

**The 4th International Conference on
Ubiquitous Computing Application and
Wireless Sensor Network
(UCAWSN-15)**
&
**The 16th International Conference on
Parallel and Distributed Computing,
Applications and Technologies
(PDCAT-15)**

July 8-10, 2015
Jeju, Korea

Organized by

KIPS CSWRG

2015 International Conferences (Sponsored / Technically Sponsored by KIPS / KIPS SWRG)

December 16-18, Bangkok, Thailand

- The 7th International Conference on Computer Science and its Applications (CSA-15)
- The 10th International Conference on Ubiquitous Information Technologies and Applications (CUTE-15)

Message from the UCAWSN 2015 General Chairs

The 4th International Conference on Ubiquitous Computing Application and Wireless Sensor Network (UCAWSN-14) is an event of the series of international scientific conferences. This conference takes place in Jeju, Korea, July 8-10, 2015. The UCAWSN-15 will be the most comprehensive conference focused on the various aspects of Ubiquitous Computing Application and Wireless Sensor Network (UCA-WSN). The UCAWSN-15 will provide an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of UCAWSN. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject.

The papers included in the proceedings cover two tracks: Track 1 - Ubiquitous Computing and Track 2 - Wireless Sensor Network. Accepted and presented papers highlight new trends and challenges of Ubiquitous Computing Application and Wireless Sensor Network. The presenters showed how new research could lead to novel and innovative applications. We hope you will find these results useful and inspiring for your future research.

We would like to express our sincere thanks to the Program Chairs: Gangman Yi (Gangneung-Wonju National University, Korea), Yuh-Shyan Chen (National Taipei University, Taiwan), Xiaohong Peng (Aston University, UK), Ali Abedi (Maine University, US), Neil Y. Yen (the University of Aizu, Japan), Jen Juan Li (North Dakota State University, USA), Hongxue (Harris) Wang (Athabasca University, Canada), Lijun Zhu (ISTIC, China), and all Program Committee members and all the additional reviewers for their valuable efforts in the review process, which helped us to guarantee the highest quality of the selected papers for the conference. Our special thanks go to the invited speaker who kindly accepted our invitations, and helped to meet the objectives of the conference: Prof. Doo-soon Park (SoonChunHyang University, Korea). We cordially thank all the authors for their valuable contributions and the other participants of this conference. The conference would not have been possible without their support. Thanks are also due to the many experts who contributed to making the event a success.

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C.S. Raghavendra, University of Southern California, USA
Young-Sik Jeong, Dongguk University, Korea
Jason C. Hung, Overseas Chinese University, Taiwan
Hanmin Jung, KISTI, Korea
Yang Xiao, University of Alabama, USA

Message from the UCAWSN 2015 Program Chairs

Welcome to the 4th International Conference on Ubiquitous Computing Application and Wireless Sensor Network (UCAWSN-15), which is held in Jeju on July 8-10, 2015. UCAWSN 2015 is the most comprehensive conference focused on the various aspects of information technology. UCAWSN 2015 provides an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of UCAWSN such as Ubiquitous and context-aware computing, context-awareness reasoning and representation, locations awareness services, architectures, protocols and algorithms of WSN, energy, management and control of WSN, etc. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications in UCA-WSN. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject.

For UCAWSN 2015, we received many paper submissions, after a rigorous peer review process, we accepted the articles with high quality for the UCAWSN 2015 proceedings. All submitted papers have undergone blind reviews by at least three reviewers from the technical program committee, which consists of leading researchers around the globe. Without their hard work, achieving such a high-quality proceeding would not have been possible. We take this opportunity to thank them for their great support and cooperation. We would like to sincerely thank the following invited speaker who kindly accepted our invitations, and, in this way, helped to meet the objectives of the conference: Prof. Young-Sik Jeong (Dongguk University, Korea) and Hwa-Young Jeong (Kyung Hee University, Korea). Finally, we would like to thank all of you for your participation in our conference, and also thank all the authors, reviewers, and organizing committee members. Thank you and enjoy the conference!

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Gangman Yi, Gangneung-Wonju National University, Korea
Yuh-Shyan Chen, National Taipei University, Taiwan
Xiaohong Peng, Aston University, UK
Ali Abedi, Maine University, US
Neil Y. Yen, the University of Aizu, Japan
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Message from the PDCAT 2015 General Chairs

The 16th International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT) is a major forum for scientists, engineers, and practitioners throughout the world to present their latest research, results, ideas, developments and applications in all areas of parallel and distributed computing. Beginning in Hong Kong in 2000, PDCAT-15 will be held in Jeju, Korea after 15 years of successful journey through various countries/regions including Taiwan, Japan, China, Singapore, Australia, New Zealand, and Korea across Asia-Oceania. We are inviting new and unpublished papers.

The conference papers included in the proceedings cover the following topics: PDCAT of Networking and Architectures, Software Systems and Technologies, Algorithms and Applications, and Security and Privacy. Accepted and presented papers highlight new trends and challenges of Parallel and Distributed Computing, Applications and Technologies. We hope readers will find these results useful and inspiring for their future research.

We would like to express our sincere thanks to Steering Chair: Hong Shen (University of Adelaide, Australia). Our special thanks go to the Program Chairs: Joon-Min Gil (Catholic University of Daegu, Korea) and Ching-Hsien (Robert) Hsu (Chung Hua University, Taiwan), all Program Committee members and all reviewers for their valuable efforts in the review process that helped us to guarantee the highest quality of the selected papers for the conference.

PDCAT 2015 General Chairs

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Hamid R. Arabnia, University of Georgia, USA
Han-Chieh Chao, National Ilan University, Taiwan
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Neil Y. Yen, The University of Aizu, Japan

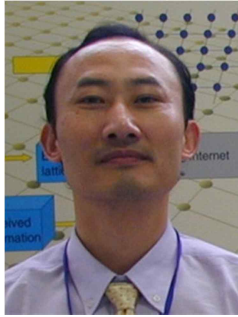
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Local Arrangement Chairs

Namje Park, Jeju National University, Korea
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Invited Speaker



Privacy Protection for Recommender Systems in Internet Commerce

Prof. Hong Shen
The University of Adelaide, Australia

Abstract

As the result of advancement of information and communication technologies, Internet commerce is evolving to become a major form of business activities in our modern society. A recommender system makes recommendations that are of potential preference to a targeted client by aggregating information from clients with similar preferences. While recommender systems play a critical role in Internet commerce for product promotion, sale pattern analysis, consumer satisfaction improvement and supply chain optimization, they also post serious privacy concerns on possible exposure of preference information to adversaries. In this talk, I will first introduce the problem of privacy preservation in recommender systems, techniques and approaches to tackle it. I will then summarise our recent work on data randomization, hypergraph identity anonymisation and probabilistic candidate selection for recommendation as respective approaches to achieve privacy protection in preferences, preference relationships and recommendation method three levels. As exemplary work I will present our recently proposed algorithm for privacy-preserving recommendation by partitioned probabilistic neighbourhood-based collaborative filtering. Finally I will conclude the talk by presenting some open problems for future research.

Biography

Hong Shen is Professor of Computer Science and Leader of Networks, Parallel and Distributed Systems Research Group of the Faculty of Engineering, Computer and Mathematical Sciences in the University of Adelaide, Australia. He is also a specially-appointed "1000 People Plan" Professor and Director of Institute of Advanced Computing in Sun Yat-sen University, China. He received the B.Eng. degree from Beijing University of Science and Technology, M.Eng. degree from University of Science and Technology of China, Ph.Lic. and Ph.D. degrees from Abo Akademi University, Finland, all in Computer Science. He was Professor and Chair of the Computer Networks Laboratory in Japan Advanced Institute of Science and Technology (JAIST) during 2001-2006, and Professor of Computer Science at Griffith University, Australia, where he taught 9 years since 1992. With main research interests in parallel and distributed computing, algorithms, data mining, privacy preserving computing, high performance networks and multimedia systems, he has published more than 300 papers including over 100 papers in international journals such as a variety of IEEE and ACM transactions. Prof. Shen received many honours/awards including China National Endowed Expert of "1000 People Plan", Chinese Academy of Sciences "Hundred Talents", National Education Commission Science and Technology Progress Award, and Chinese Academy of Sciences Natural Sciences Award. He served on the editorial board of several major international journals and chaired numerous conferences.

PROGRAM SCHEDULE FOR UCAWSN & PDCAT 2015

Day 1, July 8, 2015				
Time	Min	HALL -A	HALL B	HALL C
08: 40-09: 00	20	Registration		
09: 00-10: 30	90	Session A-1 UCAWSN Chair: Kwang-il Hwang	Session B-1 UCAWSN Chair: Su-Wan Park	Session C-1 PDCAT Chair: JoonMin Gil
10: 30-10: 40	10	Coffee Break		
10: 40-12: 10	90	Session A-2 UCAWSN Chair: Yunsick Sung	Session B-2 UCAWSN Chair: Jungho Kang	Session C-2 PDCAT Chair: Shusen Wu
12: 10-13: 30	80	Lunch		
13: 30-14: 30	40	Keynote: Privacy Protection for Recommender Systems in Internet Commerce Prof. Hong Shen The University of Adelaide, Australia Chair: Kwang-il Hwang		
14: 30-14: 40	10	Coffee Break		
14: 40-16: 10	90	Session A-3 UCAWSN (BIC) Chair: Haejong Joo	Session B-3 UCAWSN Chair: Yunsick Sung	Session C-3 UCAWSN Chair: Jongsuk Lee
16: 10-16: 20	10	Coffee Break		
16: 20-17: 40	80	Session A-4 UCAWSN Chair: Su-Wan Park	Session B-4 UCAWSN Chair: Jongsup Lee	Session C-4 UCAWSN Chair: Sukjoo Hong
18: 00-20: 00	120	Banquet		

Day 2, July 9, 2015				
Time	Min	HALL -A	HALL-B	HALL-C
08: 20-08: 40	20	Registration		
08: 50-10: 00	70	Session A-5 UCAWSN Chair: Hwa-Young Jeong	Session B-5 UCAWSN Chair: Gangman Yi	Session C-5 UCAWSN Chair: DeokGyu Lee
10: 30-12: 00	90	Organizing Committee Meeting		

Day 3, July 10, 2015				
Time	Min	HALL -A	HALL-B	HALL-C
10: 00-12: 00	120	PDCAT - Organizing Committee Meeting		
13: 00-15: 00	120	UCAWSN - Organizing Committee Meeting		
16: 00-17: 00	60	Local Arrangement Committee Meeting		

- 1. A paper presentation should be made by one of authors of the paper for 20 minutes (15 minutes for the presentation itself and 5 minutes for Q/A).**
- 2. All speakers of each session should meet the session chair at their room 10 minutes before the session begins.**
- 3. Windows 7 laptops running the Adobe Reader and Microsoft Office for paper presentations will be prepared. Please prepare for your presentation.**

**DETAILED SCHEDULE FOR
THE 4TH INTERNATIONAL CONFERENCE ON
UBIQUITOUS COMPUTING APPLICATION AND WIRELESS
SENSOR NETWORK (UCAWSN-15)
AND
THE 16TH INTERNATIONAL CONFERENCE ON PARALLEL
AND DISTRIBUTED COMPUTING, APPLICATIONS AND
TECHNOLOGIES (PDCAT-15)**

Day 1, July8, 2015 (Wednesday)

08: 40-09: 00 Registration

**09: 00-10: 30 Session A-1 : UCAWSN
(HALL A)
(Chair: Kwang-il Hwang)**

- 1. Reducing Frequency of Rekeying Operation in Ad-hoc Networks**
YunSeok Yeo, Tai-Myoung Chung
- 2. System level simulation platform for Cognitive LTE**
Yiming Fang, Yong Zhang, Mei Song, Wei Hu
- 3. A Modal Test Comparison of Wired and Wireless Accelerometers to a Cantilever Beam**
SurgwonSohn
- 4. A Study on a Reefer Container Monitoring System based on IoT**
Young Sik Moon, Jun Woo Jung, Sung Pill Choi, Tae HoonKim, ByungHaLee, ChaeSooKim, Jae Joong Kim, Hyung Rim Choi
- 5. SQL-to-MapReduce Translation for Efficient OLAP Query Processing with MapReduce**
HyeonGyu Kim
- 6. A Framework for Multi-sources Heterogeneous Information Fusion in the Internet of Things**
Feng Wang, Liang Hu, Jin Zhou, Kuo Zhao

**09: 00-10: 30 Session B-1 : UCAWSN
(HALL B)
(Chair: Su-Wan Park)**

- 1. A Secure Storage Mechanism for Mobile Device Security Platform Based on Domain Separation**
Su-WanPark, JeongNyeoKim
- 2. Automatic Lighting Control Middleware System Controlled by User Emotion based on EEG**

SoyoungAhn, DongkyooShin, DongilShin

3. **XML-based Query Language and Processing for IP-RFID Tag Data Stream**
Chang HyunPark, Byoung Kwon Park, Hyung Rim Choi, Jae Joong Kim
4. **Development of Real-time emotion recognition interface using EEG/ECG Complex bio-signal**
DongMin Shin, DongKyooShin, DongIlShin
5. **Hand recognition method with Kinect**
DoyeobLee, DongkyooShin, Dongkil Shin
6. **Connected components labeling based on union-find operations applied to connected branches**
NiuLianqiang, Chen Xin, Zhang Shengnan, Peng Min

09: 00-10: 30 **Session C-1 : PDCAT**
(HALL C)
(Chair: JoonMin Gil)

1. **Representing Higher Dimensional Arrays into a Generalized Two-dimensional Array**
K. M. Azharul Hasan, Md. Abu Hanif Shaikh
2. **Review and Comparison of Mobile Payment Protocols**
Pensri pukkasenung, Roongroj Chokngamwong
3. **A portable and platform independent file system for large scale peer-to-peer systems and distributed applications**
Andreas Barbian, Stefan Nothaas, Timm J. Filler, Michael Schoettner
4. **POFOX: Towards Controlling the Protocol Oblivious Forwarding Networks**
Tan Xiaodong, Zou Shan, GuoHaoran, Tian Ye
5. **Server Monitoring Techniques Using Open Source**
Sang-jun Kim, Jayon Bae, Yong-lak Choi
6. **Implementation of the Data Analysis Systems Using JSP and Statistical Package R**
Yong-Pil Lee, Cheol-Min Jang, Jayon Bae, Hyun-You Choi, Yong-Lak Choi

10: 30-10: 40 **Coffee break**

10: 40-12: 10 **Session A-2 : UCAWSN**
(HALL A)
(Chair: Yunsick Sung)

1. **A Lightweight Device Authentication Protocol using Keyed Hash in Internet of Things**
SunggyunJang, DucsunLim, JinyeongKang, Dongbin Lee, InwheeJoe
2. **Beacon Distance Measurement Method in Indoor Ubiquitous Computing Environment**
Yunsick Sung, JeonghoonKwak, YoungsikJeong, Jong Hyuk Park

3. The Social Balanced Densest Subgraph Problem

FeiHao, Doo-SoonPark, Zheng Pei, HwaMinLee, Young-SikJeong, Jong-Hyuk Park

4. Optimization Techniques to Enable Execution Offloading for 3D Video Games

DonghyunKwon, SeungjunYang, YunheungPaek, KwangmanKo

5. Implementation of Mass-Spring System using Parallel Computing on Mobile Device

Min Hong, Jae-Hong Jeon, Hyo-Sub Yum, Seung-Hyun Lee

6. Research on content-oriented middleware design for 6DOF of Motion Processing

ZhenhuaHao, Fangqin Xu

10: 40-12: 10 Session B-2 : UCAWSN

(HALL B)

(Chair: Jungho Kang)

1. Fall Risk Assessment using Wearables - A Survey

AsbjørnDanielsen, Hans Olofsen, BerntBremdal

2. MRF-based Refinement for Foreground Segmentation Using Codebook Modeling

Huibai Wang, Shaobo Yu, Wei Song, Yulong Xi, Kyungeun Cho, Kyhyun Um

3. Indoor Location-based Natural User interface for Ubiquitous Computing Environment

JeonghoonKwak, Yunsick Sung

4. The Novel Differential Evolution Algorithm Based on Cellular Automata

Qingfeng ding, Guoxinzheng

10: 40-12: 10 Session C-2 : PDCAT

(HALL C)

(Chair: Shusen Wu)

1. A Comparison of Performance between SQL Layer's Structural Improving MariaDB and MongoDB

Seung-Hoon Cha, Ye-Won Lee, Hyun-You Choi, Yong-Lak Choi

2. An Experimental Study on Social Regularization with User Interest Similarity

Zhiqi Zhang, Hong Shen

3. Evaluating MapReduce for Large Scale Seismic Data Sorting

Chao Li, Changhai Zhao, Yida Wang, Haihua Yan

4. Interoperation of Distributed MCU Emulator/Simulator for Operating Power Simulation of Large-Scale Internet of Event-Driven Control Things (IoEVCT)

Sanghyun Lee, Bong Gu Kang, Tag Gon Kim and Daejin Park

5. Hierarchical Caching Management for Software Defined Content Network based on Node Value

Jing Liu, Lei Wang, Yuncan Zhang, Zhenfa Wang, Song Wang

6. OCLS: A Simplified High-level Abstraction based Framework for Heterogeneous Systems

Shusen Wu, Xiaoshe Dong, Heng Chen, Bochao Dang

12: 10-13: 30 Lunch

13: 30-14: 30 **Keynote Speech**
(HALL A)
(Chair: Kwang-il Hwang)

Privacy Protection for Recommender Systems in Internet Commerce

Prof. Hong Shen
The University of Adelaide, Australia

14: 40-16: 10 **Session A-3 : UCAWSN (BIC)**
(HALL A)
(Chair: Haejong Joo)

1. **Intelligent Decision-based Smart Group Scheduler**
Yea-Bok Lee, Yi-Jun Min, Seung-Bum Kim, Su-Jeong Kwon, Sang-Soo Kim
2. **A Study on the MCA Rule Mapper for Cloud Computing Environments**
Joong-il Woo, Won-Geun Oh, Jung-Eun Kim, Joon-Mo Kim, Dong-Soo Park
3. **Physical Fatigue Analysis Algorithm Using HRV Big Data**
Kyoung-Jukim, Sang-Seo Lee, U-Seok Choi, Zheng Yi, Kyoung-Sup Kim
4. **How Different Connectivity Patterns of Individuals within an Informal Communication Network of an Organization Can Speed up Organizational Learning**
Somayeh Koohborfardhaghghi, Daebum Lee, Juntae Kim
5. **Modelling and Simulation of Grid Connected Photovoltaic System**
Moon-Taek Cho, Hyun-Jong Kim, Chung-Sik Lee, Kab-Soo Kim
6. **The Input / Output Linearization of The Time-varying Nonlinear System with a Model Uncertainty**
Jong-Suk Lee, Jong-Yong Lee, Jong-Sub Lee, Seongsu Cho
7. **Intelligent-situation-recognition-based Integrated Plant Growth Management Platform**
Sang-Soo Kim, Moon-Taek Cho, Hae-Jong Joo, Euy-Soo Lee
8. **A Study on Big-Data Business Models for Constructing a Business Start-up Ecosystem**
Hye-Sun Kim, Man-Gyu Choi, Hyoung-Ro Kim, and Byung-Hoon Jeon

14: 40-16: 10 **Session B-3 : UCAWSN**
(HALL B)
(Chair: Yunsick Sung)

1. **GPU-based fast refinements for high-quality color volume rendering**

Byeonghun Lee, Koojoo Kwon, Byeong-Seok Shin

2. **Vertex Concentration for Effective Terrain Tessellation**
BatamgalanEnkhtsog, Eun-Seok Lee, YoungsikJeong, Byeong-Seok Shin
3. **Flexible Multi-level Regression Model for Prediction of Pedestrian Abnormal Behavior**
Yu-Jin Jung, Yong-Ik Yoon
4. **Real-time Gesture Recognition for a Virtual Reality System using an Armband, a Head-Mounted Display and a Drone**
Phuong Chu, Hoang Vu, Yulong Xi, Kyhyun Um, Kyungeun Cho
5. **A Simulator for Virtual Invoked Reality Environment Design and Experiment**
Sohyun Sim, YunjiJeong, Kyhyun Um, Kyungeun Cho
6. **Watermarking Technique Based on Three-coefficient Comparison in DCT Domain**
Qiudong Sun, Liandong Wang, Yufeng Shao, JiancunZuo

14: 40-16: 10 **Session C-3 : UCAWSN**
(HALL C)
(Chair: Jongsuk Lee)

1. **ASR Error Management Using RNN Based Syllable Prediction for Spoken Dialog Applications**
Byeongchang Kim, Junhwi Choi, Gary Geunbae Lee
2. **A Two-Stage Approach to Multi-Intent Detection for Spoken Language understanding**
Byeongchang Kim, SeonghanRyu, Gary Geunbae Lee
3. **Rapid Auto-scaling Mechanism using GPU based on Desktop Storage Virtualization with Cloud Infrastructure**
Boo-Kwang Park, Hyun-Woo Kim, HwiRim Byun, Yoon-A Heo, Eun-Ha Song, Young-SikJeong
4. **Light-Weight Authentication RFID Protocol Based on Secret Sharing**
Jungho Kang, Sangkee Suk
5. **Registration and Authentication Protocol for IoT Device Conforming to OneM2M Standards**
Hyungjoo Kim, Moon-seog Jun
6. **Study on Cluster Analysis Characteristics and Classification Capabilities - a Case Study of Satisfaction Regarding Hotels and Bed & Breakfasts of Chinese Tourists in Taiwan**
Seng-Su Tsang, Wen-Cheng Wang

16: 10-16: 20 **Coffee break**

16: 20-17: 40 **Session A-4 : UCAWSN**
(HALL A)
(Chair: Su-Wan Park)

1. **Mutual authentication method considering mobility of nodes with CoAP in the oneM2M environment**
Mansikkim, ByungWookJin, Moon-seong Jun
2. **Lightweight node authentication method considering energy efficiency in sensor network environment**
JaeSeung Lee, HeeMan Lee, Moon-Seog Jun
3. **Study about service certification system using Virtualization in cloud environment**
Junho Song, DoMoon Kim, Moon-seog Jun
4. **A Design of Enhanced Secure Mechanisms for Privacy Protection in Based E-Passport**
Yoonho Lee, Hanna you, Moon-seog Jun
5. **Transfer Nonnegative Matrix Factorization for Image Representation**
Chenhui Wang, Tianchun Wang, Guangwei Liu, Huaiyu Xu
6. **Research on the Communication Method of Mobile Network Shadow Fading Based on Interference Alignment Algorithm**
Wei Zhou, Su Yu

16: 20-17: 40 Session B-4 : UCAWSN
(HALL B)
(Chair: Jongsup Lee)

1. **Data Security Model for STaaS on Private Cloud**
Aijaz Ali Brohi, MajedAljohani, Jong Hyuk Park, Young-SikJeong
2. **Group Data Sharing Scheme based on Attribute Encryption in Cloud Computing Environments**
Su-Hyun Kim, Im-Yeong Lee
3. **Secure Smart Service for Vehicular Cloud Computing Environment**
HyungjinIm, JeongKyu Lee, Jong Hyuk Park
4. **HBSS-MCC: A Human Behavior based Smartphone Security System in Mobile Cloud Computing**
Jae WoongJoo, Jong Hyuk Park
5. **A Secure Service Research for Communication between Smart devices and Vehicles**
Jae WoongJoo, Jong Hyuk Park
6. **Research on Fourth-order S-shape Acc/Dec Control algorithm based on parameter restrictio**
Fang Song, Su Yu, Tao Chen, Li-ning Sun

16: 20-17: 40 Session C-4 : UCAWSN
(HALL C)
(Chair: Sukjoo Hong)

1. **The Spreadsheet Designing of Measurement System Analysis Base on AVOVA method**

Xin Li-Hua, Leng Xing-Hua, Yu Su

2. The Design of the Marine Seismic Streamer Controller System Based on Ethernet Technology

Ye-min Cai, Jia Tang, Zhuo-hao Lu, Wei-jing Zhang, Su Yu

3. Trust Management in Ubiquitous Computing

Yihan Wang, SuYu

4. Insider Detection by Analyzing Process Behaviors of File Access

Xiaobin Wang, Yongjun Wang, Qiang Liu, Yonglin Sun, PeidaiXie

5. The Design and Implementation of Tower Defense Game based on Flash

Minhui Wang, Xia Gao

6. Belief Propagation-based Path Duration Analysis in Cognitive Vehicular Ad Hoc Network

Huma Ghafoor, Insoo Koo

7. The Greedy Approach to Group Students for Cooperative Learning

Byoung Wook Kim, SungKyu Chun, Won Gyu Lee, Jin Gon Shon

18: 00-20: 00 Banquet

Day 2, July9, 2015 (Thursday)

08: 20-08: 40 Registration

08: 50-10: 00 Session A-5 : UCAWSN
(HALL A)
(Chair: Hwa-Young Jeong)

1. **Study on the Performance Evaluation of Online Teaching Using the Quantile Regression Analysis and Artificial Neural Network**
Wen-Tsao Pan, Chiung-En Huang, Chiung-Lin Chiu
2. **The Design of The Shortest Path Algorithm Based on Raster Data**
Kong Lihong, Yu Su, Huang Bo
3. **User-Centered Intelligent Interface of Vending Machines Modeling**
YigeGao, Yanqun Huang, Jie Zhang
4. **The Cluster Algorithm for Wireless Sensor Networks Using the Residual Energy and Position**
Suk-Ju Hong, Jong-Yong Lee, Jong-Sup Lee, Seongsoo Cho
5. **Hierarchical Symmetric Key Management Scheme for Tree-based Sensor Networks**
Kwang-il Hwang, Seung-Kyu Park, Min-Sik Kim, Hyo-Seong Kim, Suk-Jun Choi
6. **Development of Consolidated Computer Teaching Materials for TED Training**
JeongyeunKim, and Namje Park
7. **STEAM Education and Bioenergy to Resolve Problems in Real Life**
Aekyung Shin, Jeongyeun Kim, and Namje Park
8. **An Exploratory Study on Criteria for Web Courseware Evaluation**
HeupilKim

08: 50-10: 00 Session B-5 : UCAWSN
(HALL B)
(Chair: Gangman Yi)

1. **A Study of Development of Thai University To Promote the Cultural Tourism Case Study: SuanSunandhaRajabhat University**
Weeraweerasonphon
2. **The Urbanization Impacts on China? Rural-urban Income Gap and Economic Growth**
Shufang Qian
3. **Inference for Multiclass Gaussian Process Classification Model using Variational EM Algorithm and Laplace Approximation**
Wanhyun Cho, SanggyunKim, Soonyoung Park
4. **An Emergency Evacuation System with Indoor Positioning for Buildings in Disaster Situations using Internet of Things**
SunggyunJang, Cheng Wang, InwheeJoe
5. **Optimal quantization and efficient cooperative spectrum sensing in cognitive radio networks**
Hurmat Ali Shah, In-Soo Koo

6. Research Trends for Pipeline Development in Genome Assembly

Jaehee Jung, Gangman Yi

08: 50-10: 00 Session C-5 : UCAWSN/PDCAT

(HALL C)

(Chair: DeokGyu Lee)

- 1. A Faster Algorithm to Build New Users Similarity List in Neighbourhood-based Collaborative Filtering**
Zhigang Lu, Hong Shen
- 2. Trajectory CLustering Based on Real-time Storage Structure Update**
Yanyun Chen, Hong Shen
- 3. The Influence of Data Centre Usage on Symmetry in Data Centre Network Design**
Alejandro Erickson, Iain A. Stewart
- 4. CodeExtract : a source-level transformation approach for program analysis**
Qiliangzhang, Kun zhou, Wei zhang, Yu zhang
- 5. Efficient Algorithms for the Energy Constrained Minimum Cost Steiner Tree Problem**
Nianchen Zou, LongkunGuo
- 6. Towards an Elastic Energy Consumption Model for HPC Applications in the Cloud**
Vinicius Rodrigues, Gustavo Rostirolla, Rodrigo Righi, Cristiano Costa
- 7. Secure SCADA Communication for Offshore Wind Energy**
Seunghwan Ju, Jaekyoung Lee, Joonyoung Park, Junshin Lee
- 8. Rhymes+: A Software Shared Virtual Memory System with Three Way Coherence Protocols on the Intel Single-Chip Cloud Computer**
Chit-Ho Dominic HUNG, Francis Chi-Moon LAU, Ricky Yu-Kwong Kwok

10: 30-12: 00 Organizing Committee Meeting

Day 3, July 10, 2015 (Friday)

[ONLY FOR INVITED]

10: 00-12: 00 PDCAT - Organizing Committee Meeting

13: 00-15: 00 UCAWSN - Organizing Committee Meeting

16: 00-17: 00 Local Arrangement Committee Meeting

Conference Venue



Reception & Banquet will hold at Shineville Luxury Resort
<http://www.shineville.com>

Banquet Date: PM 6: 00 ~ 8: 00, July 8, 2015

Location

ShineVille Luxury Resort is located in the clean sea area of #16, Tosan-ri, Pyoseon-Myeon, Seoguiipo-si, or Tosan Tourism District, the only marine tourism district of Jeju, international free city



Jeju International Airport and ShineVille Resort

- Jeju International Airport → ShineVille Resort
10:30 | 13:30 | 15:30 | 17:00 | 20:30
- ShineVille Resort → Jeju International Airport
09:00 | 12:00 | 13:30 | 15:30 | 19:00

• ShineVille Resort shuttle bus waiting place:
In front of the stand signboard of 'Hi Mart' at #7 large vehicle car park
of Jeju International Airport

ShineVille Resort and ShineVille C.C

- ShineVille Resort → ShineVille C.C 06:30 | 07:10 | 07:50 | 08:30 | 11:00 | 12:10 |
12:50 | 13:50 | 14:50 | 16:40 | 17:40
- ShineVille C.C → ShineVille Resort 06:40 | 07:20 | 08:00 | 08:40 | 11:10 | 12:20 |
13:00 | 13:50 | 15:00 | 17:00 | 18:00

• Golf Course Shuttle Bus Information ShineVille Resort Concierge 82 64-780-7208