

PROGRAM GUIDE



NBiS-2021

The 24-th International Conference on
Network-Based Information Systems

and



*Intelligent Networking
and Collaborative Systems*

INCoS-2021

The 13-th International Conference on
Intelligent Networking and Collaborative Systems

Virtual Conference (Online Presentation)

September 1st - July 3rd, 2021

Technically Co-sponsored by:



Asia University, Taichung
Taiwan



Fukuoka Institute of Technology
Japan

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Welcome Message from NBiS-2021 Organizing Committee

We would like to welcome you to the 24th International Conference on Network-Based Information Systems (NBiS-2021), which is held at Asia University, Taichung, Taiwan from September 1 to September 3, 2021.

The main objective of NBiS is to bring together scientists, engineers, and researchers from both network systems and information systems with the aim of encouraging the exchange of ideas, opinions, and experiences between these two communities.

NBiS started as a workshop and was held for 12 years together with DEXA International Conference as one of the oldest among DEXA Workshops. The workshop was very successful and in 2009 edition the NBiS was held at IUPUI, Indianapolis, USA as an independent International Conference supported by many international volunteers. In following years, the NBiSs was held in Takayama, Gifu, Japan (2010), Tirana, Albania (2011) Melbourne, Australia (2012), Gwangju, Korea (2013), Salerno, Italy (2014), Taipei, Taiwan (2015), Ostrava, Czech Republic (2016), Toronto, Canada (2017), Bratislava, Slovakia (2018), Oita, Japan (2019) and Victoria, Canada (2020) .

It is our honour to chair this prestigious conference, as one of the important conferences in the field. Extensive international participation, coupled with rigorous peer reviews, has made this an exceptional technical conference. The Technical Program and Workshops add important dimensions to this event. We hope that you will enjoy each and every component of this event and benefit from interactions with other attendees.

Since its inception, NBiS has attempted to bring together people interested in information and networking, in areas that range from the theoretical aspects to the practical design of new network systems, distributed systems, multimedia systems, Internet/web technologies, mobile computing, intelligent computing, pervasive/ubiquitous networks, dependable systems, semantic services, and scalable computing. For NBiS-2021, we have continued these efforts as novel networking concepts emerge and new applications flourish. In this edition of NBiS, many papers were submitted from all over the world. They were carefully reviewed and only high quality papers will be presented during conference days.

The organization of an international conference requires the support and help of many people. A lot of people have helped and worked hard for a successful NBiS-2021 technical program and conference proceedings. First, we would like to thank all the authors for submitting their papers. We are indebted to Track Co-Chairs, Program Committee members and reviewers who carried out the most difficult work of carefully evaluating the submitted papers. We would like to express our great appreciation to our keynote speakers for accepting our invitation as keynote speakers of NBiS-2021.

We hope that you have an enjoyable and productive time during the conference.

INCoS-2021 Conference Organizing Committee

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Jeffrey J.P. Tsai, Asia University, Taiwan
Makoto Takizawa, Hosei University, Japan

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Welcome Message from the INCoS-2021 Organizing Committee

Welcome to the 13th International Conference on Intelligent Networking and Collaborative Systems (INCoS-2021), which is held at Asia University, Taichung, Taiwan from September 1 to September 3, 2021.

INCoS is a multidisciplinary conference that covers latest advances in intelligent social networks and collaborative systems, intelligent networking systems, mobile collaborative systems, secure intelligent cloud systems, etc. Additionally, the conference addresses security, authentication, privacy, data trust and user trustworthiness behaviour, which have become crosscutting features of intelligent collaborative systems. With the fast development of the Internet, we are experiencing a shift from the traditional sharing of information and applications as the main purpose of the networking systems to an emergent paradigm, which locates people at the very centre of networks and exploits the value of people's connections, relations and collaboration. Social networks are playing a major role as one of the drivers in the dynamics and structure of intelligent networking and collaborative systems.

Virtual campuses, virtual communities and organizations strongly leverage intelligent networking and collaborative systems by a great variety of formal and informal electronic relations, such as business-to-business, peer-to-peer and many types of online collaborative learning interactions, including the virtual campuses and eLearning systems. Altogether, this has resulted in entangled systems that need to be managed efficiently and in an autonomous way. In addition, the conjunction of the latest and powerful technologies based on Cloud, mobile and wireless infrastructures are currently bringing new dimensions of collaborative and networking applications a great deal by facing new issues and challenges.

The aim of this conference is to stimulate research that will lead to the creation of responsive environments for networking and the development of adaptive, secure, mobile, and intuitive intelligent systems for collaborative work and learning.

The successful organization of the conference is achieved thanks to the great collaboration and hard work of many people and conference supporters. First, we would like to thank all the authors for their continued support to the conference by submitting their research work to the conference, for their presentations and discussions during the conference days. We would like to thank PC Co-Chairs, Track Co-chairs, TPC members and external reviewers for their work by carefully evaluating the submissions and providing constructive feedback to authors.

We would like to acknowledge the excellent work and support by the International Advisory Committee. Our gratitude and acknowledgment for the conference keynotes for their interesting and inspiring keynote speeches.

We greatly appreciate the support by Web Administrator Co-Chairs. We are very grateful to Springer as well as several academic institutions for their endorsement and assistance.

Finally, we hope that you will find these proceedings to be a valuable resource in your professional, research and educational activities.

NBiS-2021 & INCoS-2021 Keynote I



Prof. Wenny Rahayu, La Trobe University, Melbourne, Australia

Big Data Management for Data Streams

Abstract: One of the main drivers behind Big Data in the recent years has been the proliferation of applications and devices to generate data with high velocity in multiple formats. These devices include IoT sensors, mobile devices, GPS trackers and so on. This new data generation, called data streams, requires new ways to manage, process and analyse. These data streams drive the need for a new database architecture that is able to manage the complexity of multiple data formats, deal with high-speed data and integrate them into a scalable data management system. In this talk, the primary motivation for using data lakes, which is new wave of database management that is underpinned by the need to deal with data volume and variety of big data storage will be presented. Then, some case studies to demonstrate the development of big data ecosystems involving data streams will be discussed. These case studies include the development of data lake for smart factory with sensor data collection/ingestion and big data system for GPS crowdsourcing as part of a community planning.

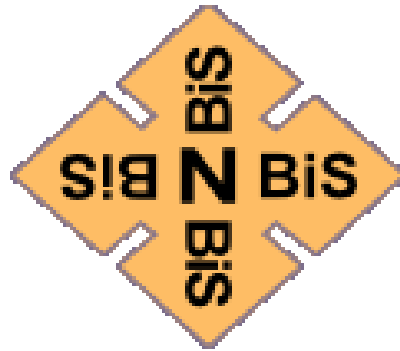
NBiS-2021 & INCoS-2021 Keynote II



Dr. Yusuke Gotoh, Okayama University, Okayama, Japan

Convergence of Broadcast and Broadband in 5G Era

Abstract: In order to converge broadband and broadcast, the realization of TV viewing system by mobile devices is a particularly important challenge. Action on standardized mobile communication technologies for multicast transmission started in 2006, and now Further evolved Multimedia Broadcast Multicast Service (FeMBMS) is an official component of 5G in 3GPP as an LTE-based 5G terrestrial broadcasting system. In this talk, I will introduce the technologies for the convergence of broadband and broadcast in the 5G era. Furthermore, I will introduce our recent work related to the technology of broadcasting while maintaining the compatibility with 5G mobile networks.



NBiS-2021

Main Conference and Workshops Program

Wednesday, September 1, 2021

Parallel Sessions

10:00-11:30 (Japan time zone: UTC+9)

09:00-10:30 (Taiwan time zone: UTC+8)

03:00-04:30 (Europe time zone: UTC+2, summer time)

NBiS-S1: Distributed Systems and Data Management

Session Chair: Wendy Osborn, University of Lethbridge, Canada

1. A Monotonically Increasing (MI) Algorithm to Estimate Energy Consumption and Execution Time of Processes on a Server
Dilawaer Duolikun , Tomoya Enokido , Leonrad Barolli , and Makoto Takizawa
2. A Capability Token Selection Algorithm for Lightweight Information Flow Control in the IoT
Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
3. Join Processing in Varying Periodic and Aperiodic Spatial Data Streams
Wendy Osborn
4. The Improved Redundant Active Time-Based Algorithm with Forcing Termination of Meaningless Replicas in Virtual Machine Environments
Tomoya Enokido, Dilawaer Duolikun, and Makoto Takizawa
5. Personalized Cryptographic Protocols for Advanced Data Protection
Urszula Ogiela, Makoto Takizawa, Lidia Ogiela

DEMoC-S1: Data Engineering and Mobile Computing**Chair: Yusuke Gotoh, Okayama University, Japan**

1. Physical Memory Management with Two Page Sizes in Tender OS
Koki Kusunoki, Toshihiro Yamauchi and Hideo Taniguchi
2. Sensor-Based Motion Analysis of Paralympic Boccia Athletes
Ayumi Ohnishi, Tsutomu Terada, and Masahiko Tsukamoto
3. A Design and Development of a Near Video-on-Demand Systems
Tomoki Yoshihisa
4. A Consideration of Delivering Method for Super-Resolution Video
Yusuke Gotoh and Takayuki Oishi

Parallel Sessions**13:00-14:30 (Japan time zone: UTC+9)****12:00-13:30 (Taiwan time zone: UTC+8)****06:00-07:30 (Europe time zone: UTC+2, summer time)****NBiS-S2: Intelligent Computing and Networking****Session Chair: Hsing-Chung Chen, Asia University, Taiwan**

1. A Hybrid Intelligent Simulation System for Node Placement in WMNs: A Comparison Study of Chi-square and Uniform Distributions of Mesh Clients for CM and LDVM Router Replacement Methods
Admir Barolli, Kevin Bylykbashi, Ermioni Qafzezi, Shinji Sakamoto, Leonard Barolli
2. Performance Comparison of CM and LDIWM Router Replacement Methods for WMNs by WMN-PSOHC Simulation System Considering Chi-square Distribution of Mesh Clients
Shinji Sakamoto, Yi Liu, Leonard Barolli and Shusuke Okamoto
3. Antilock Braking System (ABS) Based Control Type Regulator Implemented by Neural Network in Various Road Conditions
Hsing-Chung Chen, Andika Wisnujati, Agung Mulyo Widodo, Yu-Lin Song, and Chi-Wen Lung
4. Personalized Cryptographic Protocols – Obfuscation Technique Based on the Qualities of the Individual
Radosław Bułat, Marek R. Ogiela

INWC-S1: Mobile Computing and Communication**Chair: Makoto Ikeda, Fukuoka Institute of Technology, Japan**

1. A Machine Learning Approach for Predicting 2D Aircraft Position Coordinates
Kazuma Matsuo, Makoto Ikeda, Leonard Barolli
2. Evaluation of Rainfall Characteristics Between 1-Hour Precipitation and 10-Minute Precipitation Observed by AMeDAS
Kiyotaka Fujisaki
3. Numerical Analysis of Photonic Crystal Waveguide with Stub by CIP Method
Hiroshi Maeda
4. A CCM-based HC System for Mesh Router Placement Optimization: A Comparison Study for Different Instances Considering Normal and Uniform Distributions of Mesh Clients
Aoto Hirata, Tetsuya Oda, Nobuki Saito, Yuki Nagai, Kyohei Toyoshima, Leonard Barolli

NBiS-2021 Keynote I

15:00-16:00 (Japan zone: UTC+9)
14:00-15:00 (Taiwan zone: UTC+8)
08:00-09:00 (Europe time zone:UTC+2, summer time)

NBiS-2021 Keynote Talk I

Prof. Wenny Rahayu: Big Data Management for Data Streams

Parallel Sessions

16:30-18:00 (Japan time zone: UTC+9)
15:30-17:00 (Taiwan time zone: UTC+8)
09:30-11:00 (Europe time zone: UTC+2, summer time)

NBiS-S3: Cloud Computing and Multimedia Applications

Session Chair: Stelios Sotiriadis, Birkbeck, University of London, United Kingdom

1. An Efficient Framework for Resource Allocation and Dynamic Pricing Scheme for Completion Time Failure in Cloud Computing
Anjan Bandyopadhyay, Vikash Kumar Singh, Sajal Mukhopadhyay, Ujjwal Rai, Arghya Bandyopadhyay
 2. Inferring Anomalies from Cloud Metrics using Recurrent Neural Networks
Spyridon Chouliaras and Stelios Sotiriadis
 3. Method of Lyric Association based on Mind Mapping in Collaborative Lyric Writing of Popular Music
Meguru Yamashita, Kiwamu Satoh
 4. Collaborative Virtual Environments for Jaw Surgery Simulation
Krit Khwanngern, Juggapong Natwichai, Vivatchai Kaveeta, Phornphanit Meenert, Sawita Sriyong
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Thursday, September 2, 2021**Parallel Sessions**

10:00-11:30 (Japan time zone: UTC+9)
09:00-10:30 (Taiwan time zone: UTC+8)
03:00-04:30 (Europe time zone: UTC+2, summer time)

NBiS-S4: Trust and Security

Session Chair: Arjan Durrezi, IUPUI, USA

1. A Trust-Based Tool for Detecting Potentially Damaging Users in Social Networks
Kaley J. Rittichier, Davinder Kaur, Suleyman Uslu, and Arjan Durrezi
 2. Secure Cloud Storage Using Color Code in DNA Computing
Saravanan Manikandan, Islam MD Saikhul, Hsing-Chung Chen, Yu-Lin Song
 3. Deterrence-Based Trust: A Study on Improving the Credibility of Social Media Messages in Disaster Using Registered Volunteers
Takumi Kitagawa, Tetsushi Ohki, Yuki Koizumi, Yoshinobu Kawabe, Toru Hasegawa, Masakatsu Nishigaki
 4. A Perceptron Mixture Model of Intrusion Detection for Safeguarding Electronic Health Record System
Wei Lu and Ling Xue
-

INVITE-S1: Multimedia Applications**Chair: Tomoyuki Ishida, Fukuoka Institute of Technology, Japan**

1. Proposal of a Tele-Immersion Visiting System
Reiya Yahada, Tomoyuki Ishida
2. A Study on the Impact of High Refresh-Rate Displays on Scores of eSports
Koshiro Murakami, Hideo Miyachi
3. Assessing the Sense of Presence to Evaluate the Effectiveness of Virtual Reality Wildfire Training
Huang Heyao, Ogi Tetsuro
4. 3D measurement and feature extraction for metal nuts
Zhiyi Gao, Tohru Kato, Hiroki Takahashi, Akio Doi

Parallel Sessions**13:00-14:30 (Japan time zone: UTC+9)****12:00-13:30 (Taiwan time zone: UTC+8)****06:00-07:30 (Europe time zone: UTC+2, summer time)****NBiS-S5: Wireless Networks and Mobile Communication Systems****Session Chair: Naohiro Hayashibara, Kyoto Sangyo University, Japan**

1. Outage Probability of CR-NOMA Schemes with Multiple Antennas Selection and Power Transfer Approach
Hong-Nhu Nguyen, Ngoc-Long Nguyen, Nhat-Tien Nguyen, Ngoc-Lan Nguyen, and Miroslav Voznak
2. Employee Management Support Application for Regional Public Transportation Service in Japan
Chinasa Sueyoshi, Hideya Takagi, Toshihiro Uchibayashi, and Kentaro Inenaga
3. Message Ferry Routing based on Nomadic Lévy Walk in Delay Tolerant Networks
Koichiro Sugihara and Naohiro Hayashibara
4. Optical Simulations on Aerial Transmitting Laser Beam for Free Space Optics Communication
Shun Jono, Takuto Koyama, Kota Watanabe, Kiyotaka Izumi, Takeshi Tsujimura

WSSM-S1: Multimedia Applications**Chair: Masaki Kohana, Chuo University, Japan**

1. EPOQAS: Development of an Event Program Organizer with a Question Answering System
Jun Iio
2. Estimating User 's Movement Path using Wi-Fi Authentication Log
Jun Yamano, Yasuhiro Ohtaki and Kazuyuki Yamamoto
3. Integrating PPN into Autoencoders for Better Information Aggregation Performance
Yudai Okui, Tatsuhiko Yonekura and Masaru Kamada
4. An AR System to Practice Drums
Kaito Kikuchi, Michitoshi Niibori and Masaru Kamada

Parallel Sessions

15:00-16:30 (Japan time zone: UTC+9)

14:00-15:30 (Taiwan time zone: UTC+8)

08:00-09:30 (Europe time zone: UTC+2, summer time)

WSSM-S2: Web-based Systems and Applications

Chair: Shusuke Okamoto, Seikei University, Japan

1. A Proposal of Learning Feedback System for Children to Promote Self-directed Learning
Yoshihiro Kawano, Yuka Kawano
2. A SPA of Online Lecture Contents with Voice
Masaki Kohana, Shusuke Okamoto, Masaru Kamada
3. A Dynamic and Distributed Simulation Method for Web-based Games
Ryoya Fukutani, Shusuke Okamoto, Shinji Sakamoto and Masaki Kohana

NBiS-2021 Keynote II

17:00-18:00 (Japan time zone: UTC+9)

16:00-17:00 (Taiwan time zone: UTC+8)

10:00-11:00 (Europe time zone:UTC+2, summer time)

NBiS-2021 Keynote Talk II

Dr. Yusuke Gotoh: Convergence of Broadcast and Broadband in 5G Era

Friday, July 3, 2021

NBiS-2021 Organizing Committee Meeting and Discussion



*Intelligent Networking
and Collaborative Systems*

INCoS-2021

Main Conference and Workshops Program

Wednesday, September 1, 2021

Parallel Sessions

10:00-11:30 (Japan time zone: UTC+9)

09:00-10:30 (Taiwan time zone: UTC+8)

03:00-04:30 (Europe time zone: UTC+2, summer time)

WIND-S1: Multimedia and Blockchain Applications

Session Chair: Masato Tsuru, Kyushu Institute of Technology, Japan

1. License Trading System for Video Contents Using Smart Contract on Blockchain
Kosuke Mori, Kota Nakazawa and Hiroyoshi Miwa
2. Query Processing in Highly Distributed Environments
Akira Kawaguchi, Nguyen Viet Ha, Masato Tsuru, Abbe Mowshowitz and Masahiro Shibata
3. Loose Matching Approach Considering the Time Constraint for Spatio-temporal Content Discovery
Shota Akiyoshi, Yuzo Taenaka, Kazuya Tsukamoto and Myung Lee
4. Optimized Memory Encryption for VMs Across Multiple Hosts
Shuhei Horio, Kouta Takahashi, Kenichi Kourai, and Lukman Ab. Rahim
5. Blockchain Simulation Environment on Multi-Image Encryption for Smart Farming Application
Irawan Widi Widayat and Mario Köppen

Parallel Sessions

13:00-14:30 (Japan time zone: UTC+9)

12:00-13:30 (Taiwan time zone: UTC+8)

06:00-07:30 (Europe time zone: UTC+2, summer time)

INCoS-S1: Social Networking and Collaborative Systems

Session Chair: Juggapong Natwichai, Chiang Mai University, Thailand

1. An Approach to Enhance Academic Ranking Prediction with Augmented Social Perception Data
Kittayaporn Chantaranimi, Prompong Sugunsil and Juggapong Natwichai
2. The Effect of Agents' Diversities on the Running Time of the Random Walk-Based Rendezvous Search
Fumiya Toyoda and Yusuke Sakumoto
3. A Study on Designing Autonomous Decentralized Method of User-Aware Resource Assignment in Large-Scale and Wide-Area Networks
Toshitaka Kashimoto, Fumiya Toyoda and Yusuke Sakumoto
4. Revealing COVID-19 Data by Data Mining and Visualization
Carson K. Leung, Tyson N. Kaufmann, Yan Wen, Chenru Zhao, Hao Zheng
5. Algorithms for Mastering Board Game Nanahoshi Considering Deep Neural Networks
Masato Saito and Hiroyoshi Miwa

INCoS-2021 Keynote I

15:00-16:00 (Japan zone: UTC+9)

14:00-15:00 (Taiwan zone: UTC+8)

08:00-09:00 (Europe time zone: UTC+2, summer time)

INCoS-2021 Keynote Talk I

Prof. Wenny Rahayu: Big Data Management for Data Streams

Parallel Sessions

16:30-18:00 (Japan time zone: UTC+9)

15:30-17:00 (Taiwan time zone: UTC+8)

09:30-11:00 (Europe time zone: UTC+2, summer time)

INCoS-S2: Information Management and Machine Learning

Session Chair: Flora Amato, University of Naples "Frederico II", Italy

1. Artificial Intelligence-based Early Prediction Techniques in Agri-tech Domain
Alessandra Amato, Flora Amato, Leopoldo Angrisani, Leonard Barolli, Francesco Bonavolontà, Gianluca Neglia and Oscar Tamburis
2. Transformative Computing Based on Advanced Human Cognitive Processes
Urszula Ogiela, Makoto Takizawa and Lidia Ogiela
3. Automatic Measurement of Acquisition for COVID-19 Related Information
Alessandra Amato, Flora Amato, Leonard Barolli and Francesco Bonavolontà
4. Cognitive Approach for Creation of Visual Security Codes
Urszula Ogiela and Marek R. Ogiela
5. Social Media Data Misuse
Tariq Soussan and Marcello Trovati

MIDAP-S1: Medical Image and Data Analysis**Session Chair: Jana Nowaková, VSB - Technical University of Ostrava, Czech Republic**

1. Medical Image Analysis with NVIDIA Jetson GPU Modules
Pavel Kromer and Jana Nowakova
 2. Analysis of Optical Mapping Data with Neural Network
Vit Dolezi and Petr Gajdos
 3. Evolutionary Multi-level Thresholding for Breast Thermogram Segmentation
Arti Tiwari, Kamanasish Bhattacharjee, Millie Pant, Jana Nowakova and Vaclav Snasel
 4. Identification of the Occurrence of Poor Blood Circulation in Toes by Processing Thermal Images from Flir Lepton Module
Martin Radvansky, Martin Radvansky, Jr. and Milos Kudelka
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Thursday, September 2, 2021**Parallel Sessions****10:00-11:30 (Japan time zone: UTC+9)****09:00-10:30 (Taiwan time zone: UTC+8)****03:00-04:30 (Europe time zone: UTC+2, summer time)****INCoS-S3: Network Design and Intelligent Algorithms****Session Chair: Hiroyoshi Miwa, Kwansei Gakuin University, Japan**

1. Effects of Augmented Reality Markers for Networked Robot Navigation
Masato Ogata, Masato Inoue, Kiyotaka Izumi and Takeshi Tsujimura
2. Topology as a Factor in Overlay Networks Designed to Support Dynamic Systems Modeling
Abbe Mowshowitz, Akira Kawaguchi and Masato Tsuru
3. Algorithm Based on Local Search Method for Examination Proctors Assignment Problem Considering Various Constraints
Takahiro Nishikawa and Hiroyoshi Miwa
4. Bio-inspired VM Introspection for Securing Collaboration Platforms
Huseyn Huseynov, Tarek Saadawi and Kenichi Kourai

Parallel Sessions**13:00-14:30 (Japan time zone: UTC+9)****12:00-13:30 (Taiwan time zone: UTC+8)****06:00-07:30 (Europe time zone: UTC+2, summer time)****INCoS-S4: Mobile and Intelligent Networking****Session Chair: Shinji Sakamoto, Sekei University, Japan**

1. Performance Comparison of CM and LDVM Router Replacement Methods for WMNs by WMN-PSOSA-DGA Hybrid Simulation System Considering Stadium Distribution of Mesh Clients
Admir Barolli, Shinji Sakamoto, Leonard Barolli and Makoto Takizawa
 2. A Self-learning Clustering Protocol in Wireless Sensor Networks for IoT Applications
Nhat Tien Nguyen, Thien T.T. Le, Miroslav Voznak, Jaroslav Zdralek
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3. A Fuzzy-based System for User Service Level Agreement in 5G Wireless Networks
Phudit Ampririt, Ermioni Qafzezi, Kevin Bylykbashi, Makoto Ikeda, Keita Matsuo, Leonard Barolli
4. A Genetic Algorithm for Parallel Unmanned Aerial Vehicle Scheduling: A Cost Minimization Approach
Aprinaldi Jasa Mantau, Irawan Widi Widayat and Mario Koppen
5. A Movement Adjustment Method for DQN-based Autonomous Aerial Vehicle
Nobuki Saito, Tetsuya Oda, Aoto Hirata, Kyohei Toyoshima, Masaharu Hirota, Leonard Barolli

Parallel Sessions

15:00-16:30 (Japan time zone: UTC+9)

14:00-15:30 (Taiwan time zone: UTC+8)

08:00-09:30 (Europe time zone: UTC+2, summer time)

FINCoS-S1: Intelligent Algorithms and Systems

Session Chair: Marcello Trovati, Edge Hill University, United Kingdom

1. Deep Learning Approaches to Detect Real Time Events Recognition in Smart Manufacturing systems – A Short Survey
Suleman Awan and Marcello Trovati
2. A Comparison Study of CM and RIWM Router Replacement Methods for WMNs Considering Boulevard Distribution of Mesh Clients
Peng Xu, Admir Barolli, Phudit Ampririt, Shinji Sakamoto, Leonard Barolli
3. Consideration of Presentation Timing in Bicycle Navigation Using Smart Glasses
Takahiro Uchiya and Ryo Futamura
4. Graph Convolution Network for Urban Mobile Traffic Prediction
Changliang Yu, Zhiyang Ye and Nan Zhao
5. Deep Reinforcement Learning for Task Allocation in UAV-enabled Mobile Edge Computing
Changliang Yu, Wei Du, Fan Ren and Nan Zhao

INCoS-2021 Keynote II

17:00-18:00 (Japan time zone: UTC+9)

16:00-17:00 (Taiwan time zone: UTC+8)

10:00-11:00 (Europe time zone: UTC+2, summer time)

INCoS-2021 Keynote Talk II

Dr. Yusuke Gotoh: Convergence of Broadcast and Broadband in 5G Era

Friday, September 3, 2021

INCoS-2021 Organizing Committee Meeting and Discussion

**Online Meeting Schedule for NBiS-2021 and INCoS-2021
September 1 – 3, 2021**

1 st Day: Wednesday, 1 September, 2021	Room #1 Meeting ID: 882 1446 4926		Room #2 Meeting ID: 892 6008 5886		Room #3 Meeting ID: 898 3102 6967	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
Slot 1 10:00-11:30(UTC+9) 09:00-10:30(UTC+8) 03:00-04:30(UTC+2)	NBiS-S1	Wendy Osborn, Canada	DEMOc-S1	Yusuke Gotoh, Japan	WIND-S1	Masato Tsuru, Japan
Slot 2 13:00-14:30(UTC+9) 12:00-13:30(UTC+8) 06:00-07:30(UTC+2)	NBiS-S2	Hsing-Chung Chen, Taiwan	INWC-S1	Makoto Ikeda, Japan	INCoS-S1	Juggapong Natwichai, Thailand
Slot 3 15:00-16:00(UTC+9) 14:00-15:00(UTC+8) 08:00-09:00(UTC+2)	NBiS-2021 and INCoS-2021 Keynote #1: Prof. Wenny Rahayu Meeting ID: 882 1446 4926					
Slot 4 16:30-18:00(UTC+9) 15:30-17:00(UTC+8) 09:30-11:00(UTC+2)	NBiS-S3	Stelios Sotiriadis, United Kingdom	MIDAP-S1	Jana Nowaková, Czech Republic	INCoS-S2	Flora Amato, Italy
2nd Day: Thursday, 2 September, 2021	Room #1 Meeting ID: 882 1446 4926		Room #2 Meeting ID: 892 6008 5886		Room #3 Meeting ID: 898 3102 6967	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
Slot 1 10:00-11:30(UTC+9) 09:00-10:30(UTC+8) 03:00-04:30(UTC+2)	NBiS-S4	Arjan Durreli, USA	INVITE-S1	Tomoyuki Ishida, Japan	INCoS-S3	Hiro Yoshi Miwa, Japan
Slot 2 13:00-14:30(UTC+9) 12:00-13:30(UTC+8) 06:00-07:30(UTC+2)	NBiS-S5	Naohiro Hayashibara, Japan	WSSM-S1	Masaki Kohana, Japan	INCoS-S4	Shinji Sakamoto, Japan
Slot 3 15:00-16:30(UTC+9) 14:00-15:30(UTC+8) 08:00-09:30(UTC+2)			WSSM-S2	Shusuke Okamoto, Japan	FINCoS-S1	Marcello Trovati, United Kingdom
Slot 4 17:00-18:00(UTC+9) 16:00-17:00(UTC+8) 10:00-11:00(UTC+2)	NBiS-2021 and INCoS-2021 #2: Dr. Yusuke Gotoh Meeting ID: 882 1446 4926					
3rd Day: Friday, 3 September, 2021	NBiS-2021 and INCoS-2021 Steering Committee Meeting and Discussion					

Additional information

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