PROGRAM GUIDE

BWCCA-2020

The 15-th International Conference on
Broad-Band and Wireless Computing, Communication and Applications

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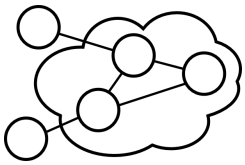

3PGCIC-2020

The 15-th International Conference on
P2P, Parallel, Grid, Cloud and Internet Computing

October 28^{th} - October 30^{th}, 2020
Yonago, Tottori, Japan

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Welcome Message from the BWCCA-2020 International Conference Organizers

Welcome to the 15-th International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA-2020), which will be held in conjunction with the 15-th 3PGCIC-2020 International Conference from October 28 to October 30, 2020 in Yonago City, Tottori Prefecture, Japan.

This International Conference is a forum for sharing ideas and research work in the emerging areas of broadband and wireless computing. Information networks of today are going through a rapid evolution. Different kinds of networks with different characteristics are emerging and they are integrating in heterogeneous networks. For these reasons, there are many interconnection problems which may occur at different levels of the hardware and software design of communicating entities and communication networks. These kinds of networks need to manage an increasing usage demand, provide support for a significant number of services, guarantee their QoS, and optimize the network resources.

The success of all-IP networking and wireless technology has changed the ways of living the people around the world. The progress of electronic integration and wireless communications is going to pave the way to offer people the access to the wireless networks on the fly, based on which all electronic devices will be able to exchange the information with each other in ubiquitous way whenever necessary.

The aim of this conference is to present the innovative research and technologies as well as developments related to broadband networking, and mobile and wireless communications.

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 BWCCA-2020 technical program and conference proceedings. First, we would like to thank all authors for submitting their papers, Program Committee Members and reviewers who carried out the most difficult work by carefully evaluating the submitted papers.

We thank Web Administrators Co-Chairs and Finance Chair for their excellent work. We would like to express our gratitude to Prof. Makoto Takizawa, Hosei University, Japan as Honorary Chair of BWCCA-2020 for his support and help. We give special thanks to Keynote Speakers of BWCCA-2020 and local arrangement team.

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

BWCCA-2020 International Conference Organizers

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Leonard Barolli, *Fukuoka Institute of Technology, Japan*

Message from the 3PGCIC-2020 Organizing Committee

Welcome to the 15-th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC-2020), which will be held in conjunction with BWCCA-2020 International Conference from October 28 to October 30, 2020 in Yonago City, Tottori Prefecture, Japan.

P2P, Grid, Cloud and Internet computing technologies have been established as breakthrough paradigms for solving complex problems by enabling large-scale aggregation and sharing of computational, data and other geographically distributed computational resources.

Grid Computing originated as a paradigm for high performance computing, as an alternative to expensive supercomputers. The Grid computing domain has been extended to embrace different forms of computing, including Semantic and Service-oriented Grid, Pervasive Grid, Data Grid, Enterprise Grid, Autonomic Grid, Knowledge and Economy Grid.

P2P Computing appeared as the new paradigm after client-server and web-based computing. These systems are evolving beyond file sharing towards a platform for large scale distributed applications. P2P systems have as well inspired the emergence and development of social networking, B2B (Business to Business), B2C (Business to Consumer), B2G (Business to Government), B2E (Business to Employee), and so on.

Cloud Computing has been defined as "a computing paradigm where the boundaries of computing are determined by economic rationale rather than technical limits". Cloud computing is a multi-purpose paradigm that enables efficient management of data centres, timesharing, and virtualization of resources with a special emphasis on business model. Cloud Computing has fast become the computing paradigm with applications in all application domains and providing utility computing at large scale.

Finally, *Internet Computing* is the basis of any large-scale distributed computing paradigms; it has very fast developed into a vast area of flourishing field with enormous impact on today's information societies. Internet-based computing serves thus as a universal platform comprising a large variety of computing forms.

The aim of the 3PGCIC conference is to provide a research forum for presenting innovative research results, methods and development techniques from both theoretical and practical perspectives related to P2P, Grid, Cloud and Internet computing.

Many people have helped and worked hard to produce a successful 3PGCIC-2020 technical program and conference proceedings. First, we would like to thank all the authors for submitting their papers, the PC members, and the reviewers who carried out the most difficult work by carefully evaluating the submitted papers.

We thank Web Administrators for their excellent work and support with the Web Submission and Management System of conference. We are grateful to Prof. Makoto Takizawa, Hosei University, Japan as Honorary Chair of the conference for his support and encouragment. Our special thanks also go to Keynote Speakers.

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

3PGCIC-2020 Organizing Committee

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BWCCA-2020 & 3PGCIC-2020 Keynote I

Prof. Masato Tsuru, Kyushu Institute of Technology, Japan

Title: Fairness and Efficiency in Network Resource Sharing

Abstract: With the expansion of network users and applications, the network traffic is still growing and a better sharing of limited network resources among multiple users/applications is required. In particular, recent strong demand on Internet of Things (IoT) for smart and connected communities along with architectural advancement, such as Software-Defined Networking (SDN) and Multi- access Edge Computing (MEC), have posed new challenges in fair and efficient resource sharing by multiplexing with complex and heterogeneous settings. In this talk, after briefly reviewing recent trends in communication networks, we discuss the concept of fairness in terms of achieved performance of each user through simple examples in wireless and wired networks. Then we go into more details in a few examples (Multipah-multicast file transfer on OpenFlow network; Wireless shared channel scheduling), and see how a fair and efficient resource sharing can be realized by time-division, space-division, and information-coding multiplexing.

Bio: **Masato Tsuru** received B.E. and M.E. degrees from Kyoto University, Japan in 1983 and 1985, respectively, and then received his D.E. degree from Kyushu Institute of Technology, Japan in 2002. He worked at Oki Electric Industry Co., Ltd., Nagasaki University, and Japan Telecom Information Service Co., Ltd. In 2003, he moved to the Department of Computer Science and Electronics, Kyushu Institute of Technology (Kyutech) as an Associate Professor, and then has been a Professor since April 2006. His research interests include performance measurement, modeling, and management of computer communication networks especially for Software-Defined Networking (SDN) and Delay Tolerant Networking (DTN). He is a member of the ACM, IEEE, IEICE, and IPSJ.

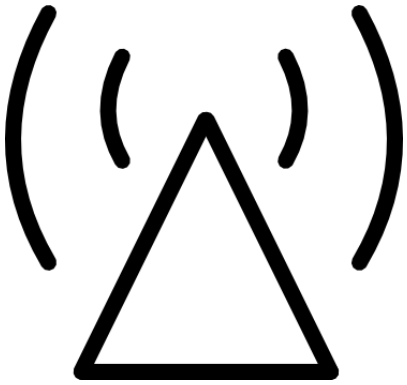
BWCCA-2020 & 3PGCIC-2020 Keynote II

Prof. Yoshitaka Shibata, Iwate Prefectural University, Japan

Title: Road Status Sensing and V2X Technologies toward Autonomous Driving on Challenged Network Environment

Abstract: Autonomous driving systems is expected as future safe and effective vehicles and have been investigated and developed in industrial countries and actually driving on the exclusive and highway roads with flat surface, clear driving lanes and center lines separated from the opposite direction and on good weather conditions. In the future autonomous driving system, more general road status and weather status environments such as heavy snow countries in addition to challenged network environment where no public communication network is available must be considered to realize safer and reliable mobility infrastructure. In this talk, in order to resolve the above problems, IoT based crowd sensing technology using various environmental sensors to precisely identify qualitative and quantitative road status using AI technology is discussed. The next generation V2X communication technology to exchange and share those road status and GIS information among surrounding vehicles and roadside bases stations is also explained. Finally a wide road status information sharing platform for challenged weather and network environments based on the 5G and the next generation high LAN is introduced.

Bio: **Yoshitaka Shibata** received his Ph.D. in Computer Science from the University of California, Los Angeles (UCLA), U.S.A. in 1985. From 1985 to 1989, he was a research member in Bell Communication Research (former AT&T Bell Laboratory), where he was working in the area of high-speed information network and protocol design for multimedia information services. From 1989 to 1998, he was with Information and Computer Science Department in Toyo University, Japan as a professor, where he conducts an intelligent multimedia network laboratory. Since 1998, he is working for Iwate Prefectural University, Japan as an executive director of Media Center and a professor of Faculty of Software and Information Science. In 2014, he became a vice president and professor emeritus in the same university. His research interests include Intelligent Multimedia Networks, IoT Technology, Virtual Reality and Agent Technologies, Kansei Information Processing and V2X Communication. He is a member of IEEE, ACM, Information Processing Society of Japan (IPSJ) and Institute of Electronic and Communication Engineering in Japan (IEICE). He is an author of more than 423 international journals and conference proceedings.



BWCCA-2020
Main Conference and Workshops Program

Wednesday, October 28, 2020

13:30-15:00 Parallel Sessions

BWCCA-S1: Mobile and Intelligent Computing Systems

Chair: Shinji Sakamoto, Seikei University, Japan

1. A Comparison Study of Constriction and Random Inertia Weight Router Replacement Methods for WMNs by WMN-PSOSA-DGA Hybrid Simulation System Considering Chi-square Distribution of Mesh Clients
   Admir Barolli, Shinji Sakamoto, Phudit Ampririt, Seiji Ohara, Leonard Barolli and Makoto Takizawa
2. DTN Routing Protocol using Reinforcement Learning
   Kenta Henmi and Akio Koyama
3. An Integrated Fuzzy-based Simulation System for Driver Risk Management in VANETs Considering Relative Humidity as a New Parameter
   Kevin Bylykbashi, Ermioni Qafzezi, Makoto Ikeda, Keita Matsuo, Leonard Barolli, Makoto Takizawa
4. Detecting Distracted Driving from Images by Processing Relative Locations of Objects of Interest inside Vehicles
   Arup Kanti Dey, Bharti Goel and Sriram Chellappan

5. An On-board Equipment and Blockchain-Based Automobile Insurance and Maintenance Platform
   Wen-Yao Lin , Frank Yeong-Sung Lin , Ting-Huan Wu , Kuang-Yen Tai

MNSA-S1: Multimedia Network Systems and Applications

Chair: Tomoya Enokido, Rissho University, Japan

1. A Dynamic Tree-Based Fog Computing (DTBFC) Model for the Energy-Efficient IoT
   Keigo Mukae, Takumi Saito, Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
2. An Energy-Efficient Algorithm for Virtual Machines to Migrate Considering Migration Time
   Naomichi Noaki, Takumi Saito, Dilawaer Duolikun, Tomoya Enokido, and Makoto Takizawa
3. A Coverage Construction Method Based Hill Climbing Approach for Mesh Router Placement Optimization
   Aoto Hirata, Tetsuya Oda, Nobuki Saito, Masaharu Hirota and Kengo Katatama
4. Review of Intelligent Data Analysis and Data Visualization
   KangXie, Linshan Han, Maohua Jing, Jingmin Luan, Tao Yang, Rourong Fan
5. Data Analysis Based on Knowledge Graph
   Kang Xie, Qizhen Jia , Maohua Jing, Qilong Yu , Tao Yang , Rourong Fan

15:30-17:00 Parallel Sessions

BWCCA-S2: Data Transmission, Replication and Classification

Chair: Hyunhee Park, Myongji University, Korea

1. Epidemic and Topic-based Data Transmission Protocol in a Mobile Fog Computing Model
   Takumi Saito, Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
2. The Energy-Efficient Object Replication by Excluding Meaningless Methods in Virtual Machine Environments
   Tomoya Enokido and Makoto Takizawa
3. Cost and Performance Analysis of Cuckoo Search based File Replication in MANET
   Takeru Kurokawa and Naohiro Hayashibara
4. Performance Comparison of Multi-Class SVM with Oversampling Methods for Imbalanced Data Classification
   Seunghyun Park and Hyunhee Park
5. Oversampling for Detection of Malicious JavaScript in Realistic Environament
   Phung Minh Ngoc and Mamoru Mimura

MAPWC-S1: Analysis and Protocols for Wireless Communication

Chair: Hiroshi Maeda, Fukuoka Institute of Technology, Japan

1. A Fuzzy-based Approach for Transmission Control of Sensory Data in Resilient Wireless Sensor Networks During Disaster Situation
   Daisuke Nishii, Makoto Ikeda, Leonard Barolli
2. Parasitic Coil Effects on Communication Performance of Table Type 13.56 MHz RFID Reader: A Comparison Study for Different Coil Turns
   Yuki Yoshigai and Kiyotaka Fujisaki
3. Tuning of Output Optical Signal Wavelength Through Resonant Filter for WDM System
   Hiroshi Maeda
4. Design and Implementation of a DQN Based AAV
   Nobuki Saito, Tetsuya Oda, Aoto Hirata, Yuto Hirota, Masaharu Hirota and Kengo Katayama

18:00-19:30 Parallel Sessions

BWCCA-S3: Distributed and Parallel Computing

Chair: Makoto Takizawa, Hosei University, Japan

1. Data Fusion Protocols for Cloud Infrastructures
   Lidia Ogiela , Makoto Takizawa , Urszula Ogiela
2. Implementation of Process Migration Method for PC-FPGA Hybrid System
   Keisuke Takano, Tetsuya Oda, Ryo Ozaki, Akira Uejima, Masaki Kohata
3. Speeding-up of Construction Algorithms for the Graph Coloring Problem
   Kazuho Kanahara, Kengo Katayama, Takafumi Miyake, and Etsuji Tomita
4. Multi-source and Multi-target Node Selection in Energy-efficient Fog Computing Model
   Yinzhe Guo, Takumi Saito, Shigenari Nakamura, Tomoya Enokido, Lei Li, and Makoto Takizawa

CWECS-S1: Cloud, Wireless and e-Commerce Security

Chair: Fang-Yie Leu, Tunghai University, Taiwan

1. IoT Device Power Management based on PSM and eDRX Mechanisms
   Kun-Lin Tsai , Fang-Yie Leu , Tz-Yuan Huang , and Hao-En Yan
2. Combining Agile with Traditional Software Development for Improvement Maintenance Efficiency and Quality
   Sen-Tarng Lai , Fang-Yie Leu
3. On Text Tiling for Documents: A Neural-Network Approach
   Siang Yun Yoong, Yao-Chung Fan, and Fang-Yie Leu
4. A High Sensing Accuracy Mechanism for Wireless Sensor Networks
   Li-Ling Hung , Fang-Yie Leu
5. A Novel Scheme of Schnorr Multi-Signatures for Multiple Messages with Key Aggregation
   Rikuhiro Kojima and Dai Yamamoto and Takeshi Shimoyama and Kouichi Yasaki and Kazuaki Nimura

20:00-21:00 BWCCA-2020 & 3PGCIC-2020 Keynote I

BWCCA-2020 & 3PGCIC-2020 Keynote Talk I

Prof. Masato Tsuru: Fairness and Efficiency in Network Resource Sharing

Thursday, October 29, 2020

13:30-15:00 Parallel Sessions

BWCCA-S4: Wireless Networks and Their Applications

Chair: Yoshitaka Shibata, Iwate Prefectural University, Japan

1. Performance Evaluation of a Message Relaying Method for Resilient Disaster Networks
   Yoshiki Tada, Makoto Ikeda, and Leonard Barolli
2. A New DTN Relay Method Reducing Number of Transmissions under Existence of Obstacles by Large-Scale Disaster
   Qiang Gao and Tetsuya Shigeyasu
3. Message Transmission Scheduling for Multi-hop Wireless Sensor Network with T-shaped Topology
   Linh Vu Nguyen, Masahiro Shibata and Masato Tsuru
4. Performance Evaluation of Improved V2X Wireless Communication Based on Gigabit WLAN
   Akira Sakuraba, Goshi Sato, Noriki Uchida, Yoshitaka Shibata

RVI3C-S1: Robot and Agent Control and Communication

Chair: Keita Matsuo, Fukuoka Institute of Technology, Japan

1. Implementation of a User Finger Movement Capturing Device for Control of Self-standing Omnidirectional Robot
   Kenshiro Mitsugi, Keita Matsuo and Leonard Barolli
2. Implementation of Control Interfaces for Moving Omnidirectional Access Point Robot
   Atushi Toyama, Kenshiro Mitsugi, Keita Matsuo and Leonard Barolli
3. Proposal and Experimental Results of an Ambient Intelligence for Training on Soldering Iron Holding
   Yuto Hirota, Tetsuya Oda, Nobuki Saito, Aoto Hirata, Masaharu Hirota and Kengo Katatama
4. Design of Education Tool for Reinforcement-Learning Agent Developers
   Takahiro Uchiya, Kodai Shimano, Ichi Takumi

15:30-17:00 Parallel Sessions

BWCCA-S5: Multimedia Systems and Applications

Chair: Yoshihiro Okada, Kyushu University, Japan

1. Improvement of Dental Treatment Training System Using a Haptic Device
   Masaki Nomi and Yoshihiro Okada
2. A Proposal of Air-Conditioning Guidance System Using Discomfort Index
   Samsul Huda, Nobuo Funabiki, Minoru Kuribayashi, Rahardhita Widyatra Sudibyo, Nobuya Ishihara, Wen-Chun Kao
3. An Efficient Content Sharing Using Dynamic Fog Considering Transition of Number of Mobile Terminals in a City
   Takuya Itokazu, Shinji Sugawara
4. Experiences with a Single-Page Application for Learning Programming
   Minoru Uehara
5. Approach of a Word2Vec Based Tourist Spot Collection Method Considering COVID-19
   Yuki Nagai, Nobuki Saito, Aoto Hirata, Tetsuya Oda, Masaharu Hirota and Kengo Katayama

NGWMN-S1: Next Generation of Wireless and Mobile Networks

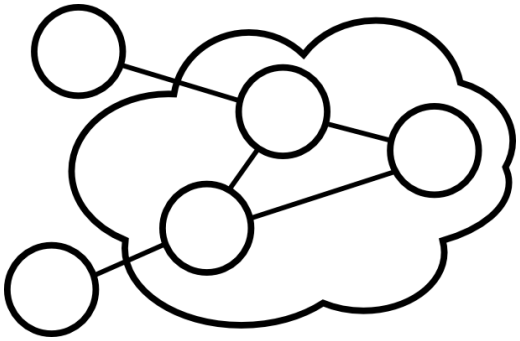
Chair: Testuya Shigeyasu, Prefectural University of Hiroshima, Japan

1. Integration of Software-Defined Network and Fuzzy Logic Approaches for Admission Control in 5G Wireless Networks: A Fuzzy-based Scheme for QoS Evaluation
   Phudit Ampririt, Seiji Ohara, Ermioni Qafzezi, Makoto Ikeda, Leonard Barolli, Makoto Takizawa
2. ICS Testbed Implementation considering dataset collection environament
   Eunseon Jeong, Junyoung Park, Minseong Kim, Chanmin Kim, Soyoung Jung, Kangbin Yim
3. A study on reducing Interest misleading by publisher migration on mobile networks
   Taichi Iwamoto and Tetsuya Shigeyasu
4. Cyber Attack Scenarios in Cooperative Automated Driving
   Insu Oh, Eunseon Jeong, Junyoung Park, Taeyoung Jeong, Junghoon Park, Kangbin Yim

18:00-19:00 BWCCA-2020 & 3PGCIC-2020 Keynote II

BWCCA-2020 & 3PGCIC-2020 Keynote Talk II

Prof. Yoshitaka Shibata: Road Status Sensing and V2X Technologies toward Autonomous Driving on Challenged Network Environment



3PGCIC-2020
Main Conference and Workshops Program

Wednesday, October 28, 2020

13:30-15:00 Parallel Sessions

3PGCIC-S1: Distributed Systems Applications

Chair: Sajal Mukhopadhyay, National Institute of Technology, Durgapur, India

1. An Algorithm to Select a Server to Minimize the Total Energy Consumption of a Cluster
   Kaiya Noguchi, Takumi Saito, Dilawaer Duolikun, Tomoya Enokido, and Makoto Takizawa
2. Challenges of Crowdsourcing Platform: Thai Healthcare Information Case Study
   Krit Khwanngern, Juggapong Natwichai, Vivatchai Kaveeta, Panutda Nantawad, Sineenuch Changkai, Supaksiri Suwiwattana
3. Possible Energy Consumption of Messages in an Opportunistic Network
   Nanami Kitahara, Shigenari Nakamura, Takumi Saito, Tomoya Enokido, and Makoto Takizawa
4. A Balanced Dissemination of Time Constraint Tasks in Mobile Crowdsourcing: A Double Auction Perspective
   Jaya Mukhopadhyay, Vikash Kumar Singh, Sajal Mukhopadhyay, and Anita Pal

SMECS-S1: Secure and Energy Saving Systems for Cloud Comuting

Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan

1. Design of In-depth Security Protection System of Integrated Intelligent Police Cloud
   Fahua Qian, Jian Cheng, Xinmeng Wang, Yitao Yang, Chanchan Li
2. Design and Implementation of Secure File Transfer System Based on Java
   Tu Zheng, Su Yunxuan, Wang Xu An, Li Ruifeng
3. Secure Outsourcing Protocol based on Paillier Algorithm for Cloud Computing
   Su Yunxuan,Tu Zheng, Wang Xu An, Li Ruifeng
4. Energy Consumption and Computation Models of Storage Systems
   Wenlun Tong, Takumi Saito, and Makoto Takizawa

15:30-17:00 Parallel Sessions

3PGCIC-S2: Intelligent Computing Systems

Chair: Makoto Ikeda, Fukuoka Institute of Techology, Japan

1. An Intelligent VegeCare Tool for Corn Disease Classification
   Natwadee Ruedeeniraman, Makoto Ikeda, Leonard Barolli
2. Performance Comparison of CM and RDVM Router Replacement Methods for WMNs by WMN-PSOHC Hybrid Simulation System Considering Normal Distribution of Mesh Clients
   Shinji Sakamoto, Leonard Barolli and Shusuke Okamoto
3. Detection and Analysis of Meal Sequence and Time Based on Internet of Things
   Liyang Zhang, Hiroyuki Suzuki, and Akio Koyama
4. Assessment of Available Edge Computing Resources in SDN-VANETs by a Fuzzy-based System Considering Trustworthiness as a New Parameter
   Ermioni Qafzezi, Kevin Bylykbashi, Phudit Ampririt, Makoto Ikeda, Leonard Barolli, Makoto Takizawa

MWVRTA-S1: Multimedia and Virtual Reality Applications

Chair: Tomoyuki Ishida, Fukuoka Institute of Technology, Japan

1. Proposal of a Traditional Craft Simulation System using Mixed Reality
   Rihito Fuchigami, Tomoyuki Ishida
2. Development and Evaluation of an Inbound Tourism Support System using Augmented Reality
   Yusuke Kosaka, Tomoyuki Ishida
3. A Study on the Relationship between Refresh-rate of Display and Reaction Time of eSports
   Koshiro Murakami, Kazuya Miyashita, Hideo Miyachi
4. Basic Consideration of Video Applications System for Tourists based on Autonomous Driving Road Information Platform in Snow Country
   Yoshitaka Shibata, Akira Sakuraba, Yoshiya Saito, Yoshikazu Arai, Jun Hakura

18:00-19:30 Parallel Sessions

3PGCIC-S3: Data Transmission and Sharing

Chair: Tomoki Yoshihisa, Osaka University, Japan

1. Aggregating and Sharing Contents for Reducing Redundant Caches on NDN
   Yuya Nakata and Tetsuya Shigeyasu
2. A Scheduling Method of Division-based Broadcasting Considering Delivery Cycle
   Yusuke Gotoh and Keisuke Kuroda

3. A Simply Implementable Architecture for Broadcast Communication Environments
   Tomoki Yoshihisa
4. A Waiting Time Determine Method to Merge Data on Distributed Sensor Data Stream Collection
   Tomoya Kawakami, Tomoki Yoshihisa, and Yuuichi Teranishi

DEM-S1: Distributed Embedded Systems

Chair: Peter Hellinckx, University of Antwerp, Belgium

1. Towards the Generalization of Distributed Software Communication
   Reinout Eyckerman, Thomas Huybrechts, Raf Van den Langenbergh, Wim Casteels, Siegfried Mercelis, Peter Hellinckx
2. A Survey on the Software and Hardware-based Influences on the Worst-Case Execution Time
   Thomas Huybrechts, Siegfried Mercelis and Peter Hellinckx
3. Intelligent Data Sharing in Digital Twins: Positioning Paper
   Thomas Cassimon, Jens de Hoog, Ali Anwar, Siegfried Mercelis, Peter Hellinckx
4. Towards Hybrid Camera Sensor Simulation For Autonomous Vehicles
   Dieter Balemans, Yves De Boeck, Jens de Hoog, Ali Anwar, Siegfried Mercelis, Peter Hellinckx
5. Lane Marking Detection Using LiDAR Sensor
   Ahmed N. Ahmed, Sven Eckelmann, Ali Anwar, Toralf Trautmann, Peter Hellinckx
6. Applying Artificial Intelligence for the Detection and Analysis of Weather Phenomena in Vehicle Sensor Data
   Wouter Van den Bogaert, Toon Bogaerts, Wim Casteels, Siegfried Mercelis, Peter Hellinckx

20:00-21:00 BWCCA-2020 & 3PGCIC-2020 Keynote I

BWCCA-2020 & 3PGCIC-2020 Keynote Talk I

Prof. Masato Tsuru: Fairness and Efficiency in Network Resource Sharing

Thursday, October 29, 2020

9:00-10:30 Parallel Sessions

3PGCIC-S4: e-Health and Distributed Applications

Chair: Mario A.R.Dantas, Federal University of Juiz de Fora, Brazil

1. eWound-PRIOR: an Ensemble Framework for Cases Prioritization after Orthopedic Surgeries
   Felipe Neves, Morgan Jennings, Miriam Capretz, Dianne Bryant, Fernanda Campos1, Victor Ströele
2. An Approach to Support the Design and the Dependability Analysis of High Performance I/O Intensive Distributed Systems
   Lucas Bressan, Laércio Pioli, Mario A. R. Dantas, Fernanda Campos, André L. de Oliveira
3. An Implementation Science Effort in a Heterogenous Edge Computing Platform to Support a Case Study of a Virtual Scenario Application
   Marceau Decamps, Jean-Francois Meháut, Vinicius Vidal, Leonardo Honorio, Laércio Pioli, Mario A.R.Dantas
4. An Approach of Time Constraint of Data Intensive Scalable in e-Health Environment
   Eliza Gomes, Rubens Zanatta, Patricia Plentz, Carlos De Rolt and Mario Dantas

SiPML-S1: Intelligent Systems and Machine Learning

Chair: Ricardo Rodríguez Jorge, Autonomous University of Ciudad Juarez, Mexico

1. Performance Analysis of WMNs by WMN-PSODGA Simulation System Considering Uniform Distribution of Mesh Clients and Different Router Replacement Methods
   Seiji Ohara, Admir Barolli, Phudit Ampririt, Keita Matsuo, Leonard Barolli, and Makoto Takizawa
2. Forecasting Electricity Consumption Using Weather Data in an Edge-fog-cloud Data Analytics Architecture
   Juan C. Olivares-Rojas, Enrique Reyes-Archundia, José A. Gutiérrez-Gnecchi, Ismael Molina-Moreno, Arturo Méndez-Patiño, Jaime Cerda-Jacobo
3. Vision-referential Speech Enhancement with Binary Mask and Spectral Subtraction
   Mitsuharu Matsumoto
4. Detection of the QRS Complexity in Real Time with Bluetooth Communication
   Ricardo Rodríguez-Jorge, I. De León-Damas and Jiri Bila

18:00-19:00 BWCCA-2020 & 3PGCIC-2020 Keynote II

BWCCA-2020 & 3PGCIC-2020 Keynote Talk II

Prof. Yoshitaka Shibata: Road Status Sensing and V2X Technologies toward Autonomous Driving on Challenged Network Environment

19:30-21:00 Parallel Sessions

CADSA-S1: Intelligent Systems and Tools

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

1. Monitoring Airplanes Faults Through Business Intelligence Tools
   Alessandra Amato and Giovanni Cozzolino and Alessandro Maisto and Serena Pelosi
2. Artificial Intelligent ChatBot for Food Related Question
   Alessandra Amato and Giovanni Cozzolino and Antonino Ferraro
3. A Smart Interface for Provisioning of Food and Health Advices
   Alessandra Amato and Giovanni Cozzolino and Antonino Ferraro
4. Analysis of COVID-19 Data
   Alessandra Amato and Giovanni Cozzolino and Alessandro Maisto and Serena Pelosi

ALICE-S1: E-Learning and Collaborative Systems

Chair: Santi Caballe, Open University of Catalonia, Spain

1. A Tool to Manage Educational Activities on a University Campus
   Antonio Sarasa-Cabezuelo, Santi Caballe
2. Towards the Use of Personal Robots to Improve the Online Learning Experience
   Jordi Conesa, Beni Gómez-Zúñiga, Eulàlia Hernández i Encuentra, Modesta Pousada Fernández, Manuel Armayones Ruiz, Santi Caballé Llobet, Xavi Aracil Díaz, Francesc Santanach Delisau
3. Towards the Design of Ethically-Aware Pedagogical Conversational Agents
   Joan Casas-Roma and Jordi Conesa
4. Evaluation on Using Conversational Pedagogical Agents to Support Collaborative Learning in MOOCs
   Santi Caballé, Jordi Conesa, David Gañán
5. Detection of Student Engagement in e-Learning Systems based on Semantic Analysis and Machine Learning
   Daniele Toti, Nicola Capuano, Fernanda Campos, Mario Dantas, Felipe Neves, and Santi Caballé

Online Meeting Schedule for BWCCA-2020 and 3PGCIC-2020
28 October to 30 October, 2020

1st day: 28 October, 2020	Room #1 Meeting ID: 836 1812 6192		Room #2 Meeting ID: 965 6407 8119		Room #3 Meeting ID: 848 8052 6812		Room #4 Meeting ID: 832 3537 0938	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
Slot 1 **13:30-15:00(GMT+9:00)** = (1:30-3:00, GMT-3:00) = (4:30-6:00, GMT+0:00)	BWCCA-S1	Shinji Sakamoto, JP	MNSA	Tomoya Enokido, JP	3PGCIC-S1	Sajal Mukhopadhyay, India	SMECS	Leonard Barolli, JP
Slot 2 **15:30-17:00(GMT+9:00)** = (3:30-5:00, GMT-3:00) = (6:30-8:00, GMT+0:00)	BWCCA-S2	Hyunhee Park, KR	MAPWC	Hiroshi Maeda, JP	3PGCIC-S2	Makoto Ikeda, JP	MWVRTA	Tomoyuki Ishida, JP
Slot 3 **18:00-19:30 (GMT+9:00)** = (6:00-7:30, GMT-3:00) = (9:00-10:30 GMT+0:00)	BWCCA-S3	Makoto Takizawa, JP	CWECS	Fang-Yie Leu, Taiwan	3PGCIC-S3	Tomoki Yoshihisa, JP	DEM	Peter Hellinckx, BL
Slot 4 **20:00-21:00 (GMT+9:00)** = (8:00-9:00, GMT-3:00) = (11:00-12:00,GMT+0:00)	**BWCCA-2020 and 3PGCIC-2020 Keynote #1** Meeting ID: 836 1812 6192							

2nd day: 29 October, 2020	Room #1 Meeting ID: 836 1812 6192		Room #2 Meeting ID: 965 6407 8119		Room #3 Meeting ID: 848 8052 6812		Room #4 Meeting ID: 832 3537 0938	
	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair	Session title	Session Chair
Slot 1 **9:00-10:30(GMT+9:00)** = (21:00-22:30 -1 day, GMT-3:00) = (18:00-20:30 -1 day, GMT-6:00) = (0:00-1:30, GMT+0:00)					3PGCIC-S4	Mario A.R.Dantas, Brazil	SiPML	Ricardo Rodríguez Jorge, Mexico
Slot 2 **13:30-15:00(GMT+9:00)** = (1:30-3:00, GMT-3:00) = (4:30-6:00, GMT+0:00)	BWCCA-S4	Yoshitaka Shibata, JP	RVI3C	Keita Matsuo, JP				
Slot 3 **15:30-17:00(GMT+9:00)** = (3:30-5:00, GMT-3:00) = (6:30-8:00, GMT+0:00)	BWCCA-S5	Yoshihiro Okada, JP	NGWMM	Testuya Shigeyasu, JP				
Slot 4 **18:00-19:00 (GMT+9:00)** = (6:00-7:00, GMT-3:00) = (9:00-10:00 GMT+0:00)	**BWCCA-2020 and 3PGCIC-2020 Keynote #2** Meeting ID: 836 1812 6192							
Slot 5 **19:30-21:00 (GMT+9:00)** = (7:30-9:00, GMT-3:00) = (10:30-12:00,GMT+0:00)	CADSA	Flora Amato, IT	ALICE	Santi Caballe, ES				

Additional information

The session schedules indicated in the program are based on the GMT+9:00 time zone.