

The session schedules indicated in the program are based on the UTC+09:00 time zone.