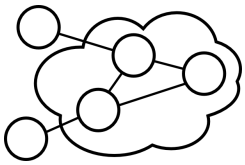
PROGRAM GUIDE

BWCCA-2019

The 14-th International Conference on
Broad-Band and Wireless Computing, Communication and Applications

and



3PGCIC-2019

The 14-th International Conference on
P2P, Parallel, Grid, Cloud and Internet Computing

November 7^{th} - November 9^{th}, 2019
University of Antwerp, Antwerp, Belgium

Supported by:

University of Antwerp

FIT Fukuoka Institute of Technology 福岡工業大学

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Welcome Message from the BWCCA-2019 International Conference Organizers

Welcome to the 14-th International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA-2019), which will be held in conjunction with the 14-th 3PGCIC-2019 International Conference from November 7 to November 9, 2019 at University of Antwerp, Antwerp, Belgium.

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. This edition BWCCA-2019 received 142 paper submissions and based on review results, we accepted 41 papers (about 29% acceptance ratio) for presentation in the conference and publication by Springer in Lecture Notes on Networks and Systems Proceedings.

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-2019 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.

This year in conjunction with BWCCA-2019 we have 7 International Workshops that complemented BWCCA-2019 program with contributions for specific topics. We would like to thank the Workshop Co- Chairs and all workshops organizers for organizing these workshops.

We thank Web Administrators Co-Chairs and Finance Chair for their excellent work. We would like to express our gratitude to Honorary Co-Chairs of BWCCA-2019 for their support and help. We give special thanks to Keynote Speakers of BWCCA-2019 and Local Arrangement Team of University of Antwerp for making excellent local arrangement for the conference.

We hope you will enjoy the conference and have a great time in Antwerp, Belgium.

BWCCA-2019 International Conference Organizers

BWCCA-2019 General Co-Chairs

Peter Hellinckx, *University of Antwerp, Belgium*

Leonard Barolli, *Fukuoka Institute of Technology, Japan*

BWCCA-2019 Program Committee Co-Chairs

Maarten Weyn, *University of Antwerp, Belgium*

Tomoya Enokido, *Rissho University, Japan*

Welcome Message from BWCCA-2019 Workshops Co-Chairs

Welcome to the Workshops of the 14-th International Conference on Broadband and Wireless Computing, Communication and Applications (BWCCA-2019), which will be held in conjunction with the 14-th 3PGCIC-2019 International Conference from November 7 to November 9, 2019 at University of Antwerp, Antwerp, Belgium.

This year 7 workshops will be held in conjunction with BWCCA-2019 International Conference. The workshops are very important part of the main conference and they cover specific topics related to next generation networks, network traffic analysis, sensor technologies, smart environments, complex systems, wireless communication, mobile networks and multimedia networking.

BWCCA-2019 workshops are listed in following:

1. The 21-st International Symposium on Multimedia Network Systems and Applications (MNSA-2019)
2. The 12-th International Workshop on Next Generation of Wireless and Mobile Networks (NGWMN-2019)
3. The 10-th International Workshop on Methods, Analysis and Protocols for Wireless Communication (MAPWC-2019)
4. The 10-th International Workshop on Cloud, Wireless and e-Commerce Security (CWECS-2019)
5. The 8-th International Workshop on Robot and Vehicle Interaction, Control, Communication and Cooperation (RVI3C-2019)
6. The 5-th International Workshop on Advanced Techniques and Algorithms for Security and Privacy (ATASP-2019)
7. The 2-nd International Workshop on Bio-Sensing, Processing, Application and Networking (BioSPAN-2019)

These workshops bring to the researchers conducting research in specific themes the opportunity to learn from this rich multi-disciplinary experience.

The Workshops Chairs would like to thank the workshop organizers for their great efforts and hard work in proposing the workshop, selecting the papers, the interesting programs and for the arrangements of the workshop during the conference days.

We hope you enjoy the workshops programs and proceedings.

BWCCA-2019 Workshops Co-Chairs

Bart Lannoo, *University of Antwerp, Belgium*
Ben Bellekens, *University of Antwerp, Belgium*
Keita Matsuo, *Fukuoka Institute of Technology, Japan*
Farookh Hussain, *University of Technology Sydney, Australia*

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Steering Committee Chair
Leonard Barolli, *Fukuoka Institute of Technology, Japan*

Message from the 3PGCIC-2019 Organizing Committee

Welcome to the 14-th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC-2019), which will be held in conjunction with BWCCA-2019 International Conference from November 7 to November 9, 2019 at University of Antwerp, Antwerp, Belgium.

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. Since late 80' s, 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, etc.

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.

This edition 102 papers were submitted and based on the reviewers' reports, the Program Committee selected 31 papers (about 30% acceptance rate) for presentation in the conference and publication in the Springer Lecture Notes on Networks and Systems Proceedings.

Many people have helped and worked hard to produce a successful 3PGCIC-2019 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.

The General Chairs of the conference would like to thank the PC Co-Chairs for their great efforts in organizing a successful conference and an interesting conference programme. We would like to appreciate the work of the Workshop Co-Chairs for supporting the workshop organizers. Our appreciations also go to all workshops organizers for their hard work in successfully organizing these workshops.

We thank Web Administrators for their excellent work and support with the Web Submission and Management System of conference. We are grateful to Honorary Co-Chairs for their support and encouragment. Our special thanks to Keynote Speakers for delivering inspiring keynotes at the conference.

Finally, we would like to thank the Local Arrangement at University of Anwerp for making excellent local arrangement for the conference.

We hope you will enjoy the conference and have a great time in Anwerp, Belgium.

3PGCIC-2019 Organizing Committee

3PGCIC-2019 General Co-Chairs
Peter Hellinckx, *University of Antwerp, Belgium*
Leonard Barolli, *Fukuoka Institute of Technology, Japan*
Flora Amato, *University of Naples Frederico II, Italy*

3PGCIC-2019 Program Committee Co-Chairs
Jan Broeckhove, *University of Antwerp, Belgium*
Tomoki Yoshihisa, *Osaka University, Japan*
Juggapong Natwichai, *Chiang Mai University, Thailand*

Message from the 3PGCIC Workshops Chairs

Welcome to the Workshops of the 14-th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC-2019), which will be held from November 7 to November 9, 2019 at University of Antwerp, Antwerp, Belgium.

The objective of the workshops is to present research results, work on progress and thus complement the main themes of 3PGCIC-2019 with specific topics of Grid, P2P, Cloud and Internet Computing.

The workshops cover research on Simulation and Modelling of Emergent Computational Systems, Multimedia, Web, Streaming Media Delivery, Middleware of Large Scale Distributed Systems, Network Convergence, Pervasive Computing and Distributed Systems and Security.

The held workshops are as following:

1. The 12-th International Workshop on Simulation and Modelling of Emergent Computational Systems (SMECS-2019)
2. The 10-th International Workshop on Streaming Media Delivery and Management Systems (SMDMS-2019)
3. The 9-th International Workshop on Multimedia, Web and Virtual Reality Technologies and Applications (MWVRTA-2019)
4. The 9-th International Workshop on Adaptive Learning via Interactive, Cognitive and Emotional approaches (ALICE-2019)
5. The 7-th International Workshop on Cloud and Distributed System Applications (CADSA-2019)
6. The 7-th International Workshop on Cloud Computing Project and Initiatives (CCPI-2019)
7. The 6-th International Workshop on Distributed Embedded Systems (DEM-2019)
8. The 5-th International Workshop on Signal Processing and Machine Learning (SiPML-2019)
9. The 2-nd International Workshop on Business Intelligence and Distributed Systems (BIDS-2019)

We would like to thank all workshop organizers for their hard work in organizing these workshops and selecting high quality papers for presentation at workshops, the interesting programs and for the arrangements of the workshop during the conference days.

We hope you will enjoy the conference and have a great time in Antwerp, Belgium!

3PGCIC-2019 Workshops Organizing Committee

3PGCIC-2019 Workshops Co-Chairs

Siegfried Mercelis, *University of Antwerp, Belgium*
Santi Caballe, *Open University of Catalonia, Spain*

BWCCA-2019 & 3PGCIC-2019 Keynote I

Dr. Ingrid Moerman, Ghent University, Belgium

Title: Wireless Experimentation with SDR: The Way to Drive Innovation

Abstract: There exist many ways for researching and developing innovative solutions: from theoretical analysis, simulations, small-scale set-up to large-scale experimentation. This first part of this talk will discuss the benefits and pitfalls of different approaches and illustrate them with some concrete examples. While experimentation seems to be most challenging approach, the second part of this talk will present how the software defined radio (SDR) facility offered in the H2020 ORCA project is capable to accelerate wireless innovation. The advantage of SDR over "off-the-shelf" technology is that it enables full and open implementation of all network functionality, also the lower physical and medium access control (MAC) layers. The ultimate goal of the ORCA project is to enable wireless experimenters to unlock the potential of reconfigurable radio technology by setting up advanced experiments involving end-to-end applications that require control of novel wireless technologies or cooperation between multiple networked SDR platforms within extreme and/or diverging communication needs in terms of latency, reliability or throughput, well before new radio technologies become available on the market in commercial off-the-shelf products. In the third and last part of the talk, the ORCA vision towards orchestrating next-generation services through end-to-end network slicing will be presented. Network slicing (also known as network virtualization) allows network resources to be used in a flexible, dynamic, and customized manner, and most crucially, provides isolation between different virtual networks. ORCA believes that each network segment should have their own orchestrator, tailored to the segment's particularities. The use of a separate orchestrator for each network segment reduces complexity and breaks down the larger E2E network orchestration problem into smaller parts. In this way, each segment orchestrator can focus on a limited number of well-defined tasks, reducing the software complexity, both in terms of design and implementation. The ORCA vision is expected to foster innovation for everyone (not only big industrial players, but also smaller companies and the research community), to reduce development life-cycle, to simplify standardisation and to stimulate multi-disciplinary experimentation.

Bio: **Ingrid Moerman** received her degree in Electrical Engineering (1987) and the Ph.D degree (1992) from the Ghent University, where she became a part-time professor in 2000. She is a staff member at IDLab, a core research group of imec with research activities embedded in Ghent University and University of Antwerp. Ingrid Moerman is coordinating the research activities on mobile and wireless networking, and she is leading a research team of about 30 members at IDLab-Ghent University. Her main research interests include: Internet of Things, Low Power Wide Area Networks (LPWAN), High-density wireless access networks, collaborative and cooperative networks, intelligent cognitive radio networks, real-time software defined radio, flexible hardware/software architectures for radio/network control and management, and experimentally-supported research. Ingrid Moerman has a longstanding experience in running and coordinating national and EU research funded projects. At the European level, Ingrid Moerman is in particular very active in the Future Networks research area, where she has coordinated and is coordinating several FP7/H2020 projects (CREW, WiSHFUL, eWINE, ORCA) and participating in other projects (Fed4FIRE, FORGE, FLEX, Flex5Gware). Ingrid Moerman is author or co-author of more than 700 publications in international journals or conference proceedings.

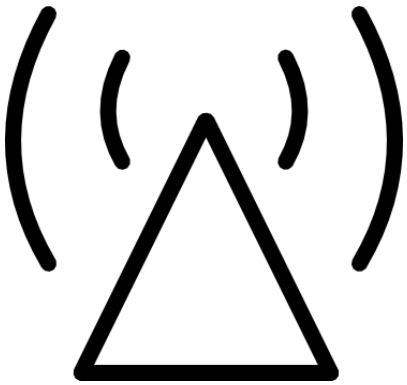
BWCCA-2019 & 3PGCIC-2019 Keynote II

Deevid De Meyer, Cronos Group, Leuven, Belgium

Title: 2020: The AI Decade

Abstract: By now it should be clear to everyone that AI has had a significant impact over the past decade. Thanks to the rise of deep learning, applications are being released almost every week that were previously deemed impossible. Chatbots, deepfakes, self-driving cars, intelligent cameras, digital authors, these technologies have been made feasible in the past 10 thanks to machine learning, and breakthroughs are still happening on almost a weekly basis. Where 2010 was the decade where AI broke through, many people think that 2020 will be the decade where it reaches maturity and widespread adoption. In this presentation, we will look at today' s frontier of artificial intelligence, and predict how the field of AI will evolve in the coming decade.

Bio: **Deevid De Meyer** is a young Cronos Group entrepeneur with a passion for world changing technologies. After his Computer Science studies, Deevid started out as a Python developer for the famous Pepper robots. During this time Deevid became fascinated with AI and Machine Learning. After a year, Deevid co-founded Brainjar, a machine learning "as a service" company that focuses on building production-ready applications with AI technologies. Currently active as solution architect for Brainjar, talking to customers and transforming problems into technical architectures, Deevid is also founding a second company QNTM, which aims to guide large enterprises through the rapidly evolving Quantum Computing landscape. Over the past few years, Deevid has given over a hundred excellently received talks on various subjects surrounding quantum computing and AI, ranging from inspiring keynotes to technical deep dives.



BWCCA-2019
Main Conference and Workshops Program

Thursday, November 7, 2019

08:00 Registration

09:00-09:30 Opening Ceremony

09:30-10:30 BWCCA-2019 & 3PGCIC-2019 Keynote I

BWCCA-2019 & 3PGCIC-2019 Keynote Talk I (PLENARY ROOM)

Dr. Ingrid Moerman: Wireless Experimentation with SDR: The Way to Drive Innovation

10:30-11:00 Coffee Break

11:00-13:00 Parallel Sessions

BWCCA-S1: Decision and Scheduling Systems

Chair: Tomoya Enokido, Risho University, Japan

1. An Optimal Route Recommendation Method for a Multi-purpose Travel Route Recommendation System
   Chen Yuan, Minoru Uehara
2. A New Discounting Approach to Conflict Information Fusion Using Multi-criteria of Reliability in Dempster-Shafer Evidence Theory
   Jin Zhu
3. A Fuzzy-based Decision System for Sightseeing Spots Considering Hot Spot Access as a New Parameter
   Yi Liu, Kevin Bylykbashi, Leonard Barolli
4. A Deep Hybrid Collaborative Filtering Based on Multi-Dimension Analysis
   Chunyan Zeng, Songnan Lv, Shangli Zhou, Zhifeng Wang
5. Trust-based Game-theoretical Decision Making for Food-Energy-Water Management
   Suleyman Uslu and Davinder Kaur and Samuel J Rivera and Arjan Durresi and Meghna Babbar-Sebens
6. Energy-Efficient Purpose Ordering Scheduler
   Tomoya Enokido and Makoto Takizawa

BWCCA-S2: Multimedia Applications and Information Retrieval

Chair: Yoshihiro Okada, Kyushu University, Japan

1. Digital Content Refinement by Collecting Partly Unreliable Attributes over a Network
   Shinji Sugawara
2. Web Version of IntelligentBox (WebIB) and Its Extension for Web-based VR Applications - WebIBVR
   Yoshihiro Okada
3. A Multi-Sensor Based Physical Condition Estimator for Home Healthcare
   Toshiyuki Haramaki, Hiroaki Nishino
4. Reputation System for IoT Data Monetization using Blockchain
   Atia Javaid, Maheen Zahid, Ishtiaq Ali, Raja Jalees Ul Hussen Khan, Zainib Noshad, Nadeem Javaid
5. A New Mobile Agent System for Sharing Disaster Information Under Unstable Network Conditions
   Natsuki Matsumoto and Tetsuya Shigeyasu
6. Data Replication based on Cuckoo Search in Mobile Ad-Hoc Networks
   Takeru Kurokawa and Naohiro Hayashibara

MNSA-S1: Multimedia Networking

Chair: Yoshitaka Shibata, Iwate Prefectural University, Japan

1. The Group-Based Linear Time Causally Ordering Protocol in a Scalable P2PPS System
   Takumi Saito, Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
2. Algorithm for Detecting Implicitly Faulty Replicas Based on the Power Consumption Model
   Hazuki Ishii, Ryuji Oma, Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
3. Parallel Data Transmission Protocols in the Mobile Fog Computing Model
   Kosuke Gima, Ryuji Oma, Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
4. Recovery of Fiber Networks C/M-Plane via an IoT-based Narrow-band Links System based on LoRa mesh Platform
   Goshi Sato, Yoshitaka Shibata, Noriki Uchida

13:00-14:00 Lunch Break

14:00-16:00 Parallel Sessions

BWCCA-S3: Next Generation Wireless Networks

Chair: Evjola Spaho, Polytechnic University of Tirana, Albania

1. Efficient 5G Network Decoupling using dynamic Modulation and Coding Scheme Selection
   Christos Bouras, Vasileios Kokkinos, Evangelos Michos
2. A Probabilistic Offloading Approach in Mobile Edge Computing
   Bhed Bahadur Bista, Jiahong Wang and Toyoo Takata
3. An Energy Efficient Mechanism for Downlink and Uplink Decoupling in 5G Networks
   Christos Bouras, Georgios Diles, Rafail Kalogeropoulos
4. Fuzzy Geocasting in Opportunistic Networks
   Sanjay K. Dhurandher, Jagdeep Singh, Isaac Woungang, Makoto Takizawa, Geetanshu Gupta, Raghav Kumar
5. SCHC-Based Solution for Roaming in LoRaWAN
   Wael Ayoub, Mohamad Mroue, Abed Ellatif Samhat, Fabienne Nouvel, and Jean-Christophe Prévotet
6. Enhancement of Binary Spray and Wait Routing Protocol for Improving Delivery Probability and Latency in a Delay Tolerant Network
   Evjola Spaho, Klodian Dhoska, Leonard Barolli, Vladi Kolici and Makoto Takizawa

BWCCA-S4: IoT and Smart Environment

Chair: Donald Elmazi, Fukuoka Institute of Technology, Japan

1. Analyzing Mobile Cycling Applications for Monitoring Workouts
   Fabricio Landero Cristobal, Miguel A. Wister, and Pablo Payro Campos
2. Road State Information Platform based on Multi-sensors and Bigdata Analysis
   Yoshitaka Shibata, Goshi Sato, Noriki Uchida
3. A Fuzzy-based Simulation System for IoT Node Selection in Opportunistic Networks and Testbed Implementation
   Miralda Cuka, Donald Elmazi, Keita Matsuo, Makoto Ikeda, Leonard Barolli
4. Consensus based Mechanism using Blockchain for Intensive Data of Vehicles
   Tehreem Ashfaq, Muhammad Ahmed Younis, Shahzad Rizwan, Zahid Iqbal, Shahid Mehmood and Nadeem Javaid
5. A TBOI (Time-Based Operation Interruption) Protocol to Prevent Late Information Flow in the IoT
   Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
6. NFC-based Commissioning of Adaptive Sensing Applications for the 5G IIoT
   Hadil Abukwaik, Christian Groß, and Markus Aleksy

MNSA-S2: IoT and Deep Learning

Chair: Tomoya Enokido, Rissho University, Japan

1. Clustering Analysis and Visualization of TCM Patents Based on Deep Learning
   Na Deng, Xu Chen, Caiquan Xiong
2. Efficient Resource Utilization using Blockchain Network for IoT Devices in Smart City
   Muhammad Zohaib Iftikhar, Muhammad Sohaib Iftikhar, Muhammad Jawad, Annas Chand, Zain Khan, Abdul Basit Majeed Khan, Nadeem Javaid
3. Recommendation System based on Deep Learning
   Tianhan Gao , Lei Jiang , Xibao Wang
4. Routing Method based on Data Transfer Path in DTN Environments
   Kazuma Ikenoue, Kazunori Ueda

16:00-16:30 Coffee Break

16:30-18:30 Parallel Sessions

BWCCA-S5: Security and Privacy

Chair: Mirang Park, Kanagawa Institute of Technology, Japan

1. Apply Lagrange Interpolation Based Access Control Mechanism in Personal Health Record Medical System
   Kuang-Yen Tai, Dai-Lun Chiang, Chun-Yen Chuang, Tzer-Shyong Chen, Frank Yeong-Sung Lin
2. Enemy Attack Management Algorithm for Action Role-Playing Games
   Tianhan Gao and Qingwei Mi
3. Analysis of the Relationship between Psychological Manipulation Techniques and Personality Factors in Targeted Emails
   Kota Uehara, Hiroki Nishikawa, Takumi Yamamoto, Kiyoto Kawauchi, Masakatsu Nishigaki
4. Gait-Based Authentication using Anomaly Detection with Acceleration of Two Devices in Smart Lock
   Kazuki Watanabe, Makoto Nagatomo, Kentaro Aburada, Naonobu Okazaki, Mirang Park
5. Trusted, Decentralized and Blockchain-based M2M Application Service Provision
   Besfort Shala, Ulrich Trick, Armin Lehmann, Bogdan Ghita and Stavros Shiaeles
6. Block-VN: A Distributed Blockchain-based Efficient Communication and Storage System *Hassan Farooq, Muhammad Usman Arshad, Muhammad Faraz Akhtar, Shahid Abbas, Bilal Zahid, Nadeem Javaid*

BWCCA-S6: Network Protocols and Performance Analysis

Chair: Makoto Takizawa, Hosei University, Japan

1. Accurate Online Energy Consumption Estimation of IoT Devices using Energest
   Adnan Sabovic, Carmen Delgado, Jan Bauwens, Eli De Poorter, Jeroen Famaey
2. Comparison of LoRa Simulation Environments
   Christos Bouras, Apostolos Gkamas, Spyridon Aniceto Katsampiris Salgado, Vasileios Kokkinos
3. Proactive Network Slices Management Algorithm Based on Fuzzy Logic System and Support Vector Regression Model
   Amal Kammoun, Nabil Tabbane, Gladys Diaz, Nadjib achir and Abdulhalim Dandoush
4. A Nodes Selection Algorithm for Fault Recovery in the GTBFC Model
   Ryuji Oma, Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
5. Data Exchange Algorithm at Aggregate Level in the TWTBFC Model
   Yinzhe Guo, Ryuji Oma, Shigenari Nakamura, Tomoya Enokido, and Makoto Takizawa
6. Blockchain based Balancing of Electricity Demand and Supply
   Maheen Zahid, Ishtiaq Ali, Raja Jalees Ul Hussen Khan, Zainib Noshad, Atia Javaid, Nadeem Javaid

CWECS-S1: Cloud Computing and Secure Systems

Chair: Fang-Yie Leu, Tunghai University, Taiwan

1. Perception Mining of Network Protocol's Stealth Attack Behaviors
   Yan-Jing Hu, Xu An Wang
2. Digital Image Anti-counterfeiting Technology
   Chin-Ling Chen, Chin-Feng Lee, Fang-Wei Hsu, Yong-Yuan Deng, Ching-Cheng Liu
3. System Implementation of AUSF Fault Tolerance
   Wei-Sheng Chen, Fang-Yie Leu, Heru Susanto

4. News Collection and Analysis on Public Political Opinions
   Zhi-Qian Hong , Fang-Yie Leu, Heru Susanto
5. Mobile Physiological Sensor Cloud System for Long-term Care
   Ping-Jui Chiang, Heru Susanto, Fang-Yie Leu, Hui-Ling Huang

19:00-21:00 Welcome Reception Party

Welcome reception party will be held at University of Antwerp.

Friday, November 8, 2019

08:00 Registration

09:30-10:30 Single Session: BWCCA-2019 & 3PGCIC-2019 Keynote II

BWCCA-2019 & 3PGCIC-2019 Keynote Talk II

Deevid De Meyer: 2020: The AI Decade

10:30-11:00 Coffee Break

11:00-13:00 Parallel Sessions

BWCCA-S7: Intelligent and Cognitive Computing

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

1. Artificial Intelligence Technique for Optimal Allocation of Renewable Energy based DGs in Distribution Networks
   Zia Ullah, M.R. Elkadeem, Shaorong Wang
2. Impact of Sharing Algorithms for Cloud Services Management
   Lidia Ogiela, Makoto Takizawa, Urszula Ogiela
3. Application of Cognitive Protocols in Transformative Computing
   Marek R. Ogiela and Lidia Ogiela
4. Performance Evaluation of WMNs by WMN-PSOHC System Considering Constriction and Linearly Decreasing Inertia Weight Replacement Methods
   Shinji Sakamoto, Seiji Ohara, Leonard Barolli and Shusuke Okamoto
5. Electric Vehicles Privacy Preserving using Blockchain in Smart Community
   Omaji Samuel, Nadeem Javaid, Faisal Shehzad, Muhammad Sohaib Iftikhar, Muhammad Zohaib Iftikhar, Hassan Farooq, and Muhammad Ramzan

MAPWC-S1: Methods and Protocols for Wireless Communication

Chair: Kazunori Uchida, Fukuoka Institute of Technology, Japan

1. Concatenated Path Domain for Dijkstra' s Algorithm Based Ray Tracing to Enhance Computational Areas
   Kazunori Uchida, Leonard Barolli
2. Routing of Optical Baseband Signal Depending on Wavelength in Periodic Structure
   Naoki Higashinaka, Hiroshi Maeda
3. Two-stage Dynamic Contract Design Under Asymmetric Information in Cooperative Communication
   Nan Zhao, Pengfei Fan, Xiao He, Menglin Fan,Chao Tian
4. Minimizing Control Overhead of Routing Protocols in Wireless Multihop Networks: Simulation Evaluation
   Soushi Morita, Elis Kulla
5. Effect of Parasitic Element on Communication Performance of 13.56MHz RFID System
   Kiyotaka Fujisaki, Yuki Yoshigai

BioSPAN-S1: Multimedia Network Systems and Applications

Chair: Kin Fun Li, University of Victoria, Canada

1. Enhanced Decentralized Management of Patient-Driven Interoperability based on Blockchain
   Asad Ullah Khan, Affaf Shahid, Fatima Tariq, Abdul Ghaffar, Abid Jamal, Shahid Abbas and Nadeem Javaid
2. Design and Construction of Intelligent Decision-making System for Marine Protection and Law Enforcement
   Na Deng, Xu Chen, Caiquan Xiong
3. Data Authenticity Analysis for Online O2O Data: A Case Study of Second-hand Houses Posting Data
   Xu Chen, Deliang Zhong, Yingzhou Zheng, Shudong Liu, Yipeng Li, Na Deng
4. A Brief Survey: 3D Face Reconstruction
   Tianhan Gao, Hui An
5. A Feasibility Study on Wrist Rehabilitation using the Leap Motion
   Linlin Zhang, Kin Fun Li
6. Classification of Cotton and Flax Fiber Images Based on Inductive Transfer Learning
   Yuhan Jiang, Song Cai, Chunyan Zeng, Zhifeng Wang

13:00-14:00 Lunch Break

14:00-16:00 Parallel Sessions

NGWMN-S1: Wireless and Mobile Networks

Chair: Hsing-Chung Chen, Asia University, Taiwan

1. A Hybrid Intelligent Simulation System for Node Placement in WMNs Considering Load Balancing: A Comparison Study for Exponential and Normal Distribution of Mesh Clients
   Seiji Ohara, Heidi Durresi, Admir Barolli, Shinji Sakamoto, Leonard Barolli
2. Multi-Dimensional Contract Incentive Design for Mobile Crowdsourcing Networks
   Nan Zhao, Menglin Fan, Chao Tian, Pengfei Fan, Xiao He
3. Evaluation and Comparison of CO 2 and Fuel Consumption for Different Car Following Models
   Ningling Jiang, Elis Kulla
4. Individually Separated Wireless Access Point to Protect User' s Private Information
   Myoungsu Kim, Kangbin Yim
5. Long-Term Care (LTC) Monitoring System for Caregivers Based On Wireless Sensing Technology
   Hsing-Chung Chen, Mei-He Jiang, Tzu-Ya Chen

RVI3C-S1: Robotics and VANETs

Chair: Keita Matsuo, Fukuoka Institute of Technology, Japan

1. A Message Relaying Method with Enhanced Dynamic Timer Considering Decrease Rate of Neighboring Nodes for Vehicular-DTN
   Shogo Nakasaki, Makoto Ikeda, Leonard Barolli
2. Prediction of RSSI by Scikit-learn for Improving Position Detecting System of Omnidirectional Wheelchair Tennis
   Keita Matsuo and Leonard Barolli
3. Decentralized Mechanism for Hiring the Smart Autonomous Vehicles using Blockchain
   Zain Abubaker, Muhammad Usman Gurmani, Tanzeela Sultana, Muhammad Azeem, Muhammad Zohaib Iftikhar, Nadeem Javaid
4. An Intelligent Approach for Resource Management in SDN-VANETs Using Fuzzy Logic
   Ermioni Qafzezi, Kevin Bylykbashi, Leonard Barolli
5. Tutorial educating Developer of Reinforcement Learning Agent using IDEAL *Takahiro Uchiya, Kodai Shimano, Ichi Takumi*

ATASP-S1: Techniques and Algorithms for Security and Privacy

Chair: Takamichi Saito, Meiji University, Japan

1. Trusted Remote Patient Monitoring using Blockchain-based Smart Contracts
   Hafiza Syeda Zainab Kazmi, Faiza Nazeer, Sahrish Mubarak, Seemab Hameed, Aliza Basharat, Nadeem Javaid
2. A Survey of Malicious HID Devices
   Zhao Songyin, Wang Xu An
3. Power consumption attack based on improved principal component analysis
   Wang Zeyu, Zhang Wei, Ma Peng, Wang Xu An
4. How Securely are OAuth/OpenID Connect Implemented in Japan?
   Takamichi Saito, Tsubasa Kikuta, Rikita Koshiba

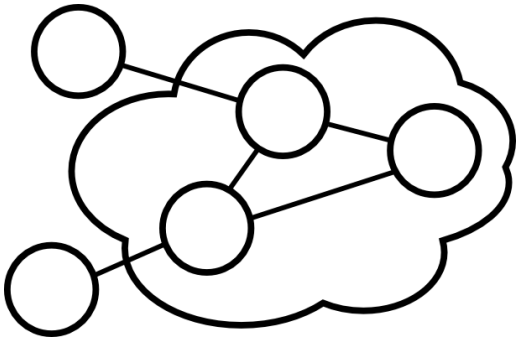
16:00-16:30 Coffee Break

19:00-21:00 Banquet Party

Banquet Party will be held at University of Antwerp.

Saturday, November 9, 2019

BWCCA-2019 Organizing Committee Meeting and Discussion



3PGCIC-2019
Main Conference and Workshops Program

Thursday, November 7, 2019

08:00 Registration

09:00-09:30 Opening Ceremony

09:30-10:30 BWCCA-2019 & 3PGCIC-2019 Keynote I

BWCCA-2019 & 3PGCIC-2019 Keynote Talk I (PLENARY ROOM)

Dr. Ingrid Moerman: Wireless Experimentation with SDR: The Way to Drive Innovation

10:30-11:00 Coffee Break

11:00-13:00 Parallel Sessions

3PGCIC-S1: Intelligent Computing Systems

Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan

1. A Fuzzy-based Peer Coordination Quality System in Mobile P2P Networks: Effect of Time for Finishing Required Task (TFRT) Parameter
   Vladi Kolici, Yi Liu, Leonard Barolli
2. Wind Power Forecasting Based on Efficient Deep Convolution Neural Networks
   Sana Mujeeb, Nadeem Javaid, Hira Gul, Nazia Daood, Shaista Shabbir, Arooj Arif
3. A Fuzzy-based System for Driving Risk Measurement (FSDRM) in VANETs: A Comparison Study of Simulation and Experimental Results
   Kevin Bylykbashi, Ermioni Qafzezi, Makoto Ikeda, Keita Matsuo, Leonard Barolli
4. A Comparison Study of Constriction and Linearly Decreasing Vmax Replacement Methods for Wireless Mesh Networks by WMN-PSOHC-DGA Simulation System
   Admir Barolli, Shinji Sakamoto, Heidi Durresi, Seiji Ohara, Leonard Barolli, Makoto Takizawa
5. Implementation of a Fuzzy-based Simulation System for Actor Selection in WSANs Considering Degree of Centrality as new Parameter
   Donald Elmazi, Miralda Cuka, Makoto Ikeda, Keita Matsuo, Leonard Barolli

3PGCIC-S2: Cloud Computing and Secure Systems

Chair: Flora Amato, University of Naples “Frederico II”, Italy

1. Investigating Performance and Cost in Function-as-a-Service Platforms
   Diogo Bortolini, Rafael R. Obelheiro
2. Optimal Bandwidth and Delay of Video Streaming Traffic in Cloud Data Center Server Racks
   Nader F. Mir, Vincy Singh, Akshay Paranjpe, Abhilash Naredla, Jahnavi Tejomurtula, Abhash Malviya, Ashmita Chakraborty
3. Log-based Intrusion Detection for Cloud Web Applications using Machine Learning
   Jaron Fontaine, Chris Kappler, Adnan Shahid, Eli De Poorter
4. A Secure and Distributed Architecture for Vehicular Cloud
   Hassan Mistareehi, Tariqul Islam, Kiho Lim, D. Manivannan
5. One Step Forward: Towards A Blockchain based Trust Model for WSNs
   Abdul Mateen, Jawad Tanveer, Ashrafullah, Nasir Ali Khan, Mubariz Rehman, Nadeem Javaid
6. Secure Service Provisioning Scheme for Lightweight Clients with Incentive Mechanism based on Blockchain
   Ishtiaq Ali, Raja Jalees ul Hussen Khan, Zainib Noshad, Atia Javaid, Maheen Zahid, Nadeem Javaid

DEM-S1: Distributed Embedded Systems

Chair: Peter Hellinckx, University of Antwerp, Belgium

1. DUST Initializr - CAD Drawing Platform for Designing Modules and Applications in the DUST Framework
   Thomas Huybrechts, Simon Vanneste, Reinout Eyckerman, Jens de Hoog, Siegfried Mercelis, Peter Hellinckx
2. Distributed Task Placement in the Fog: A Positioning Paper
   Reinout Eyckerman, Siegfried Mercelis, Johann Marquez-Barja, Peter Hellinckx
3. A New Approach to Selectively Implement Control Flow Error Detection Techniques
   Jens Vankeirsbilck, Jonas Van Waes, Hans Hallez, Jeroen Boydens

4. AirLeakSlam: Automated Air Leak Detection
   Anthony Schenck, Walter Daems, Jan Steckel
5. LiDAR and Camera Sensor Fusion for 2D and 3D Object Detection
   Dieter Balemans, Simon Vanneste, Jens de Hoog, Siegfried Mercelis, Peter Hellinckx
6. Online Reverse Engineering of CAN Data
   Jens de Hoog, Nick Castermans, Siegfried Mercelis, Peter Hellinckx

13:00-14:00 Lunch Break

14:00-16:00 Parallel Sessions

3PGCIC-S3: Parallel and Distributed Systems

Chair: Makoto Takizawa, Hosei University, Japan

1. Research Characterization on I/O Improvements of Storage Environments
   Laércio Pioli, Victor Ströele A. Menezes, Mario A. R. Dantas
2. Towards Plug and Use Functionality for Autonomous Buildings
   Markus Aleksy, Reuben Borrison, Christian Groß, Johannes Schmitt
3. An Evaluation of Pacemaker Cluster Resource Manager Reliability
   Davide Appierto, Vincenzo Giuliano
4. Node Recovery in Wireless Sensor Networks via Blockchain
   Raja Jalees ul Hussen Khan, Zainib Noshad, Atia Javaid, Maheen Zahid, Ishtiaq Ali, Nadeem Javaid
5. A Cotton and Flax Fiber Classification Model Based on Transfer Learning and Spatial Fusion of Deep Features
   Shangli Zhou, Song Cai, Chunyan Zeng, Zhifeng Wang

3PGCIC-S4: Multimedia and Internet Computing

Chair: Kin Fun Li, University of Victoria, Canada

1. Introducing Connotation Similarity
   Marina Danchovsky Ibrishimova, Kin Fun Li
2. Proposal of Transesophageal Echo Examination Support System by CT Imaging
   H. Takahashi, T. Katoh, A. Doi, M. Hozawa, Y. Morino
3. A Study of 3D Shape Similarity Search in Point Representation by using Machine Learning
   Hideo Miyachi, Koshiro Murakami
4. A Fog-Cloud Approach to Enhance Communication in a Distance Learning Cloud Based System
   Lucas Larcher, Victor Ströele, Mario Dantas
5. Smart Contracts for Research Lab Sharing Scholars Data Rights Management over the Ethereum Blockchain Network
   Abdul Ghaffar, Muhammad Azeem, Zain Abubaker, Muhammad Usman Gurmani, Tanzeela Sultana, Faisal Shehzad, Nadeem Javaid
6. Mining and Utilizing Network Protocol's Stealth Attack Behaviors
   YanJing Hu, Xu An Wang, HaiNing Luo, Shuaishuai Zhu

DEM-S2: Intelligent Systems and Applications

Chair: Maarten Weyn, University of Antwerp, Belgium

1. Using Neural Architecture Search to Optimize Neural Networks for Embedded Devices
   Thomas Cassimon, Simon Vanneste, Stig Bosmans, Siegfried Mercelis, Peter Hellinckx
2. Spiking Neural Network Implementation on FPGA for Robotic Behaviour
   Maximiliaan Walravens, Erik Verreyken, Jan Steckel
3. Comparing Machine Learning Algorithms for RSS-based localization in LPWAN
   Thomas Janssen, Rafael Berkvens, Maarten Weyn
4. Learning to Communicate with Multi-Agent Reinforcement Learning Using Value-Decomposition Networks
   Simon Vanneste, Astrid Vanneste, Stig Bosmans, Siegfried Mercelis, Peter Hellinckx

16:00-16:30 Coffee Break

16:30-18:30 Parallel Sessions

3PGCIC-S5: Intelligent and Cognitive Systems

Chair: Alessandro Maisto, University of Salerno, Italy

1. Automatic Text Classification through Point of Cultural Interest Digital Identifiers
   Maria Carmela Catone, Maria Cristina Falco, Alessandro Maisto, Serena Pelosi, Alfonso Siano
2. An Automatic Text Summary Method Based on LDA Model
   Caiquan Xiong, Li Shen, Zhuang Wang
3. An Industrial Multi-Agent System (MAS) Platform
   Ariona Shashaj, Federico Mastrorilli, Michele Stingo, Massimiliano Polito
4. Museums' Tales: Visualizing Instagram Users' Experience
   Pierluigi Vitale, Azzurra Mancuso, Mariacristina Falco
5. Research Topics: A Multidisciplinary Analysis of Online Communities to Detect PolicyMaking Indicators
   Iolanda Sara Iannotta, Pierluigi Vitale

3PGCIC-S6: IoT Computing Systems

Chair: Fatos Xhafa, Technical University of Catalonia, Spain

1. A Framework for Allocation of IoT devices to The Fog Service Providers in Strategic Setting
   Anjan Bandyopadhyay, Fatos Xhafa, Saurav Mallik, Paul Krause, Sajal Mukhopadhyay, Vikash Kumar Singh, Ujjwal Maulik
2. Home Fine Dust Monitoring Systems Using XBee
   Sung Woo Cho
3. Opinion Mining in consumers food choice and quality perception
   Alessandra Amato, Giovanni Cozzolino, Marco Giacalone
4. A Model for Human Activity Recognition in Ambient Assisted Living
   Wagner D. do Amaral, Mario A. R. Dantas, Fernanda Campos
5. Omniconn: An Architecture for Heterogeneous Devices Interoperability on Industrial Internet of Things
   Bruno Machado Agostinho, Cauê Baasch de Souza, Fernanda Oliveira Gomes, Alex Sandro Roschildt Pinto, Mario Antônio Ribeiro Dantas

DEM-S3: Wireless Networks

Chair: Peter Hellinckx, University of Antwerp, Belgium

1. Simulating a Combination of TDoA and AoA Localization for LoRaWAN
   Michiel Aernouts, Noori BniLam, Rafael Berkvens, Maarten Weyn
2. Localization Accuracy Performance Comparison between LTE-V and IEEE 802.11p
   Rreze Halili, Maarten Weyn, Rafael Berkvens
3. Time Synchronization with Channel Hopping Scheme for LoRa Networks
   Ritesh Kumar Singh, Rafael Berkvens, Maarten Weyn
4. In-Air Imaging Sonar Sensor Network with Real-time Processing Using GPUs
   Wouter Jansen, Dennis Laurijssen, Robin Kerstens, Walter Daems, Jan Steckel

19:00-21:00 Welcome Reception Party

Welcome reception will be held at University of Antwerp.

Friday, November 8, 2019

08:00 Registration

09:30-10:30 Single Session: BWCCA-2019 & 3PGCIC-2019 Keynote II

BWCCA-2019 & 3PGCIC-2019 Keynote Talk II

Deevid De Meyer: 2020: The AI Decade

10:30-11:00 Coffee Break

11:00-13:00 Parallel Sessions

SMDMS-S1: Streaming Media Delivery and Management Systems

Chair: Tomoki Yoshihisa, Osaka University, Japan

1. The Structured Way of Dealing with Heterogeneous Live Streaming Systems
   Andrea Tomassilli, Nicolas Huin, Frédéric Giroire
2. A Rule Design for Trust-Oriented Internet Live Video Distribution Systems
   Satoru Matsumoto, Tomoki Yoshihisa, Tomoya Kawakami, Yuuichi Teranishi
3. High-performance Computing Environment with Cooperation between Supercomputer and Cloud
   Toshihiro Kotani, Yusuke Gotoh
4. Evaluation of a Distributed Sensor Data Stream Collection Method Considering Phase Differences
   Tomoya Kawakami, Tomoki Yoshihisa, Yuuichi Teranishi
5. A Mathematical Analysis of 2-Tiered Hybrid Broadcasting Environments
   Satoru Matsumoto, Kenji Ohira, Tomoki Yoshihisa

CADSA-S1: Cloud and Distributed System Applications

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

1. Optimization Algorithms and Tools applied in Agreements Negotiation
   Alessandra Amato, Flora Amato, Giovanni Cozzolino, Marco Giacalone, Francesco Romeo
2. A Configurable Implementation of the SHA-256 Hash Function
   Raffaele Martino, Alessandro Cilardo
3. A Blockchain based Incentive Mechanism for Crowd Sensing Network
   Zainib Noshad, Atia Javaid, Maheen Zahid, Ishtiaq Ali, Raja Jalees ul Hussen Khan, Nadeem Javaid
4. Design of a cloud-oriented Web Application for Legal Conflict Resolution through Equitative Algorithms
   Alessandra Amato, Flora Amato, Giovanni Cozzolino, Marco Giacalone, Francesco Romeo
5. Equitative Algorithms for Legal Conflict Resolution
   Alessandra Amato, Flora Amato, Giovanni Cozzolino, Marco Giacalone

ALICE-S1: Adaptive Learning Systems and Emotional Approaches

Chair: Santi Caballé, Open University of Catalonia, Spain

1. Multi-Attribute Categorization of MOOC Forum Posts and Applications to Conversational Agents
   Nicola Capuano, Santi Caballé
2. A Tool for Creating Educational Resources Through Content Aggregation
   Antonio Sarasa-Cabezuelo, Santi Caballé
3. A Methodology Approach to Evaluate Cloud-based Infrastructures in Support for e-Assessment
   Josep Prieto, David Gañán
4. Towards an Educational Model for Lifelong Learning
   Jordi Conesa, Josep-Maria Batalla-Busquets, David Bañeres, Carme Carrion, Israel Conejero-Arto, María del Carmen Cruz Gil, Montserrat Garcia-Alsina, Beni Gómez-Zúñiga, María J. Martinez-Argüelles, Xavier Mas, Tona Monjo, Enric Mor

13:00-14:00 Lunch Break

14:00-16:00 Parallel Sessions

CCPI-S1: Cloud Computing Systems and Architectures

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

1. Cloud Manifacturing activities in the Campania Regional Project "Linee Guida e Proposte per I 4.0 Campania"
   Beniamino Di Martino, Pasquale Cantiello and Salvatore Venticinque
2. An Approach to Help in Cloud Model Choice for Academia Services' Supplying
   Pasquale Cantiello, Beniamino Di Martino, Michele Mastroianni
3. Italian Cloud Tourism as Tool to Develop Local Tourist Districts Economic Vitality and Reformulate Public Policies
   Alfonso Marino, Paolo Pariso
4. Auto-scaling in the Cloud: Current Status and Perspectives
   Marta Catillo, Massimiliano Rak, Umberto Villano
5. Dynamic Patterns for Cloud Application Life-Cycle Management
   Geir Horn, Leire Orue-Echevarria Arrieta, Beniamino Di Martino, Paweł Skrzypek, Dimosthenis Kyriazis
6. From Monolith to Cloud Architecture Using Semi-automated Microservices Modernization
   Salvatore Augusto Maisto, Beniamino Di Martino, Stefania Nacchia
7. Reinforcement Learning for Resource Allocation in Cloud Datacenter
   Salvatore Venticinque, Stefania Nacchia, Salvatore Augusto Maisto

SiPML-S1: Signal Processing and Machine Learning

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

1. Apple Brand Classification Using CNN Aiming at Automatic Apple Texture Estimation
   Shigeru Kato, Ryuji Ito, Takaya Shiozaki, Fuga Kitano, Naoki Wada, Tomomichi Kagawa, Hajime Nobuhara, Takanori Hino, Yukinori Sato
2. Fundamental Study on Evaluation System of Beginner's Welding Using CNN
   Shigeru Kato, Takanori Hino, Naoki Yoshikawa
3. Building an Early Warning Model for Detecting Environmental Pollution of Wastewater in Industrial Zones
   Nghien Nguyen Ba, Ricardo Rodriguez Jorge
4. A Robust Fully Correntropy - based Sparse Modeling Alternative to Dictionary Learning
   Carlos A. Loza
5. Labeling activities acquired by a Low-accuracy EEG device
   Ákos Rudas, Sándor Laki

BIDS-S1: Business Intelligence and Distributed Systems

Chair: Kin Fun Li, University of Victoria, Canada

1. Data Sharing System Integrating Access Control based on Smart Contracts for IoT
   Tanzeela Sultana, Abdul Ghaffar, Muhammad Azeem, Zain Abubaker, Muhammad Usman
2. Energy Trading between Prosumer and Consumer in P2P Network Using Blockchain
   Muhammad Usman Gurmani, Tanzeela Sultana, Abdul Ghaffar, Muhammad Azeem, Zain Abubaker, Nadeem Javaid
3. Auto-generating Examination Paper based on Genetic Algorithms
   Xu Chen, Deliang Zhong, Yutian Liu, Yipeng Li, Shudong Liu, Na Deng
4. The Data Scientist Job in Italy: What Companies Require
   Maddalena della Volpe, Francesca Esposito
5. An Architecture for System Recovery Based on Solution Records on Different Servers *Takayuki Kasai, Kosuke Takano*
6. A Novel Approach for Selecting Hybrid Features from Online News Textual Metadata for Fake News Detection
   Mohamed K. Elhadad, Kin Fun Li, Fayez Gebali

16:00-16:30 Coffee Break

16:30-18:30 Parallel Sessions

SMECS-S1: Simulation and Modelling for Computational Systems

Chair: Juggapong Natwichai, Chiang Mai University, Thailand

1. Blockchain based Decentralized Authentication and Licensing Process of Medicine
   Muhammad Azeem, Zain Abubaker, Muhammad Usman Gurmani, Tanzeela Sultana, Abdul Ghaffar, Abdul Basit Majeed Khan, Nadeem Javaid
2. Detection of Malicious Code Variants Based on a Flexible and Lightweight Net
   Wang Bo, Wang Xu An, Su Yang, Nie Jun Ke
3. Preprocessing of Correlation Power Analysis Based on Improved Wavelet Packet
   Ma Peng, Wang Ze-yu, Zhong WeiDong, Wang Xu An
4. A Method of Annotating Disease Names in TCM Patents Based on Co-training
   Na Deng, Xu Chen, Caiquan Xiong
5. Semantic Annotation in Maritime Legal Case Texts Based on Co-training
   Jun Luo, Ziqi Hu, Qi Liu, Sizhuo Chen, Peiyong Wang, Na Deng
6. Data Analytical Platform Deployment: A Case Study from Automotive Industry in Thailand
   Chidchamaiporn Kanmai, Chartchai Doungsa-ard, Worachet Kanjanakuha, Juggapong Natwichai

MWVRTA-S1: Streaming Media Delivery and Management Systems

Chair: Tomoyuki Ishida, Fukuoka Institute of Technology, Japan

1. Influence of Japanese Traditional Crafts on Kansei in Different Interior Styles
   Ryo Nakai, Yangzhicheng Lu, Tomoyuki Ishida, Akihiro Miyakwa, Kaoru Sugita, Yoshitaka Shibata
2. Semantic Similarity Calculation of TCM Patents in Intelligent Retrieval Based on Deep Learning
   Na Deng, Xu Chen, Caiquan Xiong
3. The Design and Development of Assistant Application for Maritime Law Knowledge Built on Android
   Jun Luo, Ziqi Hu, Qi Liu, Sizhuo Chen, Peiyong Wang, Na Deng
4. A Matrix Factorization Recommendation Method Based on Multi-Grained Cascade Forest
   Shangli Zhou, Songnan Lv, Chunyan Zeng, Zhifeng Wang

19:00-21:00 Banquet Party

Banquet Party will be held at University of Antwerp.

Saturday, November 9, 2019

3PGCIC-2019 Organizing Committee Meeting and Discussion

BWCCA-2019 and 3PGCIC-2019 Session Schedule
November 7th – 9th , 2019
University of Antwerp, Antwerp, Belgium

Thursday (November 7, 2019)		**ROOM 1**	**ROOM 2**	**ROOM 3**	**ROOM 4**	**ROOM 5**	**ROOM 6**
Slot	**Time**	Registration					
Opening	**09:00 – 09:30**	Opening Ceremony					
Session 1	**09:30 – 10:30**	BWCCA-2019 and 3PGCIC-2019 Keynote I					
Coffee Break	10:30 – 11:00	Coffee Break					
Session 2	**11:00 – 13:00**	BWCCA S1	BWCCA S2	MNSA S1	3PGCIC S1	3PGCIC S2	DEM S1
Lunch	13:00 – 14:00	Lunch Break					
Session 3	**14:00 – 16:00**	BWCCA S3	BWCCA S4	MNSA S2	3PGCIC S3	3PGCIC S4	DEM S2
Coffee Break	16:00 – 16:30	Coffee Break					
Session 4	**16:30 – 18:30**	BWCCA S5	BWCCA S6	CWECS S1	3PGCIC S5	3PGCIC S6	DEM S3
Social Event	19:00 – 21:00	*Welcome Reception Party*					

Friday (November 8, 2019)		**ROOM 1**	**ROOM 2**	**ROOM 3**	**ROOM 4**	**ROOM 5**	**ROOM 6**
Slot	**Time**	Registration					
Session 1	**09:30 – 10:30**	BWCCA-2019 and 3PGCIC-2019 Keynote II					
Coffee Break	10:30 – 11:00	Coffee Break					
Session 2	**11:00 – 13:00**	BWCCA S7	MAPWC S1	BioSPAN S1	SMDMS S1	CADSA S1	ALICE S1
Lunch	13:00 – 14:00	Lunch Break					
Session 3	**14:00 – 16:00**	NGWMN S1	RVI3C S1	ATASP S1	CCPI S1	SiPML S1	BIDS S1
Coffee Break	16:00 – 16:30	Coffee Break					
Session 4	**16:30 – 18:30**					SMECS S1	MWVRTA S1
Social Event	19:00 – 21:00	*Banquet Party*					

Saturday (November 9, 2019)		**ROOM 1**	**ROOM 2**	**ROOM 3**	**ROOM 4**	**ROOM 5**	**ROOM 6**
Slot	**Time**	BWCCA-2019 and 3PGCIC-2019 Steering Committee Meeting and Discussion					