

**The 11th International Conference on  
Future Information Technology  
(FutureTech 2016)  
&  
The 10th International Conference on  
Multimedia and Ubiquitous Engineering  
(MUE 2016)**

April 20-22, 2016  
Beijing, China

**Organized by**

**FutureTech, MUE & KIPS CSWRG**

**2016 International Conferences**  
(Sponsored / Technically Sponsored by KIPS / KIPS SWRG)

**July 6-10, Jeju, Korea**

-The 5th International Conference on Ubiquitous Computing Application and Wireless Sensor Network (UCAWSN-16)

**Dec. 19 - 21, Phuket, Thailand**

- The 11st KIPS International Conference on Ubiquitous Information Technologies and Applications (CUTE 2016)

## Message from the FutureTech2016 General Chairs

FutureTec2016 is the 11th event of the series of international scientific conference. This conference takes place on April 20-22, 2016 in Beijing, China. The aim of the FutureTech2016 is to provide an international forum for scientific research in the technologies and application of information technology. FutureTech 2016 is the next edition of FutttureTech2015 (Hanoi, Vietnam), FutureTech2014 (Zhangjiajie, China), FutureTech2013 (Gwangju, Korea), FutureTech2012 (Vancouver, Canada), FutureTech2011 (Loutraki, Greece), FutureTech2010 (Busan, Korea, May 2010) which was the next event in a series of highly successful the International Symposium on Ubiquitous Applications & Security Services (UASS-09, USA, Jan. 2009), previously held as UASS-08 (Okinawa, Japan, Mar. 2008), UASS-07 (Kuala Lumpur, Malaysia, August, 2007), and UASS-06 (Glasgow, Scotland, UK, May, 2006).

The conference papers included in the proceedings cover the following topics: Hybrid Information Technology, High Performance Computing, Cloud and Cluster Computing, Ubiquitous Networks and Wireless Communications, Digital Convergence, Multimedia Convergence, Intelligent and Pervasive Applications, Security and Trust Computing, IT Management and Service, Bioinformatics and Bio-Inspired Computing, Database and Data Mining, Knowledge System and Intelligent Agent, Game and Graphics, and Human-centric Computing and Social Networks. Accepted and presented papers highlight new trends and challenges of future information technologies. We hope readers will find these results useful and inspiring for their future research.

We would like to express our sincere thanks to Program Chairs: Gangman Yi (Gangneung-Wonju National University, Korea), Zhangdui Zhong (Beijing Jiaotong University, China), Yu Chen (State University of New York, USA), Mingquan Zhou (Beijing Normal University, China), Kwang-il Hwang (Incheon National University, Korea), Ka Lok Man (Xi'an Jiaotong-Liverpool University, China), Neil Yen (University of Aizu, Japan), Ying Zhao (Beijing University of Chemical Technology, China), 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.

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.

FutureTech 2016 General Chairs

Jia Weijia, Shanghai Jiaotong University, China  
Wanlei Zhou, Deakin University, Australia  
Young-Sik Jeong, Dongguk University, Korea  
Qun Jin, Waseda University, Japan  
Hong Shen, University of Adelaide, Australia  
Muhammad Khurram Khan, King Saud University, Saudi Arabia

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For FutureTech2016, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the FutureTech2016 proceedings, published by the Springer. All submitted papers have undergone blind reviews by at least two 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 speakers who kindly accepted our invitations, and, in this way, helped to meet the objectives of the conference: Prof. Yi Pan, Regents' Professor of Computer Science, Interim Associate Dean and Chair of Biology, Georgia State University, USA. 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!

FutureTech 2016 Program Chairs

Gangman Yi, Gangneung-Wonju National University, Korea  
Zhangdui Zhong, Beijing Jiaotong University, China  
Yu Chen, State University of New York, USA  
Mingquan Zhou, Beijing Normal University, China  
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## Message from the MUE2016 General Chairs

MUE 2016 is the 10th event of the series of international scientific conference. This conference takes place on April 20-22, 2016 in Beijing, China. The aim of the MUE2016 is to provide an international forum for scientific research in the technologies and application of Multimedia and Ubiquitous Engineering. Ever since its inception, International Conference on Multimedia and Ubiquitous Engineering has been successfully held as MUE-15 (Hanoi, Vietnam, May 2015), MUE-14 (Zhangjiajie, China, May 2014), MUE-13 (Seoul, Korea, May 2013), MUE-12 (Madrid, Spain, July 2012), MUE-11 (Loutraki, Greece, June 2011), MUE-10 (Cebu, Philippines, August 2010), MUE-09 (Qingdao, China, June 2009), MUE-08 (Busan, Korea, April 2008), and MUE-07 (Seoul, Korea, April 2007).

The conference papers included in the proceedings cover the following topics: Multimedia Modeling and Processing, Multimedia and Digital Convergence, Ubiquitous and Pervasive Computing, Ubiquitous Networks and Mobile Communications, Ubiquitous Networks and Mobile Communications, Intelligent Computing, Multimedia and Ubiquitous Computing Security, Multimedia and Ubiquitous Services, Multimedia Entertainment. Accepted and presented papers highlight new trends and challenges of Multimedia and Ubiquitous Engineering. 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: James J. (Jong Hyuk) Park (SeoulTech, Korea). Our special thanks go to the Program Chairs: Yunsick Sung (Keimyung University, Korea), Wei Song (North China University of Technology, China), Chengcui Zhang (The University of Alabama at Birmingham, USA), Ching-Hsien (Robert) Hsu (Chung Hua University, Taiwan), Lei Wang (Dalian University of Technology, China), 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.

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Albert Zomaya, University of Sydney, Australia  
Hai Jin, Huazhong University of Science and Technology, China  
Gangman Yi, Gangneung-Wonju National University, Korea  
Laurence T. Yang, St. Francis Xavier University, Canada  
Cho-Li Wang, The University of Hong Kong, Hong Kong  
Jianhua Ma, Hosei University, Japan

## Message from the MUE2016 Program Chairs

Welcome to the 10th International Conference on Multimedia and Ubiquitous Engineering (MUE 2016), which will be held in Beijing, China on April 20–22, 2016. MUE2016 will be the most comprehensive conference focused on the various aspects of multimedia and ubiquitous engineering. It will provide an opportunity for academic and industry professionals to discuss recent progress in the area of multimedia and ubiquitous environment. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications in multimedia and ubiquitous engineering. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in these important subjects.

For MUE2016, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the MUE2016 proceedings, published by the Springer. All submitted papers have undergone blind reviews by at least two 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. 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!

MUE 2016 Program Chairs

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Lei Wang, Dalian University of Technology, China, lei.wang@dlut.edu.cn



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## Invited Speaker



### **Parallel Programming on Cloud Platforms — Hand Coding or Automatic**

**Dr. Yi Pan**

Regents' Professor of Computer Science  
Interim Associate Dean and Chair of Biology  
Georgia State University  
Atlanta, Georgia, USA

#### **Abstract**

Cloud computing has gradually evolved into an infrastructural tool for many scientific and business applications with intensive data or computing requirements. One of the challenges in cloud computing now is how to run software efficiently on cloud platforms since lots of classic codes are not capable of being executed in parallel in cloud environments, resulting in low efficiency. It is also costly to redesign and convert current sequential codes into cloud codes on cloud programming models such as MapReduce or Spark. Thus, automatic translation from sequential codes to cloud codes is one of the directions that could resolve the problem of slow code migration from traditional computing platforms to cloud infrastructures. In this talk, I will present several automatic translators (M2M, J2M and J2S) for cloud programming models Map Reduce and Spark. I will provide details of the design of our translators and their performance results through experiments. Comparisons with hand coded cloud programs will also be studied. Our experimental results indicate that the translators not only can precisely translate the sequential Java into cloud codes, but also can achieve almost linear speedup in performance if the data are big enough. In addition, their limitations and shortcomings will also be identified and future directions in this area will be provided.

#### **Biography**

Yi Pan is a Regents' Professor of Computer Science, an Interim Associate Dean and Chair of Biology at Georgia State University, USA. He is also a visiting Changjiang Chair Professor at Central South University, China. Dr. Pan received his B.Eng. and M.Eng. degrees in computer engineering from Tsinghua University, China, in 1982 and 1984, respectively, and his Ph.D. degree in computer science from the University of Pittsburgh, USA, in 1991. His profile has been featured as a distinguished alumnus in both Tsinghua Alumni Newsletter and University of Pittsburgh CS Alumni Newsletter. Dr. Pan's research interests include parallel and cloud computing, wireless networks, and bioinformatics. Dr. Pan has published more than 180 journal papers with over 60 papers published in various IEEE journals. In addition, he has published over 150 papers in refereed conferences. He has also co-authored/co-edited 40 books. His work has been cited more than 6500 times. Dr. Pan has served as an editor-in-chief or editorial board member for 15 journals including 7 IEEE Transactions. He is the recipient of many awards including IEEE Transactions Best Paper Award, several conference Best Paper Awards, IBM Faculty Award, JSPS Senior Invitation Fellowship, IEEE BIBE Outstanding Achievement Award, NSF Research Opportunity Award, and AFOSR Summer Faculty Research Fellowship. He has organized many international conferences and delivered keynote speeches at over 50 international conferences around the world.

# PROGRAM SCHEDULE FOR FUTURETECH & MUE2016

Day 1, April 20, 2016				
Time	Min	HALL -A	HALL B	HALL C
12:40-13:00	20	Registration		
13:00-14:30	90	Session A-1 FT-1 Chair :	Session B-1 MUE-1 Chair :	Session C-1 SusComIT Chair :
14:30-14:40	10	Coffee Break		
14:40-16:10	90	Session A-2 FT-2 Chair :	Session B-2 MUE-2 Chair :	Session C-2 DATICS Chair :
16:10-16:20	10	Coffee Break		
16:20-17:50	90	Session A-3 FT-3 Chair :		Session C-3 BDAA2016 Chair :
17:50-18:00		Break		
18:00-20:00	120	Reception		

Day 2, April 21, 2016				
Time	Min	HALL -A	HALL B	HALL C
08:40-09:00	20	Registration		
09:00-10:30	90	Session A-4 RN <sup>2</sup> Chair :	Session B-4 MUE-3 Chair :	Session C-4 DFIS2016 Chair :
10:30-10:40	10	Coffee Break		
10:40-12:10	90	Session A-5 RN <sup>2</sup> Chair :	Session B-5 DIKI2016 Chair :	Session C-5 DFIS2016 Chair :
12:10-13:20	70	Lunch		
13:20-14:00	40	<b>Keynote: Parallel Programming on Cloud Platforms</b> <b>Prof. Dr. Yi Pan</b> Regents' Professor of Computer Science Interim Associate Dean and Chair of Biology Georgia State University, Atlanta, Georgia, USA <b>Chair:</b>		
14:00-14:10	10	Coffee Break		
14:10-15:40	90	Session A-6 RN <sup>2</sup> Chair :	Session B-6 FT-4 Chair :	Session C-6 ISP2016 Chair :
15:40-18:00	140	Shuttle Bus from NCUT to Wanda Realm Hotel		
18:00-20:00	120	Banquet (Wanda Realm Hotel, Beijing)		

Day 3, April 22, 2016				
Time	Min	HALL -A	HALL B	HALL C
09:00-10:30	90	Organizing Committee Meeting		
10:30-10:40	10	Break		
10:40-12:10	90	Local Committee Meeting		

1. A paper presentation should be made by one of authors of the paper for 20 minute (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 11TH INTERNATIONAL CONFERENCE ON FUTURE  
INFORMATION TECHNOLOGY (FUTURETECH2016)  
AND  
THE 10TH INTERNATIONAL CONFERENCE ON  
MULTIMEDIA AND UBIQUITOUS ENGINEERING  
(MUE2016)**

**Day 1, April 20, 2016 (Wednesday)**

**12:40-13:00     Registration**

**13:00-14:30     Session A-1 : FT-1  
(HALL A)  
(Chair:)**

- 1. Network Traffic Classification Model based on MDL Criterion**  
*Ying Zhao, Junjun Chen, Guohua You, Jian Teng*
- 2. AI meets Geography: a Heuristic Geographic Routing Algorithm for Wireless Networks**  
*Shijie LV, Jinchen AN, Hui LI*
- 3. A Content-aware Expert Recommendation Scheme in Social Network Services**  
*Young-Sung Shin, Hyeong-Il Kim, Jae-Woo Chang*
- 4. Automated Theorem Finding by Forward Reasoning Based on Strong Relevant Logic: A Case Study in Tarski's Geometry**  
*Hongbiao Gao, Jingde Cheng*
- 5. A Supporting Environment for Contract-Based Programming with Ada 2012**  
*Bo Wang, Hongbiao Gao, Jingde Cheng*
- 6. A Dual-Process Technique for Risk Decision Making by Implicating Equate-to-Differentiate Approach**  
*Yu Xiang, Lei Bai, Bo Peng, Li Ma*
- 7. A method for knowledge checking service selection with incomplete weight information based on the grey related analysis and data envelopment analysis in fuzzy environment**  
*Ming Li, Yuqi Yu, Yingcheng Xu*
- 8. A Secure Range Query Processing Algorithm for the Encrypted Database on the Cloud**  
*Hyeong-Il Kim, Munchul Choi, Hyeong-Jin Kim, Jae-Woo Chang*

**14:40-16:10     Session B-1 : MUE-1  
(HALL B)  
(Chair:)**

- 1. Hierarchical Semantic Classification and Attribute Relations Analysis with Clothing Region Detection**

*Jingjin Zhou, Zhengzhong Zhou, Liqing Zhang*

**2. Optimization of Inter-Dependent Requirement's Prioritization Using Fuzzy ANP**

*Zarmina Jahangir, Kashif Zafar*

**3. A Survey of Microarray Gene Expression Data Analysis Techniques**

*Javed Zahoor, Kashif Zafar*

**4. A Method of Image-based Water Surface Reconstruction**

*Ling Zou, Yue Qi, Guoping Wang*

**5. Reversible Image Data Hiding With Local Adaptive Contrast Enhancement**

*Ruiqi Jiang, Weiming Zhang, Jiajia Xu, Nenghai Yu, Xiaocheng Hu*

**6. Practical Tools for Digital Image Forensic Authentication**

*Jinhua Zeng, Wei Lu, Rui Yang, Xiulian Qiu*

**7. Parallel Detection Algorithm of Covered Primitives Based on Geometry Shadow Map**

*Hua Li, Huamin Yang, Cheng Han, Jianping Zhao, Yuling Cao*

**8. A Density-aware Similarity Join Query Processing Algorithm on MapReduce**

*Miyoung Jang, Youngho Song, Jae-Woo Chang*

**13:00-14:30     Session C-1 : SusComIT**

**(HALL C)**

**(Chair:)**

**1. Efficient k-out-of-n oblivious transfer protocol**

*Wang Qinglong, Lei Yingjuan, Duan Zongtao*

**2. The potential of mCommerce for seniors in developed countries**

*Petra Maresova, Blanka Klimova*

**3. Economic and Technological Aspects of Business Intelligence in European Business Sector**

*Petra Maresova, Blanka Klimova*

**4. Real-time Comprehensive Indoor Air Quality Level Indicator**

*MinSik Kim, Seung-Kyu Park, Kwang-il Hwang, Suk-jun Choi*

**5. A Secure Communication in Web of Things**

*Jin H. Park, Im Y. Jung, Soon J. Kim*

**14:30-14:40     Coffee break**

**14:40-16:10     Session A-2 : FT-2**

**(HALL A)**

**(Chair:)**

**1. Enabling Consumer Trust upon Acceptance of IoT Technologies through Security and Privacy Model**

*Wazir Zada Khan, Mohammed Y Aalsalem, Muhammad Khurram Khan, Quratulain Arshad*

**2. Defects extraction for QFN based on texture detection and region of interest selection**

*Kai Chen, Zhisheng Zhang, Yuan Chao, Min Dai, Jinfei Shi*

**3. Perceptron: An Old Folk Song Sung on a New Stage**

*Yuping Li*

**4. User Scheduling for beamforming MU-MISO-OFDM Systems**

*Najoua ACHOURA, Ridha BOUALLEGUE*

5. **A New Group-based Secret Function Sharing with Variate Threshold**  
*Anneke Soraya Hidayat, Rosemary Koikara, Kee-Young Yoo*
6. **A Certain Theory based Trust and Reputation Model in VANETs**  
*Na Fan, Zongtao Duan, Chao Wang, Qinglong Wang*
7. **A Development of Streaming Big Data Analysis System using In-memory Cluster Computing Framework: Spark**  
*Kiejin Park, Changwon Baek, Limei Peng*
8. **Research of Different Mobility Models on Routing Protocol Performance of Ad Hoc Networks**  
*Na An, Lei Tang, Yishui zhu, Zhiliang Kou, Xinxin Chen, Zongtao Duan*

**16:20-17:50     Session B-2 : MUE-2**  
**(HALL B)**  
**(Chair:)**

1. **Collaborative Ontology Generation Method Using an Ant Colony Optimization Model**  
*Hansaem Park, Jeungmin Lee, Kyunglag Kwon, Jongsoo Sohn, Yunwan Jeon, Sungwoo Jung, In-Jeong Chung*
2. **An Approach for User Interests Extraction using Decision Tree and Social Network Analysis**  
*Jeungmin Lee, Hansaem Park, Kyunglag Kwon, Yunwan Jeon, Sungwoo Jung, In-Jeong Chung*
3. **Real-Time Line Marker Detection for Night-Time Blind Spot Monitoring System in Rural Area**  
*Kang Yi, Daewoo Kim, Kyeong-Hoon Jungo*
4. **Efficient Skeleton Extraction Method Based on Depth Data in Infrared Self-help Camera System**  
*Xingquan Cai, Shiyu Li, Lijian Zhao, Zishu Liu, Qianru Ye*
5. **Design and Android Application for Power Monitoring System Using PLC for ICT-integrated Fish Farm**  
*Jun-Ho Huh*
6. **Modified Wavelet Domain Hidden Tree Model for Texture Segmentation**  
*Yulong Qiao Ganchao Zhao*
7. **Coping with Uncertainty in Sensor Networks**  
*Hoon-Kyu Kim, Kyung-Chang Kim*
8. **Encryption Method of Compressed Images with JPEG Compliance by Shuffling Information both in Spatial and Frequency Domains**  
*Kang Yi, Kyung-mi Kim*
9. **Design and Implementation of MapReduce-based Book Recommendation System by Analysis of Large-scale Book-rental Data**  
*Joon-Min Gil, JongBum Lim, Dong-Mann Seo*
10. **Modeling a Big Medical Data Cognitive System with N-ary Formal Concept Analysis**  
*Fei Hao, Doo-Soon Park, Se Dong Min, Sewon Park*

**14:40-16:10     Session C-2 : DATICS2016**  
**(HALL C)**  
**(Chair:)**



**1. Modeling and Simulation of PV Modules Based on ANFIS**

*Ziqiang Bi, Jieming Ma, Wanjun Hao, Xinyu Pan, Jian Wang, Jianmin Ban, Ka Lok Man*

**2. Non-negative Kernel Sparse Model for Image Retrieval**

*Yungang Zhang, Lei Bai, Bo Peng*

**3. Meta-learning with Empirical Mode Decomposition for Noise Elimination in Time Series Forecasting**

*David O. Afolabi, Sheng-Uei Guan, Ka Lok Man<sup>1</sup>, Prudence W. H. Wong*

**16:10-16:20     Coffee break**

**16:20-17:50     Session A-3 : FT-3**

**(HALL A)**

**(Chair:)**

**1. Fault Localization Method by Utilizing Memory Map and Input-Driven Update Interval**

*Kwanhyo Kim, Ki-Yong Choi, Jung-Won Lee*

**2. Power Measurement Technique Considering the State Changes of GPS using Location APIs**

*Jae-Hyeon Park, Deok-Ki Kim, Jung-Won Lee*

**3. A Fault-Tolerant Intersection Control Algorithm under the Connected Intelligent Vehicles Environment**

*Mourad Elhadeif*

**4. QSL: A Specification Language for E-questionnaire, E-testing, and E-voting Systems**

*Yuan Zhou, Hongbiao Gao, Jingde Cheng*

**5. Predicting New Attacks: A Case Study in Cryptographic Protocols**

*Da Bao, Kazunori Wagatsuma, Hongbiao Gao, Jingde Cheng*

**6. A Proposal of Methods for Extracting Temporal Information of History-related Web Document based on Historical Objects Using Machine Learning Techniques**

*Jun Lee, YongJin Kwon*

**7. Mobility-aware TAC Configuration in LTE-based Mobile Communication Systems**

*Hyung-Woo Kang, Seok-Joo Koh*

**8. Examining Performance Issues of GUI based Android Applications**

*Jung-Hoon Shin, Mesfin Abebe, Suntae Kim, Cheol Jung Yoo, Kwang-Yoon Jin*

**9. Feature Vectors for Performance Test Case Classification**

*Calvin G. Mangeni, Suntae Kim, Rhan Jung*

**10. The Design and Implementation of a New Lightweight Block Cipher on FPGA**

*Kwangki Ryoo, Gookyi Dennis A. N.*

**16:20-17:50     Session C-3 : BDAA2016**

**(HALL C)**

**(Chair:)**

**16:10-16:20     Break**

**18:00-20:00     Reception**

## **Day 2, May 21, 2016 (Thursday)**

**08:40-09:00     Registration**

**09:00-10:30     Session A-4 : RN<sup>2</sup>  
(HALL A)  
(Chair:)**

- 1. What Motivates Users to Play Mobile Phone Games More?**  
*Wonjin Jung, Taehwan Kim*
- 2. A Certain Theory based Trust and Reputation Model in VANETs**  
*Na Fan, Zongtao Duan, Chao Wang, Qinglong Wang*
- 3. Breast Tumors Classification based on Fuzzy c-means and Morphological Operation**  
*Tariq Sadad, Ayyaz Hussain*
- 4. A Weakly-Secure and Reliable Network Coding Scheme**  
*Hao Wu, Hui Li, Mengjing Song*
- 5. Elderly People and Their Attitude towards Mobile Phones and Their Applications – A Review Study**  
*Blanka Klimova, Petra Maresova*
- 6. An Adaptive Dynamic Requests Scheduling Model for Multi-socket Multi-core Web Servers**  
*Guohua You, Ying Zhao*
- 7. Feature Selection Based Classification of Sentiment Analysis using Biogeography Optimization Algorithm**  
*Ramsha Shahid, Sobia Tariq, Kashif Zafar*

**09:00-10:30     Session B-4 : MUE-3  
(HALL B)  
(Chair:)**

- 1. Futures/Option Electric Power Pricing in Smart Grid using Game Theory and Hybrid AMI Based on Weather Clearness**  
*Jun-Ho Huh, Kyungryong Seo*
- 2. Skyline Query Processing System for Taiwan Maps**  
*Tzu-Hsien Wang, Yuan-Ko Huang, Chiang Lee*
- 3. Blind Image Quality Assessment with Complete Pixel-level Information**  
*Jingtao Xu, Luping, Yang, Haiqing Du, Yong Liu*
- 4. Infrared Human Posture Recognition Method Based on Hidden Markov Model**  
*Xingquan Cai, Yufeng Gao, Mengxuan Li, Kyungeun Cho*
- 5. CLIQUE for English Sentence-Level Sentiment Classification in Parallel Network**  
*Vo Ngoc Phu*
- 6. STING for Vietnamese Sentence-Level Sentiment Classification in Parallel Network**  
*Vo Ngoc Phu*
- 7. Problem Detection Related to Multiple Skills**  
*Sylvia Encheva*

**8. Development for Agri-Food Service Platform using 3D Contents Techniques**

*Geum-Young Min, Hyoungh-Seop Shim*

**09:00-10:30     Session C-4 : DFIS2016**

**(HALL C)**

**(Chair:)**

- 1. User centric authorization implementation and evaluation**  
*Rajidi Satish Chandra Reddy, Srinivas Reddy Gopu*
- 2. The Effects of Heuristic GUI Principles on the Accessibility of Information in the Context of Mobile Application**  
*Wonjin Jung*
- 3. English Sentiment Classification using CLARA in Parallel Network**  
*Vo Ngoc Phu*
- 4. Single Linkage Clustering used English Sentiment Classification in Cloudera**  
*Vo Ngoc Phu*
- 5. On the Benefits of Information Retrieval and Information Extraction Techniques Applied to Digital Forensics**  
*David Lillis, Mark Scanlon*
- 6. Leadership of Information Security Managers on the Effectiveness of Information Systems Security through Media of Organizational Culture**  
*Myeonggil Choi, Jungsuk Song*

**10:30-10:40     Coffee break**

**10:40-12:10     Session A-5 : RN<sup>2</sup>**

**(HALL A)**

**(Chair:)**

- 1. A New Trend of Hybrid Bayesian Probability Theory for Health Monitoring in Smart Home**  
*Yanarat Ariyasipak (Patcharaporn Paokanta), Napat Harnpornchai*
- 2. Distributed Cluster Collaboration Strategy for Object Association and Identification in Large Areas**  
*Sangjin Hong, Nammee Moon*
- 3. Decision Based Spectral Embedding Approach for Identifying facial Behaviour on RGB-D Images**  
*Deepak Kumar Jain, Raj Kumar, Neha Jain*
- 4. A development of touch sensing using a depth camera–projector system**  
*Ji Yeol Park, Jinwon Park, Kyumok Kim, Jon-Ha Lee, Seung-Won Jung*
- 5. Programming Practice and Digital Textbook on Smartphone**  
*Kwang Sik Chung, Hye Won Byun, HeonChang Yu*
- 6. Researching Apache Hama: A Pure BSP Computing Framework**  
*Kamran Siddique, Zahid Akhtar, Yangwoo Kim*
- 7. An improved independent component analysis algorithm and its application on feature binding**  
*DENG Hongxia, YI Mengnan, DONG Yunyun, LI Haifang*

**10:40-12:10     Session B-5 : DIKI2016**

**(HALL B)**

**(Chair:)**

- 1. Exploitation of Clustering Techniques in Disease Distribution of Community Residents**  
*Li JinHong, YangQiuQi, Wei Song*
- 2. Research and Application of Ocean Environment Data Visualization Technology Based on MATLAB**  
*Li JinHong, YangQiuQi, Wei Song*
- 3. The Application and Improvement of ID3 Algorithm in WEB Log Data Mining**  
*Weihua Feng, Xingquan Cai*
- 4. The Research of Dentition Defect Expert System Based on the AND/OR Tree with Positive and Negative Constraints**  
*Danyang Cao, Yan Shi, Peijun Lv*
- 5. Research on Method of Technological Evolution Analysis Based on HLDA**  
*Liang Chen, Xiaoping Lei, GuanCan Yang, Jing Zhang*
- 6. A Mixture Record Linkage Approach for US Patent Inventor Disambiguation**  
*Yang Guan-Can , Cheng Liang, Zhang Jing, Wang Dao-Ren, Zhang Hai-Chao*
- 7. Detecting Network Community by Propagating Labels based on Contact-Specific Constraint**  
*Xiaolan Wu, Chengzhi Zhang*
- 8. The LTC Framework for Competitive Analysis on Industrial Technology**  
*Hongqi Han, Changqing Yao, Maoxiang Peng, Yongsheng Yu*
- 9. CERIF: A Research Information Model for Electric Vehicles Decision Support System**  
*YingJie Zhang, Na Qi*

**10:40-12:10     Session C-5 : DFIS2016**

**(HALL C)**

**(Chair:)**

- 1. Design for Network Attack Forensic System based on HTTP Evasive behavior**  
*Wenhao Liu, Haiqing Pan, Gang Xiong, Zigang Cao, Zhen Li*
- 2. A Fine-Grained Large-Scale NAT Detection Method**  
*Bin Yan, Gaopeng Gou, Gang Xiong, Yuanbo Guo, Yibao Bao*
- 3. Access Control - comparison and challenges**  
*Rajidi Satish Chandra Reddy, Srinivas Reddy Gopu*
- 4. Multiple Heterogeneous JPEG Image Hierarchical Forensic**  
*Xiangwei Kong, Bo Wang, Mingliang Yang, Yue Feng*
- 5. Contribution-based Feature Transfer for JPEG Mismatched Steganalysis**  
*Chaoyu Feng, Xiangwei Kong, Bo Wang, Yanqing Guo*
- 6. Research on the forensic direction of social networking software**  
*Hubei University of Police, Guocheng Pu, Yonghao Mai, Jingwu Liu, Lingxu Shuang*
- 7. Effects of Question Style in User's Emotion Survey: Using the Case of FWA's Best Award Winning Website**  
*Sangmin Lee, Joo Hyun Park, Dongho Kim, Han-Young Ryoo*

**12:10-13:00     Lunch**

**13:00-13:40     Keynote Speech**

(HALL A)

(Chair:)

**“Parallel Programming on Cloud Platforms-Hand Coding or Automatic Translation”**

**Dr. Yi Pan,**  
Regents' Professor of Computer Science  
Interim Associate Dean and Chair of Biology  
Georgia State University, Atlanta, Georgia, USA

**13:40-13:50     Coffee break**

**13:50-15:20     Session A-6 : RN<sup>2</sup>**

(HALL A)

(Chair:)

- 1. An Interactive Virtual Reality System with a Wireless Head-mounted Display**  
*Shujia Hao, Wei Song, Kaisi Huang, Yulong Xi, Kyungeun Cho, Kyhyun Um*
- 2. Interactive Lecture System based on Mixed Reality with Transparent Display**  
*Yulong Xi, Seoungjae Cho, Kyhyun Um, Kyungeun Cho*
- 3. Interaction Engine Design for Virtual Experiments by Multi-users**  
*Yeji Kim, Yulong Xi, Seoungjae Cho, Kyhyun Um, Kyungeun Cho*
- 4. 3D Eye-Tracking Method Using HD Face Model of Kinect v2**  
*Byoung Cheul Kim, Eui Chul Lee*
- 5. A Dynamic Traffic Data Visualization System with OpenStreetMap**  
*Wei Song, Jiaxue Li, Simon Fong, Wei Wang*
- 6. Face Recognition Based on Deep Belief Network Combined with Center-Symmetric Local Binary Pattern**  
*Chen Li, Wei Wei, Jingzhong Wang, Wanbing Tang, Shuai Zhao*
- 7. Efficient Semantic Image Processing Mechanism for Automatic Context-Aware based on Cloud Infrastructure**  
*Seok-Hyeon Han, Hyun-Woo Kim, Boo-Kwang Park, Yoon-A Heo, Young-Sik Jeong*
- 8. Simulation of Explosion Using the Ideal Viscoelastic Object Yield Condition**  
*Byeong-Seok Shin, Gyeong-Su Kim, Su-Kyung Sung*

**13:50-15:20     Session B-6 : FT-4**

(HALL B)

(Chair:)

- 1. MAC protocol with Priority to Urgent Data in Wireless Healthcare Monitoring Sensor Networks**  
*Rae Hyun Kim, Pyung Soo Kim, Jun Su Kim, Su Min Kim, Jeong Gon Kim*
- 2. Buffer-Aided Relay Selection with Primary Sensing in Underlay Cognitive Radio Networks**  
*Su Min Kim, Junsu Kim, Jeong Gon Kim, Pyung Soo Kim*
- 3. A Cursor using Limited Range of Motion for Persons with Visual and Motor Impairment**  
*Jong won Lee, Kang Hyoun Kim, Jin Gon Shon*

4. **Big Data Processing Framework of Road Traffic Collision from networked CCTV Using Prediction-Correction CEP Rules**  
*In Jung Lee*
5. **Barcode Objects Localization using Frequency and Corner Features**  
*Myeongsuk Pak, Sanghoon Kim*
6. **Study and Comparison of Virtual Machine Scheduling Algorithms in Open Source Clouds**  
*Mohan Krishna Varma Nandimandalam, Eunmi Choi*
7. **Two-Stage Estimation Filtering for Temporarily Uncertain Systems**  
*Pyung Soo Kim*
8. **Forensic Approach for Data Collection in Guest Domain based on Mobile Hypervisor**  
*Kyung-Soo Lim, Jeong-Nye Kim, Deok-Gyu Lee*

**13:50-15:20     Session C-6 : ISP2016**  
**(HALL C)**  
**(Chair:)**

1. **Log-distance Path Loss Model-based Relative Distance Estimation Method**  
*Sang-Geol Lee, Yunsick Sung*
2. **Variant RSS Adaptive Filtering Method in Beacon Environments**  
*Sang-Geol Lee, Eui-Young Cha, Jong Hyuk Park, Yunsick Sung*
3. **Identification of Influential Weather Factors on Traffic Safety Using K-means Clustering and Random Forest**  
*Oh Hoon Kwon, Shin Hyoung Park*
4. **Optimal Location of Regional Emergency Trauma Centers Using Geocoded Crash Data**  
*Shin Hyoung Park, Oh Hoon Kwon*
5. **Linear Motor Primitive Generation Method based on Observation Spots**  
*Jeonghoon Kwak, Yunsick Sung, Jong Hyuk Park*
6. **Location-Based Multi-user Interaction Based on Mobile Head Mount Display**  
*Mankyu Sung, MyungSoo Jung, Yeahyung Moon*
7. **Enhanced User Interface for a Sexual Violence Prevention Education App**  
*Donguk Kim, Jeonghoon Kwak, Yunsick Sung, Hyung Jin Park, Kyung Min Park*

**18:00-20:00     Banquet**

## **Day 3, May 22, 2016 (Friday)**

**09:00-10:30     Organizing Committee Meeting**  
**(HALL A)**

**10:30-10:40     Break**

**10:40-12:10     Local Committee Meeting**  
**(HALL A)**



## CONFERENCE VENUE

### North China University of Technology (NCUT)



#### NCUT Address

North China University of Technology, No. 5, Jinyuanzhuang Road, Shijingshan District, Beijing, China. (中国北京市石景山区晋元庄路5号北方工业大学)

**URL:** <http://www.ncut.edu.cn/>

#### From/to Beijing International Airport

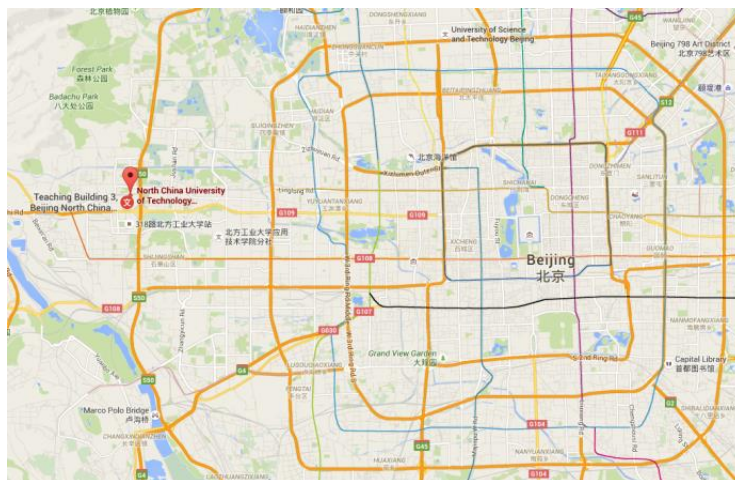
##### 1. By taxi

Approximately 49 km to NCUT, about 60 minutes by Taxi. Taxi fee is around 150-200 cny.

##### 2. Airport limousine

Shijingshan Line at Capital Airport ( 2 or 3 terminal ) station to LuGu station(鲁谷站), acrossing the road and walking 324 meters to Jingyuan East station ( 京原东 站 ), take Bus No. 663 (PingGuoYuan south direction) to North China University of Technology. Traffic fee is around 32 cny.

#### MAP



### Wanda Realm Beijing



### Wanda Realm Beijing Hotel Address

No. Jia 18 Shijingshan Road, Shijingshan District, Beijing, China  
(中国北京市石景山区石景山路甲 18 号万达嘉华酒店)

**URL** <http://www.wandahotels.com/index.php?m=content&c=index&a=show&catid=65&id=5>

### From/to Beijing International Airport

#### 1. By taxi

Approximately 46 km to Wanda Realm Beijing Hotel, about 60 minutes by Taxi. Taxi fee is around 150-200 cny.

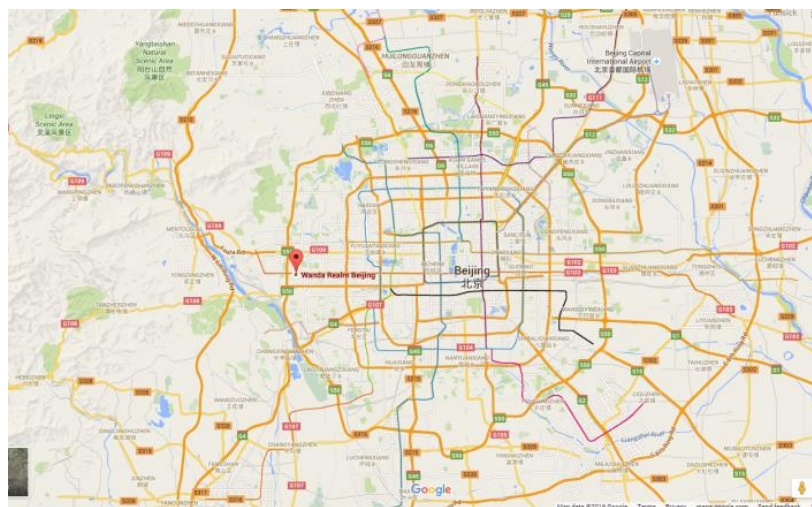
#### 2. Airport limousine

Shijingshan Line at Capital Airport ( 2 or 3 terminal ) station to Wanda Realm Beijing Hotel station (万达嘉华酒店), walking 50 meters to Wanda Realm Beijing Hotel. Traffic fee is around 30 cny.

### Reservations

To book the hotel, the hotel need a revservation form and a payment authorization form.  
The authors can submit those to [reservation.beijing@wandahotels.com](mailto:reservation.beijing@wandahotels.com), with the price of 600 cny.  
The hotel will deal with the reservation.

### MAP





### **Transportation between NCUT and Wanda Realm Beijing Hotel**

**1. By taxi**

Approximately 6 km, about 15 minutes by Taxi. Taxi fee is around 20 cny.

**2. Bus No. 961**

Between North China University of Technology station (北方工业大学) and Babaoshan station(八宝山站), 2 cny.