

## Preliminary Program Summary

## 26 October 2015 (Monday)

	Suite 3	Suite 4	Suite 5	Suite 1	Suite 7	Suite 8	Suite 9
8:45-9:00	CIT-2015 and DASC-2015 Opening Ceremony at Suite 3				IUCC-2015 and PICom-2015 Opening Ceremony at Suite 1		
9:00-9:50	Keynote Speech 1 at Suite 3				Keynote Speech 3 at Suite 1		
9:50-10:40	Keynote Speech 2 at Suite 3				Keynote Speech 4 at Suite 1		
10:40-11:00	Coffee Break						
11:00-12:30	CIT-1	CIT-2	DASC-1	IUCC-1	MSNCom-1	PICom-1	IBDS+SOWN
12:30-13:30	Conference Reception Lunch						
13:30-15:30	CIT-3	CIT-4	DASC-2	IUCC-2	MSNCom-2	PICom-2	ITA-1
15:30-16:00	Coffee Break						
16:00-18:00	CIT-5	CIT-6	DASC-3	IUCC-3	AUCN-1+SocialSec	ASCC-1	WISH+ASCC-2

## 27 October 2015 (Tuesday)

	Suite 3	Suite 4	Suite 5	Suite 1	Suite 7	Suite 8	Suite 9
9:10-10:00	Keynote Speech 5 at Suite 3			Keynote Speech 6 at Suite 1		Keynote Speech 7 at Suite 9	
10:00-10:30	Coffee Break						
10:30-12:30	CIT-7+CIT-8	SMMA+IWSCA	WCTU+MT4H	IntelNet	IoT-Smart+IoTBDH-2	ITA-2	WNM-1
12:30-13:30	Conference Reception Lunch						
13:30-15:30	CIT-9+CIT-10	IUCC-4+IUCC-5	DASC-4	AUCN-2+I-SOCA	IoTBDH-1	MultiCom	ICTA
15:30-16:00	Coffee Break						
16:00-18:00	CIT-11	IUCC-6	PICom-3	PICom-4+WNM-2	CEWE	BigData	HWNQoE
18:30-21:00	Dinner						

## 28 October 2015 (Wednesday)

	Suite 3	Suite 4	Suite 5				
9:00-11:00	CIT-12+CIT-13	VEAI	PCIS				
	<b>Coffee Break and Conference Conclusion</b>						

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**Part I: TECHNICAL SESSIONS OF CIT-2015 and Associated  
Workshops/Symposia**

**CIT-2015 TECHNICAL SESSIONS  
26 October 2015 Monday**

**11:00-12:30 Session CIT-1: Wireless Communication and 5G Technologies (I) (Room: Suite 3)**

Session Chair:

- Automatic Modulation Classification in Cognitive Radio Using Multiple Antennas and Maximum-Likelihood Techniques  
*Ahmed O. Abdul Salam, Ray E. Sheriff, Saleh R. Al-Araji, Kahtan Mezher, and Qassim Nasir*
- A Two-Tier Evolutionary Game Theoretic Approach to Dynamic Spectrum Sharing through Licensed Shared Access  
*Ahsan Saadat, Gengfa Fang, and Wei Ni*
- Adaptive Rate Control in Smart Grid Heterogeneous Communications Networks  
*Weifeng Zhong, Rong Yu, Yan Zhang, Yue Gao, and Stein Gjessing*
- Application Sequence Prediction for Energy Consumption Reduction in Mobile Systems  
*Ismat Chaib Draa, Jamel Tayeb, Smail Niar, and Emmanuelle Grislin*
- Optimal Real Time Pricing Based on Income Maximization for Smart Grid  
*Sahar Ahmadzadeh and Kun Yang*
- Reduced Complexity MIMO Receiver with Real-Valued Beamforming  
*Craig Miller, Wei Liu, and Richard J. Langley*

**11:00-12:30 Session CIT-2: Wireless Communication and 5G Technologies (II) (Room: Suite 4)**

Session Chair:

- Exploiting the DASH Framework to Promote a Dynamic Transport Selection for Video Streaming over LTE Networks  
*Luis Díez, Ramón Agüero, Joel Penhoat, Emile Stéphan, and Fabien Heliot*
- Channel-Aware Scheduling in FFR-Aided OFDMA-Based Heterogeneous Cellular Networks  
*Jan García-Morales, Guillem Femenias, and Felip Riera-Palou*
- Evidence Theory Based Self-Interference Suppression for Two-Way Full-Duplex MIMO Relays  
*Yi Yang, Yanhua Sun, Enchang Sun, and Yanhua Zhang*
- SDR-Based ADS-B with Dual-Frequency for UAS: A Universal Design  
*Yueying Zhang, Keju Wang, and Hang Long*
- Acoustic Radar Weak Target Detection Method Based on Mellin Transform  
*Dinghe Wang, Qinglong Bao, and Zengping Chen*
- Hidden Markov Model for Improved Ultrasound-Based Presence Detection  
*Paola Jaramillo and Jean-Paul Linnartz*

**13:30-15:30 Session CIT-3: Pattern Recognition, Data Mining, and Artificial Intelligence (I) (Room: Suite 3)**

Session Chair:

- SMART: An Application Framework for Real Time Big Data Analysis on Heterogeneous Cloud Environments  
*Julio C.S. dos Anjos, Marcos D. Assunção, Jean Bez, Claudio Geyer, Edison Pignaton de Freitas, Alexandre Carissimi, João Paulo C. L. Costa, Gilles Fedak, Felix Freitag, Volker Markl, Paul Fergus, and Rubem Pereira*
- Automatic Classification and Taxonomy Generation for Semi-structured Data  
*Bernardo Pereira Nunes, Giseli Rabello Lopes, and Marco Antonio Casanova*

- Artificial Intelligence for Detecting Preterm Uterine Activity in Gynecology and Obstetric Care  
*Ibrahim Olatunji Idowu, Paul Fergus, Abir Hussain, Chelsea Dobbins, Mohammed Khalaf, Raul V. Casana Eslava, and Robert Keight*
- A Novel Continuous Learning and Collaborative Decision Making Mechanism for Real-Time Cooperation of Humanoid Service Robots  
*Ming Jiang and Li Zhang*
- An Associative Classifier Adopting Fuzzy Weighted Rules Based on Information Gain  
*Yi Chai, Guixia Kang, Ningbo Zhang, Yanyan Guo, and Jingning Wang*
- A Neural Network Clamping Force Model for Bolt Tightening of Wind Turbine Hubs  
*Emanuele Lindo Secco, Atulya Nagar, Christian Deters, Helge Wurdemann, Hak-Keung Lam, and Kaspar Althoefer*
- WARank: Weighted Asymmetric Ranking for Approximate Nearest Neighbor Search  
*Yuan Cao, Heng Qi, Keqiu Li, Yingwei Jin, and Zhiyang Li*
- An Approach of Vector Space Model to Link Concrete Concepts with Wiki Entities  
*Lucas Borges Monteiro, Li Weigang, and Ahmed Abdelfattah Saleh*

#### **13:30-15:30 Session CIT-4: Pattern Recognition, Data Mining, and Artificial Intelligence (II) (Room: Suite 4)**

Session Chair:

- Combining Fuzzy Rough Set with Salient Features for HRM Classification  
*Asia L. Jabar and Tarik A. Rashid*
- Word-Sense Disambiguation of Korean Predicates Using Sejong Electronic Dictionary and Unsupervised Learning  
*Sangwook Kang, Yeontaek Oh, Minho Kim, and Hyuk-chul Kwon*
- Online Pedestrian Tracking Using Ensemble Color Feature  
*Bo Zhang, Yi Xu, and Xiaokang Yang*
- A Data-Driven Hybrid Optimization Model for Short-Term Residential Load Forecasting  
*Xiu Cao, Shuanshuan Dong, Zhenhao Wu, and Yinan Jing*
- Multi-model or Single Model? A Study of Movie Box-Office Revenue Prediction  
*Guijia He and Soowon Lee*
- An Experimental Evaluation of Aggregation Algorithms for Processing Top-K Queries  
*Liang Zhu, Qin Ma, Weiye Meng, Mingqian Yang, and Fang Yuan*
- Equalizing Energy Distribution in Sensor Nodes through Optimization of RPL  
*Juuso Nurmio, Ethiopia Nigussie, and Christian Poellabauer*
- Model-Based Self-Tuning PI Control of Bolt-Nut Tightening for Wind Turbine Bearing Assembly  
*Christian Deters, Hak-Keung Lam, Mark Barrett-Baxendale, and Emanuele Lindo Secco*

#### **16:00-18:00 Session CIT-5: Information Technology and Applications (Room: Suite 3)**

Session Chair:

- Towards a UML Profile for Privacy-Aware Applications  
*Tania Basso, Leonardo Montecchi, Regina Moraes, Mario Jino, and Andrea Bondavalli*
- Towards the Use of Unmanned Aerial Vehicles for Automatic Power Meter Readings  
*Jose Rodrigues Torres Neto, Roberto Sadao Yokoyama, Azzedine Boukerche, Daniel Ludovico Guidoni, Rodolfo Ipólito Meneguette, and Leandro Aparecido Villas*
- Semantic Web Services Discovery Adopting SERIN  
*José Renato Villela Dantas, Hermano Albuquerque Lira, Bruno de Azevedo Muniz, Tadeu Matos Nunes, and Pedro Porfírio Muniz Farias*
- A Taxonomy-Based Evaluation of Personalized E-Advertisement

*Dana A. Al Qudah, Alexandra I. Cristea, Suncica Hadzidedic Bazdarevic, Samar Al-Saqqah, and Rizik M. H. Al-Sayyad*

- Linux Enriched Design in Third Generation Wireless Open Access Research Platform  
*Muhammad Saad Saud, Anton Paatelma, Markku Jokinen, and Tuomo Hänninen*
- An Extension of UML Activity Diagram to Model the Behaviour of Context-Aware Systems  
*Ahmed Al-alshuhai and François Siewe*
- A Dynamic Power-Aware Scheduling of Mixed-Criticality Real-Time Systems  
*Ijaz Ali, Jun-ho Seo, and Kyong Hoon Kim*
- Improving Network Efficiency with Simplemux  
*Jose Saldana, Ignacio Forcén, Julián Fernández-Navajas, and José Ruiz-Mas*

**16:00-18:00 Session CIT-6: Multimedia Application and QoS/QoE Provision and Estimation (Room: Suite 4)**

Session Chair:

- Network Quality Adaptive Video Transmission  
*Fakher Oueslati and Jean-Charles Grégoire*
- DICE: A Distributed Protocol for Camera-Aided Video Surveillance  
*Hanna Kavalionak, Claudio Gennaro, Giuseppe Amato, and Carlo Meghini*
- Recommendation Systems Based on Online User's Action  
*Aymen Elkhelifi, Firas Ben Kharrat, and Rim Faiz*
- Videoconferencing over OpenFlow Networks: An Optimization Framework for QoS Routing  
*Djamel-Eddine Henni, Abdelghani Ghomari, and Yassine Hadjadj-Aoul*
- Scorpion: A Solution Using Cooperative Rerouting to Prevent Congestion and Improve Traffic Condition  
*Allan Mariano de Souza, Roberto Sadao Yokoyama, Leonardo Castro Botega, Rodolfo Ipolito Meneguette, and Leandro Aparecido Villas*
- ETBAC-Based Model in Media Oriented System Transport Network  
*Shuaibing Lu, Zhiyi Fang, Guannan Qu, and Song Gao*
- CHOKeD: Fair Active Queue Management  
*Sanaullah Manzoor, Ghulam Abbas, and Masroor Hussain*
- On-the-Fly Process Resource Quarantine for System Stabilization  
*Gaku Nakagawa, Hirotaka Kawata, and Shuichi Oikawa*

**27 October 2015 Tuesday**

**10:30-12:30 Session CIT-7: Management of Data and Database Systems (Room: Suite 3)**

Session Chair:

- Analytical Performance Evaluation of Frame Synchronization for Data with Known, Unequal Distribution over Binary Symmetric Channel  
*Boladale M. Isawhe and Maria G. Martini*
- Enhancing Aggregation over Uncertain Databases  
*Nermin Abdelhakim Othman, Ahmed Sharaf Eldin, and Doaa Saad Elzanfaly*
- Marketing or Newsletter Sender Reputation System Using Association Analysis Concept  
*Akkarach Kawbunjun, Ubon Thongsatapornwatana, and Woraphon Lilakiatsakun*
- SSIE: An Automatic Data Extractor for Sports Management in Athletics Modality  
*Felipe Simões, Fabio Matsunaga, Armando Toda, Jacques Brancher, Abdallah Junior, and Rosangela Busto*

**10:30-12:30 Session CIT-8: Computer Graphics/Image Processing (Room: Suite 3)**

Session Chair:

- A Robust Face Recognition System Based on Curvelet and Fractal Dimension Transforms  
*Alaa S. Al-Waisy, Rami Qahwaji, Stanley Ipson, and Shumoos Al-Fahdawi*
- Accelerating Brain Simulations on Graphical Processing Units  
*Engin Kayraklioglu, Tarek El-Ghazawi, and Zeki Bozkus*
- Graph Grammar for the Research Information Collection Method According to Research Activities  
*Youzou Miyadera, Chiaki Murakami, Koichi Anada, Yasuhiko Morimoto, Shoichi Nakamura, Hiroaki Kaminaga, and Takeo Yaku*
- BE-SIFT: A More Brief and Efficient SIFT Image Matching Algorithm for Computer Vision  
*Jian Zhao, Hengzhu Liu, Yiliu Feng, Shandong Yuan, and Wanzeng Cai*

### **13:30-15:30 Session CIT-9: Internet of Things (Room: Suite 3)**

Session Chair:

- Efficient CP-ABE Attribute/Key Management for IoT Applications  
*Lyes Touati and Yacine Challal*
- A Proactive Multi-type Context-Aware Recommender System in the Environment of Internet of Things  
*Yassmeen Salman, Abdallatif Abu-Issa, Iyad Tumar, and Yousef Hassouneh*
- Fog Computing in Healthcare Internet of Things: A Case Study on ECG Feature Extraction  
*Tuan Nguyen Gia, Mingzhe Jiang, Amir-Mohammad Rahmani, Tomi Westerlund, Pasi Liljeberg, and Hannu Tenhunen*
- Rail Internet of Things: An Architectural Platform and Assured Requirements Model  
*Mahmoud Hashem Eiza, Martin Randles, Princy Johnson, Nathan Shone, Jennifer Pang, and Amhmed Bhiih*
- Remote Temporal Couplers for Multiple Content Synchronization  
*Ricardo Mendes Costa Segundo and Celso Alberto Saibel Santos*

### **13:30-15:30 Session CIT-10: Information Technology for Biomedicine and Smart Health (Room: Suite 3)**

Session Chair:

- Robust Approach for Medical Data Classification and Deploying Self-Care Management System for Sickle Cell Disease  
*Mohammed Khalaf, Abir Jaafar Hussain, Dhiya Al-Jumeily, Russell Keenan, Paul Fergus, and Ibrahim Olatunji Idowu*
- Session Resumption-Based End-to-End Security for Healthcare Internet-of-Things  
*Sanaz Rahimi Moosavi, Tuan Nguyen Gia, Ethiopia Nigussie, Amir-Mohammad Rahmani, Seppo Virtanen, Hannu Tenhunen, and Jouni Isoaho*
- Context-Aware Clinical Knowledge Sharing in Cross-Boundary E-Health: A Conceptual Model  
*Obinna Anya, Hissam Tawfik, and Dhiya Al-Jumeily*

### **16:00-17:30 Session CIT-11: Wireless Sensor and Ad Hoc Networks (Room: Suite 3)**

Session Chair:

- Minimization and Placement of Sensors in Structurally Observable Networks  
*João Paulo Souza Medeiros, Paulo Sergio Motta Pires, João Batista Borges Neto, and Antonio Alfredo Ferreira Loureiro*
- Collision-Free Routing Protocol in Multi-hop Wireless Sensor Networks  
*Hicham Lakhlef, Julien Bourgeois, Saad Harous, and Jean Frédéric Myoupo*
- Measuring Distances with RSSI from Vehicular Short-Range Communications  
*Roberto S. Yokoyama, Bruno Y. L. Kimura, Leandro A. Villas, and Edson D.S. Moreira*
- THESEUS: A Routing System for Shared Sensor Networks

*Mohammadreza Iman, Flavia C. Delicato, Claudio M. de Farias, Luci Pirmez, Igor L. dos Santos, and Paulo F. Pires*

- FPGA Based Real Time 'Secure' Body Temperature Monitoring Suitable for WBSN  
*Muzaffar Rao, Thomas Newe, Ian Grout, Elfed Lewis, and Avijit Mathur*
- Dynamic Searchable Encryption with Multi-user Private Search for Cloud Computing  
*Wenjun Luo, Yaqiong Chen, and Yousheng Zhou*

## **28 October 2015 Wednesday**

### **9:00-11:00 Session CIT-12: Utility Computing/Clouding Computing/Ubiquitous Computing (Room: Suite 3)**

Session Chair:

- Stochastic Bounding Models for Performance Analysis of Clouds  
*Farah Ait-Salaht and Hind Castel-Taleb*
- Hybrid and Extensible Architecture for Cloud Infrastructure Deployment  
*Enrique Chirivella-Perez, Juan Gutiérrez-Aguado, Jose M. Claver, and Jose M. Alcaraz Calero*
- Modelling the Data Aggregator Positioning Problem in Smart Grids  
*Guilherme Rolim, Diego Passos, Igor Moraes, and Célio Albuquerque*
- A Zero-Penalty Container-Based Execution Infrastructure for Hadoop Framework  
*Hang Su, Jiafeng Zhu, Masood Mortazavi, Guangyu Shi, and Dakai Zhu*
- Middleware Reconfiguration Relying on Formal Methods  
*Nelson Rosa*

### **9:00-11:00 Session CIT-13: Information Security (Room: Suite 3)**

Session Chair:

- An Approach to IdM with Privacy in the Cloud  
*Jorge Werner, Carla Merkle Westphall, Rafael Weingärtner, Guilherme Arthur Geronimo, and Carlos Becker Westphall*
- Scalable Multi-group Key Management for Advanced Metering Infrastructure  
*Mourad Benmalek, Yacine Challal, and Abdelmadjid Bouabdallah*
- An Empirical Risk Management Framework for Monitoring Network Security  
*Malik Shahzad Kaleem Awan, Pete Burnap, and Omer Rana*

## **WNM-2015 TECHNICAL SESSIONS**

### **27 October 2015 Tuesday**

### **10:30-12:30 Session WNM-1: Wireless Network and Multimedia (Room: Suite 9)**

Session Chair:

- Power-Aware QoS Provisioning in OFDMA Small Cell Networks  
*Antonios Alexiou, Anastasios N. Bikos, and Christos Bouras*
- Power Management and Rate Control Mechanism for Wi-Fi Infrastructure Networks  
*Christos Bouras, Vaggelis Kapoulas, Kostas Stamos, Nikos Stathopoulos, and Nikos Tavoularis*
- Empirical Performance Models for V2V Communications  
*Miguel Sepulcre, Javier Gozalvez, Baldomero Coll-Perales, M. Carmen Lucas-Estañ, and Jose Ramon Gisbert*
- SoCar: A Social Car2Car Framework to Refine Routes Information Based on Road Events and GPS  
*Walter Balzano, Maria Rosaria Del Sorbo, and Domenico Del Prete*



- Power Optimization Technique in Interference-Limited Femtocells in LTE and LTE Advanced Based Femtocell Networks  
*Shahrukh Khan and Sahibzada Ali Mahmud*
- Analyzing Linear Communication Networks Using the Ribosome Flow Model  
*Yoram Zarai, Oz Mendel, and Michael Margaliot*

#### **16:00-18:00 Session WNM-2: Wireless Network and Multimedia (Room: Suite 1)**

Session Chair:

- A Novel Secure SDN/LTE Based Architecture for Smart Grid Security  
*Asad Irfan, Nayab Taj, and Sahibzada Ali Mahmud*
- OpenGUFI: An Extensible Graphical User Flow Interface for an SDN-Enabled Wireless Testbed  
*Joerg Schultz, Roman Szczepanski, Kay Haensge, Michael Maruschke, Nico Bayer, and Hans Einsiedler*
- HTTP Data Offloading Using Multipath TCP Proxy  
*Christos Pollalis, Paris Charalampou, and Efstathios Sykas*

### **WSNCom-2015 TECHNICAL SESSIONS**

**26 October 2015 Monday**

#### **11:00-12:30 Session MSNCom-1: Mobile Social Networking and Computing (Room: Suite 7)**

Session Chair:

- Intelligent Mobile Framework Based on Swarm Computation  
*Xinzheng Niu, Dazhuang Su, and Minhao Cheng*
- A Web Service Composition Method Based on Merging Genetic Algorithm and Ant Colony Algorithm  
*Zhengde Zhao, Xin Hong, and Shaohua Wang*
- The Research on Collaborative Filtering Recommendation Algorithm Based on Improved Clustering Processing  
*Shaohua Wang, Zhengde Zhao, and Xin Hong*
- The Video Recommendation System Based on DBN  
*Cui Hongliang and Qin Xiaona*
- Content-centric Network-Based MANET for Streaming Video Transmission  
*Olfa Ben Rhaïem, Lamia Chaari Fourati, and Anis Masmoudi*

### **WISH-2015 TECHNICAL SESSIONS**

**26 October 2015 Monday**

#### **16:00-18:00 Session WISH: Imaging and Sensor Technologies for Improved Healthcare (Room: Suite 9)**

Session Chair:

- A Fast and Accurate Iris Localization Technique for Healthcare Security System  
*Alaa S. Al-Waisy, Rami Qahwaji, Stanley Ipson, and Shumoos Al-Fahdawi*
- An Automatic Corneal Subbasal Nerve Registration System Using FFT and Phase Correlation Techniques for an Accurate DPN Diagnosis  
*Shumoos Al-Fahdawi, Rami Qahwaji, Alaa S. Al-Waisy, and Stan Ipson*
- Breast Cancer Detection Using 1D, 2D, and 3D FDTD Numerical Methods  
*A.F. Mirza, F. Abdulsalam, R. Asif, Y.A.S. Dama, M.M. Abusitta, F. Elmegri, R.A. Abd-Alhameed, J.M. Noras, and R. Qahwaji*

- The Application of Full-Field Optical Coherence Tomography on Evaluating Film Coating of Pharmaceutical Pellets  
*Jinke Zhang, Yaochun Shen, and Yalin Zheng*
- Channel Estimation for OFDM FFT/DWT in Multi-carrier Modulation Used in Wireless Telemedicine  
*H.S.O. Migdadi, H. Obeidat, K.O. Anoh, N.N. Khatib, J.M. Noras, R. Qahwaji, and R.A. Abd-Alhameed*
- Smart Bolus Estimation Taking into Account the Amount of Insulin on Board  
*Ahmad M. Al-Tae, Majid A. Al-Tae, Waleed Al-Nuaimy, Zahra J. Muhsin, Hamzah AlZu'bi*

## IntelNet-2015 TECHNICAL SESSIONS

27 October 2015 Tuesday

### 10:30-12:30 Session IntelNet: Intelligent Communication and Social Networks (Room: Suite 1)

Session Chair:

- A Study of a Virtual Network Embedding Algorithm  
*Zhen-hua Chen, Xiang-wei Zheng, and Dian-jie Lu*
- A Crisis Mitigation Policy for SLA Profit Maximization in Multitenant Database  
*Zhenkun Wang, Yongqing Zheng, Lanju Kong, and Zhiyong Chen*
- Global Index Oriented Non-Shard Key for Multi-tenant Database  
*Xiao Zongshui, Lanju Kong, Qingzhong Li, and Pang Cheng*
- An Intention-Topic Model Based on Verbs Clustering and Short Texts Topic Mining  
*Tingting Lu, Shifeng Hou, Zhenxiang Chen, Lizhen Cui, and Lei Zhang*
- Predictive Models for Energy-Efficient Clouds: An Analysis on Real-Life and Synthetic Data  
*Albino Altomare and Eugenio Cesario*
- Performance and Resource Prediction at High Utilization for N-Tier Service Systems in Cloud an Experiment Driven Approach  
*Wenbin Zhang, Yuliang Shi, Lei Liu, Lizhen Cui, and Yongqing Zheng*

## I-SOCA-2015 TECHNICAL SESSIONS

27 October 2015 Tuesday

### 13:30-15:30 Session I-SOCA: Internet of Things: Smart Objects, Cloud, and Applications (Room: Suite 1)

Session Chair:

- Extending Event Elements of Business Process Model for Internet of Things  
*Hsiao-Hsien Chiu and Ming-Shi Wang*
- Mapping Security Requirements to Identify Critical Security Areas of Focus in PaaS Cloud Models  
*Alex Akinbi and Ella Pereira*
- Lightweight Forensics Application: Lightweight Approach to Securing Mobile Devices  
*Helen Angela Brumfitt, Bob Askwith, and Bo Zhou*
- A Novel Network Topology in Underwater Visible Light Sensor Networks  
*Shih-Hao Chang, Rubem Pereira, and Kuei-Ping Shih*
- Virtual Resource Allocation and Composition for Data Stream Processing of Online Auditing in Cloud Computing  
*Lei Wang and Tuo Li*

## SMMA-2015 TECHNICAL SESSIONS

27 October 2015 Tuesday

### 10:30-12:30 Session SMMA: Social Media Mining and Analysis (Room: Suite 4)

Session Chair:

- Usage and Consequences of Privacy Settings in Microblogs  
*Elena Daehnhardt, Nick K. Taylor, and Yanguo Jing*
- Association Rules Mining Based on Clustering Analysis and Soft Sets  
*Bo Li, Zheng Pei, and Keyun Qin*
- Big Data Analytics in MOOCs  
*Yanyan Zheng and Beibei Yin*
- A Multi-criteria Review-Based Hotel Recommendation System  
*Yashvardhan Sharma, Jigar Bhatt, and Rachit Magon*
- The Belief Degrees of Fuzzy Linguistic Values Based on a Fuzzy Formal Context  
*Li Yan*

## WCTU-2015 TECHNICAL SESSIONS

27 October 2015 Tuesday

### 10:30-12:30 Session WCTU: Character and Text Understanding (Room: Suite 5)

Session Chair: Prof. Ella Pereira, Edge Hill University, UK

- Recognition of Fuzzy Characters on Oracle-Bone Inscriptions  
*Gao Feng, Xiong Jing, and Liu Yong-ge*
- Ontology Description of Chinese Character Semantics  
*Jing Xiong, Xin Liu, and Qingsheng Li*
- Delaunay and Graph Modal-Based Bagua Layout Text Line Extraction for Shui Script  
*Zhang Guofeng and Zhang Weiqin*
- A Novel Dynamic Description and Generation Method for Chinese Character  
*Qingsheng Li and Quan Liu*

## SOWN-2015 TECHNICAL SESSIONS

26 October 2015 Monday

### 11:00-12:30 Session SOWN: Security & Optimization for Wireless Networks (Room: Suite 9)

Session Chair:

- Core-Selecting Auction Based Spectrum Allocation Scheme in Cognitive Femtocell Networks  
*Liang Bu-lin and Huang Chuan*

## ITA-2015 TECHNICAL SESSIONS

26 October 2015 Monday

### 13:30-15:30 Session ITA-1: Information Technology and Applications (I) (Room: Suite 9)

Session Chair:

- An Empirical Evaluation of Software Quality Assurance Practices and Challenges in a Developing Country  
*Olaperi, Yeside Sowunmi, and Sanjay Misra*
- Evaluating Open Source Software Quality Models Against ISO 25010  
*Adewole Adewumi, Sanjay Misra, and Nicholas Omoregbe*
- Towards a Distinction between Application State Resources and Data Resources in ROA

*Tadeu Matos Nunes, Pedro Porfírio Muniz Farias, José Renato Villela Dantas, Hermano Albuquerque Lira, Bruno de Azevedo Muniz, and Luiz Henrique S. Felix*

- Use Cases and Development of Software Defined Networks in OpenStack  
*Arti Mann, Wei Wei, Ravi Badana, Tong Zhang, and T. Andrew Yang*
- Euclidean Distance-Based QoS Metric for Dynamic MAP Selection in HMIPv6 Network  
*Esad Kadušić, Nataša Živić, Mirko Škrbić, Mesud Hadžialić, and Narcis Behlilović*
- Mining Binary Data with Matrix Algebra  
*Ritu Chaturvedi and C.I. Ezeife*
- ITSr-HISL: An Improved Model for Trajectory Signature Recognition in Human Interactive Sign Language  
*Nehal F. Attia, Sherin M. Youssef, and Saleh M. Elkaffas*
- Method to Develop Coded Excitation for Velocimetry in Downhole Drilling  
*Weijia Lu, Ran Niu, Longtao Yuan, Xin Qu, Heng Wu, and Jing Ye*

**27 October 2015 Tuesday**

**10:30-12:30 Session ITA-2: Information Technology and Applications (II) (Room: Suite 8)**

Session Chair:

- Using Relational Algebra on the Specification of Real World ETL Processes  
*Vasco Santos and Orlando Belo*
- Adaptive Context-Sensitive Spelling Error Correction Techniques for the Extremely Unpredictable Error Generating Language Environments  
*Minho Kim, Sung-Ki Choi, Jingzhi Jin, and Hyuk-Chul Kwon*
- Practical Target Word Selection Method in Korean to Korean Sign Language Machine Translation  
*Minho Kim, Sung-ki Choi, Aesun Yoon, and Hyuk-Chul Kwon*
- A Reliable Crisis Information System to Share Data after the Event of a Large-Scale Disaster  
*Marcello Cinque, Domenico Cotroneo, Christian Esposito, Mario Fiorentino, and Stefano Russo*
- Tracking File's Metadata from Computer Memory Analysis  
*Khairul Akram Zainol Ariffin, Ahmad Kamil Mahmood, Jafreezal Jaafar, and Solahuddin Shamsuddin*
- Facial Expression Recognition with sEMG Method  
*Mingzhe Jiang, Amir-Mohammad Rahmani, Tomi Westerlund, Pasi Liljeberg, and Hannu Tenhunen*
- A Correlated Topic Modeling Approach for Facial Expression Recognition  
*Rouxin Sang and K.P. Chan*
- Improving Camera Pose Estimation for Indoor Marker-less Augmented Reality  
*Sud Sudirman and Abdennour El-Rhalibi*

**Part II: TECHNICAL SESSIONS OF IUCC-2015 and Associated Workshops/Symposia**

**IUCC-2015 TECHNICAL SESSIONS**

**26 October 2015 Monday**

**11:00-12:30 Session IUCC-1: Sensor Networks and Ad Hoc Networks (Room: Suite 1)**

Session Chair:

- Wear-I: A New Paradigm in Wearable Computing  
*Jianhua Ma and Runhe Huang*
- Beaconless Geographic Routing Protocol with Adaptive Delay Timer in Wireless Sensor Networks

*Jeongcheol Lee, SeokYoon Kang, ChungJae Lee, Kyong Hoon Kim, and Ki-Il Kim*

- Energy-Efficient Location Estimation Using Variable Range Beacons in Wireless Sensor Networks  
*Muhammad Farooq-i-Azam, Qiang Ni, Ejaz A. Ansari, and Haris Pervaiz*
- Energy Efficient Adaptive Cooperative Communications in Wireless Sensor Networks  
*Radwa Ahmed Osman, Xiao-Hong Peng, and Zuoyin Tang*
- XML Based Wireless Patient Monitoring System Using Vehicular Ad-Hoc Networks  
*Avleen Kaur Malhi and Shalini Batra*
- When Smart Phone Meets Vehicle: A New On-Board Unit Scheme for VANETs  
*Xiuqi Li, Yong Feng, Feng Wang, and Qian Qian*

### **13:30-15:30 Session IUCC-2: Wireless Networks and Ubiquitous Networks (Room: Suite 1)**

Session Chair:

- Integration of QoS Parameters from IEEE 802.11s WLAN Mesh Networks into Logical P2P Overlays  
*Michael Rethfeldt, Peter Danielis, Björn Konieczek, Felix Uster, and Dirk Timmermann*
- A New Relay Node Selection Model for Wireless Community Mesh Networks  
*Liang Zhao, Ahmed Y. Al-Dubai, Xianwei Li, and Guolong Chen*
- Joint Relay Selection and Resource Allocation for D2D-Enabled Cellular Communications  
*Guopeng Zhang, Ru Wang, Shuanshuan Wu, Lin Chen, Bo Dai, Kun Yang, and Liqiang Zhao*
- Adaptive Current Level Control Algorithm For Battery-Powered ZigBee Network in Enterprise Settings  
*Yitian Zhang, Kun Yang, and Xiao Wang*
- Design of Novel Teaching Episodes in Medical Education Using Emerging Experiential Digital Assets - Technology Enabled Medical Education beyond the Gimmicky  
*Panagiotis E Antoniou, Eleni Dafli, and Panagiotis D Bamidis*
- Increasing Interference Robustness of WiFi Fingerprinting by Leveraging Spectrum Information  
*Filip Lemic, Arash Behboodi, Vlado Handziski, and Adam Wolisz*
- Channel Capacity Analysis of Blood Capillary-Based Molecular Communication  
*Yue Sun, Kun Yang, and Qiang Liu*
- Performance Investigation and Comparison between Virtual Networks and Physical Networks Based on an Advanced Testbed Network  
*Tong Li, Xiaodan Zhang, Zongzhen Liu, Jingguo Ge, Zhongjiang Yao, Yuepeng E, Yulei Wu, and Lei Zhang*

### **16:00-18:00 Session IUCC-3: Ubiquitous Computing and Ambient Intelligence (Room: Suite 1)**

Session Chair:

- Response Time in Switching Scents When Converting Scenes  
*Shutaro Homma, Eri Matsuura, Sayaka Matsumoto, Shohei Horiguchi, and Ken-ichi Okada*
- Assessing Physical Location as a Potential Contextual Cue For Adaptive Mobile Contact Lists  
*Athanasios Plessas, Olga Georgiadou, Vassilios Stefanis, Andreas Komninos, and John Garofalakis*
- Anti-counterfeiting Using Irregularities of Magnetic Flux Density  
*Hyunho Kang and Keiichi Iwamura*
- Automatic Animal Detection from Kinect Sensed Images for Livestock Monitoring and Assessment  
*Qiming Zhu, Jinchang Ren, David Barclay, Samuel McCormack, and Willie Thomson*
- Minutiae Based Automatic Fingerprint Recognition: Machine Learning Approaches  
*Amjad Ali, Rehanullah Khan, Irfan Ullah, Adnan Daud Khan, and Abid Munir*
- A Smartphone Management Method to Save Battery Using Bayesian Networks and Fuzzy System  
*Jun-Ho Kim and Sung-Bae Cho*

**27 October 2015 Tuesday**

**13:30-15:30 Session IUCC-4: Internet of Things & Data Processing and Big Data (Room: Suite 4)**

Session Chair:

- A Decentralized Batch-Based Group Key Management Protocol for Mobile Internet of Things (DBGK)  
*Mohammed Riyadh Abdmeziem, Djamel Tandjaoui, and Imed Romdhani*
- A Dynamic Power Tuning for the Constrained Application Protocol of Internet of Things  
*Mamoun Qasem, Ahmed Al-Dubai, Imed, Romdhani, and Muneer Bani Yassien*
- E-Trickle: Enhanced Trickle Algorithm for Low-Power and Lossy Networks  
*Baraq Ghaleb, Ahmed Al-Dubai, and Elias Ekonomou*
- Prototyping and In-Depth Analysis of Big Data Benchmarking  
*Divya Pandove and Shivani Goel*
- Pota: Maximizing Profit for Task-Level Scheduling for Data Center Networks  
*Xiaoyi Tao, Heng Qi, Wenxin Li, Keqiu Li, and Yingwei Jin*
- A Data Imputation Method Based on Deep Belief Network  
*Zhikui Chen, Siqian Liu, Kunyou Jiang, Han Xu, and Xinru Cheng*
- DRISTI: Distributed Real-Time In-Situ Seismic Tomographic Imaging  
*Goutham Kamath, Wen-Zhan Song, Paritosh Ramanan, Lei Shi, and Junjie Yang*

**13:30-15:30 Session IUCC-5: Resource Management and Scheduling (Room: Suite 4)**

Session Chair:

- Load Scheduling Based on an Advanced Real-Time Price Forecasting Model  
*Xing Luo, Xu Zhu, and Eng Gee Lim*
- On the Implementation of RT-FAIR Scheduling Framework in Linux  
*Hang Su, Dakai Zhu, and Jiafeng Zhu*

**16:00-17:30 Session IUCC-6: Detection, Identification, and Recognition (Room: Suite 4)**

Session Chair:

- Exploring Accuracy-Cost Tradeoff in In-Home Living Activity Recognition Based on Power Consumptions and User Positions  
*Kenki Ueda, Hirohiko Suwa, Yutaka Arakawa, and Keiichi Yasumoto*
- Bootstrapping Personalised Human Activity Recognition Models Using Online Active Learning  
*Tudor Miu, Paolo Missier, and Thomas Plötz*
- Temporal Recursive Pedestrian Trajectory Identification for Multi-camera Surveillance System  
*Cong Shen, Rong Xie, and Liang Zhang*
- DIVINE: Building a Wearable Device for Intelligent Control of Environment Using Google Glass  
*Tamir Sobeih, Nick Whittaker, and Liangxiu Han*
- COVER: A Cooperative Virtual Force Robot Deployment Technique  
*Gamal Sallam and Uthman Baroudi*
- ECG Security Identification System on the Zynq SoC Platform  
*Xiaojun Zhai, Abbes Amira, and Faycal Bensaali*

**MultiCom-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

**13:30-15:30 Session MultiCom: Multimedia Communications and Networking (Room: Suite 8)**

Session Chair:

- Hybrid Clustered Peer-Assisted DASH-SVC System

*Ran Dubin, Ofer Hadar, Yariv Freifeld, Aviv Ruham, Amit Dvir, Nissim Harel, and Refael Barkan*

- Video Quality in 5G Networks: Context-Aware QoE Management in the SDN Control Plane  
*Olatunde Awobuluyi, James Nightingale, Qi Wang, and Jose M. Alcaraz-Calero*
- Client QoE-Oriented Segment Selection for DASH  
*Mirghiasaldin Seyedebrahimi, Colin Bailey, and Xiao-Hong Peng*
- Anomalous Region Detection on the Mobility Data  
*Huan Huo, Shangye Chen, Liang Song, Leiyu Ban, Zonghan Wu, Liang Liu, and Liping Gao*
- Block-Based Feature Adaptive Compressive Sensing for Video  
*Xin Ding, Wei Chen, and Ian Wassell*

## **VEAI-2015 TECHNICAL SESSIONS**

**28 October 2015 Wednesday**

### **9:00-11:00 Session VEA1: Virtual Environments and Advanced Interfaces (Room: Suite 4)**

Session Chair:

- Separating Gesture Detection and Application Control Concerns with a Multimodal Architecture  
*Leonel Morgado, Bernardo Cardoso, Fausto de Carvalho, Luís Fernandes, Hugo Paredes, Luís Barbosa, Benjamim Fonseca, Paulo Martins, and Ricardo Rodrigues Nunes*
- The Potential of the Brain-Computer Interface for Learning: A Technology Review  
*Leo Galway, Paul McCullagh, Gaye Lightbody, Chris Brennan, and David Trainor*
- Simulating Nature for Elderly Users - A Design Approach for Recreational Virtual Environments  
*Jon Ram Bruun-Pedersen, Stefania Serafin, and Lise Busk Kofoed*
- Playing Immersive Games on the REVERIE Platform  
*Ioannis Dourmanis, Julie Wall, and David S. Monaghan*
- Hardware Interfaces for VR Applications: Evaluation on Prototypes  
*Markos Mentzelopoulos, Filippo Tarpini, Agazio Emanuele, and Aristidis Protopsaltis*
- The REVERIE Human Representation Addresses Issues Related to Virtual Presence, Communication, and Interaction in Collaborative Virtual Environments  
*Ioannis Dourmanis, Daphne Economou, and Nektarios Georgalas*
- Lessons from Digital Puppetry: Updating a Design Framework for a Perceptual User Interface  
*Jeffrey Ferguson*

## **BigData-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

### **16:00-18:30 Session BigData: Big Data and Smart Sustainable Society (Room: Suite 8)**

Session Chair:

- Towards a Semantic Layer to Support Road and Public Transport User Decision-Making  
*Nicholas Gould and David Atkin*
- Development of an Integrated Agent for Greener Airport Operations  
*Zhexing Yan and Mahroo Eftekhari*
- Big Data Computation for Workshop-Based Planning Support  
*Jianguang Tu, Jianquan Cheng, and Liangxiu Han*
- Implementation of the Big Data Management System for Demand Side Energy Management  
*Jungin Choi, Mijeom Kim, and Jaeweon Yoon*
- POPmine: Tracking Political Opinion on the Web  
*Pedro Saleiro, Sílvia Amir, Mário Silva, and Carlos Soares*
- Nudge Better Quantified-Self with Context-Aware and Proactive Services

*Li Guo*

- Towards a Heterogeneous Compute Engine for Software Acceleration on Big Data Infrastructures  
*Christos Margiolas and Ioannis Manousakis*
- Towards Free Market Cloud Computing  
*Jeremy Singer, Abyd Adhami, and Colin Perkins*

#### **HWNQoE-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

#### **16:00-18:00 Session HWNQoE: Heterogeneous Wireless Networks and Quality-of-Experience (Room: Suite 9)**

Session Chair:

- Content-Based Video Quality Prediction Using Random Neural Networks for Video Streaming over LTE Networks  
*Tarik Ghalut, Hadi Larijani, and Ali Shahrabi*
- OpenFlow 1.3 Extension for OMNeT++  
*Mukhald A. Salih, John Cosmas, and Yue Zhang*
- Medium Access Control Protocol to Address Hidden Terminals in MU-MIMO WLANs  
*Sanjeeb Shrestha, Gengfa Fang, Eryk Dutkiewicz, and Xiaojing Huang*
- Hata Path Loss Model Tuning for Cellular Networks in Irregular City  
*Omar Banimelhem, Muneer. M. Al-Zu'bi, and Mohammad S. Al Salameh*
- Human-Computer Interaction System for Communications and Control  
*Svetla Radeva and Dimitar Radev*

#### **IWSCA-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

#### **10:30-12:30 Session IWSCA: Soft Computing and Applications (Room: Suite 4)**

Session Chair:

- On Induced Soft Sets and Topology for the Parameter Set of a Soft Set  
*Zhicai Liu, Keyun Qin, Zheng Pei, and Jin Liu*
- A Consensus Model for Multiple Criteria Group Decision Making under Linguistic Environment  
*Fen Zou, Liangzhong Yi, Zheng Pei, and Jing Liu*
- Entropy on Interval-Valued Intuitionistic Fuzzy Soft Set  
*Yaya Liu and Keyun Qin*
- The Rough Set Model Based on Grade Indiscernibility Relation  
*Junfang Luo and Keyun Qin*

#### **IoT-Smart-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

#### **10:30-12:30 Session IoT-Smart: Internet of Things and Smart Spaces (Room: Suite 7)**

Session Chair:

- Survey on Clean Slate Cellular-IoT Standard Proposals  
*Wael Guibene, Keith E. Nolan, and Mark Y. Kelly*
- Performance Evaluation of the RPL Protocol in Fixed and Mobile Sink Low-Power and Lossy-Networks  
*Isam Wadhaj, Istvan Kristof, Imed Romdhani, and Ahmed Al-Dubai*
- Performance Evaluation of RPL Objective Functions



*Mamoun Qasem, Hussien Altawssi, Muneer Bani Yassien, and Ahmed Al-Dubai*

- Empirical Experiments for Sensors' Distance Estimation in Smart Places  
*Nadhir Ben Halima, Yaser Khamayseh, Wail Mardini, and Abedl Rahman Almodawar*
- Level Crossing Rate of Ratio of Product of Two k-u Random Variables and Nakagami-m Random Variable  
*Dragana Krstie, Imed Romdhani, Muneer Masadeh Bani Yassein, Siniša Minić, Goran Petković, and Predrag Milačić*

#### **ICTA-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

**13:30-15:30 Session ICTA: Innovative Computational Technologies and Its Applications (Room: Suite 9)**

Session Chair:

- Estimation of Physical Activity Walking in Different Slopes Based on Accelerometer Approach  
*Kai He, Jing-Xian Yao, and Hsien-Tsung Chang*
- Energy-Efficient Multimedia Multicast Scheduling and Resource Allocation Algorithms for OFDMA-Based Systems  
*Shih-Lin Wu and Wei-Wen Wang*
- Efficient Strategies of Compressing Three-Dimensional Sparse Arrays Based on Intel XEON and Intel XEON Phi Environments  
*Chun-Yuan Lin, Huang Ting Yen, and Che-Lun Hung*
- Trusted Platform Based Linux File Access Control  
*Guang-liang Guo and Quan Qian*
- Efficient Brain MRI Segmentation Algorithm on TK1  
*Che-Lun Hung, Chun-Yuan Lin, Yuan-Huai Wu, Hsiao-Hsi Wang, and Yu-Chen Hu*
- Voice Helper: A Mobile Assistive System for Visually Impaired Persons  
*Kuei-Chun Liu, Ching-Hung Wu, Shau-Yin Tseng, and Yin-Te Tsai*

#### **MT4H-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

**10:30-12:30 Session MT4H: Mobile Technology for Healthcare (Room: Suite 5)**

Session Chair: Prof. Ella Pereira, Edge Hill University, UK

- Walk and Jog Characterization Using a Triaxial Accelerometer  
*Jose David López, Angela Sucerquia, Leonardo Duque-Muñoz, and Francisco Vargas-Bonilla*
- Activity Tracker and Elderly  
*Peter Rasche, Matthias Wille, Sabine Theis, Katharina Schaefer, Christopher M. Schlick, and Alexander Mertens*
- Introducing Digital Wellness: Bringing Cyberpsychological Balance to Healthcare and Information Technology  
*Ciarán McMahon and Mary Aiken*
- Clustering of Physical Activities for Quantified Self and mHealth Applications  
*Chelsea Dobbins and Reza Rawassizadeh*

#### **AUCN-2015 TECHNICAL SESSIONS**

**26 October 2015 Monday**

**16:00-18:00 Session AUCN-1: Advances in Ubiquitous Computing and Networking (I) (Room: Suite 7)**

Session Chair:

- Travel Time Prediction on Highways  
*Jan Rupnik, John Davies, Blaž Fortuna, Alistair Duke, and Sandra Stincic Clarke*
- A Combined Smartphone and Smartwatch Fall Detection System  
*Thomas Vilarinho, Babak Farshchian, Daniel Gloppstad Bajer, Ole Halvor Dahl, Iver Egge, Sondre Steinsland Hegdal, Andreas Lønes, Johan N. Slettevold, and Sam Mathias Weggersen Uthman Baroudi and Mohammed Aldarwbi*
- Inspired Counter Based Broadcasting for Dynamic Source Routing in Mobile Networks  
*Muneer Bani Yassein and Ahmed Y. Al-Dubai*
- Towards a Holistic Multi-cloud Brokerage System: Taxonomy, Survey, and Future Directions  
*Bandar Aldawsari, Thar Baker, and David England*
- C2@home - A Novel User-Side Cloud-of-Clouds Management Architecture  
*Antonella Di Stefano, Giovanni Morana, and Daniele Zito*

**27 October 2015 Tuesday**

**13:30-15:30 Session AUCN-2: Advances in Ubiquitous Computing and Networking (II) (Room: Suite 1)**

Session Chair:

- Towards a Mobile Assistive Technology for Monitoring and Assessing Cognitive Fatigue in Individuals with Acquired Brain Injury  
*Edward Price, George Moore, Leo Galway, and Mark Linden*
- Probabilistic Estimation of Resource Affinities of Processes in Computing Systems  
*Susmit Bagchi*
- CoRFL: A Connectivity Restoration Mechanism Using Fuzzy Logic in Wireless Actor and Sensor Networks
- Development of ZigBee Triaxial Accelerometer based Human Activity Recognition System  
*S Irene, N M Shweta, P Haribabu, R Pitchiah*

**Part III: TECHNICAL SESSIONS OF DASC-2015 and Associated Workshops/Symposia**

**DASC-2015 TECHNICAL SESSIONS**

**26 October 2015 Monday**

**11:00-12:30 Session DASC-1: Autonomic Computing Theory, Models, Architectures, and Communications (Room: Suite 5)**

Session Chair:

- Simulation Environment Based on SystemC and VEOS for Multi-core Processors with Virtual AUTOSAR ECUs  
*Moisés Urbina, Zaher Owda, and Roman Obermaisser*
- Evaluation and Prevention of MAC Layer Misbehaviours in Public Wireless Hotspots  
*Chaminda Alocious, Hannan Xiao, Bruce Christianson, and James Malcolm*
- Enterprise Data Center Globality Measurement  
*Ruairí de Fréin, Joel Pfaff, and Thomas Paré*
- Towards Efficient Dissemination and Filtering of XML Data Streams

*Kirill Belyaev and Indrakshi Ray*

- CCTV as a Smart Sensor Network  
*Giles Oatley, Tom Crick, and Dee Bolt*

### **13:30-15:30 Session DASC-2: Self-Protection and Intrusion-Detection (Room: Suite 5)**

Session Chair:

- Distributed Black Virus Decontamination and Rooted Acyclic Orientations  
*Jie Cai, Paola Flocchini, and Nicola Santoro*
- Towards Automated Generation and Visualization of Hierarchical Attack Representation Models  
*Fangcheng Jia, Jin B. Hong, and Dong Seong Kim*
- Efficient Discovery of Malicious Symptoms in Clouds via Monitoring Virtual Machines  
*Sultan S. Alshamrani, Dariusz R. Kowalski, and Leszek A. Gqsieniec*
- Efficient Event Detection in Social Media Data Streams  
*Xiang Sun, Yan Wu, Lu Liu, and John Panneerselvam*
- A New Prime and Probe Cache Side-Channel Attack for Cloud Computing  
*Younis A. Younis, Kashif Kifayat, Qi Shi, and Bob Askwith*
- Evolutionary Virus Immune Strategy Based on Community Vitality  
*Cai Fu, Li Min, Jia Yang, Deliang Xu, Xiao-Yang Liu, and Lansheng Han*
- CloudZombie: Launching and Detecting Slow-Read Distributed Denial of Service Attacks from the Cloud  
*Saeed Shafieian, Mohammad Zulkernine, and Anwar Haque*
- Detection and Prevention of Malicious Requests in ICN Routing and Caching  
*Eslam G. AbdAllah, Mohammad Zulkernine, and Hossam S. Hassanein*
- The Trustworthy Autonomic Interface Guardian Architecture for Cyber-Physical Systems  
*Kevin G. Lyn, Lee W. Lerner, Christopher J. McCarty, and Cameron D. Patterson*

### **16:00-18:00 Session DASC-3: Information and System Security & Trust and Privacy (Room: Suite 5)**

Session Chair:

- A Cyber Security Ontology for BPMN-Security Extensions  
*Curtis L. Maines, David Llewellyn-Jones, Stephen Tang, and Bo Zhou*
- Protecting Future Personal Computing: Challenging Traditional Network Security Models  
*Helen Angela Brumfitt, Bob Askwith, and Bo Zhou*
- A Safety Concept for a Railway Mixed-Criticality Embedded System Based on Multicore Partitioning  
*Irune Agirre, Mikel Azkarate-Askasua, Asier Larrucea, Jon Perez, Tullio Vardanega, and Francisco J. Cazorla*
- A Modular Safety Case for an IEC 61508 Compliant Generic COTS Processor  
*Asier Larrucea, Jon Perez, and Roman Obermaisser*
- Digital Memories Based Mobile User Authentication for IoT  
*Nathan Shone, Chelsea Dobbins, William Hurst, and Qi Shi*
- ShutterRoller: Preserving Social Network Privacy towards High-Speed Domain Gateway  
*Borui Yang, Jianxin Li, Lu Liu, Yingjie Cao, Hua Wei, Peiyuan Sun, Nannan Wu, and Bo Li*
- Identity-Based Association Protocols for Wireless Personal Area Networks  
*Xin Huang, Paul Craig, and Qinghua Wang*
- Representation of Trust and Reputation in Self-Managed Computing Systems  
*Jan Kantert, Sarah Edenhofer, Sven Tomforde, and Christian Müller-Schloer*

**27 October 2015 Tuesday**

### **13:30-15:30 Session DASC-4: QoS of Communications and Services (Room: Suite 5)**

Session Chair:

- Take Off a Load: Load-Adjusted Video Quality Prediction and Measurement  
*Ruairí de Fréin*
- Correlation-Based Top-k Recommendation for Web Services  
*Qi Xie, Zibin Zheng, Lu Liu, and Mengtian Cui*
- The Impact of Hypervisor Scheduling on Compromising Virtualized Environments  
*Tsvetoslava Vateva-Gurova, Neeraj Suri, and Avi Mendelson*
- Incremental, Distributed, and Concurrent Scheduling in Systems-of-Systems with Real-Time Requirements  
*Roman Obermaisser and Ayman Murshed*
- Diverse Compiling for Microprocessor Fault Detection in Temporal Redundant Systems  
*Andrea Höller, Tobias Rauter, Johannes Iber, and Christian Kreiner*
- Calligraphy Imitation System Based on Virtual Brush and Scale-Invariant Feature Transform  
*Zhu Li, Li Jun, Hu Tao, and Xiang Jun*
- Preserving Source-Location Privacy through Redundant Fog Loop for Wireless Sensor Networks  
*Mianxiong Dong, Kaoru Ota, and Anfeng Liu*

**IBDS-2015 TECHNICAL SESSIONS**

**26 October 2015 Monday**

**11:00-12:30 Session IBDS: Intelligent Big Data Systems (Room: Suite 9)**

Session Chair:

- Computational Objectivity in Depression Assessment for Unstructured Large Datasets  
*Aaron Johnson, Paul Holmes, Lewis Craske, Marcello Trovati, Nik Bessis, and Peter Larcombe*
- Investigation of Energy Efficiency on Cloud Computing  
*Nathan Whittington, Lu Liu, Bo Yuan, and Marcello Trovati*
- A Semi-automated Assessment of the Direction of Influence Relations from Semantic Networks: A Case Study in Maths Anxiety  
*Marcello Trovati, Jayne Trovati, Peter Larcombe, and Lu Liu*
- Reducing Vehicular Traffic Congestion Using Available Forward Road Capacity Detection  
*James Hardy and Lu Liu*

**CEWE-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

**16:00-18:00 Session CEWE: Cybercrimes and Emerging Web Environments (Room: Suite 7)**

Session Chair:

- Counterfeiting and Defending the Digital Forensic Process  
*Álvaro Botas, Ricardo J. Rodríguez, Teemu Väisänen, and Patrycjusz Zdzichowski*
- Mitigating Circumstances in Cybercrime: A Position Paper  
*Raian Ali, John McAlaney, Shamal Faily, Keith Phalp, and Vasilios Katos*
- MP-Shield: A Framework for Phishing Detection in Mobile Devices  
*Giovanni Bottazzi, Emiliano Casalicchio, Davide Cingolani, Fabio Marturana, and Marco Piu*
- The Evidentiary Value of Link Files in Linux File System to Digital Forensic Investigation  
*Tharmini Janarthanan and Shahrzad Zargari*
- Fast Mining of Large-Scale Logs for Botnet Detection: A Field Study  
*Giovanni Bottazzi and Giuseppe Francesco Italiano*

## SocialSec-2015 TECHNICAL SESSIONS

26 October 2015 Monday

### 16:00-18:00 Session SocialSec: Social Computing and Security (Room: Suite 7)

Session Chair:

- A Fragment Classification Method Depending on Data Type  
*Ning Zheng, Jinlong Wang, Ting Wu, and Ming Xu*
- Don't Speak to Strangers: The Suspicious Strategy Can Help to Improve Cooperation in Spatial Donation Game  
*Hong Ding, Junyao Huang, Yuangfang Chen, and Yizhi Ren*
- A Secure Authentication Scheme for Session Initiation Protocol Based on Elliptic Curve Cryptography  
*Shehzad Ashraf Chaudhry, Khalid Mahmood, Husnain Naqvi, and Muhammad Sher*

## ASCC-2015 TECHNICAL SESSIONS

26 October 2015 Monday

### 16:00-18:00 Session ASCC-1: Advances in Autonomic and Secure Computing and Communications (Room: Suite 8)

Session Chair:

- A Mobile Phone Device as a Biometrics Authentication Method for an ATM Terminal  
*Nabeel Ali Albahbooh and Patrick Bours*
- Function and Performance of Testing: Towards a Systemic View  
*Krzysztof M. Brzeziński*
- Autonomic Management Using Self-Stabilization for Hierarchical and Distributed Middleware  
*Maurice Djibril Faye, Eddy Caron, and Ousmane Thiaré*
- Fuzzy Inference Based Intrusion Detection System: FI-Snort  
*Nitin Naik*
- Zero-Carbon Cloud: A Volatile Resource for High-Performance Computing  
*Andrew A. Chien, Rich Wolski, and Fan Yang*

### 16:00-18:00 Session ASCC-2: Sustainable High Performance Computing (Room: Suite 9)

Session Chair:

- Use HDLC Principles for Distributed Applications  
*Justin Y. Shi*
- AnkaCom: A Development and Experiment for Extreme Scale Computing  
*Yasin Celik, Aakash Pradeep, and Justin Y. Shi*

## Part IV: TECHNICAL SESSIONS OF PCom-2015 and Associated Workshops/Symposia

## PCom-2015 TECHNICAL SESSIONS

26 October 2015 Monday

### 11:00-12:30 Session PCom-1: Ubiquitous Intelligence & Cyber-Physical Computing (Room: Suite 8)

Session Chair:

- Crowd Steering in Public Spaces: Approaches and Strategies

*Andrea Sassi, Claudio Borean, Roberta Giannantonio, Marco Mamei, Dario Mana, and Franco Zambonelli*

- Performance Evaluation of Cyber-Physical Intrusion Detection on a Robotic Vehicle  
*Tuan Phan Vuong, George Loukas, and Diane Gan*
- A Smartphone-Based System for Personal Data Management and Personality Analysis  
*Ao Guo and Jianhua Ma*
- A Novel Image Quality Assessment Method Based on Vision Attention  
*Zehua Lan, Yu Li, and Xingang Liu*
- Coalition Based Bandwidth Allocation in Mobile Social Networks  
*Bo Fan, Supeng Leng, Kun Yang, and Geyong Min*
- A Secure Cooperative Spectrum Sensing Strategy for Distributed Cognitive Radio Networks  
*Hui Lin, Jia Hu, Chuan Huang, and Li Xu*

**13:30-15:30 Session PICom-2: Artificial Intelligence & Knowledge Computing (Room: Suite 8)**

Session Chair:

- A Rule-Based Ontology Reasoning System for Context-Aware Building Energy Management  
*Jinsoo Han, Youn-Kwae Jeong, and Ilwoo Lee*
- A Convolutional Neural Network for Leaves Recognition Using Data Augmentation  
*Chaoyun Zhang, Pan Zhou, Chenghua Li, and Lijun Liu*
- Neural Networks Based Formation Control of Anti-ship Missiles with Constant Velocity  
*Yuan Wang, Yongkun Wang, Mingwei Sun, Shengzhi Du, and Zengqiang Chen*
- Interactive Display Services for Smart Environments  
*Jens Naber, Dominik Schäfer, Sebastian VanSyckel, and Christian Becker*
- Prevent Cooking Risks in Kitchen of Elderly People: Adaptable Reasoning Engine Based on Fuzzy Logic for Smart Oven  
*Bessam Abdulrazak and Rami Yared*
- Parameter Optimisation for Location Extraction and Prediction Applications  
*Alasdair Thomason, Nathan Griffiths, and Victor Sanchez*
- Unified Structure and Data Driven Process for Knowledge Enrichment and Problem Solving  
*Atsushi Sato and Runhe Huang*
- Backhaul Aggregation for Smart Homes in Heterogeneous Wireless Networks  
*Muhammad Asad Khan, Supeng Leng, Xiaoyan Huang, Jiechen Yin, and Bo Fan*

**27 October 2015 Tuesday**

**16:00-17:30 Session PICom-3: High Performance Computing (Room: Suite 5)**

Session Chair:

- Design and Verification of Heterogeneous Streaming Parallel Mechanisms on Kepler CUDA  
*Kailong Zhang, Shaoli Zhou, Liang Hu, Hang Su, Xiao Wu, and Kejian Miao*
- The Robustness of Face-Based CAPTCHAs  
*Haichang Gao, Lei Lei, Xin Zhou, Jiawei Li, and Xiyang Liu*
- PSO Based Multiobjective Reliable Optimization Model for Cloud Storage  
*Xiyang Liu, Lei Fan, Liming Wang, and Sha Meng*
- Community Detection Algorithm Based on the Scale Free Property of Networks  
*Xiyang Liu, Qiong Pan, Yingying An, and Guimin Qin*
- An Efficient Method for Document Categorization Based on Word2vec and Latent Semantic Analysis  
*Ronghui Ju, Pan Zhou, Cheng Hua Li, and Lijun Liu*
- Water Quality Modeling for Pipeline Network Peripherals Based on Simulation of Water Age

**16:00-18:00 Session PCom-4: Intelligent Social Networking (Room: Suite 1)**

Session Chair:

- ShakeMe: Key Generation from Shared Motion  
*Hidir Yüzügüzel, Jari Niemi, Serkan Kiranyaz, Moncef Gabbouj, and Thomas Heinz*
- Context-Aware Service Discovery and Selection in Decentralized Environments  
*Mariwan Ahmed, Lu Liu, Bo Yuan, Marcello Trovati, and James Hardy*
- Pervasive Information Visualization: Toward an Information Visualization Design Methodology for Multi-device Co-located Synchronous Collaboration  
*Paul Craig, Xin Huang, Huayue Chen, Xi Wang, and Shiyao Zhang*
- The Mobile Tree Browser: A Space Filling Information Visualization for Browsing Labelled Hierarchies on Mobile Devices  
*Paul Craig and Xin Huang*

**IoTBDH-2015 TECHNICAL SESSIONS**

**27 October 2015 Tuesday**

**13:30-15:30 Session IoTBDH-1: Internet of Things and Big Data for Healthcare (I) (Room: Suite 7)**

Session Chair:

- Prediction and Guidance of Behaviour: A Web-Based Multipurpose Behaviour Intervention Investigation Methodology  
*Yang Fu and Wenyan Wu*
- Smart Health Monitoring Using the Advance Metering Infrastructure  
*Carl Chalmers, William Hurst, Michael Mackay, and Paul Fergus*
- A Prostate Cancer Care Process Example of Using Data from Internet of Things  
*Emmanuel Eyo Effiok, Enjie Liu, Hong Qing Yu, and Jon Hitchcock*
- Improving the Validity of Lifelogging Physical Activity Measures in an Internet of Things Environment  
*Po Yang, Martin Hanneghan, Jun Qi, Zhikun Deng, Feng Dong, and Dina Fan*
- Life-Logging Data Aggregation Solution for Interdisciplinary Healthcare Research and Collaboration  
*Zhikun Deng, Po Yang, Youbing Zhao, Xia Zhao, and Feng Dong*
- Improving Reliability of Message Broadcast over Internet of Vehicles (IoVs)  
*Elias Eze C., Sijing Zhang, and Enjie Liu*
- Investigating Big Data Healthcare Security Issues with Raspberry Pi  
*Xiaohua Feng, Babatunde Onafeso, and Enjie Liu*
- MyHealthAvatar: A Case Study of Web-Based Interactive Visual Analytics of Lifestyle Data  
*Farzad Parvinzamid, Youbing Zhao, Zhikun Deng, Xia Zhao, Nikolaos Ersotelos, Feng Dong, Enjie Liu, and Gordon Clapworthy*

**10:30-12:30 Session IoTBDH-2: Internet of Things and Big Data for Healthcare (II) (Room: Suite 7)**

Session Chair:

- BPMN Security Extensions for Healthcare Process  
*Koh Song Sang and Bo Zhou*
- Cognitive Radio Aided Internet of Vehicles (IoVs) for Improved Spectrum Resource Allocation  
*Joy Eze, Sijing Zhang, Enjie Liu, Elias E. Chinedum, and Hong Q. Yu*
- A Survey of Physical Activity Monitoring and Assessment Using Internet of Things Technology  
*Jun Qi, Po Yang, Dina Fan, and Zhikun Deng*

## PCIS-2015 TECHNICAL SESSIONS

28 October 2015 Wednesday

### 9:00-11:00 Session PCIS: Pervasive Computing and Intelligence Systems (Room: Suite 5)

Session Chair:

- Sentiment Analysis Using Convolutional Neural Network  
*Xi Ouyang, Pan Zhou, Cheng Hua Li, and Lijun Liu*
- Recognition of Dynamic Data Structures to Support Porting of Applications to the Cloud  
*Beniamino Di Martino and Antonio Esposito*
- Assist-Me - A Volunteer Mobile Emergency System to Assist Elderly People  
*Hady Khaddaj Mallat and Bessam Abdulrazak*
- A Dining Context-Aware System with Mobile and Wearable Devices  
*Kee-Hoon Kim and Sung-Bae Cho*
- An Adaptable inVANETs-Based Intersection Traffic Control Algorithm  
*Mourad Elhadef*
- PAM: A Packet Manipulation Mechanism for Mitigating Crosstalk Faults in NoCs  
*Zahra Shirmohammadi, Mohsen Ansari, Sanaz Kazemi Abharian, Sepideh Safari, and Seyed Ghassem Miremadi*
- Wireless Location Estimation Using Virtual Forces  
*Fahed H. Awad*
- Relay Node Deployment for Wireless Sensor Networks Based on PSO  
*Bao Yu, Wang Yuanping, Zhao Liang, Hu Yuan, and Zhang Aijuan*

### Poster SESSIONS

- Understanding Access Stability and Mobility Patterns of Mobile Internet Users  
*Yuan Li, Hao Jiang, Shuwen Yi, Chen Zhou, Lihua Wu, and Ming Wu*
- Spanning Data Across Heterogeneous MANETs through Proactive Strip Interoperability  
*Marco Antonio To, Jose Alvarez, Marcos Cano, and Stephane Maag*
- Semantic Mapping Relational to a Directed Property Hypergraph Model  
*Dewi Wisnu Wardani and Josef Küng*
- Identifying and Classifying Suspicious Network Behavior Using Passive DNS Analysis  
*Kaio R.S. Barbosa, Eduardo Souto, Eduardo Feitosa, and Khalil El-Khatib*
- Personalized Privacy Aware Framework for Moving Objects in Participatory Sensing  
*Dorothy Kalui, Xi Guo, Dezheng Zhang, Yonghong Xie, and Zhiyong Yang*
- An Optimization to CHARM Algorithm for Mining Frequent Closed Itemsets  
*Xin Ye, Feng Wei, Fan Jiang, and Shaoyin Cheng*
- Diffusion Least Mean Square Algorithms with Zero-Attracting Adaptive Combiners  
*Fuxi Wen and Wei Liu*
- Feature Selection in Brain Computer Interface Using Genetics Method  
*Aswineshadri.K and V. Thulasi Bai*
- Fault Detection and Classification Based on PCA and N-LMC  
*Xiaoqin Zhang and Feng Liu*
- An Attributed Predicate RDF  
*Dewi Wisnu Wardani and Josef Küng*
- Methodology for an Open Digital Forensics Model Based on CAINE  
*Casimer Decusatis, Aparicio Carranza, Alassane Ngaide, Sundas Zafar, and Nestor Landaez*



- The Impact of Heterogeneous Spreading Abilities of Network Ties on Information Spreading  
*Chengeng Ou, Xiaolong Jin, Yuanzhuo Wang, Wei Chen, and Xueqi Cheng*
- Technology and Information Trust for Supporting Risky Decisions Based on Social-Media Content  
*Jason R.C. Nurse, Michael Goldsmith, Sadie Creese, and Koen Lamberts*
- A Novel QoS Routing Method for LEO Rosette Constellation Network  
*Yuanyuan Zhang, Laitao Zhu, Jing Wu, Hao Jiang, Jianguo Zhou, Tianyi Cao, Zijing Cheng, and Zhaojun Wang*
- Towards New Caching Strategy for Information-centric Networking Based on Data Proximity Control  
*Amine Abidi and SoniaMettali Gammar*
- GARUDA: A New Geographical Accident Aware Solution to Reduce Urban Congestion  
*Allan Mariano de Souza, Roberto Sadao Yokoyama, Nelson Luis Saldanha da Fonseca, Rodolfo Ipolito Meneguette, and Leandro Aparecido Villas*
- A New Lightweight Homomorphic Encryption Scheme for Mobile Cloud Computing  
*Mohd Rizuan Baharon, Qi Shi, and David Llewellyn-Jones*
- Probabilistic Area-Based Dissemination for Heterogeneous Transmission Ranges in Vehicular Ad-Hoc Networks  
*Maryam M. Alotaibi and Hussein T. Mouftah*
- An AGV Mechanism Based Secure Routing Protocol for Internet of Things  
*Youhua Xia, Hui Lin, and Li Xu*
- LSA-Based Chinese-Slavic Mongolian NER Disambiguation  
*Jiang Yupeng, Hou Hongxu, and Yang Ping*
- REODM: Identify Local Outliers in Big Data  
*Yongchang Gao, Haowen Guan, and Bin Gong*
- Ontology-Based Requirements Generation for Credibility Validation of Safety-Critical System  
*Rui Li, Shilong Ma, and Wentao Yao*
- IVOrpheus - A Proposal for Interaction by Voice Commands in Three-Dimensional Environments of Information Visualization  
*Lennon Furtado, Brunelli Miranda, Nelson Neto, and Bianchi Meiguins*
- Evaluating User Influence Based on the Properties of User in Social Networks  
*Yong Yao, Bian Li, and Lei Peng*
- Dealing with Uncertainties in Software Project Management  
*Marcelo Marinho, Suzana Sampaio, Alexandre Luna, Telma Lima, and Hermano Moura*
- Rankboost-Based Result Merging  
*Benjamin Ghansah, Shengli Wu, and Nathaniel Ghansah*
- Blind Detection of Image Splicing Based on Fuzzy Run-Length  
*Zenan Shi, Xuanjing Shen, Haipeng Chen, and Xiang Li*
- Real Time Bi-directional Traffic Management Support System with GPS and WebSocket  
*Md. Rahatur Rahman and Shamim Akhter*
- Power System Applications Integration for the Smart Grid  
*Do Eun Oh and Hyun Soo Kim*
- Static Group Privacy Protection Mechanism Based on Cloud Model  
*Ruxiang Zhai, Kun Zhang, and Mingjun Liu*
- Snapshot Integration Routing for High-Resolution Satellite Sensor Networks Based on Delay-Tolerant Network  
*Pubin Song, Jing Wu, Hao Jiang, Jianguo Zhou, Zijing Cheng, Zhaojun Wang, and Tianyi Cao*
- Developing Energy-Aware Task Allocation Schemes in Cloud-Assisted Mobile Workflows

*Bo Gao, Ligang He, Xin Lu, Cheng Chang, Kenli Li, and Keqin Li*

- Analysis of Urban Residential Water Consumption Based on Smart Meters and Fuzzy Clustering  
*Ji Yang, Yong Li, Nan Feng Zhang, Jing Feng Yang, Ke Kuang, Yue Hua Hu, and Wen Guang Qi*
- Universal Random Number Generation with Field-Programmable Analog Array and Magnetic Tunneling Junction (MTJ) Devices  
*Yu Bai and Mingjie Lin*
- Integrated QoS Assessment of Web Services  
*Olga Georgieva and Dessislava Petrova-Antonova*
- A Simple Software Development Methodology Based on MVP for Android Applications in a Classroom Context  
*Carmen N. Ojeda-Guerra*
- Predicting the Effects of DDoS Attacks on a Network of Critical Infrastructures  
*William Hurst, Nathan Shone, and Quentin Monnet*
- A Three-Stage Process to Detect Outliers and False Positives Generated by Intrusion Detection Systems  
*Fatma Hachmi, Khadouja Boujenfa, and Mohamed Limam*
- Linear (k, n) Secret Sharing Scheme with Cheating Detection  
*Yan-xiao Liu, Zhi-xiao Wang, and Wen-yao Yan*
- Using Dropped Call as an Authentication Factor  
*Balwinder Sodhi*
- Empirical Analysis of Rate Limiting + Leap Ahead (RL+LA) Countermeasure against Witty Worm  
*Khurram Shahzad and Steve Woodhead*
- Cooperative Socio-aware Dynamic Backoff Optimization for Urban VANETs  
*Matthias Sander Frigau*
- FPGA Based Reconfigurable IPSec AH Core Suitable for IoT Applications  
*Muzaffar Rao, Thomas Newe, Ian Grout, Elfed Lewis, and Avijit Mathur*
- A Method of Handling Control Dependence in Dynamic Taint Analysis  
*Xuefei Wang, Hengtai Ma, and Ke Yang*
- Toward a Secure Android Software Protection System  
*Junfeng Xu, Li Zhang, Yunchuan Sun, Dong Lin, and Ye Mao*
- Cost-Effective Hybrid Replacement Strategy for SSD in Web Cache  
*Qu Li, Xiaofei Liao, Hai Jin, Li Lin, Xia Xie, and Qiongjie Yao*
- A Map-Reduce Method for Training Autoencoders on Xeon Phi  
*Qiongjie Yao, Xiaofei Liao, and Hai Jin*
- A Context Aware Reputation Mechanism for Enhancing Big Data Veracity in Mobile Cloud Computing  
*Hui Lin, Jia Hu, Jiajia Liu, Li Xu, and Yulei Wu*