

PROGRAM GUIDE



CISIS-2024

The 18-th International Conference on
Complex, Intelligent, and Software Intensive Systems

and



IMIS-2024

The 18-th International Conference on
Innovative Mobile and Internet Services in Ubiquitous Computing

Hybrid Conference

July 3rd - July 5th, 2024

Tunghai University, Taichung, Taiwan

Technically Co-Sponsored by:



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CISIS-2024 Organizing Committee

Honorary Co-Chairs

Makoto Takizawa, *Hosei University, Japan*
Kuo-En Chang, *Tunghai University, Taiwan*

General Co-Chairs

Chao-Tung Yang, *Tunghai University, Taiwan*
Tomoya Enokido, *Rissho University, Japan*

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Shunya Higashi, *Fukuoka Institute of Technology, Japan*
Ermioni Qafzezi, *Fukuoka Institute of Technology, Japan*

Steering Committee Chair

Leonard Barolli, *Fukuoka Institute of Technology, Japan*

Welcome Message of CISIS-2024 International Conference Organizers

Welcome to the 18th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2024), which will be held from July 3 to July 5, 2024, in conjunction with the 18th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2024).

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.

Research in the field of intelligent systems, robotics, neuroscience, Artificial Intelligence (AI), 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. Sriram Chellappan, University of South Florida, and Prof. Chao-Tung Yang, Tunghai University, Taiwan, 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 Co-Chairs Prof. Makoto Takizawa, Hosei University, Japan and Prof. Kuo-En Chang, Tunghai University, Taiwan for their 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-2024 Organizing Committee

Honorary Co-Chairs

Makoto Takizawa, *Hosei University, Japan*
Kuo-En Chang, *Tunghai University, Taiwan*

General Co-Chairs

Fang-Yie Leu, *Tunghai University, Taiwan*
Kangbin Yim, *Soonchunhyang University, Korea*

Program Committee Co-Chairs

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Kin Fun Li, *University of Victoria, Canada*

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Kouichi Sakurai, *Kyushu University, Japan*

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Hiroaki Kikuchi, *Meiji University, Japan*

International Liaison Co-Chairs

Chao-Tung Yang, *Tunghai University, Taiwan*
Farookh Hussain, *University of Technology Sydney, Australia*
Hyunhee Park, *Myongji University, Korea*

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Kangbin Yim, *Soonchunhyang University, Korea*
Tomoyuki Ishida, *Fukuoka Institute of Technology, Japan*
Keita Matsuo, *Fukuoka Institute of Technology, Japan*

Finance Chair

Makoto Ikeda, *Fukuoka Institute of Technology, Japan*

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Yu-Chen Hu, *Tunghai University, Taiwan*

Web Administrators

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Shunya Higashi, *Fukuoka Institute of Technology, Japan*
Ermioni Qafzezi, *Fukuoka Institute of Technology, Japan*

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Leonard Barolli, *Fukuoka Institute of Technology, Japan*

Welcome Message of IMIS-2024 International Conference Organizers

Welcome to the 18th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS-2024), which will be from July 3 to July 5, 2024, in conjunction with the 18th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2024).

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-2024, we received many paper submissions from all over the world. The papers included in the proceedings cover important aspects of UPC research domain.

We are very proud and honored to have 2 distinguished keynote talks by Prof. Sriram Chellappan, University of South Florida, and Prof. Chao-Tung Yang, Tunghai University, Taiwan, 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-2024 technical program and conference proceedings. First, we would like to thank all the authors for submitting their papers, the Program Committee Members, and the reviewers who carried out the most difficult work by carefully evaluating the submitted papers. We are grateful to Honorary Co-Chairs Prof. Makoto Takizawa, Hosei University, Japan and Prof. Kuo-En Chang, Tunghai University, Taiwan for their guidance and support.

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

We hope that all of you enjoy IMIS-2024 and find this a productive opportunity to learn, exchange ideas and make new contacts.

CISIS-2024 & IMIS-2024 Keynote I



Prof. Sriram Chellappan University of South Florida, Tampa, Florida, USA

Integrating AI, Citizen-Science, Social-Media and Innovative Hardware Tech for Public Health

Abstract: Among many public health concerns, mosquito-borne diseases are most challenging. The problem is global now. Rising temperatures, floods, mobility are all exacerbating challenges today. Diseases like Zika fever, malaria, dengue and chikungunya have no vaccines or cures, as a result of which around a million people die each year from mosquito-borne diseases with a vast majority of them being children. In this talk, we will present our R&D on a spectrum of solutions geared to combat mosquito-borne diseases. Our technologies combine innovative/explainable AI algorithms, novel methods of citizen-science engagement and systems, Social-media data mining, and innovative hardware to address a range of problems in mosquito surveillance, control, and disease management under outbreaks. Some results of successful deployments will also be highlighted.

CISIS-2024 & IMIS-2024 Keynote II



Prof. Chao-Tung Yang, Tunghai University, Taichung, Taiwan

Application of Artificial Intelligence and Internet of Things for Building Smart Services

Abstract: The integration of Artificial Intelligence (AI) and Internet of Things (IoT) technologies has revolutionized the concept of smart services. Intelligent systems influence many aspects of daily life. Also, with the emergence of IoT, AI and Machine Learning (ML) opportunities have been created for smart computing infrastructure. We have proposed iSEC (Intelligent Sensors, Edge Computing, and Cloud Computing) framework. The project deploys a smart cloud edge-computing architecture to provide ML and deep learning in the cloud edge environment. By leveraging the iSEC architecture and real-time streaming services, AI and IoT can be effectively combined to enhance smart services. One prominent application is the utilization of YOLO (You Only Look Once) image recognition and object detection for intelligent service delivery. This approach enables the identification and analysis of objects in real-time, allowing for efficient and accurate decision-making in various smart service scenarios.



CISIS-2024

Main Conference and Workshops Program

Wednesday, 3 July, 2024

CISIS-2024 Organizing Committee Meeting and Discussion

Thursday, 4 July, 2024

CISIS-2024 Keynote I

10:00-11:00 (UTC+8) Taiwan Standard Time
04:00-05:00 (UTC+2) CEST Time Zone (Rome, Italy)

CISIS-2024 Keynote Talk I

Prof. Sriram Chellappan: Integrating AI, Citizen-Science, Social-Media and Innovative Hardware Tech for Public Health

Coffee Break

11:00-11:30 (UTC+8) Taiwan Standard Time

Parallel Sessions

11:30-13:00(UTC+8) Taiwan Standard Time
05:30-07:00(UTC+2) CEST Time Zone (Rome, Italy)

CISIS-S1: Next Generation Networks and Systems

Chair: Shinji Sakamoto, Kanazawa Institute of Technology, Japan

1. A Fuzzy-based System for Selection of Radio Access Technology in 5G Wireless Networks Considering RAT Load as a New Parameter
Phudit Ampirit, Shunya Higashi, Paboth Kraikritayakul, Ermioni Qafzezi, Keita Matsuo, Leonard Barolli
2. Assessment of WMN-CS Intelligent Simulation System for Uniform, Weibull and Chi-square Distribution of Mesh Clients
Shinji Sakamoto, Leonard Barolli, Yi Liu, Makoto Takizawa
3. Performance Evaluation of a Distracted Driving Detection System Considering Smoking Behavior
Naoki Tanaka, Hiroto Tanaka, Hibiki Tanaka, Makoto Ikeda and Leonard Barolli
4. A Survey on Cooperative Intelligent Transport Systems (C-ITS): Opportunities and Challenges
Ramin Ranjbar Motlagh, Omid Ameri Sianaki, Himanshu Shee
5. Trusted Computing in Advanced Cybersecurity Solutions
Lidia Ogiela, Makoto Takizawa, Marek R. Ogiela

VENOA-S1: Multimedia Systems and Applications

Chair: Yoshihiro Okada, Kyushu University, Japan

1. Automatic Chord Estimation Using Deep Learning Focused on Overtone Structure
Ayumu Mitoma, Ken'ichi Furuya
 2. Development of Multipurpose Network Learning Materials Using OpenFlow
Kazuaki Yoshihara, Nobukazu Iguchi, Kenzi Watanabe
 3. Headtracking Functions of IntelligentBox for Dental Treatment Training System
Takuya Yoshinobu, Yoshihiro Okada
 4. Web-based Interactive Radiation Visualization Tool for Radiation Protection Learning
Kento Oka, Toshioh Fujibuchi, Hiroyuki Arakawa, Kosuke Kaneko, Wei Shi, Yoshihiro Okada
-

Lunch

13:00-14:00(UTC+8) Taiwan Standard Time

Parallel Sessions

14:00-15:30(UTC+8) Taiwan Standard Time
08:00-09:30(UTC+2) CEST Time Zone (Rome, Italy)

CISIS-S2: Distributed Systems and Applications**Chair: Tomoya Enokido, Rissho University, Japan**

1. Energy-Efficient Concurrency Control with Role and Purpose Concepts
Tomoya Enokido, Dilawaer Duolikun, Makoto Takizawa
2. An Architecture Proposal Using Hybrid Blockchain Applied for Supply Chain Tracking
Rafael Hoffmann, Carlos Moratelli, Alex S. R. Pinto
3. New Convergence Analysis of the BEER Algorithm in Decentralized Nonconvex Optimization
Tran Thi Phuong and Le Trieu Phong
4. Fog Node Selection Algorithm in Information Flow Control
Shigenari Nakamura, Tomoya Enokido, Makoto Takizawa
5. DP-ACO: Differentially Private Average Consensus Optimization in Decentralized Learning
Tran Thi Phuong, Le Trieu Phong

SWISM-S1: Semantic Computing**Chair: Beniamino Di Martino, University of Campania "Luigi Vanvitelli", Italy**

1. Towards a Methodology for Comparing Legal Texts based on Semantic, Storytelling and Natural Language Processing
Mariangela Graziano, Beniamino Di Martino, Luigi Colucci Cante, Antonio Esposito, Pietro Lupi
 2. Semantic, Business Process and Natural Language Processing for eBuilding
Beniamino Di Martino, Mariangela Graziano, Luigi Colucci Cante
 3. Semantic and Inference-based Techniques for IoT-enabled Discovery of Escape Routes in Building Information Modeling
Mariangela Graziano, Beniamino Di Martino, Luigi Colucci Cante
 4. Exploring Technologies for Semantic Metadata Enhancement
Sadia Azam, Martina De Sanctis, Amleto Di Salle, Ludovico Iovino
-

Coffee Break**15:30-16:00(UTC+8) Taiwan Standard Time**

Parallel Sessions**16:00-17:30(UTC+8) Taiwan Standard Time**
10:00-11:30(UTC+2) CEST Time Zone (Rome, Italy)**CISIS-S3: System Management and IoT Applications****Chair: Omid Ameri Sianaki, University of Victoria, Australia**

1. A Method for Job Management Using MPI Profiling Interface
Takayoshi Miyake, Tomoki Deguchi, Yoshinari Nomura
 2. Early Design Mechanism for Upgrading Smart Contract Business Processes
Swati Goel, Manuel Mazzara
 3. Implementing Deep Reinforcement Learning Algorithms on the Tennis Environment
Soheila Gheisari, Alireza Rezaee
-

4. Conceptualizing a Digital Twin Architecture for Enhanced Control in Precast Concrete Production
Amanda Cole, Omid Ameri Sianaki, Himanshu Shee
5. An Energy-efficient Homogeneous TBFC Model of the IoT
Dilawaer Duolikun, Tomoya Enokido, Makoto Takizawa

SWISM-S2: AI and IoT Applications**Chair: Antonio Esposito, University of Campania "Luigi Vanvitelli", Italy**

1. Artificial Intelligence in Architecture, Engineering and Construction sector and Building Information Modeling: A Review of Methodologies, Applications and Future Perspectives
Luigi Colucci Cante, Beniamino Di Martino, Mariangela Graziano
 2. Artificial Intelligence Techniques for Dynamic Offloading in Cloud Continuum Environment: A Review
Gennaro Junior Pezzullo, Beniamino Di Martino
 3. Navigating IoT Complexity: Developing Datasets for Smart-Home Device Interactions
Massimiliano Rak, Daniele Granata, Antonio Esposito, Antonio Ferretti
 4. Integration of LLM in Barcode Scanning for Visually Impaired People
Theodor-Radu Grumeza, Richard Baczur, Alexandra-Emilia Fortis
-

Welcome Reception Party**18:00-20:00(UTC+8) Taiwan Standard Time**Tunghai University

Friday, 5 July, 2024**CISIS-2024 Keynote II**

10:00-11:00 (UTC+8) Taiwan Standard Time
04:00-05:00 (UTC+2) CEST Time Zone (Rome, Italy)

CISIS-2024 Keynote Talk II

Prof. Chao-Tung Yang: Application of Artificial Intelligence and Internet of Things for Building Smart Services

Coffee Break

11:00-11:30 (UTC+8) Taiwan Standard Time

Parallel Sessions

11:30-13:00(UTC+8) Taiwan Standard Time
05:30-07:00(UTC+2) CEST Time Zone (Rome, Italy)

CISIS-S4: Predicting Systems and Algorithms

Chair: Isaac Woungang, Toronto Metropolitan University, Canada

1. A Systematic Review of External Influence Factors in Multifactor Analysis and Prediction of Carbon Credit Prices
Najlaa Alshatri, Leila Ismail, Farookh Khadeer Hussain
2. Stock Market Prediction using Social Media Sentiments
Ayush Upadhyay, Harsh Jain, Prateek Dhingra, Nisha Kandhoul, Sanjay Kumar Dhurandher, Isaac Woungang
3. Investigation of the Location Problem in Logistics Centers Using the ADMM Algorithm
Lili Su, Qiong Li, Xiaolong Ma, Xu-An Wang
4. Stock Price Prediction Based on FinBERT-LSTM Model
Shijia Fan, Xu Chen, Xu-An Wang
5. Hyperparameter Tuning on Classical Machine Learning Models in Orthopedic Disease Prediction on Biomechanical Features
Hai Thanh Nguyen, Minh Hong Nguyen, Nhu Bich Thi Pham, Tai Tan Phan, Linh Thuy Thi Pham

IKIDW-S1: Knowledge Management and Sustainable Relationship

Chair: Olivia Fachrunnisa, Sultan Agung Islamic University, Indonesia

1. Utilization of Apriori Algorithm to Maximize the Sales Potential of Youth Entrepreneurs by Increasing the Frequency and Sales Generation in the Modern Culinary Business Sector
Dina Lusianti, Fadhil Ahmad Husain, Agung Prihandono
 2. Innovation and Coping Strategy in the Modern Cigarette Industry: Evidence from Indonesia
Suparnyo, Mamik Indaryani, Dina Lusianti, Annisya Lutfi Septanti
 3. A Model to Determine Social Identity of the Organization: The Role of Employee Engagement and Positive Work Behavior
Olivia Fachrunnisa
-

4. A Conceptual Model to Improve SME's Digital Innovation Capability: The Role of Digital Adoption and Entrepreneurial Orientation
Dwi Indriastuti, Olivia Fachrunnisa
5. Revitalization and Social Cognitive Theory: Evidence of Indonesian Cooperatives
Mamik Indaryani, Zuliyati, Noor Indah Rahmawati, Dina Lusianti, Krisnanda, Dwi Puji Ratnawati
6. Designing a Quiz Application Navigation for Visually Impaired Persons Based on Android Platform
Agung Prihandono, Janu Arlinwibowo, Widya Cholid Wahyudin, Taftazani Ghazi Pratama, Mia Ajeng Alifiani, Mira Meilia Marka

Lunch

13:00-14:00(UTC+8) Taiwan Standard Time

Parallel Sessions

14:00-15:30(UTC+8) Taiwan Standard Time
08:00-09:30(UTC+2) CEST Time Zone (Rome, Italy)

CISIS-S5: Multimedia Networking and Applications

Chair: Wei Lu, Keene State College, USNH, USA

1. Interpreting Large-Scale Attacks Against Open-Source Medical Systems Using eXplainable AI
Wei Lu
2. Jupyter-Based Java Development Environment for Programming Education
Yibao Liang, Minoru Uehara
3. A Customizable Intelligent System for Cervical Cytology Image Classifications
Diogen Babuc, Alexandra Emilia Fortis
4. Feature Selection Based on Ranking Metagenomic Relative Abundance for Inflammatory Bowel Disease Prediction
Hien Thanh Thi Nguyen, Hat Nguyen Le, Hai Thanh Nguyen
5. Child Abuse Behaviors Identification from Surveillance Videos
Thi-Ngoc-Diem Pham, Ba-Dai-Phuc Phan, Thanh Dien Tran

SWISM-S3: Semantic Annotation and Service Computing

Chair: Salvatore Venticinquè, University of Campania "Luigi Vanvitelli", Italy

1. Text Annotation Tools: A Comprehensive Review and Comparative Analysis
Luigi Colucci Cante, Salvatore D'Angelo, Beniamino Di Martino, Mariangela Graziano
 2. Towards a Semantic Annotation Software Design for Images and Texts
Beniamino Di Martino, Alba Amato, Dario Branco, Luigi Colucci Cante, Mariangela Graziano, Salvatore Venticinquè
 3. A Conceptual Framework for Predictive Process Monitoring in Public Administration
Simona Fioretto, Elio Masciari
 4. Knowledge Graphs Application to Life Science
Alessia Sabia
-

Coffee Break

15:30-16:00(UTC+8) Taiwan Standard Time

Banquet Party

18:00-20:00(UTC+8) Taiwan Standard Time

Howard Prince Hotel Taichung

<http://www.howard-hotels.com.tw/en/taichung/home/>



IMIS-2024

Main Conference and Workshops Program

Wednesday, 3 July, 2024

IMIS-2024 Organizing Committee Meeting and Discussion

Thursday, 4 July, 2024

IMIS-2024 Keynote I

10:00-11:00 (UTC+8) Taiwan Standard Time
04:00-05:00 (UTC+2) CEST Time Zone (Rome, Italy)

IMIS-2024 Keynote Talk I

Prof. Sriram Chellappan: Integrating AI, Citizen-Science, Social-Media and Innovative Hardware Tech for Public Health

Coffee Break

11:00-11:30 (UTC+8) Taiwan Standard Time

Parallel Sessions

11:30-13:00(UTC+8) Taiwan Standard Time
05:30-07:00(UTC+2) CEST Time Zone (Rome, Italy)

IMIS-S1: Multimedia and Web Computing

Chair: Tomoyuki Ishida, Fukuoka Institute of Technology, Japan

1. Pull-type Relief Supplies Request System for Long-term Evacuation Support
Yuta Seri, Tomoyuki Ishida
2. A Camera Placement System for Motion Analysis and Object Recognition: System Assessment by Simulations and an Experiment
Kyohei Wakabayashi, Chihiro Yukawa, Tetsuya Oda, Leonard Barolli
3. Cognicise Virtual Reality System
Kaisei Komoto, Tomoyuki Ishida
4. A Real-Time Eye Gaze Tracking based Digital Mouse
SeHyun Kwak, Daeho Lee, Siwon Kim, Junghoon Park
5. Proposal of a Clinical Training Support System for Nursing Students Using Mixed Reality Technology
Naho Kuriya, Tomoyuki Ishida

ITAUC-S1: Intelligent Systems and Network Applications

Chair: Hsing-Chung Chen, Asia University, Taiwan

1. An Enhanced Fault Identification Algorithm for PMC-based Diagnosable Systems
Yuan-Hsiang Teng, Tzu-Liang Kung
 2. Intelligent Information Transmission Model with Distributed Task Queue Functionality Based on the MQTT Transmission Protocol
Hsing-Chung Chen, Chou Yu Hsien, Wei Lin
 3. Performance Analysis of a DTAG Recovery Method in DTN with Multiple Flows
Shura Tachibana, Makoto Ikeda, Leonard Barolli
 4. An Experiential Learning Platform Adopting PBL and Mix-Reality for Artificial Intelligence Literacy Education
Anthony Y. H. Liao, Shun-Pin Huang, Tomoya Ikezawa, Kuan-Yu Lin
 5. Performance Improvement of Multiple Anchors for Three-Dimensional Indoor Positioning Using UWB Wireless Communications
Yung-Fa Huang, Guan-Yi Chen, Hsin-Cheng Wu
-

Lunch

13:00-14:00(UTC+8) Taiwan Standard Time

Parallel Sessions

14:00-15:30(UTC+8) Taiwan Standard Time
08:00-09:30(UTC+2) CEST Time Zone (Rome, Italy)

IMIS-S2: AI-based Systems and Applications

Chair: Chao-Tung Yang, Tunghai University, Taiwan

1. Novel Dynamic Difficulty Adjustment Methods for Niche Games
Qingwei Mi, Tianhan Gao
2. Comparative Analysis of Fine-Tuned MobileNet versions on Fish Disease Detection
Hien Van Nguyen, Thinh Quoc Huynh, Nhat Minh Nguyen, Anh Kim Su, Hai Thanh Nguyen
3. Methodology to Monitor and Estimate Occupancy in Enclosed Spaces based on Indirect Methods and Artificial Intelligence: A University Classroom as a Case Study
Alma Mena-Martinez, Joanna Alvarado-Uribe, Manuel Davila Delgado, Hector G. Ceballos
4. Bird Recognition Based on Mixed Convolutional Neural Network
Feiyu Yao, Na Deng, Xu-an Wang
5. Edge AI-Driven Air Quality Monitoring and Notification System: A Multilocation Campus Perspective
Wijaya Chandra, Anggi Andriyadi, Shi-Yan Chen, I-Jan Wang, Chao-Tung Yang

BDITS-S1: Secure and Trusted Systems

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

1. A PFCP Protocol Fuzz Testing Framework Integrating Data Mutation Strategies and State Transition Algorithms
Xiaoyang Feng, Wei Tan, Qiu Tao, Wenxiao Yu, Zixuan Zhang, Baojiang Cui
 2. Peer Selection for Reliability Improvement in P2P Networks by Fuzzy-based and Ns-3 Simulation Systems
Yi Liu, Shinji Sakamoto, Leonard Barolli
 3. An Efficient Smart Contracts Event Ordering Vulnerability Detection System Based on Symbolic Execution and Fuzz Testing
Yitao Li, Baojiang Cui, Dongbin Wang, Yue Yu, Can Zhang
 4. A Smart Contract Vulnerability Detection System Based on BERT Model and Fuzz Testing
Zehao Liang, Baojiang Cui, Dongbin Wang, Jie Xu, Huipeng Liu
-

Coffee Break

15:30-16:00(UTC+8) Taiwan Standard Time

Parallel Sessions

16:00-17:30(UTC+8) Taiwan Standard Time
10:00-11:30(UTC+2) CEST Time Zone (Rome, Italy)

IMIS-S3: Wireless Networks and Mobile Computing

Chair: Kangbin Yim, SCH University, Korea

1. Enhancing Road Safety with In-Vehicle Network Abnormal Driving Behavior Detection
Md Rezanur Islam, Kamronbek Yusupov, Munkhdelgerkh Batzorig, Insu Oh, Kangbin Yim
-

2. A Security Transaction Scheme of Internet of Vehicles System Based on Dual Blockchain and SM9 Technology
Lili Jiao
3. Swap and Carry Strategy for Utilizing Spare Batteries as an Emergency Power Supply on Battery Swapping EV
Mayu Hatamoto, Tetsuya Shigeyasu
4. Development of DTN Buffer Management for Rapid Grasping of Disaster Situations While Minimizing AoI
Fuka Isayama, Tetsuya Shigeyasu
5. Estimating Occupancy Level in Indoor Spaces Using Infrared Values and Environmental Variables: A Collaborative Work Area as a Case Study
Angelo Jean Carlo Ovando Franco, Gerardo Tadeo Pérez Guerra, Joanna Alvarado-Uribe, Héctor Gibran Ceballos Cancino

MCNCS-S1: Data Management and Wireless Networking

Chair: Fang-Yie Leu, Tunghai University, Taiwan

1. Applying ChatGPT-based Iterative Improvement Model for Improving Software Maintenance Efficiency
Sen-Tarnng Lai, Fang-Yie Leu
2. Legal Case Retrieval by Essential Element Extraction based on Reading Comprehension Model
Chen-Hua Huang, Chuan-Hsin Wang, Yao-Chung Fan, and Fang-Yie Leu
3. Implementation of Switch Slicing in 5G/B5G/6G Networks
Li-Wen Peng, Fang-Yie Leu, Heru Susanto
4. Base-Station Resource Allocation Based on Frame/Sub-Frame
Yu-Han Chen, Fang-Yie Leu, Heru Susanto

Welcome Reception Party

18:00-20:00(UTC+8) Taiwan Standard Time

Tunghai University

Friday, 5 July, 2024**IMIS-2024 Keynote II**

10:00-11:00 (UTC+8) Taiwan Standard Time
04:00-05:00 (UTC+2) CEST Time Zone (Rome, Italy)

IMIS-2024 Keynote Talk II

Prof. Chao-Tung Yang: Application of Artificial Intelligence and Internet of Things for Building Smart Services

Coffee Break

11:00-11:30 (UTC+8) Taiwan Standard Time

Parallel Sessions

11:30-13:00(UTC+8) Taiwan Standard Time
05:30-07:00(UTC+2) CEST Time Zone (Rome, Italy)

IMIS-S4: Intelligent Systems and Applications**Chair: Keita Matsuo, Fukuoka Institute of Technology, Japan**

1. A Fuzzy-based System for Assessment of Performance Error in VANETs Considering Environmental Stressors
Ermioni Qafzezi, Kevin Bylykbashi, Shunya Higashi, Phudit Ampririt, Keita Matsuo, Leonard Barolli
2. Enhancing The Highway Transportation System with Traffic Congestion Detection using The Quadcopters and CNN Architecture Schema
Edy Kristianto, Rita Wiryasaputra, Florensa Rosani Purba, Fernando A. Banjarnahor, Chin-Yin Huang, Chao-Tung Yang
3. A Comparison Study for Different Number of Mesh Routers and Small Scale WMNs Considering Subway Distribution of Mesh Clients and Three Router Replacement Methods
Admir Barolli, Evjola Spaho, Shinji Sakamoto, Leonard Barolli, Makoto Takizawa
4. Safety Assurance of Omnidirectional Wheelchair Robot for Playing Badminton Game
Keita Matsuo, Leonard Barolli
5. A Fuzzy-based System for Assessment of Relational Trust Considering Reputation as a New Parameter
Shunya Higashi, Phudit Ampririt, Ermioni Qafzezi, Makoto Ikeda, Keita Matsuo, Leonard Barolli

SMEUCE-S1: Investment and Operation Management**Chair: Kuei-Yuan Wang, Asia University, Taiwan**

1. Discussion on the Labor Shortage Problem in Taiwan's Construction Industry
Kuei-Yuan Wang, Ying-Li Lin, Chien-Kuo Han, Wen-De Lin
 2. The Impact of Investor Sentiment on Abnormal Returns and Abnormal Volumes- the Study of ESG Event
Yung-Shun Tsai, Shyh-Weir Tzang, Chun-Ping Chang, Ruei-Tsz Chuang
 3. Effects of Other Customers' Negative Behavior on Focal Customers' Evaluation of Service Results
Mei Hua Huang, Chia-Yuan Lee, Szu-Hsien Lin
 4. The Investment Performance of Taiwan and Hong Kong: A Comparative Analysis
Mei-Hua Liao, Yiu Chan, Ya-Lan Chan
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5. Research on Optimization Strategies of Pension Investment Portfolio - Taking Civil Servants as an Example
Ying-Li Lin, Tzu-Ting Chao, Kuei-Yuan Wang, Hui-Ling Yang
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Lunch

13:00-14:00(UTC+8) Taiwan Standard Time

Parallel Sessions

14:00-15:30(UTC+8) Taiwan Standard Time
08:00-09:30(UTC+2) CEST Time Zone (Rome, Italy)

IMIS-S5: Distributed Computing and Applications

Chair: Tetsuya Shigeyasu, Prefectural University of Hiroshima, Japan

1. An Evaluation Model for the Effectiveness of College Club Activities Based on Grey Relational Analysis
Qiong Li, Lili Su, Yanyan Zhao, Lixing Li, Xuan Wang
2. Research on Bitcoin Price Prediction Based on Text Analysis and Deep Learning
Ziying Liu, Xu Chen, Wang Xu An
3. Effect of DoS Attack into LiDAR Ethernet
Yoonji Kim, Insu Oh, Jiung Hwang, Jeong Minchan, Kangbin Yim
4. A Study on Detecting Damaged Building Based on Results of Wi-Fi RTT Measurements
Natsumi Hiramoto, Tetsuya Shigeyasu, Chunxiang Chen
5. Extended Gerber-Shiu Expected Discounted Penalty Functions in Risk Model Perturbed by Diffusion and Application
Zhimin Wang, Haibo Zhang, Xiang Ma, Xuan Wang

SMEUCE-S2: Ubiquitous Commerce and Sustainable Development

Chair: Mei-Hua Huang, Asia University, Taiwan

1. An Exploration of Financial Planning and Wealth Management - A Case Study of Fresh Graduates
Ying-Li Lin, Tzu-Ting Chao, Yu-Ai Chang
 2. The Impact of Google Search Volume Index (SVI) on Stock Returns of Taiwan AI Supply Chain Stocks
Ying-Li Lin, Tzu-Ting Chao, Chia-Fang Hsieh
 3. Impact of the Bullwhip Effect on Supplier Management: A Case Study of the Machine Tool Components Industry
Ya-Lan Chan, Jheng-Fong Ke, Sue-Ming Hsu, Mei-Hua Liao
 4. Analysis on Company Sustainable Development Goals Disclosure: A Case on Indonesian Commercial Bank Listed on BUKU 4 and 3
Szu-Hsien Lin, Mirzha Alamsyah Muda, Mei Hua Huang
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Coffee Break

15:30-16:00(UTC+8) Taiwan Standard Time

Banquet Party

18:00-20:00(UTC+8) Taiwan Standard Time

Howard Prince Hotel Taichung

<http://www.howard-hotels.com.tw/en/taichung/home/>

Hybrid Meeting Schedule for CISIS-2024 and IMIS-2024, 3 July to 5 July, 2024

1st day: Wednesday, 3 July, 2024	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-2024 and IMIS-2024 Steering Committee Meeting and Discussion								
2nd day: Thursday, 4 July, 2024	Room #1 Meeting ID:		Room #2 Meeting ID:		Room #3 Meeting ID:		Room #4 Meeting ID:	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
Slot 1 10:00-11:00 (UTC+8) Taiwan Standard Time 04:00-05:00 (UTC+2) CEST Time Zone (Rome, Italy) CISIS-2024 and IMIS-2024 Keynote #1: Prof. Sriram Chellappan Meeting ID:								
Coffee Break								
Slot 2 11:00-11:30 (UTC+8) Taiwan Standard Time 05:30-07:00(UTC+2) CEST Time Zone (Rome, Italy)								
CISIS-S1	Shinji Sakamoto, Japan	VENOA-S1	Yoshihiro Okada, Japan	IMIS-S1	Tomoyuki Ishida, Japan	ITAUC-S1	Hsing-Chung Chen, Taiwan	
Lunch								
Slot 3 14:00-15:30(UTC+8) Taiwan Standard Time 08:00-09:30(UTC+2) CEST Time Zone (Rome, Italy)								
CISIS-S2	Tomoya Enokido, Japan	SWISM-S1	Beniamino Di Martino, Italy	IMIS-S2	Chao-Tung Yang, Taiwan	BDITS-S1	Baojiang Cui, China	
Coffee Break								
Slot 4 16:00-17:30(UTC+8) Taiwan Standard Time 10:00-11:30(UTC+2) CEST Time Zone (Rome, Italy)								
CISIS-S3	Omid Ameri Sianaki, Australia	SWISM-S2	Antonio Esposito, Italy	IMIS-S3	Kangbin Yim, Japan	MCNCS-S1	Fang-Yie Leu, Taiwan	
Reception Party at Tunghai University								
3rd day: Friday, 5 July, 2024	Room #1 Meeting ID:		Room #2 Meeting ID:		Room #3 Meeting ID:		Room #4 Meeting ID:	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
Slot 1 10:00-11:00 (UTC+8) Taiwan Standard Time 04:00-05:00 (UTC+2) CEST Time Zone (Rome, Italy) CISIS-2024 and IMIS-2024 Keynote #2: Prof. Chao-Tung Yang Meeting ID:								
Coffee Break								
Slot 2 11:30-13:00(UTC+8) Taiwan Standard Time 05:30-07:00(UTC+2) CEST Time Zone (Rome, Italy)								
CISIS-S4	Isaac Woungang, Canada	IKIDW-S1	Olivia Fachrunnisa, Indonesia	IMIS-S4	Keita Matsuo, Japan	SMEUCE-S1	Kuei-Yuan Wang, Taiwan	
Lunch								
Slot 3 14:00-15:30(UTC+8) Taiwan Standard Time 08:00-09:30(UTC+2) CEST Time Zone (Rome, Italy)								
CISIS-S5	Wei Lu, USA	SWISM-S3	Salvatore Venticinque, Italy	IMIS-S5	Tetsuya Shigeyasu, Japan	SMEUCE-S2	Mei-Hua Huang, Taiwan	
Coffee Break								
Banquet Party in Howard Prince Hotel Taichung								