

PROGRAM GUIDE

IEEE AINA 2015

The 29th IEEE International Conference on
Advanced Information Networking and Applications



March 25-27, 2015

Gwangju, Korea

Sponsored by:

IEEE Technical Committee on Distributed Processing (TCDP)



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Steering Committee Chair

Message from IEEE AINA 2015 Steering Committee Co-Chairs

Welcome to the 29-th IEEE International Conference on Advanced Information Networking and Applications (IEEE AINA 2015). It is our great pleasure and honor to held AINA 2015 in Gwangju, Korea from March 25 to March 27, 2015. On behalf of the AINA Steering Committee and IEEE AINA 2015 Organizing Committee, we would like to express to all participants our cordial welcome and high respect.

AINA is an International Forum, where scientists and researchers from academia and industry working in various scientific and technical areas of networking and distributed computing systems can demonstrate new ideas and solutions in distributed computing systems.

AINA was born in Asia, but it is now an International Conference with high quality thanks to the great help and cooperation of many international friendly volunteers. AINA is a very open society and is always welcoming international volunteers from any country and any area in the world. AINA is an International Conference sponsored by TCDP of IEEE Computer Society.

In conjunction with the AINA main conference, we have also 15 International Workshops. Every year after the conference, AINA usually publish special issues in International Journals. The authors who attend AINA and present their papers in the main conference and workshops can submit a revised version of the paper to one of the special issues.

An international conference can be organized by support and great voluntary efforts of many people and organizations and our main responsibility is to coordinate various tasks carried out with other willing and talented volunteers.

We would like to thank IEEE AINA 2015 General Co-Chairs Prof. Fatos Xhafa, Technical University of Catalonia, Spain and Prof. Jong Hyuk Park, Seoul National University of Science and Technology, Korea for their great efforts to make a very successful organization of IEEE AINA 2015.

We would like to express our special thanks to Dr. Michael H. Jeong Kyung Hee, University, Korea, Dr. Tomoki Yoshihisa, Osaka University, Japan and Dr. Markus Aleksy, ABB AG, Germany as PC Co-Chairs of IEEE AINA-2015 for making excellent technical program.

We greatly appreciate Prof. Tomoya Enokido, Rissho University, Japan, Dr. Gangman Yi, Gangneung-Wonju National University, Korea, Dr. Kin Fun Li, University of Victoria, Canada, Dr. Wenny Rahayu, La Trobe University, Australia as Workshops Co-Chairs for organizing 16 workshops in conjunction with IEEE AINA 2015. Especially, we have special thanks to Prof. Tomoya Enokido for his leading role and efforts to invite many successful workshops.

We would like to thank also all track area chairs, program committee members, workshops organizers and workshops committee members for carefully reviewing the papers.

We have special thanks to Dr. Makoto Ikeda, Dr. Elis Kulla, Mr. Tetsuya Oda and Mr. Shinji Sakamoto as Web administrators.

We would like to take opportunity to thank all members of the organization committee and program committee as well as all the reviewers for their hard work to make the reviews on time and authors for submitting the papers. We would like to give special thanks to IEEE Computer Society TCDP, as Sponsor of IEEE AINA 2015.

Finally, we would like to thank the Local Arrangement Team of Gwangju Convention Bureau for their support and good local arrangement for the conference.

We do hope that you will have a great time in Gwangju, Korea.

IEEE AINA Steering Committee Co-Chairs

Makoto Takizawa, Hosei University, Japan
Leonard Barolli, Fukuoka Institute of Technology, Japan

Message from IEEE AINA 2015 General Co-Chairs

It is our great pleasure to welcome you all at the 29-th IEEE International Conference on Advanced Information Networking and Applications (IEEE AINA 2015), which will be held at Kim Dae Jung Convention Center, Gwangju, Korea from March 25 to March 27, 2015.

IEEE AINA International Conference is a forum for sharing ideas and research work in the emerging areas of information networking and their applications. The area of advanced networking has grown very rapidly and the applications around it have experienced an explosive growth especially in the area of pervasive and mobile applications, multimedia computing and social networking, semantic collaborative systems, as well as Grid, P2P and Cloud Computing. This advanced networking revolution is transforming the way people live, work, and interact with each other, and is impacting the way business, education, entertainment, and health care are operating. The papers included in the proceedings covers theory, design and application of computer networks, distributed computing and information systems.

Each year AINA has received high submission from all around the world, and maintained high quality accepted papers as it aspires to be one of the main international conferences on the Information Networking in the world. In conjunction with the IEEE AINA 2015 conference, there are 15 workshops, which also accepted high quality papers.

An international conference of this size requires the support and help of many people. A lot of people have helped and worked hard to produce a successful IEEE AINA 2015 technical program and conference proceedings. First, we would like to thank all authors for submitting their papers, the session chairs and distinguished keynote speakers. We are indebted to Program Area Chairs, Program Committee Members and reviewers, who carried out the most difficult work of carefully evaluating the submitted papers.

We would like to give our special thanks to Prof. Makoto Takizawa and Prof. Leonard Barolli, Co-Chairs of the Steering Committee for their strong encouragement, guidance and insights, and for spending a lot of energy for conference organization and shaping the conference program. We would like to thank Dr. Michael H. Jeong Kyung Hee, University, Korea, Dr. Tomoki Yoshihisa, Osaka University, Japan and Dr. Markus Aleksy, ABB AG, Germany as PC Co-Chairs. We would like to give our thanks also to Workshops Co-Chairs Prof. Tomoya Enokido, Rissho University, Japan, Dr. Gangman Yi, Gangneung-Wonju National University, Korea, Dr. Kin Fun Li, University of Victoria, Canada, Dr. Wenny Rahayu, La Trobe University, Australia.

Our special thanks go to Dr. Makoto Ikeda, Dr. Elis Kulla, Mr. Tetsuya Oda and Mr. Shinji Sakamoto for maintaining the conference Web site and the administration of paper submission and review process.

Finally, we would like to thank the Local Arrangement Team of Gwangju Convention Bureau for their support and good local arrangement for the conference.

We hope you will enjoy the conference and have a great time in Gwangju, Korea.

IEEE AINA 2015 General Co-Chairs

Jong Hyuk Park, Seoul National University of Science and Technology, Korea
Fatos Xhafa, Technical University of Catalonia, Spain

Message from IEEE AINA 2015 Program Committee Co-Chairs

Welcome to the 29-th IEEE International Conference on Advanced Information Networking and Applications (IEEE AINA 2015), which will be held at Kim Dae Jung Convention Center, Gwangju, Korea from March 25 to March 27, 2015.

The purpose of AINA conference is to bring together researchers, developers, and industrial experts to share new ideas and recent research results in the emerging areas of information networking and their applications. Nowadays, networks are going through a rapid evolution. The papers included in the proceedings cover all aspects of theory, design, and application of computer networks and distributed computing systems. Most of the papers deal with new trends in information networking, such as wireless sensor networks, ad-hoc networks, cloud computing, peer-to-peer systems, grid computing, pervasive and ubiquitous systems, multimedia systems, security, multi-agent systems, high-speed networks, and web-based systems.

This edition AINA received 478 paper submissions from all over the world. Each submission was peer-reviewed by program committee members or invited external reviewers. Finally, the program committee accepted 129 papers (about 27% acceptance ratio), which will be presented during the conference days. Unfortunately, many interesting and good papers could not be accepted in IEEE AINA 2015 due to the limited number of time slots allocated for presentations at the conference.

We are very proud and honored to have two distinguished keynote talks by Prof. Hiroaki Kikuchi, Meiji University, Japan and Prof. Hanmin Jung, Korea Institute of Science and Technology Information (KISTI), Korea, who will present their recent work and will give new insights and ideas to the conference participants.

Organizing an international conference of this size is of course a team effort. Therefore, we gladly admit that we had the help of many very professional people. First of all, we would like to thank all the authors for their interesting contributions since they shape the program and make it interesting for the audience. Moreover, we would like to express our thankfulness to all program-vice chairs for their great efforts. Additionally, we would like to thank all program committee members and reviewers who carried out the most important work to evaluate the submitted papers. We also thank the workshops chairs Prof. Tomoya Enokido, Risho University, Japan, Dr. Gangman Yi, Gangneung-Wonju National University, Korea, Dr. Kin Fun Li, University of Victoria, Canada, Dr. Wenny Rahayu, La Trobe University, Australia for organizing many excellent workshops and symposiums, which enrich the conference and provide additional opportunities for discussions and future co-operations.

The great success of the AINA conference series would not be possible without the enormous commitment and support of the steering committee co-chairs Prof. Makoto Takizawa and Prof. Leonard Barolli. Therefore, we would like to thank them for their strong encouragement and guidance.

The general coordination of an event such as AINA conference requires a lot of coordination effort as well as many other activities related to the conference organization. Here, we thank the general co-chairs Prof. Fatos Xhafa, Technical University of Catalonia, Spain and Prof. Jong Hyuk Park, Seoul National University of Science and Technology, Korea for their great support and invaluable suggestions. We give special thanks to Dr. Makoto Ikeda and Dr. Elis Kulla for his great efforts and efficient work to deal with many conference matters.

We hope you will enjoy the conference and readings and have a great time in Gwangju, Korea.

IEEE AINA 2015 Program Committee Co-Chairs

Michael H. Jeong, Kyung Hee University, Korea

Tomoki Yoshihisa, Osaka University, Japan

Markus Aleksy, ABB AG, Germany

Message from IEEE AINA 2015 Workshops Co-Chairs

Welcome to the AINA 2015 workshops to be held in conjunction with the 29-th IEEE International Conference on Advanced Information Networking and Applications, at Kim Dae Jung Convention Center, Gwangju, Korea from March 25 to March 27, 2015. The goal of AINA workshops is to provide a forum for international researchers and practitioners to exchange and share their new ideas, research results, and ongoing work on leading-edge topics in the different fields of information networks and their applications. Some of the accepted workshops deal with topics that open up perspectives beyond the ordinary, thus, enriching the topics usually addressed by the AINA conference.

For this edition, the following 15 symposiums and workshops will be held with AINA 2015.

1. The 11-th International Symposium on Frontiers of Information Systems and Network Applications (FINA 2015)
2. The 11-th International Workshop on Heterogeneous Wireless Networks (HWISE 2015)
3. The 8-th International Workshop on Information Technology for Innovative Services (ITIS 2015)
4. The 8-th International Symposium on Mining and Web (MAW 2015)
5. The 8-th International Workshop on Bio and Intelligent Computing (BICom 2015)
6. The 8-th International Workshop on Telecommunication Networking, Applications and Systems (TeNAS 2015)
7. The 7-th International Workshop on Disaster and Emergency Information Network Systems (IW-DENS 2015)
8. The 5-th International Workshop on Protocols and Applications with Multi-Homing Support (PAMS 2015)
9. The 3-rd International Workshop on Collaborative Enterprise Systems (COLLABES 2015)
10. The 3-rd International Workshop on Informatics for Intelligent Context-Aware Enterprise Systems (ICAES 2015)
11. The 3-rd International Workshop on Pervasive Internet of Things and Smart Cities (PITSaC 2015)
12. The 3-rd International Workshop on Network Management and Monitoring (NetMM 2015)
13. The 3-rd International Workshop on the Theories and Intricacies of Information Security problems (INTRICATE-SEC 2015)
14. The 2-nd International Workshop on Device Centric Cloud (DC2 2015)
15. The 2-nd International Workshop on Engineering Energy Efficient WSNs (EEEWSN 2015)

We would like to thank the community for their great response to IEEE AINA 2015 workshops. The excellent technical program of the workshops was the result of a professional work from workshop chairs, workshop program committees, reviewers, and authors.

We would like to give our special thanks to Prof. Makoto Takizawa and Prof. Leonard Barolli, the Steering Committee Chairs of IEEE AINA International Conference for their strong encouragement and guidance to organize the AINA 2015 workshops and symposiums. We would like to thank IEEE AINA 2015 General Co-Chairs Prof. Fatos Xhafa, Technical University of Catalonia, Spain and Prof. Jong Hyuk Park, Seoul National University of Science and Technology, Korea for their advices to make possible organization of IEEE AINA 2015 workshops and symposiums. We are thankful to IEEE AINA 2015 Program Co-Chairs

Dr. Michael H. Jeong Kyung Hee, University, Korea, Dr. Tomoki Yoshihisa, Osaka University, Japan and Dr. Markus Aleksy, ABB AG, Germany for their support and help to prepare the technical program of AINA 2015 workshops and symposiums. We would like to express special thanks to Dr. Makoto Ikeda, Dr. Elis Kulla, Mr. Tetsuya Oda and Mr. Shinji Sakamoto for their timely and unlimited support as web administrators.

We wish all of you entertaining and rewarding experience in all workshops and the IEEE AINA 2015 International Conference.

IEEE AINA 2015 Workshops Co-Chairs

Tomoya Enokido, Risho University, Japan
Gangman Yi, Gangneung-Wonju National University, Korea
Kin Fun Li, University of Victoria, Canada
Wenny Rahayu, La Trobe University, Australia

IEEE AINA 2015 Keynote Talk I

Prof. Hanmin Jung, Korea Institute of Science and Technology Information (KISTI), Korea

How to Help Researchers Using Prescriptive Analytics and Complex Event Processing?

Abstract: Explosively increased Big Data and very fast technical evolutions require an entirely new analytics that is able to precisely analyze researcher's activities until now and to provide research directions from now on. Prescriptive analytics shows fundamental difference with descriptive/predictive analytics in that it should provide multiple strategies to achieve a given research direction. Complex event processing also shows a new way to read implicit intentions from many kinds of activities such as publishing article, travelling on business, and attending conference. Thus, this talk shows a case study by explaining requirements and factors for implementing a personalized research service with InSciTe Advisory, as a data-intensive intelligent service, for helping to find plausible research directions. This talk also covers data gathering, information extraction from entities to simple events, reasoning, and Hadoop ecosystem.

IEEE AINA 2015 Keynote Talk II

Prof. Hiroaki Kikuchi, Meiji University, Japan

Privacy Issues in Big Data and Privacy-preserving Data Mining

Abstract: The utilization of big-data is expected to broadly contribute to the innovative services and business models with accurate model of our behaviors. Personal data is considered to be highly values here and hence we have many issues in privacy. This talk introduces a couple of incidents related to personal data in big data business and clarify the risk of re-identification of individual from anonymized data. Current Personal Information Protection Act restricts the exchange of personal data among companies. There is no clear standard to specify procedure for reduction of risk of identification. To address the privacy issues in big data application, the notion of privacy-preserving data mining has been studied well. In this talk, the fundamental principle and some applications of privacy-preserving data mining are introduced.



IEEE AINA 2015 Main Conference and Workshops Program

Wednesday, March 25, 2015

08:00 Registration

09:00-10:30 Single Session: Opening and Keynote Talk I

IEEE AINA 2015 Keynote Talk I (PLENARY ROOM)

Prof. Hanmin Jung: How to Help Researchers Using Prescriptive Analytics and Complex Event Processing?

10:30-11:00 Coffee Break

11:00-13:00 Parallel Sessions

AINA-S1: Communications Network and Protocols I - Room 1

Chair: Isaac Woungang, Ryerson University, Canada

1. Experimental Evaluation of Congestion Avoidance
David Murray, Kevin Ong
2. On the Benefits of Using Multipath TCP and Openflow in Shared Bottlenecks
Marcus Sandri, Alan Silva, Lucio Agostinho Rocha, Fabio Luciano Verdi
3. Base Station Selection in M2M Communication Using Q-learning Algorithm in LTE-A Networks
A. H. Mohammed, A. S. Khwaja, A. Anpalagan, I. Woungang
4. Evaluation of AggSessAC Admission Control Solution to Improve Network Revenue
Andris Skrastins, Gunars Lauks

AINA-S2: Ad Hoc and Mesh Networks I - Room 2**Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

1. E-MAntNet: An ACO-Based Energy Efficient Routing Protocol for Mobile Ad Hoc Networks
Ssowjanya HariShankar, Isaac Woungang, Sanjay Kumar Dhurandher, Issa Traore, Shakira Banu Kaleel
2. Implementation and Experimental Results of a WMN Testbed in Indoor Environment Considering LoS Scenario
Tetsuya Oda, Admir Barolli, Shinji Sakamoto, Leonard Barolli, Makoto Ikeda, Kazunori Uchida
3. Application of WMN-SA Simulation System for WMN Node Placement in a Realistic Scenario
Shinji Sakamoto, Tetsuya Oda, Leonard Barolli, Makoto Ikeda, Fatos Xhafa, Kazunori Uchida
4. Energy-Efficient Cooperative MAC Protocol based on Power Control in MANETs
Xiaoying Zhang, Alagan Anpalagan, Lei Guo, Ahmed Shaharyar Khwaja
5. Continuous Neighbor Discovery Protocol in Wireless Ad Hoc Networks with Sectorized-Antennas
Zeeshan Hameed Mir, Woo-Sung Jung, Young-Bae Ko

AINA-S3: Wireless Sensor Networks I - Room 3**Chair: Fumiaki Sato, Toho University, Japan**

1. Efficient Coverage of Agricultural Field with Mobile Sensors by Predicting Solar Power Generation
Masaru Eto, Ryo Katsuma, Morihiko Tamai, Keiichi Yasumoto
2. A Novel Outlier Detection Model Based on One Class Principal Component Classifier in Wireless Sensor Networks
Oussama Ghorbel, Mohamed Abid, Hichem Snoussi
3. AAEERP: Advanced AUV-Aided Energy Efficient Routing Protocol for Underwater WSNs
Naveed Ilyas, Nadeem Javaid, Zafar Iqbal, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, Muhammad Shoaib
4. An Efficient Distributed TDMA MAC Protocol for Large-Scale and High-Data-Rate Wireless Sensor Networks
Kouhei Moriyama, Yongbing Zhang
5. DYN-NbC: A New Routing Scheme to Maximize Lifetime and Throughput of WSNs
Ayesha Hussain Khan, Nadeem Javaid, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, Noman Haider

HWISE-S1: Wireless Sensor Networks - Room 4**Chair: Elis Kulla, Okayama University of Science, Japan**

1. Extended Lifetime Based Elliptical Sink-Mobility in Depth Based Routing Protocol for UWSNs
Naveed Ilyas, Nadeem Javaid, Zafar Iqbal, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, Muhammad Shoaib
2. Selection of Actor Nodes in Wireless Sensor and Actor Networks: A Fuzzy Based Method Considering Actor Mobility
Donald Elmazi, Elis Kulla, Tetsuya Oda, Evjola Spaho, Leonard Barolli, Kazunori Uchida
3. Circular Joint Sink Mobility Scheme for Wireless Sensor Networks
S. Rahim, H. Rahim, R. D. Khan, M. Z. Siddiqi, M. A. Qureshi, U. Qasim, Z. A. Khan, S. Mahmood, N. Javaid
4. DYN-NbC-JSM: Dynamic Joint Sink Mobility with Need-Based Clustering in WSNs
Ayesha Hussain Khan, Nadeem Javaid, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, Noman Haider
5. Using Cellular Sensor Networks for Environment Protection
Mimoza Durrezi, Arjan Durrezi, Leonard Barolli, Kazunori Uchida

IWDENS-S1: Disaster Information System - Room 5**Chair: Yoshitaka Shibata, Iwate Prefectural University, Japan**

1. Feasibility Validation of WiFi Based Multihop Access Network for Disaster Recovery
Quang Tran Minh, Shigeki Yamada
2. GICS: Group-Based Internet Connection Spreading Architecture for Disaster Recovery
Xuan Thien Phan, Quang Tran Minh, Kien Nguen, Nam Thoai, Shigeki Yamada
3. Proposal of the Fire Fighting Support System for the Volunteer Fire Company
Kazuhiro Takahagi, Tomoyuki Ishida, Satoshi Noda, Akira Sakuraba, Noriki Uchida, Yoshitaka Shibata
4. Application of DTN to the Vehicle Sensor Platform CoMoSE
Go Hirakawa, Noriki Uchida, Yoshikazu Arai, Yoshitaka Shibata
5. Implementation of High Presence Video Communication System for Multiple Users Using Tiled Display Environment
Satoshi Noda, Yasuo Ebara, Tomoyuki Ishida, Koji Hashimoto, Yoshitaka Shibata

TeNAS-S1: Distributed and Parallel Applications - Room 6**Chair: Rubem Pereira, Liverpool John Moores University, UK**

1. A Case Study and Design of Transformation Architecture in BSS
Teh-Sheng Huang, Chun-Yen Wang, Tsung-Ching Lin, Jeu-Yih Jeng
2. An Anomaly Detection by Whitening HOSF
Chun-Hui Wang, Yue Pan, Shwu-Huey Yen
3. Video Streaming: H.264 and the Internet of Things
Rubem Pereira, Ella Pereira

13:00-14:30 Lunch Break**14:30-16:30 Parallel Sessions****AINA-S4: Distributed and Parallel Systems I - Room 1****Chair: Wenny Rahayu, La Trobe University, Australia**

1. Performance Analysis of Traffic Bottleneck Induced by Concentration at K-ary N-cube NoC Routers
Samia Loucif
2. A Simple Predicate to Expedite the Termination of a Randomized Consensus Algorithm
Michel Raynal
3. A Server Selection Method for Web-based Multiserver Systems
Masaki Kohana, Shusuke Okamoto
4. A Thread Merging Transformation to Improve Throughput of Multiple Programs
Yuanfang Chen, Xiaoming Li
5. Processing Group Reverse kNN in Spatial Databases
Anasthasia Agnes Haryanto, David Taniar, Kiki Maulana Adhinugraha
6. Efficient Processing of Queries over Recursive XML Data
Norah Saleh Alghamdi, Wenny Rahayu, Eric Pardede

AINA-S5: Communications Network and Protocols II - Room 2**Chair: Makoto Takizawa, Hosei University, Japan**

1. An Efficient and Provable Secret Shared Key Computation for Cryptographic Protocol Across Insecure Channel
Ndibanje Bruce, HyunHo Kim, SuHyun Park, HoonJae Lee
2. A Scalable Inter-AS QoS Routing Architecture in Software Defined Network (SDN)
Murat Karakus, Arjan Durrezi
3. A Flexible Read-Write Abortion Protocol to Prevent Illegal Information Flow
Shigenari Nakamura, Dilewaer Duolikun, Tomoya Enokidoy, Makoto Takizawa
4. Evaluation of Human Activity Recognition and Fall Detection Using Android Phone
Muhammad Babar Rasheed, Nadeem Javaid, Turki Ali Alghamdi, Sana Mukhtar, Umar Qasim, Zahoor Ali Khan, M. Haris Baidar Raja
5. Heterogeneous Network Handover Using 3GPP ANDSF
Chin-Yu Liu, Fang-Yie Leu, Jung-Chun Liu, Aniello Castiglione, Francesco Palmieri

AINA-S6: Ad Hoc and Mesh Networks II - Room 3**Chair: Farookh Khadeer Hussain, University of Technology Sydney, Australia**

1. A Protocol for End-to-End Key Establishment During Route Discovery in MANETs
Shrikant H Talawar, R. C. Hansdah
2. Probabilistic Key Pre-Distribution for Heterogeneous Mobile Ad Hoc Networks Using Subjective Logic
Mahdieh Ahmadi, Mohammed Gharib, Fatemeh Ghassemi, Ali Movaghar
3. Optimizing Cached Route Time-to-Live in Mobile Ad-Hoc Networks
Quang-My Tran, Arek Dadej
4. Transmitting Scalable Video Streaming over Wireless Ad Hoc Networks
Walayat Hussain, Farookh Khadeer Hussain, Omar Khadeer Hussain
5. Performance Analysis of WMN-GA Simulation System for Different WMN Architectures Considering OLSR
Admir Barolli, Tetsuya Oda, Leonard Barolli, Fatos Xhafa, Vincenzo Loia, Kazunori Uchida
6. Optimization of Giant Component and Number of Covered Users in Wireless Mesh Networks: A Comparison Study
Vladi Kolici, Leonard Barolli, Shinji Sakamoto, Tetsuya Oda, Fatos Xhafa, Kazunori Uchida

HWISE-S2: Wireless Network Algorithms and Performance Analysis - Room 4**Chair: Isaac Woungang, Ryerson University, Canada**

1. An Analysis of Machine-Type-Communication on Human-Type-Communication over Wireless Communication Networks
Parampreet Sidhu, Isaac Woungang, Glaucio H. S. Carvalho, Alagan Anpalagan, Sanjay K. Dhurandher
2. Video Quality Transmission Evaluation over Next Generation Wireless Networks
Hekma Chaari, Kais Mnif, Lotfi Kamoun
3. Smartphone-Based Secure Access Control in Wireless Network Analysis
Hyunho Kim, Young-Jin Kang, Ndibanje Bruce, Suhyun Park, Hoonjae Lee
4. Performance Evaluation of a VANET Simulation System Using NS-3 and SUMO
Vladi Kolici, Tetsuya Oda, Evjola Spaho, Leonard Barolli, Makoto Ikeda, Kazunori Uchida
5. Using Combined Cellular Ad Hoc Communications for Smart Environments
Mimoza Durrezi, Arjan Durrezi, Leonard Barolli, Kazunori Uchida

IWDENS-S2: Disaster Information Network - Room 5**Chair: Yoshitaka Shibata, Iwate Prefectural University, Japan**

1. M2M Emergency Help Alert Mobile Cloud Architecture
Mohammad Aazam, Pham Phuoc Hung, Eui-Nam Huh
2. Evaluation of Vehicle-to-Vehicle Communication with Delay Tolerant Networks for Safety Surveillance System
Noriki Uchida, Go Hirakawa, Yoshikazu Arai, Kazuo Takahata, Yoshitaka Shibata
3. Mobile Cloud Computing for Distributed Disaster Information System in Challenged Communication Environment
Yosuke Kikuchi, Yoshitaka Shibata
4. A Road Condition Monitoring System Using Various Sensor Data in Challenged Communication Network Environment
Kenta Ito, Go Hirakawa, Yoshikazu Arai, Yoshitaka Shibata
5. Development of Autonomous Anti-Disaster Base Station by Combination of Satellite and Wireless Networks
Hiroaki Yuze, Shinichi Nabeta, Yuji Ito

TeNAS-S2: Networking and Communications Technologies and Performance - Room 6**Chair: Teh-Sheng Huang, Chunghwa Telecom Lab, Taiwan**

1. Multipath Transmission Model and Its Route Selection Policy Considering Packet Re-sequencing Buffers Availability
Yuta Yoshinaga, Masayoshi Shimamura, Katsuyoshi Iida
2. Road-Oriented Geographic Routing Protocol for Urban Vehicular Ad Hoc Networks
Ryosuke Akamatsu, Keiji Obara, Hiroshi Shigeno
3. Equalization for the FDM System Using Mach-Zehnder Filters
Yuki Fukushima, Isamu Wakabayashi, Takayuki Kawahara
4. A Visible Light Communication Link Protection Mechanism for Smart Factory
Shih-Hao Chang

16:30-17:00 Coffee Break**17:00-19:00 Parallel Sessions****AINA-S7: Wireless Sensor Networks II - Room 1****Chair: R. C. Hansdah, Indian Institute of Science, India**

1. Energy-Efficient QoS Routing in Wireless Multimedia Sensor Networks
Ziad Serhan, Wafaa Bou Diab
2. Improving the Energy Efficiency of a Clock Synchronization Protocol for WSNs Using a TDMA-Based MAC Protocol
Siddharth Watwe, R.C. Hansdah
3. Achieving Data Survivability and Confidentiality in Unattended Wireless Sensor Networks
Arpan Sen, Shrestha Ghosh, Arinjoy Basak, Harsh Parsuram Puria, Sushmita Ruj
4. Energy Efficient Extended Coverage in Wireless Sensor Networks
Nachiketa Tarasia, Manas Ranjan Lenka, Amulya Ratna Swain
5. Parallel Processing Simulator for Separate Sensor of WSN Simulator with GPU
Hyun-Woo Kim, Eun-Ha Song, Jong Hyuk Park, Young-Sik Jeong

AINA-S8: Distributed and Parallel Systems II - Room 2**Chair: Fatos Xhafa, Technical University of Catalonia, Spain**

1. Processing and Analytics of Big Data Streams with Yahoo!S4
Fatos Xhafa, Victor Naranjo, Santi Caballé
2. Asynchronous Migration of Process Replicas in a Cluster
Dilawaer Duolikun, Tomoya Enokido, Hui-Huang Hsu, Makoto Takizawa
3. Energy-Efficient Delay Time-Based Process Allocation Algorithm for Heterogeneous Server Clusters
Tomoya Enokido, Makoto Takizawa
4. TeleBuilder: A 3DCG Builder System for Multiplayers via Network
Ningping Sun, Masataka Murakami, Youhei Yamashita, Tomonori Yagi
5. Anomaly Detection of Solar Power Generation Systems Based on the Normalization of the Amount of Generated Electricity
Yohei Akiyama, Yuji Kasai, Masaya Iwata, Eiichi Takahashi, Fumiaki Sato, Masahiro Murakawa

AINA-S9: Pervasive and Ubiquitous Computing I - Room 1**Chair: Hiroaki Kikuchi, Meiji University, Japan**

1. Location Search Based on Subarea Fingerprinting and Surface Fitting for Indoor Positioning System
Bang Wang, Shengliang Zhou
2. User-Centric Contexts Sensing for Instant Information Seeking Support
Neil Y. Yen, Jason C. Hung
3. A New Unreliable Failure Detector for Self-Healing in Ubiquitous Environments
Anubis Graciela de Moraes Rossetto, Carlos O. Rolim, Valderi Leithardt, Guilherme A. Borges, Claudio F. R. Geyer, Luciana Arantes, Pierre Sens
4. Improving Energy Saving Techniques by Ambient Intelligence Scheduling
Matteo Cristani, Erisa Karafili, Claudio Tomazzoli
5. Privacy-Preserving Ubiquitous Social Mining via Modular and Compositional Virtual Sensors
Evangelos Pournaras, Izabela Moise, Dirk Helbing

HWISE-S3: Wireless and Mobile Communication Systems - Room 4**Chair: Kazunori Uchida, Fukuoka Institute of Technology, Japan**

1. A Discrete Ray Tracing Method Based on Dijkstra Algorithm for 3D Propagation Environments
Kazunori Uchida
2. Numerical Analysis of 1×4 Branch Waveguide in Two Dimensional Photonic Crystal Structure
Hiroshi Maeda, Naoki Sakuma, Noriyuki Toyomasu, Ryoma Nishi, Daichi Ogata
3. Investigation of Message Suppression Method Considering TCP in Vehicular-DTN
Seiichiro Ishikawa, Taiki Honda, Makoto Ikeda, Leonard Barolli
4. Analytical Downlink Effective SINR Evaluation in LTE Networks
Marwane Ben Hcine, Ridha Bouallegue
5. Investigating Performance of Concurrent Virtual Wi-Fi Interfaces
Kien Nguyen, Kentaro Ishizu, Homare Murakami, Fumihide Kojima

NetMM-S1: Network Monitoring and Management - Room 5**Chair: Stephane Maag, TELECOM SudParis, France**

1. An Approach for Testing Data Intensive Systems: Application to a Banking CRM System
Xiaoping Che, Pengyu Liu, Zhipeng Zhang, Fangzhi Wen

2. DOCKEMU - A Network Emulation Tool
Marco Antonio To, Marcos Cano, Preng Biba
3. A Reliable and Scalable Classification-Based Hybrid IPS
Oscar Rodas, Gerardo Morales, Jose Alvarez
4. Process Mining for Trust Monitoring
Jorge Lopez, Stephane Maag, Cecilia Saint-Pierre, Javier Bustos, Ana Cavalli

PAMS-S1: Multipath Transport Protocols - Room 6**Chair: Thomas Dreibholz, Simula Research Laboratory, Norway**

1. Maintaining and Monitoring the Infrastructure of the NORNET CORE Testbed for Multi-homed Systems
Thomas Dreibholz, Jarle Bjørgeengen, Jonas Werme
2. Multi-path TCP in Real-World Setups – An Evaluation in the NORNET CORE Testbed
Thomas Dreibholz, Xing Zhou, Fu Fa
3. Performance Evaluation of Experimental Setups in Home Energy Management Systems in Smart Grid
W. Naeem, N. Javaid, Z. A. Khan, U. Qasim, A. Mahmood, Z. Mehmood, A. Ahmad, F. Ali, W. Sarwar
4. Device-to-Device Service Selection Framework in Cloud Radio Access Network
Yuansheng Luo, Kun Yang, Qiang Tang, Jianming Zhang, Shi Qiu

20:00-22:00 Welcome Reception Party

Thursday, March 26, 2015**08:00 Registration****09:00-10:30 Single Session: Keynote Talk II****IEEE AINA 2015 Keynote Talk II (PLENARY ROOM)****Prof. Hiroaki Kikuchi:** Privacy Issues in Big Data and Privacy-preserving Data Mining**10:30-11:00 Coffee Break****11:00-13:00 Parallel Sessions****AINA-S10: Security and Privacy II - Room 1****Chair: Takamichi Saito, Meiji University, Japan**

1. Encrypted Gradient Descent Protocol for Outsourced Data Mining
Fang Liu, Wee Keong Ng, Wei Zhang
2. A Proposal and Implementation of an ID Federation that Conceals a Web Service from an Authentication Server
Yuto Iso, Takamichi Saito
3. O-Bin : Oblivious Binning for Encrypted Data over Cloud
Mahmood Ahmad, Zeeshan Pervez, Byeong Ho Kang, Sungyoung Lee
4. Traffic Flow Classification and Visualization for Network Forensic Analysis
Nuttachot Promrit, Anirach Mingkhwan
5. Efficient Authentication, Traitor Detection, and Privacy-Preserving for the Most Common Queries in Two-Tiered Wireless Sensor Networks
Thach V. Bui, Thuc D. Nguyen, Noboru Sonehara, Isao Echizen

AINA-S11: Wireless Sensor Networks III - Room 2**Chair: R. C. Hansdah, Indian Institute of Science, India**

1. AGA-MAC: Adaptive Geographic Anycast MAC Protocol for Wireless Sensor Networks
Tales Heimfarth, João Carlos Giacomin, João Paulo de Araujo
2. A Distributed Approach to Construct Hierarchical Structure for Routing with Balanced Energy Consumption in WSNs
Subhasis Dash, Satya Sundar Mallick, R. C. Hansdah, Amulya Ratna Swain
3. A New Linear Cluster Handling (LCH) Technique Toward's Energy Efficiency in Linear WSNs
M. Sajid, K. Khan, U. Qasim, Z. A. Khan, S. Tariq, N. Javaid
4. (LEACH)2 : Combining LEACH with Linearly Enhanced Approach for Cluster Handling in WSNs
K. Khan, M. Sajid, S. Mahmood, Z. A. Khan, U. Qasim, N. Javaid
5. Extensive Simulation Performance Evaluation of MSK Scheme with Error Correcting Codes in Wireless Sensor Networks
Rajoua Aname, Ridha Bouallegue, Kosai Raoof

AINA-S12: Agents and Intelligent Computing - Room 3**Chair: Haidar Safa, American University of Beirut, Lebanon**

1. Neuromodulating Cognitive Architecture. Towards Biomimetic Emotional AI.
Max Talanov, Jordi Vallverdu, Salvatore Distefano, Manuel Mazzara, Radhakrishnan Delhibabu
2. Tabu Search Based Approach to Solve the TAs Reconfiguration Problem in LTE Networks
Haidar Safa, Nadine Ahmad
3. Neural Network-Based Estimation for OFDM Channels
Chia-Hsin Cheng, Yung-Fa Huang, Hsing-Chung Chen, Tsung-Yu Yao
4. Strength-Constrained Weighted Evolution Model for Wireless Sensor Networks
Nan Jiang, Tao Wan, Lingfeng Liu, Jin Li

BICom-S1: Wearable and Mobile Computing - Room 4**Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

1. Template Matching Compression Algorithm for Wearable ECG Measurement System Based on Multi Wireless Transmission Platform
Tae-Young Kim, Yun-Hong Noh, Do-Un Jeong
2. Implementation of the Variable ECG Data Packet Transmission System with Activity State
Byeong-Gu Ahn, Yun-Hong Noh, Do-Un Jeong
3. A Wearable ECG Monitoring System Using Adaptive EMD Filter Based on Activity Status
Byeong-Hoon Kim, Yun-Hong Noh, Do-Un Jeong
4. Design and Analysis of an Enhanced Secure Mechanism of LLRP in RFID systems
Baojiang Cui, Ziyue Wang, Jun Yang, Xiaofeng Chen
5. Privacy-Preserving Traffic Monitoring in Vehicular Ad Hoc Networks
Chen Yang, Bo Qin, Xiuwen Zhou, Yang Sun, Shuangyu He, Qianhong Wu

COLLABES-S1: Business Intelligence and Security Systems - Room 5**Chair: Fatos Xhafa, Technical University of Catalonia, Spain**

1. Improving Business by Migrating Applications to the Cloud Using Cloudstep
Paulo Roberto Martins de Andrade, Renanh Gonçalves Araújo, Jose Cronemberger Filho, Tiago Rolim Pereira, Adriano Bessa Albuquerque, Nabor C. Mendonca
2. Implementation of a Collaborative Document Processing in the Cloud
Jiafei Wen, Xiaolong Wu, Shui Lam
3. General Multi-key Searchable Encryption
Jun Yang, Chuan Fu, Nan Shen, Zheli Liu, Chunfu Jia, Jin Li
4. Quantum Key Distribution Protocol Using Quantum Fourier Transform
Xiaoqing Tan, Siting Cheng, Jin Li, Zhihong Feng

FINA-S1: Distributed Applications and Software Engineering - Room 6**Chair: Tomoya Enokido, Rissho University, Japan**

1. An Active Learning System Using Smartphone for Improving Students Learning Concentration
Noriyasu Yamamoto
2. Technology Research of Tibetan Hot Topics Extraction
Guixian Xu, Lirong Qiu
3. Word Sense Disambiguation Based on Feature Ranking Graph
Yeqing Li, Xiaoyu Qiu
4. Named Entity Relation Extraction Based on Multiple Features
Yeqing Li

13:00-14:30 Lunch Break**14:30-16:30 Parallel Sessions****AINA-S13: Pervasive and Ubiquitous Computing II - Room 1****Chair: Joseph Kee-Yin Ng, Baptist University of Hong Kong, Hong Kong**

1. Implementation of the Smart Chair System for Multi-functional Unconstrained Healthcare Monitoring
Byeong-Ju Kim, Yun-Hong Noh, Do-Un Jeong
2. SmartMind: Activity Tracking and Monitoring for Patients with Alzheimer's Disease
Kam-Yiu Lam, Nelson Wai-Hung Tsang, Song Han, Joseph Kee-Yin Ng, Sze-Wei Tam, Ajit Nath
3. On Data Fusion for Orientation Sensing in WBASNs using Smart Phones
Danish Mahmood, Nadeem Javaid, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, Mohammed Alnuem
4. Detecting Driver Distraction Using Smartphones
Vamsi Paruchuri, Aravind Kumar
5. On the Protection of fMRI Images in Multi-domain Environments
Arcangelo Castiglione, Alfredo De Santis, Raffaele Pizzolante, Aniello Castiglione, Vincenzo Loia, Francesco Palmieri

AINA-S14: Security and Privacy II - Room 2**Chair: Hiroaki Kikuchi, Meiji University, Japan**

1. An Endorsement-based Mobile Payment System for a Disaster Area
Babatunde Ojetunde, Naoki Shibata, Juntao Gao, Minoru Ito
2. A Data Visualization Approach for Trustworthiness in Social Networks for On-line Learning
Jorge Miguel, Santi Caballé, Fatos Xhafa, Vaclav Snasel
3. On Modeling Protocol-Based Clustering Tag in RFID Systems with Formal Security Analysis
Ndibanje Bruce, Hyunho Kim, Youngjin Kang, Youngsil Lee, Hoonjae Lee
4. Correlation Power Analysis Attack on the PingPong-128 Key Stream Generator
Young-Jin Kang, Hyun Ho Kim, Ndibanje Bruce, Younggoo Park, Hoonjae Lee
5. Scalability of Privacy-Preserving Linear Regression in Epidemiological Studies
Hiroaki Kikuchi, Hideki Hashimoto, Hideo Yasunaga, Takamichi Saito
6. Efficient Authentication, Traitor Detection, and Privacy-Preserving for the Most Common Queries in Two-Tiered Wireless Sensor Networks
Thach V. Bui, Thuc D. Nguyen, Noboru Sonehara, Isao Echizen

AINA-S15: P2P Systems - Room 3**Chair: Tomoya Enokido, Rissho University, Japan**

1. P2P-Based Service Distribution over Distributed Resources
Sujoy Mistry, Dibyanshu Jaiswaly, Arijit Mukherjee, Nandini Mukherjee
2. A Reliable System for JXTA-Overlay P2P Platform Considering Number of Authentic Files, Security and QoS Parameters
Yi Liu, Donald Elmazi, Shinji Sakamoto, Leonard Barolli, Fatos Xhafa, Kazunori Uchida
3. Content Access Control Scheme for P2P Networks Using a Reputation Value
Kentaro Aburada, Yoshihiro Kita, Mirang Park, Naonobu Okazaki
4. Causally Ordered Delivery of Event Messages with Keyword Vectors in P2P Publish/Subscribe Systems
Hiroki Nakayama, Dilawaer Duolikun, Tomoya Enokido, Makoto Takizawa
5. Accurate Data Aggregation on Unstable Structured P2P Network
Atsushi Takeda, Takuma Oide, Akiko Takahashi, Takuo Suganuma

BICom-S2: Healthcare and Smart Environments - Room 4**Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

1. Hybrid Cloud Service Based Healthcare Solutions
Young Sil Lee, Ndibanje Bruce, Thiranant Non, Esko Alasaarela, Hoonjae Lee
2. Integrated and Personalized Diabetes Coach for Children
Andy Harris, Arjan Durresti, Mihran Tuceryan, Tamara S. Hannon
3. A Survey of 'User Comfort' in Home Energy Management Systems in Smart Grid
A. Mahmood, A. Ahmad, H. T. Javed, Z. Mehmood, Z. A. Khan, U. Qasim, N. Javaid
4. Development of Virtual Palpation System for Dental Education
Tatsushi Tokuyasu, Takaaki Nakayama, Kazuhiko Toshimitsu, Kazutoshi Okamura, Kazunori Yoshiura
5. Implementation and Evaluation of a Small Size Omnidirectional Wheelchair
Keita Matsuo, Yi Liu, Donald Elmazi, Leonard Barolli, Kazunori Uchida

COLLABES-S2: Intelligent Data Processing - Room 5**Chair: Fatos Xhafa, Technical University of Catalonia, Spain**

1. Implementation of a Software-Defined Storage Service with Heterogeneous Storage Technologies
Chao-Tung Yang, Wei-Hsiang Lien, Yu-Chuan Shen, Fang-Yi Leu
2. Optimize Auction Bandwidth in Content Centric Network with Provider Portal for Application
Wisarut Suesuwan, Woraphon Lilakiatsakun
3. Experimental Study of Borehole Logs for Oil and Gas Exploration
S. Imran, N. Khan

FINA-S2: Energy-Aware Information Systems - Room 6**Chair: Makoto Takizawa, Hosei University, Japan**

1. Power Consumption and Computation Models of a Server with a Multi-core CPU and Experiments
Hiroki Kataoka, Dilawaer Duolikun, Tomoya Enokido, Makoto Takizawa
2. Implementation of Cloud Infrastructure Monitor Platform with Power Saving Method
Chao-Tung Yang, Chih-Liang Chuang, Jung-Chung Liu, Chien-Chih Chen., William C. Chu
3. Demand Response: From Classification to Optimization Techniques in Smart Grid
Ashfaq Ahmad, Nadeem Javaid, Umar Qasim, Zahoor Ali Khan
4. Implementation of Application Softwares for Reducing Power Consumption in Web Services
Ken Nishimura, Kaoru Sugita
5. Secure Two-party Computation in Social Cloud Based on Reputation
Yilei Wang, Chao Guo, Tao Li, Qiuliang Xu

16:30-17:00 Coffee Break

17:00-19:00 Parallel Sessions

AINA-S16: Pervasive and Ubiquitous Computing III - Room 1**Chair: Hiroaki Kikuchi, Meiji University, Japan**

1. Encrypted Association Rule Mining for Outsourced Data Mining
Fang Liu, Wee Keong Ng, Wei Zhang
2. RTT-based Random Walk Approach to Detect Stepping-Stone Intrusion
Jianhua Yang, Yongzhong Zhang
3. A New $(n, 2n)$ Double Block Length Hash Function Based on Single Key Scheduling
Atsuko Miyaji, Mazumder Rashed
4. ConDroid: Targeted Dynamic Analysis of Android Applications
Julian Schütte, Rafael Fedler, Dennis Titze
5. Apparecium: Revealing Data Flows in Android Applications
Dennis Titze, Julian Schütte

AINA-S17: Internet Computing and Web Applications - Room 2**Chair: Hiroaki Nishino, Oita University, Japan**

1. Detection of Illegal Players in Massively Multiplayer Online Role Playing Game by Classification Algorithms
Zhongqiang Zhang, Hiroaki Anada, Junpei Kawamoto, Kouichi Sakurai
2. City-Level Geolocation Based on Routing Feature
Fan Zhao, Yuhan Song, Fenlin Liu, Ke Ke, Jingning Chen, Xiangyang Luo
3. Framework of Marketing or Newsletter Sender Reputation System (FMNSRS)
Akkarach Kawbunjun, Ubon Thongsatapornwatana, Woraphon Lilakiatsakun
4. Exploring Stock Market Using Twitter Trust Network
Yefeng Ruan, Lina Alfantoukh, Arjan Durrezi
5. A Framework for Secure Information Flow Analysis in Web Applications
Ralph Adaimy, Wassim El-Hajj, Ghassen Ben Brahim, Hazem Hajj, Haidar Safa
6. A Network Topology Visualization System Based on Mobile AR Technology
Toshiyuki Haramaki, Hiroaki Nishino

AINA-S18: Cloud, Data Centers and Services Computing I - Room 3**Chair: Felix Freitag, Technical University of Catalonia, Spain**

1. Cooperative Resource Management in a IaaS
Giang Son Tran, Alain Tchana, Daniel Hagimont, Noel De Palma
2. A Network-Aware Optimization for VM Placement
Lucio Agostinho Rocha, Fábio Luciano Verdi
3. Efficient Computation Offloading Strategies for Mobile Cloud Computing
Yaling Tao, Yongbing Zhang, Yusheng Ji
4. On Supporting Service Selection for Collaborative Multi-Cloud Ecosystems in Community Networks
Amin M. Khan, Felix Freitag, Smrati Gupta, Victor Muntès-Mulero, Jacek Dominiak, Peter Matthews
5. TROBADOR: Service Discovery for Distributed Community Network Micro-Clouds
Mennan Selimi, Felix Freitag, Roger Pueyo Centelles, Agustí Moll, Luís Veiga
6. FIRm: Functional Middleware with Support to Multi-Tenancy
André Silva, Nelson Rosa

BICom-S3: Intelligent Computing - Room 4**Chair: Leonard Barolli, Fukuoka Institute of Technology, Japan**

1. Integrating Wireless Cellular and Ad-Hoc Networks Using Fuzzy Logic Considering Node Mobility and Security
Takaaki Inaba, Donald Elmazi, Yi Liu, Shinji Sakamoto, Leonard Barolli, Kazunori Uchida
2. Enabling Large-Scale Biomolecular Conformation Search with Replica Exchange Statistical Temperature Molecular Dynamics (RESTMD) over HPC and Cloud Computing Resources
Nayong Kim, Richard Platania, Wei Huang, Chris Knight, Tom Keyes, Seung-jong Park, Joohyun Kim
3. Application of Neural Networks for Intrusion Detection in Tor Networks
Taro Ishitaki, Donald Elmazi, Yi Liu, Tetsuya Oda, Leonard Barolli, Kazunori Uchida
4. An Improved Algorithm for Secure Outsourcing of Modular Exponentiations
Jun Ye, Xiaofeng Chen, Jianfeng Ma

ITIS-S1: Innovative Services and Systems - Room 5**Chair: Akio Koyama, Yamagata University, Japan**

1. Shape and Motion Features Approach for Activity Tracking and Recognition from Kinect Video Camera
Ahmad Jalal, Shaharyar Kamal, Daijin Kim
2. A Hybrid Type DTN Routing Method Using Delivery Predictability and Maximum Number of Replication
Tomoaki Miyakawa, Akio Koyama
3. The Design of a Framework for Smart Appliances
Minoru Uehara
4. Extension of Web-Based Software Development Environment
Hideaki Yanagisawa
5. Parallel Architectures with Small World Network Model
Hideki Mori, Minoru Uehara, Katsuyoshi Matsumoto

FINA-S3: Scalable Computing Systems and Protocols - Room 6**Chair: Tomoya Enokido, Rissho University, Japan**

1. e-MinZu: A Software Service Architecture Based on SaaS for Massive Data Source
Weng Yu
2. The Research of Security of P2P Network File Sharing System
Shaojing Li, Wanli Su, Haoling Li
3. New Methods for Big Data Analysis in Images
Petra Perner
4. Why Internet Protocols Need Incentives
David Murray
5. A New Scheduling Algorithm for Real-Time Communication in LTE Networks
Dardouri Samia, Bouallegue Ridha
6. Broadcast Protocols in Wireless Networks
Kazuaki Kouno, Dilawear Duolikun, Tomoya Enokido, Makoto Takizawa

20:00-22:00 Banquet Party

Friday, March 27, 2015**9:00-11:00 Parallel Sessions****AINA-S19: Scalable Computing and IoT - Room 1****Chair: Fatos Xhafa, Technical University of Catalonia, Spain**

1. Free Split: A Write-Ahead Protocol to Improve Latency in Distributed Prefix Tree Indexing Structures
Rudyar Cortes, Xavier Bonnaire, Olivier Marin, Pierre Sens
2. A Survey of Home Energy Management for Residential Customers
Ihsan Ullah, Nadeem Javaid, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, Mohammed Alnuem, Mudassar Bashir
3. A Rule Processing Scheme Using the Rete Algorithm in Grid Topology Networks
Tomoya Kawakami, Tomoki Yoshihisa, Yutaka Yanagisawa, Masahiko Tsukamoto
4. Fog Computing Micro Datacenter Based Dynamic Resource Estimation and Pricing Model for IoT
Mohammad Aazam, Eui-Nam Huh
5. Preparing and Inter-Connecting Hyper-Converged SmartX Boxes for IoT-Cloud Testbed
Sun Park, ByungRae Cha, Jongwon Kim
6. Consumers' Sentiment Analysis of Popular Phone Brands and Operating System Preference Using Twitter Data: A Feasibility Study
Deepali Arora, Kin Fun Li, Stephen W. Neville

AINA-S20: Security and Privacy IV - Room 2**Chair: Shou-Hsuan Stephen Huang, University of Houston, USA**

1. Cryptographic Operation Load-balancing Between Cryptographic Module and CPU
Yohei Kaneko, Takamichi Saito, Hiroaki Kikuchi
2. An Approach to Detect Remote Access Trojan in the Early Stage of Communication
Dan Jiang, Kazumasa Omote
3. Privacy Preserving Data Processing
Hiroshi Yamaguchi, Masahito Gotaishi, Phillip C-Y Sheu, Shigeo Tsujii
4. Study of Filter Sharing Method Using Virtual Peers in P2P Networks
Masahiro Sakuma, Yoshihiro Kita, Kentaro Aburada, Mirang Park, Naonobu Okazaki
5. Per Connection Server-Side Identification of Connections via Tor
Andrew Springall, Christopher DeVito, Shou-Hsuan Stephen Huang

AINA-S21: Vehicular and Cognitive Radio Networks - Room 3**Chair: Bhed B. Bista, Iwate Prefectural University, Japan**

1. A Testbed Using USRP(TM) and LabView(R) for Dynamic Spectrum Access in Cognitive Radio Networks
Nimish Sharma, Danda B. Rawat, Bhed B. Bista, Sachin Shetty
2. Performance Evaluation of Software Defined and Cognitive Wireless Network Based Disaster Resilient System
Goshi Sato, Noriki Uchida, Yoshitaka Shibata
3. Cluster Based Semantic Data Aggregation in VANETs
Aboobeker Sidhik Koyamparambil Mammu, Josef Jiru, Unai Hernandez Jayo
4. A Message Suppression Controller for Vehicular Delay Tolerant Networking
Taiki Honda, Makoto Ikeda, Seiichiro Ishikawa, Leonard Barolli

MAW-S1: Information Retrieval and Tweet Sentiment Analysis - Room 4**Chair: Kim Fun Li, University of Victoria, Canada**

1. Increasing Trust in Elections via a Simple Receipt Algorithm
Suzanne Mello-Stark, Edmund A. Lamagna
2. Overviewing the Knowledge of a Query Keyword by Clustering Viewpoints of Web Search Information Needs
Ichiro Moriya, Yusuke Inoue, Takakazu Imada, Takehito Utsuro, Yasuhide Kawada, Noriko Kando
3. Approximating Document Frequency for Self-Index based Top-k Document Retrieval
Tokinori Suzuki, Atsushi Fujii
4. The Use of POS Sequence for Analyzing Sentence Pattern in Twitter Sentiment Analysis
Fajri Koto, Mirna Adriani
5. Discover Overlapping Topical Regions by Geo-Semantic Clustering of Tweets
Yuta Taniguchi, Daiki Monzen, Lutfiana Sari Ariestien, Daisuke Ikeda

DC2-S1: Device Centric Cloud I - Room 5**Chair: Jaehoon (Paul) Jeong, Sungkyunkwan University, Korea**

1. Contextual User Interest Modeling Approaches for Personalized Services on Multiple Devices
Zheng Hao, Deng XiaoTao, Yu Lei, Zhang Jie, Inchul Hwang, SunHee Youm
2. DNS Name Autoconfiguration for IoT Home Devices
Sejun Lee, Jaehoon (Paul) Jeong, Jungsoo Park
3. Will ToR Achieve Its Goals in the "Future Internet"? An Empirical Study of Using ToR with Cloud Computing
Antonio Carnielli, Mahdi Aiash
4. SBUS: Smart e-Bus Battery Substitution Scheme in Vehicular Networks
Jihyeok Seo, Jaehoon (Paul) Jeong, Hyounghick Kim, Jung-Soo Park

FINA-S4: Security and Privacy - Room 6**Chair: Hiroaki Kikuchi, Meiji University, Japan**

1. Performance Comparison Between RSA and Elliptic Curve Cryptography-Based QR Code Authentication
Non Thiranant, Young Sil Lee, HoonJae Lee
2. Analysis of Researcher Co-authorship Network
Jiana Meng, Jun Guo
3. Anonymous Identity-Based Encryption with Bounded Leakage Resilience
Pengtao Liu, Chengyu Hu, Shanqing Guo, Yilei Wang
4. The Electronic Voting in the Presence of Rational Voters
Tao Li, Hao Yang, Yilei Wang, Qiuliang Xu

11:00-11:30 Coffee Break**11:30-13:30 Parallel Sessions**

AINA-S22: Cloud, Data Centers, and Services Computing II - Room 1**Chair: Haidar Safa, American University of Beirut, Lebanon**

1. Towards Resource-aware Business Process development in the Cloud
Emna Hachicha, Walid Gaaloul
2. Establishment of Virtual Policy Based Network Management Scheme by Load Experiments in Virtual Environment
Kazuya Odagiri, Shogo Shimizu, Naohiro Ishii, Makoto Takizawa
3. A Framework of Mobile Cloudlet Centers Based on the Use of Mobile Devices as Cloudlets
Abdalla Artail, Karim Frenn, Haidar Safa, Hassan Artail
4. Design and Implementation of the Hadoop-Based Crawler for SaaS Service Discovery
Asma Alkalbani, Akshatha Shenoy, Farookh Khadeer Hussain, Omar Khadeer Hussain, Yanping Xiang
5. Secured mVoIP Service over Cloud and Container-Based Improvement
Byungrae Cha, Sun Park, Sujeong Shim, Jongwon Kim

AINA-S23: Security and Privacy V - Room 2**Chair: Hiroaki Kikuchi, Meiji University, Japan**

1. Introduction and Analysis of SDN and NFV Security Architecture (SN-SECA)
Danilo V. Bernardo, Bee Bee Chua
2. Enhancing RPL Resilience Against Routing Layer Insider Attacks
Karel Heurtefeux, Ochirkhand Erdene-Ochir, Nasreen Mohsin, Hamid Menouar
3. Secure Outsourcing of Multiple Modular Exponentiations
Jinyang Li, Jun Ye
4. Novel Approaches to Protecting Block Ciphers by Distributing Round Keys
Taeyoung Jung, Jaein Kim, Junyoung Park, Kangbin Yim
5. Fuzzing CAN Packets into Automobiles
Hyeryun Lee, Kyunghee Choi, Kihyun Chung, Jaein Kim, Kangbin Yim

PITSaC-S1: Security in the Internet of Things - Room 3**Chair: Antonio J. Jara, University of Applied Sciences Western Switzerland (HES-SO), Switzerland**

1. Invited Talk: Open InterConnect
Markus Jung, Samsung, South Korea
2. Managing Context Information for Adaptive Security in IoT environments
José Luis Hernández Ramos, Jorge Bernal Bernabé, Antonio Fernando Skarmeta Gómez
3. LESS: Lightweight Establishment of Secure Session - A Cross-Layer Approach Using CoAP and DTLS-PSK Channel Encryption
Abhijan Bhattacharyya, Tulika Bose, Soma Bandyopadhyay, Arijit Ukil, Arpan Pal
4. SDN Based Architecture for IoT and Improvement of the Security
Olivier Flauzac, Carlos Gonzalez, Abdelhak Hachani, Florent Nolot
5. EAP for IoT: More Efficient Transport of Authentication Data – TEPANOM Case Study
Marcin Piotr Pawlowski, Antonio J. Jara, Maciej J. Ogorzalek

MAW-S2: Data Mining and Data Structures - Room 4**Chair: Kin Fun Li, University of Victoria, Canada**

1. Exploring Technical Phrase Frames from Research Paper Titles
Yuzana Win, Tomonari Masada
2. Mining User Interests through Internet Review Forum for Building Recommendation System
Omar Abdilllah, Mirna Adriani
3. SkillsRec: A Novel Semantic Analysis Driven Learner Skills Mining and Filtering Approach for Personal Learning Environments Based on Teacher Guidance
Zaffar Ahmed Shaikh, Denis Gillet, Shakeel Ahmed Khoja
4. Academic Performance Predictors
Cheng Lei, Kin Fun Li
5. Applicability of Probabilistic Data Structures for Filtering Tasks in Data Loss Prevention Systems
Lu Shi, Sergey Butakov, Dale Lindskog, Ron Ruhl, Evgeny Storozhenko

DC2-S2: Device Centric Cloud II - Room 5**Chair: Jaehoon (Paul) Jeong, Sungkyunkwan University, Korea**

1. Privacy Preserving Nearest Neighbor Search Based on Topologies in Cellular Networks
Mahdi Daghmechi Firoozjaei, Jaegwan Yu, Hyoungshick Kim
2. A Framework for Security Services Based on Software-Defined Networking
Jaehoon (Paul) Jeong, Jihyeok Seo, Geumhwan Cho, Hyoungshick Kim, Jung-Soo Park
3. Introducing a Hybrid Infrastructure and Information-Centric Approach for Secure Cloud Computing
Mahdi Aiash, Robert Colson, Mohammad Muneer Kallash
4. A Survey on Interfaces to Network Security Functions in Network Virtualization
Hyunsu Jang, Jaehoon (Paul) Jeong, Hyoungshick Kim, Jung-Soo Park

INTRICATE-S1: Theories and Intricacies of Information Security Problems - Room 6**Chair: Anne V. D. M. Kayem, University of Cape Town, South Africa**

1. Secure and Efficient Mobile Personal Health Data Sharing in Resource Constrained Environments
Richard Ssembatya, Anne V.D.M. Kayem
2. Structural Controllability Analysis Via Embedding Power Dominating Set Approximation in ErdHős-Rényi Graphs
Bader Alwasel, Stephen D. Wolthusen
3. A Usable and Secure Crime Reporting System for Technology Resource Constrained Context
Aderonke Busayo Sakpere, Anne V.D.M. Kayem., Thabo Ndlovu
4. Physical Layer Secrecy Performance of Multi-hop Decode-and-Forward Relay Networks with Multiple Eavesdroppers
Duc-Dung Tran, Nguyen-Son Vo, Tan-Loc Vo, Dac-Binh Ha
5. A New Efficient Request-Based Comparable Encryption Scheme
Peng Chen, Jun Ye, Xiaofeng Chen
6. Server Aided Ciphertext-Policy Attribute-Based Encryption
Hao Wang, Bo Yang, Yilei Wang

13:30-15:00 Lunch Break**15:00-17:00 Parallel Sessions**

AINA-S24: Mobile Networks - Room 1**Chair: Vamsi Paruchuri, University of Central Arkansas, USA**

1. Message Relay Decision Algorithm to Improve Message Delivery Ratio in DTN-Based Wireless Disaster Information Systems
Miho Kawamoto, Tetsuya Shigeyasu
2. Adaptive Cell Range Expansion for Energy Cost Saving in Heterogeneous Cellular Networks with Hybrid Energy Supplies
Qiao Kong, Bang Wang
3. DCLA: Distributed Chunk Loss Avoidance Method for Cooperative Mobile Live Streaming
Kenta Mori, Sho Hatakeyama, Hiroshi Shigeno
4. Upgrading 802.11 deployments: A Critical Examination of Performance
Mamun Abu-Tair, Saleem N. Bhatti
5. MACoD: Mobile Device-Centric Approach for Identifying Access Point Congestion
Woonghee Lee, Mungyu Bae, Hyunsoon Kim, Suk Kyu Lee, Hwangnam Kim
6. Stateless Adaptive Reliable Broadcast Protocol for Heterogeneous Wireless Networks
Vamsi Paruchuri, Arjan Durrezi

AINA-S25: Multimedia Systems and Applications - Room 2**Chair: Yoshitaka Shibata, Iwate Prefectural University, Japan**

1. A Triage Training System with Dynamic Scenario Change
Misaki Hagino, Yuki Tayama, Ken-ichi Okada
2. An Adaptive Video Quality Control Method in Wireless Network Environment
Motoo Ino, Koji Hashimoto, Yoshitaka Shibata
3. Travel Agency Desk Support System Using Interest Degree
Yusaku Maki, Satoshi Gondo, Tomoo Inoue, Ken-ichi Okada
4. MR Manual and Authoring Tool with Afterimages
Hiroyuki Endo, Shinnosuke Furuya, Ken-ichi Okada
5. Item Similarity Learning Methods for Collaborative Filtering Recommender Systems
Feng Xie, Zhen Chen, Jiaying Shang, Wenliang Huang, Jun Li
6. Implementation of an Eye Gaze Tracking System for the Disabled People
Junghoon Park, Taeyoung Jung, Kangbin Yim

PITSaC-S2: Internet of Things - Room 3**Chair: Antonio J. Jara, University of Applied Sciences Western Switzerland (HES-SO), Switzerland**

1. Smart Eco-Urban Cities Ubiquitous Public Park
Nizar Boussarsar, Youssef Kamoun, Mouna Ketatni, Anis Benhajji, Seifallah Jemal
2. A Publish-Subscribe Approach to IoT Integration: the Smart Office Use Case
Alex Carmine Olivieri, Gianluca Rizzo, Francois Morard
3. Group-Based Uplink Scheduling for Machine-Type Communications in LTE-Advanced Networks
Tsung-Hui Chuang, Meng-Hsun Tsai, Chun-Yi Chuang
4. Proof-of-Concept: Infrared Transmission Using Smart Phone Cameras
Rene Romann
5. Automatic Generation of Social Relationships between Internet of Things in Smart Home Using SDN-Based Home Cloud
Younggi Kim, Younghee Lee
6. Internet of Things for Cultural Heritage of Smart Cities and Smart Regions
Antonio J. Jara, Yunchuan Sun, Houbing Song, Rongfang Bie, Dominique Genouod, Yann Bocchi

EEEWSN-S1: Applications of WSNs and Network Protocols - Room 4**Chair: Leonardo Mostarda, University of Camerino, Camerino, Italy**

1. Packet Arrival Analysis in Wireless Sensor Networks
Krishna Doddapaneni, Purav Shah, Enver Ever, Ali Tasiran, Fredrick A. Omondi, Leonardo Mostarda, Orhan Gemikonakli
2. RUHEED - Rotated Unequal Clustering Algorithm for Wireless Sensor Networks
Nueraili Aierken, Roberto Gagliardi, Leonardo Mostarda, Zaib Ullah
3. A Framework for Energy Based Performability Models for Wireless Sensor Networks
Fredrick A. Omondi, Purav Shah, Orhan Gemikonakli, Enver Ever
4. Time Reversal-based Transmissions with Distributed Power Allocation for Two-Tier Networks
Vu Tran-Ha, Quang-Doanh Vu, Een-Kee Hong
5. A Constrained ECA Language Supporting Formal Verification of WSNs
Flavio Corradini, Rosario Culmone, Leonardo Mostarda, Luca Tesei, Franco Raimondi
6. An ANT+ Protocol Based Health Care System
Nadeem Qaisar Mehmood, Rosario Culmone

ICAES-S1: Intelligent Context-Aware Systems and Applications - Room 5**Chair: Philip Moore, Lanzhou University, China**

1. On Context and the Open World Assumption
Philip Moore, Hai V. Pham
2. Handling Big Data Using NoSQL
Jagdev Bhogal, Imran Choksi
3. An Ontological Analysis of the Role of Culture within Green IT
Jagdev Bhogal, William Campbell
4. Models for an Intelligent Context-Aware Blended m-Learning System
David Newell, Philip Davies, Ron Austin, Philip Moore, Mak Sharma

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