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)

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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 FuttureTech2015 (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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Welcome to the 11th International Conference on Future Information Technology (FutureTech 2016), which will be held in Beijing, China on April 20–22, 2016. FutureTech2016 will the most comprehensive conference focused on the various aspects of information technologies. It will provide an opportunity for academic and industry professionals to discuss recent progress in the area of future information technologies. 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 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
Kwang-il Hwang, Incheon National University, Korea
Ka Lok Man, Xi'an Jiaotong-Liverpool University, China
Neil Yen, University of Aizu, Japan
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Yunquan Zhang, Institute of Computing Technology, CAS, China
Zou Cliff, University of Central Florida, USA

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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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

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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!

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Zheng-Jun Zha, National University of Singapore, Singapore

Invited Speaker

Privacy Preserving Recommendation in Social Networks

Dr. Hong Shen

Professor of Computer Science
The University of Adelaide,
Australia

Abstract

As the result of advancement of information and communication technologies, social networks provide various forums of social interactions, e.g. Facebook for friends, Netlix for movies and Amazon for products, that enable information sharing to boost modern social and business activities. A recommender system makes recommendations that are of potential interest to a user by aggregating information from similar entities in the network. While recommender systems play a critical role in social networks for product promotion, social relationship and behaviour pattern analysis, consumer satisfaction improvement and supply chain optimisation, all vital for achieving the smart society, they also post serious privacy concerns on possible exposure of behaviour/preference information to adversaries. In this talk, I will first introduce various attacks of privacy breaches during recommendation in social networks, and then summarise relevant techniques and approaches to tackle them. Next, I will present our recent work on data randomisation, hypergraph identity anonymisation and differential-privacy recommendation as respective approaches to achieve privacy preserving recommendation through protection in preferences, preference relationships and recommendation method three levels. Finally I will conclude the talk by presenting some open problems for future research.

Biography

Hong Shen is Professor of Computer Science 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 Compute 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.

Invited Speaker

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

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 FUTURETECH2016 & 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 : Kwang-Il Hwang	**Session B-1** **MUE-1** Chair : Yunsick Sung	**Session C-1** **SusComIT** Chair : Blanka Klimova
14:30-14:40	10	Coffee Break		
14:40-15:20	40	**Opening Ceremony: Prof. Li Ma** Dean of the School of Computer Science and technology, NCUT **Keynote: Privacy Preserving Recommendation in Social Networks** **Dr. Hong Shen** Professor of Computer Science The University of Adelaide, Australia Chair : Aziz Nasridinov		
15:20-15:30	10	Coffee Break		
15:30-17:00	90	**Session A-2** **FT-2** Chair : Mankyu Sung	**Session B-2** **MUE-2** Chair : Joon-Min Gil	N/A
17:00-17:10	10	Coffee Break		
17:10-18:00	50	**Session A-3** **FT-3** Chair : Kwang-Il Hwang	**Session B-3** **BDAA2016** Chair : Aziz Nasridinov	N/A
18:00-19:00	60	Break		
19:00-21:00	120	**Reception** Chair : Aziz Nasridinov		

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^2** Chair : Wei Song	**Session B-4** **MUE-3** Chair : Fei Hao	**Session C-4** **DFIS2016** Chair : Haiqing Pan
10:30-10:40	10	Coffee Break		
10:40-12:10	90	**Session A-5** **RN^2** Chair : Kwang Sik Chung	**Session B-5** **DIKI2016** Chair : Shuo Xu	**Session C-5** **ISP2016 & IT2016** Chair : Myeonggil Choi
12:10-13:20	70	Lunch		
13:20-14:00	40	**Keynote: Parallel Programming on Cloud Platforms** **Prof. Dr. Yi Pan** Regents' Professor of Computer Science Interim Associate Dean and Chair of Biology Georgia State University, Atlanta, Georgia, USA Chair : Aziz Nasridinov		
14:00-14:10	10	Coffee Break		
14:10-15:40	90	**Session A-6** **RN^2** Chair : Wei Song	**Session B-6** **FT-4** Chair : Jin Gon Shon	**Session C-6** **DATICS** Chair : Ka Lok Man
15:40-18:00	140	**Shuttle Bus from NCUT to Wanda Realm Hotel**		
18:00-20:00	120	**Banquet (Wanda Realm Hotel, Beijing)** Chair : Aziz Nasridinov		

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 for20 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.**

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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: Kwang-Il Hwang)

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

13:00-14:30   Session B-1 : MUE-1
(HALL B)
(Chair: Yunsick Sung)

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

Jingjin Zhou, Zhengzhong Zhou, Liqing Zhang

2. **A Method of Image-based Water Surface Reconstruction**
   Ling Zou, Yue Qi, Guoping Wang
3. **Reversible Image Data Hiding With Local Adaptive Contrast Enhancement**
   Ruiqi Jiang, Weiming Zhang, Jiajia Xu, Nenghai Yu, Xiaocheng Hu
4. **Practical Tools for Digital Image Forensic Authentication**
   Jinhua Zeng, Wei Lu, Rui Yang, Xiulian Qiu
5. **Parallel Detection Algorithm of Covered Primitives Based on Geometry Shadow Map**
   Hua Li, Huamin Yang, Cheng Han, Jianping Zhao, Yuling Cao
6. **A Density-aware Similarity Join Query Processing Algorithm on MapReduce**
   Miyoung Jang, Youngho Song, Jae-Woo Chang
7. **Enhanced User Interface for Sexual Violence Prevention Education Apps**
   Donguk Kim, Jeonghoon Kwak, Yunsick Sung, Hyung Jin Park, Kyung Min Park

13:00-14:30   Session C-1 : SusComIT
(HALL C)
(Chair: Blanka Klimova)

1. **The potential of mCommerce for seniors in developed countries**
   Petra Maresova, Blanka Klimova
2. **Economic and Technological Aspects of Business Intelligence in European Business Sector**
   Petra Maresova, Blanka Klimova
3. **Experimental Study of Real-time Comprehensive Indoor Air Quality**
   Kwang-il Hwang, Seung-Kyu Park
4. **A Secure Communication in Web of Things**
   Jin H. Park, Im Y. Jung, Soon J. Kim

14:30-14:40   Coffee break

14:40-15:20   Opening Ceremony &Keynote Speech
(HALL A)
(Chair: Aziz Nasridinov)
   Opening Ceremony:

   Prof. Li Ma
   Dean of the School of Computer Science and technology, NCUT

   Keynote Speech: "Privacy Preserving Recommendation in Social Networks"

   Dr. Hong Shen
   Professor of Computer Science
   The University of Adelaide, Australia

15:20-15:30   Coffee break

15:30-17:00   Session A-2 : FT-2
(HALL A)
(Chair: Mankyu Sung)

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, Fuyun He, Jinfei Shi
3. **Perceptron: An Old Folk Song Sung on a New Stage**
   Yuping Li
4. **A Development of Streaming Big Data Analysis System using In-memory Cluster Computing Framework: Spark**
   Kiejin Park, Changwon Baek, Limei Peng
5. **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
6. **Fault Localization Method by Utilizing Memory Map and Input-Driven Update Interval**
   Kwanhyo Kim, Ki-Yong Choi, Jung-Won Lee
7. **Power Measurement Technique Considering the State Changes of GPS using Location APIs**
   Jae-Hyeon Park, Deok-Ki Kim, Jung-Won Lee
8. **A Fault-Tolerant Intersection Control Algorithm under the Connected Intelligent Vehicles Environment**
   Mourad Elhadef
9. **QSL: A Specification Language for E-questionnaire, E-testing, and E-voting Systems**
   Yuan Zhou, Hongbiao Gao, Jingde Cheng

15:30-17:00   Session B-2 : MUE-2
(HALL B)
(Chair: Joon-Min Gil)

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. **Modified Wavelet Domain Hidden Tree Model for Texture Segmentation**
   Yulong Qiao Ganchao Zhao

6. **Coping with Uncertainty in Sensor Networks**
   Hoon-Kyu Kim, Kyung-Chang Kim
7. **Encryption Method of Compressed Images with JPEG Compliance by Shuffling Information both in Spatial and Frequency Domains**
   Kang Yi, Kyung-mi Kim
8. **Design and Implementation of MapReduce-based Book Recommendation System by Analysis of Large-scale Book-rental Data**
   Joon-Min Gil, JongBum Lim, Dong-Mahn Seo
9. **Modeling a Big Medical Data Cognitive System with N-ary Formal Concept Analysis**
   Fei Hao, Doo-Soon Park, Se Dong Min, Sewon Park

17:00-17:10   Coffee break

17:10-18:00   Session A-3 : FT-3
(HALL A)
(Chair: Kwang-Il Hwang)

1. **Predicting New Attacks: A Case Study in Security Anlysis of Cryptographic Protocols**
   Da Bao, Kazunori Wagatsuma, Hongbiao Gao, Jingde Cheng
2. **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
3. **Mobility-aware TAC Configuration in LTE-based Mobile Communication Systems**
   Hyung-Woo Kang, Seok-Joo Koh
4. **Examining Performance Issues of GUI based Android Applications**
   Jung-Hoon Shin, Mesfin Abebe, Suntae Kim, Cheol Jung Yoo, Kwang-Yoon Jin
5. **Feature Vectors for Performance Test Case Classification**
   Calvin G. Mangeni, Suntae Kim, Rhan Jung

17:10-18:00   Session B-3 : BDAA2016
(HALL C)
(Chair: Aziz Nasridinov)

1. **Real-Time Document Ranking using Term Weight Estimation in Information Retrieval**
   Erdenebileg Batbaatar, Aziz Nasridinov, Keun Ho Ryu
2. **Multiple Regression Analysis of Climatic Factors in Greenhouse Using Data Partitioning**
   Yu Fu, Aziz Nasridinov, Minghao Piao, Keun Ho Ryu
3. **An Ontology-Based Approach for Searching Crime Big Data**
   Eun-Suk Choi, Aziz Nasridinov, Kwan-Hee Yo
4. **An Accident Prediction in Military Barracks Using Data Mining**
   HyunSoon Shin, Kwan-Hee Yoo, Aziz Nasridinov
5. **A Road Recommendation Method Using Statistical Correlation Analysis**
   Aziz Nasridinov, Kwan-Hee Yoo, Tae-Kyung Lee

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18:00-19:00 **Break**

19:00-21:00 <u>**Reception**</u>

Day 2, May 21, 2016 (Thursday)

08:40-09:00 **Registration**

09:00-10:30 <u>**Session A-4 : RN^2**</u>
(HALL A)
(Chair: Wei Song)

1. **What Motivates Users to Play Mobile Phone Games More?**
   Wonjin Jung, Taehwan Kim
2. **A Weakly-Secure and Reliable Network Coding Scheme**
   Hao Wu, Hui Li, Mengjing Song
3. **Elderly People and Their Attitude towards Mobile Phones and Their Applications – A Review Study**
   Blanka Klimova, Petra Maresova
4. **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
5. **Researching Apache Hama: A Pure BSP Computing Framework**
   Kamran Siddique, Zahid Akhtar, Yangwoo Kim

09:00-10:30 <u>**Session B-4 : MUE-3**</u>
(HALL B)
(Chair: Fei Hao)

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. **Design and Android Application for Monitoring System Using PLC for ICT-integrated Fish Farm**
   Jun-Ho Huh
3. **Infrared Human Posture Recognition Method Based on Hidden Markov Model**
   Xingquan Cai, Yufeng Gao, Mengxuan Li, Kyungeun Cho
4. **Development for Agri-Food Service Platform using 3D Contents Techniques**
   Geum-Young Min, Hyoung-Seop Shim
5. **A novel method for identifying repeat region on de nove assembly**
   Gangman Yi
6. **Dependence Analysis for Web Services Data Mutation Testing**
   Bo Yang
7. **Does the Speed of Problems Comment affect GitHub Open Source Software Development Process?**

Bo Yang, Gang Meng, Wei Zhang, Runze Du

09:00-10:30   <u>**Session C-4 : DFIS2016**</u>
(HALL C)
(Chair: Haiqing Pan)

1. **The Effects of Heuristic GUI Principles on the Accessibility of Information in the Context of Mobile Application**
   Wonjin Jung
2. **Leadership of Information Security Managers on the Effectiveness of Information Systems Security through Media of Organizational Culture**
   Myeonggil Choi, Jungsuk Song
3. **Design for Network Attack Forensic System based on HTTP Evasive behavior**
   Wenhao Liu, Haiqing Pan, Gang Xiong, Zigang Cao, Zhen Li
4. **A Fine-Grained Large-Scale NAT Detection Method**
   Bin Yan, Liang Huang, Gaopeng Gou, Yuanbo Guo, Yibao Bao
5. **Multiple Heterogeneous JPEG Image Hierarchical Forensic**
   Xiangwei Kong, Bo Wang, Mingliang Yang, Yue Feng
6. **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
7. **Research on the forensic direction of social networking software**
   Guocheng Pu, Yonghao Mai, Jingwu Liu, Lingxu Shuang

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

10:40-12:10   <u>**Session A-5 : RN^2**</u>
(HALL A)
(Chair: Kwang Sik Chung)

1. **Distributed Cluster Collaboration Strategy for Object Association and Identification in Large Areas**
   Sangjin Hong, Nammee Moon
2. **A development of touch sensing using a depth camera–projector system**
   Ji Yeol Park, Jinwon Park, Kyumok Kim, Jon-Ha Lee, Seung-Won Jung
3. **Programming Practice and Digital Textbook on Smartphone**
   Kwang Sik Chung, Hye Won Byun, HeonChang Yu
4. **Novel Mobile Motion Prediction Algorithm for Predicting Pedestrian's Next Location**
   Yan Zhuang, Simon Fong, Meng Yuan
5. **Mining Foursquare User Check-in Habit Based on Historical Check-in Records**
   Simon Fong, Yan Zhuang, Meng Yuan

10:40-12:10   <u>**Session B-5 : DIKI2016**</u>
(HALL B)
(Chair: Shuo Xu)

1. **Exploitation of Clustering Techniques in Disease Distribution of Community Residents**
   Jinhong Li, Xingxing Xie, Wei Song
2. **Research and Application of Ocean Environment Data Visualization Technology Based**

   on MATLAB
   JinHong Li, QiuQi Yang, 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. **Detecting Network Community by Propagating Labels based on Contact-Specific Constraint**
   Xiaolan Wu, Chengzhi Zhang

6. **The LTC Framework for Competitive Analysis on Industrial Technology**
   Hongqi Han, Changqing Yao, Maoxiang Peng, Yongsheng Yu

7. **Bayesian Multinomial Naïve Bayes Classifier to Text Classification**
   Shuo Xu, Yan Li, Zheng Wang

8. **CERIF: A Research Information Model for Electric Vehicles Decision Support System**
   YingJie Zhang, Na Qi

9. **A Mixture Record Linkage Approach for US Patent Inventor Disambiguation**
   Yang Guan-Can, Zhang Jing, Chen Liang, Zhang Hai-Chao, Wang Dao-Ren

10. **Review on Study of Multi-Source Data Fusion in Topic Discovery**
    HaiYun Xu, Chao Wang, LiJie Ru, ZengHui Yue, Ling Wei, Shu Fang

11. **Research on Method of Technological Evolution Analysis Based on HLDA**
    Liang Chen, Xiaoping Lei, Guancan Yang, Jing Zhang

10:40-12:10   Session C-5 : ISP2016 & IT2016
(HALL C)
(Chair: Myeonggil Choi)

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, 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, Jong Hyuk Park

6. **Location-Based Multi-user Interaction Based on Mobile Head Mount Display**
   Mankyu Sung, MyungSoo Jung, Yeahyung Moon

7. **Red and Green Parking Lamp Location Detection Method in UAV Environment**
   Kyeong-Min Jo, Sang-Geol Lee, Eui-Young Cha, Yunsick Sung, Sangil Choi

8. **An Efficient Design of Graycode Circuit Using Reversible Logic**
   Seo Yeon Moon, Jong Hyuk Park

9. **A Study on Integrated Support Platform for Sixth Industrialization of Agriculture**
   Hong-geun Kim, Saraswathi Sivamani, Myeongbae Lee, Young-Sik Jeong, Yongyun Cho, Jangwoo Park, Changsun Shin

10. **A System for Early Disease Detection Based on Feed Behaviors in Livestock**
    Slaraswathi Sivamani, Hong-geun Kim, Changsun Shin, Jangwoo Park, Young-Sik Jeong

12:10-13:20   Lunch

13:20-14:00   Keynote Speech
(HALL A)
(Chair: Aziz Nasridinov)

"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

14:00-14:10   Coffee break

14:10-15:40   Session A-6 : RN^2
(HALL A)
(Chair: Wei Song)

1. **3D Eye-Tracking Method Using HD Face Model of Kinect v2**
    Byoung Cheul Kim, Eui Chul Lee
2. **A Dynamic Traffic Data Visualization System with OpenStreetMap**
    Wei Song, Jiaxue Li, Yifei Tian, Simon Fong, Wei Wang
3. **Face Recognition Based on Deep Belief Network Combined with Center-Symmetric Local Binary Pattern**
    Chen Li, Wei Wei, Jingzhong Wang, Wanbing Tang, Shuai Zhao
4. **Simulation of Explosion Using the Ideal Viscoelastic Object Yield Condition**
    Byeong-Seok Shin, Gyeong-Su Kim, Su-Kyung Sung
5. **An Interactive Virtual Reality System with a Wireless Head-mounted Display**
    Shujia Hao, Wei Song, Kaisi Huang, Yulong Xi, Kyungeun Cho, Kyhyun Um
6. **Interactive Lecture System based on Mixed Reality with Transparent Display**
    Yulong Xi, Seoungjae Cho, Simon Fong, Byong kwon Lee, Kyhyun Um, Kyungeun Cho
7. **Interaction Engine Design for Virtual Experiments by Multi-users**
    Yeji Kim, Yulong Xi, Seoungjae Cho, Simon Fong, Changhwan Yi, Kyhyun Um, Kyungeun Cho

14:10-15:40   Session B-6 : FT-4
(HALL B)
(Chair: Jin Gon Shon)

1. **MAC protocol with Priority to Urgent Data in Wireless Healthcare Monitoring Sensor Networks**
    Rae Hyun Kim, Jeong Gon Kim
2. **Buffer-Aided Relay Selection with Primary Sensing in Underlay Cognitive Radio Networks**
    Su Min Kim, Junsu 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. **Real-time Barcode Objects Localization by Combining Frequency and Corner Features**
Myeongsuk Pak, Sanghoon Kim

5. **Study and Comparison of Virtual Machine Scheduling Algorithms in Open Source Clouds**
Mohan Krishna Varma Nandimandalam, Eunmi Choi

6. **Two-Stage Estimation Filtering for Temporarily Uncertain Systems**
Pyung Soo Kim

7. **Forensic Approach for Data Collection in Guest Domain based on Mobile Hypervisor**
Kyung-Soo Lim, Jeong-Nye Kim, Deok-Gyu Lee

8. **A Certain Theory based Trust and Reputation Model in VANETs**
na fan, zongtao duan, chao wang, qinglong wang

14:10-15:40   Session C-6 : DATICS2016
(HALL C)
(Chair: Ka Lok Man)

1. **Modeling and Simulation of PV Modules Based on ANFIS**
Zinqiang 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. **Feature Pooling using Spatio-Temporal Constrain for Video Summarization and Retrieval**
Jie Ren, Jinchang Ren

4. **An Output Grouping based Approach to Multiclass Classification Using Support Vector Machines**
Xuan Zhao, Steven Guan, Ka Lok Man

5. **Maximum Power Point Estimation for Photovoltaic Modules via RBFNN**
Jieming Ma, Ziqiang Bi, Yue Jiang, Xiangyu Tian, Yungang Zhang, Eng Gee Lim, Ka Lok Man

6. **Meta-learning with Empirical Mode Decomposition for Noise Elimination in Time Series Forecasting**
David O. Afolabi, Sheng-Uei Guan, Ka Lok Man, Prudence W. H. Wong

15:40-18:00   Shuttle Bus from NCUT to Wanda Realm Hotel

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

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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/
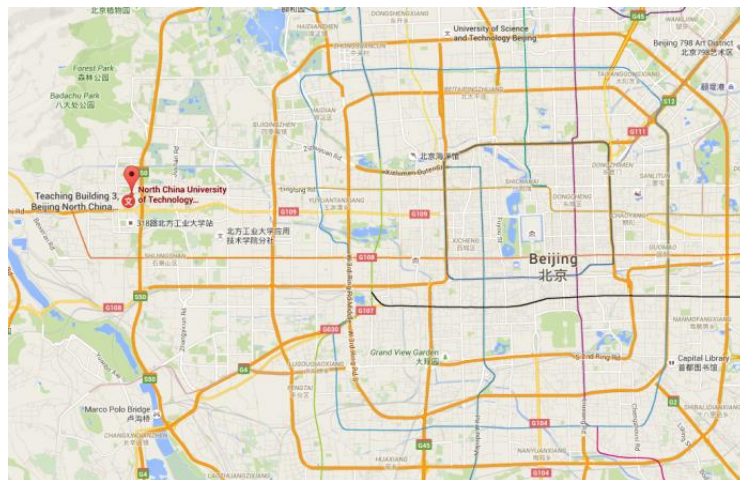
From/to Beijing International Airport

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

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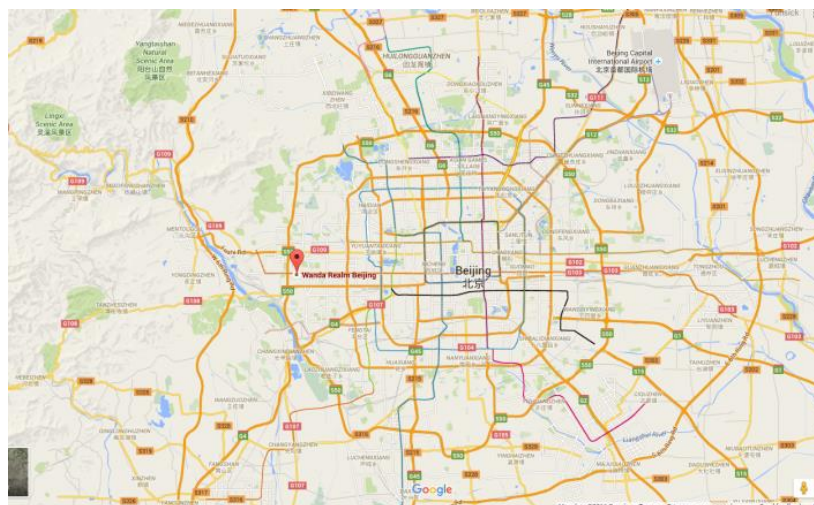
2. Airport limousine
Shijingshan Line at Capital Airport (2 or 3 terminal) station to Wanda Realm Beijing Hotel station (万达嘉华酒店), walking 50 meters to Wanda Realm Beijing Hotel. Traffic fee is around 30 cny.

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, with the price of 600 cny.
The hotel will deal with the reservation.

MAP

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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.