The 14th International Conference on Future Information Technology (FutureTech 2019)
&
The 13th International Conference on Multimedia and Ubiquitous Engineering (MUE 2019)

April 24-26, 2019
Xian, China

Organized by

FutureTech, MUE & KIPS CSWRG

KIPS
Korea Information Processing Society

KIPS CSWRG
Korea Information Processing Society
Computer Software Research Group

2019 International Conferences

(Sponsored / Technically Sponsored by KIPS / KIPS CSWRG)

The 2019 International Conference on Big data, IoT, and Cloud computing (BIC 2019)

- UCAWSN conference has been changed to BIC2019.
- August 19-21, 2019, Jeju, Korea
- http://www.bic-conference.org/2019

Message from the FutureTech 2019 General Chairs

FutureTech 2019 is the 14th event of the series of international scientific conference. This conference takes place on April 24-26, 2019 in Xian, China. The aim of the FutureTech 2019 is to provide an international forum for scientific research in the technologies and application of information technology. FutureTech 2018 is the next edition of FutureTech2018 (Salerno, Italy), FutureTech2017 (Seoul, Korea), FutureTech2016 (Beijing, China), FutureTech2015 (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 Steering Chair: James J. (Jong Hyuk) Park (SeoulTech, Korea) and Young-Sik Jeong (Dongguk University, Korea). Our special thanks go to the Program Chairs: Fei Hao (Shaanxi Normal University, China), Yulei Wu (University of Exeter, UK), Xiaojiang Chen, Northwest University, 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 2019 General Chairs

Wei Zhao, University of Sharjah, The United Arab Emirates,
Xiaoming Wang, Shaanxi Normal University China,
Jungho Kang, Baewha Women's University, Korea

Message from the FutureTech 2019 Program Chairs

Welcome to the 14th International Conference on Future Information Technology (FutureTech 2019), which will be held in Xian, China on April 24-26, 2018. FutureTech 2019 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 FutureTech 2019, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the FutureTech 2019 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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Fei Hao, Shaanxi Normal University, China,
Yulei Wu, University of Exeter, UK,
Xiaojiang Chen, Northwest University, China,

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Message from the MUE 2019 General Chairs

MUE 2019 is the 13th event of the series of international scientific conference. This conference takes place on April 24-26, 2019 in Xian, China. The aim of the MUE 2019 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-18 (Salerno, Italy), MUE-17 (Seoul , Korea), MUE-16 (Beijing, China), MUE-15 (Hanoi, Vietnam), MUE-14 (Zhangjiajie, China), MUE-13 (Seoul, Korea), MUE-12 (Madrid, Spain), MUE-11 (Loutraki, Greece), MUE-10 (Cebu, Philippines), MUE-09 (Qingdao, China), MUE-08 (Busan, Korea), and MUE-07 (Seoul, Korea).

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: Bin Guo (Northwestern Polytechnic University, China), Jin Wang (Changsha University of Science and Technology, China), Pyeoungkee Kim (Silla University, Korea), Byoungwook Kim (Dongguk University, Korea), 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.

MUE 2019 General Chairs

Laurence T. Yang, St. Francis Xavier University, Canada
Geyong Min, University of Exeter, UK
Yunsick Sung, Dongguk University, Korea

Message from the MUE 2019 Program Chairs

Welcome to the 13th International Conference on Multimedia and Ubiquitous Engineering (MUE 2019), which will be held Xian, China on May 24-26, 2019. MUE 2019 will 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 MUE 2019, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the MUE 2019 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 2019 Program Chairs

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Jin Wang, Changsha University of Science and Technology, China
Pyeoungkee Kim, Silla University, Korea
Byoungwook Kim, Dongguk University, Korea

Organization

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Seunghae Kim, KISTI, Korea
Dongkyun Kim, KISTI, Korea
HeonChang Yu, Korea University, Korea

Invited Speaker I

Broad Learning: A paradigm shift in discriminative incremental learning

Dr. C. L. Philip Chen
FIEEE, FAAAS, FIAPR, FCAA, FHKIE
Member of Academy of Europe (AE), European Academy of Sciences and Arts (EASA)
Editor-in-Chief, IEEE Trans. on Systems, Man, and Cybernetics: Systems

Abstract

In recent years, deep learning carves out a research wave in machine learning. With outstanding performance, more and more applications of deep learning in pattern recognition, image recognition, speech recognition, and video processing have been developed. The talk is to introduce "Broad Learning" – a complete paradigm shift in discriminative learning and a very fast and accurate learning without deep structure. The broad learning system (BLS) utilizes the power of incremental learning. That is without stacking the layer-structure, the designed neural networks expand the neural nodes broadly and update the weights of the neural networks incrementally when additional nodes are needed and when the input data entering to the neural networks continuously. The designed network structure and incremental learning algorithm are perfectly suitable for modeling and learning big data environment. Experiments indicate that the designed structure and algorithm out-perform existing structures and learning algorithms. Several BLS variations that cover existing deep-wide/broad-wide structures and their regression performance over function approximation, time series prediction, face recognition, and data modelling will be discussed.

Biography

Dr. Chen's research areas are in systems, cybernetics and computational intelligence. He is a Fellow of the IEEE, AAAS, and IAPR. He was the President of IEEE Systems, Man, and Cybernetics Society (SMCS) (2012-2013), where he also has been a distinguished lecturer for many years and received Outstanding Service Awards 4 times. Currently, he is the Editor-in-Chief of IEEE Transactions on Systems, Man, and Cybernetics: Systems (2014-). He has been an Associate Editor of many IEEE Transactions, and currently he is an Associate Editor of IEEE Trans on Fuzzy Systems, IEEE Trans on Cybernetics, and IEEE/CAA Automatica Sinica. He was the Chair of TC 9.1 Economic and Business Systems of IFAC (2015-2017). He is also a Fellow of CAA and Fellow of HKIE and an Academician of International Academy of Systems and Cybernetics Science (IASCYS).
In addition, he is an ABET (Accreditation Board of Engineering and Technology Education, USA) Program Evaluator for Computer Engineering, Electrical Engineering, and Software Engineering programs. University of Macau's Engineering and Computer Science programs receiving HKIE's accreditation and Washington/Seoul Accord is his utmost contribution in engineering education for Macau as the former Dean. During his deanship, the engineering and computer science programs have been ranked at world top 200 in the Times Higher Education (THE) world university ranking. The computer science program is also ranked at world top 175 in the US News and World Report global university ranking. Dr. Chen won the Norbert Wiener Award of IEEE Systems and Cybernetics Science in 2018. Dr. Chen received Outstanding Electrical and Computer Engineering Award in 2016 from his alma mater, Purdue University, West Lafayette, where he received his Ph.D. degree in 1988, after he received his M.S. degree in electrical engineering from the University of Michigan, Ann Arbor, in 1985.

Invited Speaker II

Cross-Space Crowd Sensing: Concepts, Technologies, and Practices

Dr. Zhiwen Yu
Professor
School of Computer Science
Northwestern Polytechnical University
China

Abstract

Crowd sensing is a new sensing paradigm that uses individual sensing capability to accomplish complex social sensing tasks. Human beings live and communicate in both cyber and physical spaces. Crowd sensing can be realized by actively recruiting participants in the cyber space and also opportunistically collecting crowd footprints in the cyber space. We propose a new concept named Cross-Space Crowd Sensing that aims at combining the different sensing capabilities in both cyber and physical spaces, and also fusing human implicit intelligence in understanding the sensory data. In this talk, I will introduce the definition of cross-space crowd sensing, main research challenges, and present our early works in this area.

Biography

Dr. Zhiwen Yu is currently a professor of the School of Computer Science, Northwestern Polytechnical University, China. He has worked as an Alexander Von Humboldt Fellow at Mannheim University, Germany from Nov. 2009 to Oct. 2010, a research fellow at Kyoto University, Japan from Feb. 2007 to Jan. 2009, and a post-doctoral researcher at Nagoya University, Japan in 2006-2007. His research interests cover ubiquitous computing, mobile social networks, and human-computer interaction. He has served as an associate/guest editor for a number of international journals, such as IEEE Transactions on Human-Machine Systems, IEEE Communications Magazine, and ACM Transactions on Intelligent Systems and Technology. He is the General Co-Chair of SmartCity 2016, CPSCom 2015, General Chair of UIC 2014, the Program Chair of EUC 2013, HumanCom 2012, and UIC 2010, the Vice Program Chair of PerCom 2015, the Workshop Chair of UbiComp 2011. He has published around 150 scientific papers in refereed journals and conferences, e.g., ACM Computing Surveys, IEEE TKDE, IEEE TMC, IEEE THMS, ACM TKDD, UbiComp, PerCom, etc. Zhiwen Yu is a senior member of IEEE, a distinguished member of CCF (China Computer Federation) and the vice chair of CCF Pervasive Computing Technical Committee. He received the CCF Young Scientist Award in 2011, the CPSCom'13/GPC'12/AMT'12/UIC'09 best paper awards, the Humboldt Fellowship in 2008, and the CCF Excellent Doctoral Dissertation Award in 2006. He got the National Science Fund for Distinguished Young Scholars in 2017.

PROGRAM SCHEDULE FOR FUTURETECH2019 & MUE2019

Day 1, April 24, 2019				
Time	**Min**	**HALL A**	**HALL B**	**HALL C**
10:00-10:15	15	**Registration**		
10:15-10:35	20	**Welcome Ceremony:** **Vice President Zupei Yang** Shaanxi Normal University, China **Wei Zhao** American University of Sharjah, The United Arab Emirates **Geyong Min** University of Exeter, UK Chair: Wei Zhao (IEEE Fellow) at Wenlan Building-Lecture Hall		
10:35-11:15	40	**Keynote I: Dr. C. L. Philip Chen** FIEEE, FAAAS, FIAPR, FCAA, FHKIE Member of Academy of Europe (AE), European Academy of Sciences and Arts (EASA) Editor-in-Chief, IEEE Trans. on Systems, Man, and Cybernetics: Systems **Broad Learning: A Paradigm Shift in Discriminative Incremental Learning** Chair: Wei Zhao (IEEE Fellow) at Wenlan Building-Lecture Hall		
11:15-11:30	15	**Group Photo in front of the Library**		
11:30-13:30	120	**Lunch**		
13:30-14:10	40	**Keynote II: Dr. Zhiwen Yu** Professor, School of Computer Science Northwestern Polytechnical University, China **Cross-Space Crowd Sensing: Concepts, Technologies, and Practices** Chair: Geyong Min at Wenlan Building-Lecture Hall		
14:10-14:20	10	**Coffee Break**		
14:20-15:50	90	**Session A-1** **MUE-1** Chair: Ka Lok Man	**Session B-1** **FT-1** Chair: Marcel Pikhart	**Session C-1** **MUE-2** Chair: Byungwook Kim
15:50-16:00	10	**Coffee Break**		
16:00-17:30	90	**Session A-2** **MUE-3** Chair: Lichen Zhang	**Session B-2** **FT-2** Chair: Xiaoliang Chen	**Session C-2** **FT-3** Chair: NamHyun Yoo
17:30-18:10	40	**Break** (The Bus will depart at 17:40 in front of Wenlan Building, Shaanxi Normal University)		
18:10-19:40	90	**Banquet** Chair: Joon-Min Gil at the Function Room 2, B1, Wyndham Grand Xian South		

1. **A paper presentation should be made by one of authors of the paper for 15 minutes (10**

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 or 10 laptops running the Adobe Reader and Microsoft Office for paper presentations will be prepared. Please prepare for your presentation.**

Day 2, April 25, 2019				
Time	**Min**	**HALL A**	**HALL B**	**HALL C**
9:40-10:00	20	**Registration**		
10:00-11:15	75	**Session A-3** **MUE-4** Chair: Fei Hao	**Session B-3** **MUE-5** Chair: Haiwei Yan	
11:15-13:00	75	**Session A-4** **MUE-6** Chair: Xiaoliang Chen	**Session B-4** **FT-4** Chair: Wei Song	
13:00-14:30	90	**Lunch**		
14:30-16:30	120	**Museum Tour** **(The tour will be started at 14:40 in front of Wenlan Building, Shaanxi Normal University)**		

Day 3, April 26, 2019		
Time	**Min**	**HALL A**
09:00-10:30	90	**Organizing Committee Meeting**
10:30-10:40	10	**Break**
10:40-12:10	90	**Local Committee Meeting**

DETAILED SCHEDULE FOR THE 14TH INTERNATIONAL CONFERENCE ON FUTURE INFORMATION TECHNOLOGY (FUTURETECH 2018) AND THE 13TH INTERNATIONAL CONFERENCE ON MULTIMEDIA AND UBIQUITOUS ENGINEERING (MUE 2019)

Day 1, April 24, 2019 (Wednesday)

09:40-10:00 **Registration**

10:15-10:35 **Welcome Ceremony**
(Wenlan Building-Lecture Hall, Chair: Wei Zhao (IEEE Fellow))

Vice President Zupei Yang,
Shaanxi Normal University, China

Wei Zhao
American University of Sharjah, The United Arab Emirates

Geyong Min
University of Exeter, UK

10:35-11:15 **Keynote I**
(Wenlan Building-Lecture Hall, Chair: Wei Zhao (IEEE Fellow))

"Broad Learning: A paradigm shift in discriminative incremental learning"

Dr. C. L. Philip Chen,
FIEEE, FAAAS, FIAPR, FCAA, FHKIE
Member of Academy of Europe (AE), European Academy of Sciences and Arts (EASA)
Editor-in-Chief, IEEE Trans. on Systems, Man, and Cybernetics: Systems

11:15-11:30 **Group Photo in front of Library**

11:30-13:30 **Lunch**

13:30-14:10 **Keynote II**
(Wenlan Building-Lecture Hall, Chair: Geyong Min)

"Cross-Space Crowd Sensing: Concepts, Technologies, and Practices"

Dr. Zhiwen Yu,

Professor
School of Computer Science
Northwestern Polytechnical University
China

14:10-14:20 Coffee break

14:20-15:50 Session A-1 : MUE-1
(HALL A, Chair: Ka Lok Man)

1. **Learning Influence Diagram Utility Function by Observing Behavior**
   Bai Lei
2. **A Brief Review of Image Restoration Techniques Based on Generative Adversarial Models**
   Cai Zhang, Fei Du, Yungang Zhang
3. **A Priority Heuristic Correlation Technique for Decision Tree Pruning**
   Yu Xiang, Li Ma
4. **A Rapid Response Approach Applying Edge Computing for Distributed Warehouses in WSN**
   Yuechun Wang, Ka Lok Man, Danny Hughes, Steven Guan, Prudence Wong
5. **SwarMotion: A 3D Point Cloud Video Recording Tool for Classification Purposes**
   Diego Monteiro, Jialin Wang, Hai-Ning Liang, Nilufar Baghaei, Andre Abel
6. **Mobile Robot-Based Measuring and Mapping of Gas Distribution in Surface Soil**
   Zhubing Lei, Muchun Zhou, Jian Wang and Baochuan Fu

14:20-15:50 Session B-1 : FT-1
(HALL B, Chair: Marcel Pikhart)

1. **Aspects of Intercultural Communication in IT: Convergence of Communication and Computing in the Global World of Interconectedness**
   Marcel Pikhart
2. **Exploring eLearning for Dementia Care**
   Blanka Klimova
3. **Mobile Learning and Its Impact on Learning English Vocabulary**
   Blanka Klimova
4. **A Hierarchical Attention Headline Generation Model with a Filter**
   Jiehang Xie, Xiaoming Wang, Xinyan Wang, Guangyao Pang
5. **Applying Transfer Learning into Recommendations in the Case of Data Deficient**
   Meiling Gai, Xiaoming Wang, Guangyao Pang, Xinyan Wang, Xueyang Qin, Jiehang Xie
6. **Fast Searching of Log Area in FAST FTL using Log Area Indexing**
   Sang Hyeok Yu, Tae-Sun Chung

14:20-15:50 Session C-1 : MUE-2
(HALL C, Chair: Byungwook Kim)

1. **A Keyword Extraction Scheme from CQI based on Graph Centrality**

They Pheaktra, JongBeom Lim, JongHyuk Lee, Joon-Min Gil

2. **MG Font Module for Integrating TeX Bitmap Fonts in Linux System**
   Saima Majeed, Ammar Ul Hassan Muhammad, Jaeyoung Choi
3. **Research process traceability based the RD relationship**
   Jeong Ah Kim, SunTae Kim, JaeYoung Choi, JiYoung Lee, YoungWha Choi
4. **Design of Online Multimedia Homework Management System Based on Cloud Platform**
   Si Fu, Fei Hao
5. **Research on the Development Strategy of News Channel in the context of Media Fusion**
   Shuang Zheng, Fei Hao
6. **Situation Assessment with Random Bayesian Network Forest**
   Xiushe Zhang, Ming Guan, Xiaoquan Hu, Chunlei Han, Jianshe Wu
7. **Target Tracking with the Prediction of Trajectory and Kalman Filter in Wireless Sensor Networks**
   Xiushe Zhang, Qiqi Ding, Xiaoquan Hu, Qin Liu, Jianshe Wu

15:50-16:00 **Coffee break**

16:00-17:30 **Session A-2 : MUE-3**
(HALL A, Chair: Lichen Zhang)

1. **The Research of Regional Tourist Flow Situation Assessment Based on Time Variant and Multi-source Data**
   Wu Yun, Jin Qun, Wang Tian Ming
2. **The Chinese Knowledge Graph on Domain-tourism**
   Weizhen Zhang, Han Cao, Fei Hao, Lu Yang, Muhib Ahmad, Yifei Li
3. **An Improved Change Detection Based on PCA and FCM Clustering for Earthen Ruins**
   Changqing Wang, Yun Xiao, Baoying Liu, Dexin Du, Rui Luo
4. **Optimal Design Parameters for tiny-YOLO2 Implementation with light-weight Embedded GPGPU Environment**
   Yechan Yu, Daewoo Kim, Jinjoo Ha, Hojin Kim, Kang Yi
5. **Development of Multiset Similarity Measure using Minhash Algorithm**
   Jin Uk Yoon, Jaehwa Chung, Byoungwook Kim
6. **Study on the Smart Speaker Security Evaluations and Countermeasures**
   Jiseop Lee, Sooyoung Kang, Seungjoo Kim

16:00-17:30 **Session B-2 : FT-2**
(HALL B, Chair: Xiaoliang Chen)

1. **Data-Request-Packet Broadcasting Approach for Mobile Opportunistic Networks with Unreliable Links**
   Lichen Zhang, Xiaochun Zhang, Sui Yu, Longjiang Guo, Peng Li, Meirui Ren, Xiaoming Wang
2. **Optimal Control of the Adversarial Information Propagation in Online Social Networks**
   Xinyan Wang, Xiaoming Wang, Jiehang Xie, Pengfei Wan
3. **SPARK-based Partitioning Algorithm for K-anonymization of Large RDFs**
   Odsuren Temuujin, Minhyuk Jeon, Kwangwon Seo, Jinhyun Ahn, Dong-Hyuk Im
4. **Distribution Pattern Learning for Social Resources in a Golden Snub-nosed Monkey Community**
   Qiang Hu, Xiaoqian Mi, Songtao Guo, Huawei Liu, Fengyi Song, Kun Yang, Xiaoyan Yin
5. **Opinion Similarity Regulated Public Opinion Network Embedding**

Fei Ren, Xiaoliang Chen, Yajun Du, Xianyong Li, Ruomiao

16:00-17:30 Session C-2 : FT-3
(HALL C, Chair: NamHyun Yoo)

1. **Improvement of the User Throughput with Relaying Through CR-based UAV**
   Suho Choi, Wooyeob LEE, Inwhee Joe
2. **UAV Anomaly Detection with Distributed Artificial Intelligence based on LSTM-AE and AE**
   Gimin Bae, Inwhee Joe
3. **A Study of an Unmanned Surface Vehicle System for Marine Environmental Monitoring**
   NamHyun Yoo
4. **A Study of Trim Tab Management System for an USV and a Small Boat**
   NamHyun Yoo
5. **Detecting Temporal Sentiment-oriented Difference for Crowdsourced Time-Sync Comments**
   Ruomiao Li, Yajun Du, Fei Ren
6. **Particle Color Transforming Method by Mapping Image Texture Arrangement with Weight Value**
   Jia-Yi Qiu, Fei Hao, Jae-Hyuk Ko

17:30-18:10 Coffee Break

The Bus will depart at 17:40 in front of Wenlan Building, Shaanxi Normal University

18:10-19:40 Banquet at Wyndham Grand Xian South
(Chair: Joon-Min Gil)

Day 2, April 25, 2018 (Thursday)

09:40-10:00 Registration

10:00-11:15 Session A-3 : MUE-4
(HALL A, Chair: Fei Hao)

1. **Experiment Design and Analysis of Cross-cultural Variation in Color Preferences Using Eye-tracking**
   Bo Wu, Shoji Nishimura, Yishui Zhu, Qun Jin
2. **Research on Tilt Survey Algorithm Based on Accelerometer & GNSS Receiver Data Fusion**
   Caixu Xu, Jie He
3. **Rectangular Seal Location Algorithm based on Digital Linear Feature**
   Liu Zhihui, Zhang Li
4. **Big Data Based Decision-making Support System Design for Efficient Analysis of the Performance of Software Education**
   Ji-Hoon Seo, Kil-Hong Joo
5. **N-Crop Based Image Division in Deep Learning with Medical Images**

JuHyeon Lee, Dongho Lee, YAN LI, Byeong-Seok Shin

6. **Computing Service Scheme with Idle Virtual Machine based on OpenStack**
   Jueun Jeon, Seungchul Kim, Gisung Yu, Hyun-Woo Kim, Young-Sik Jeong

10:00-11:15 Session B-3 : MUE-5
(HALL B, Chair: Haiwei Yan)

1. **Improvement Design of Smart Toilet Interactions Based on Peak-end Rule**
   Yujia Wu, Bowen Sun
2. **Research on Literature Searching Website Design Based on Usability Test**
   Haiwei Yan, Ruolin Gao, Yuanbo Sun, Bowen Sun
3. **Lifetime Optimization of WSN Networks with Full-Coverage Nodes**
   Cong chen, Jia chen
4. **Proceedings Design and Implementation of Cultural Communication and Promotion System Based on Big Data**
   Xuan Qi, Bo Ding
5. **An Empirical Study on Continuance Using Intention of OTT Apps with young Generation**
   Thi-Thanh-Quy Tran, Quoc-Tuan Tran, Hoanh-Su Le
6. **The Trend of New & Renewable Energies in the Socialist Republic of Vietnam and the Possibility of Introducing Korean Smart Grid**
   Thi-Hong Nguyen
7. **Mutual sensor Authentication Technique Based on Hash Chain Considering Future IoT Environment**
   Jungho Kang

11:15-13:00 Session A-4 : MUE-6
(HALL A, Chair: Xiaoliang Chen)

1. **Discussion on Digitization Construction of Cangyuan Rock Paintings In the New Media Era**
   Qian Xu
2. **How to Construct and Apply Self-learning Support System of Art Curriculum in the New Media Environment**
   Zhiyuan Ma, Gingjing Guan, Eeljin Chae, Di Wu
3. **On the Evaluation of Propagation Force of New Media for Government Affairs Based on the Theory of Information Acceptance Technology**
   Yuzhi Dong
4. **Scrambler based AES for Countermeasure against Power Analysis Attacks**
   Young-Jin Kang, Ki-Hwan Kim, Hoon Jae Lee
5. **Deep Learning based IoT re-authentication for Botnet Detection and Prevention**
   Mikail Salim, Jong Hyuk Park
6. **Music Generation Method utilizing a GAN Model based on Bar Segmentation**
   Shuyu Li, Yunsick Sung

11:15-13:00 Session B-4 : FT-4
(HALL B, Chair: Wei Song)

1. **IA Personalized Recommendation Algorithm based on Time Factor and Reading Factor**
   Xiaoying Zhu, Keda Lu, Zhenwei Di
2. **HPFLRF ：A High Performance Fingerprint Localization Algorithm Based on Random Forest**
   Pengyu Huang, Haojie Zhao, Wei Wang
3. **An ICP-based Point Clouds Registration Method for Indoor Environment Modeling**
   Su Sun, Wei Song, Yifei Tian, Simon Fong
4. **Improvement of QSL by Ontologies of E-Questionnaire, E-Testing, and E-Voting Systems**
   Yuan Zhou, Yuichi Goto, Jingde Cheng
5. **A Customer Group Mining Method Based on Cluster Analysis**
   Yongping Tang, Zizhen Peng
6. **Toward a GUI-based Comprehension of Software Architecture**
   Yeong-Seok Seo
7. **Reliable Blockchain based Stochastic Game System**
   Jeong Hoon Jo, Jong Hyuk Park

13:00-14:30 **Lunch**

14:30-16:30 **Museum Tour**

The tour will be started at 14:40 in front of Wenlan building, Shaanxi Normal University

Day 3, April 26, 2019 (Friday)

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

10:30-10:40 **Break**

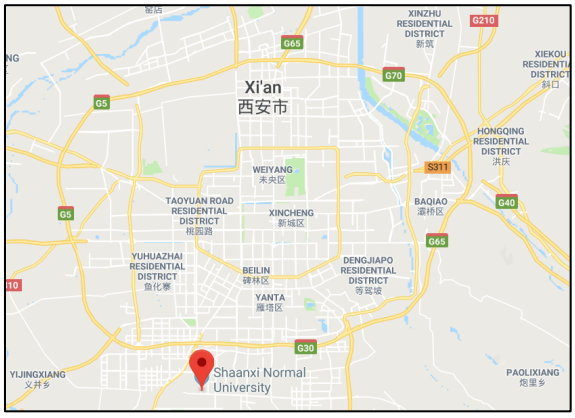
10:40-12:10 **Local Committee Meeting**
(HALL A)

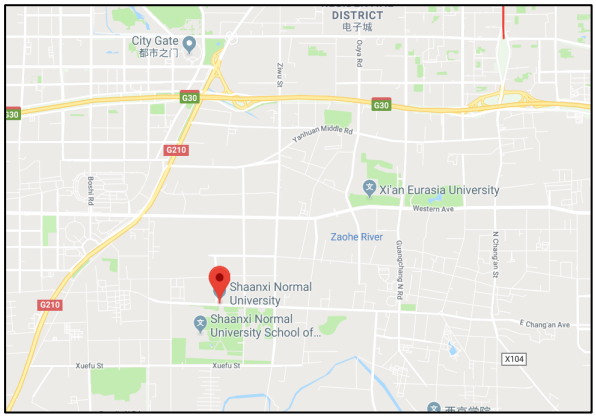
CONFERENCE VENUE

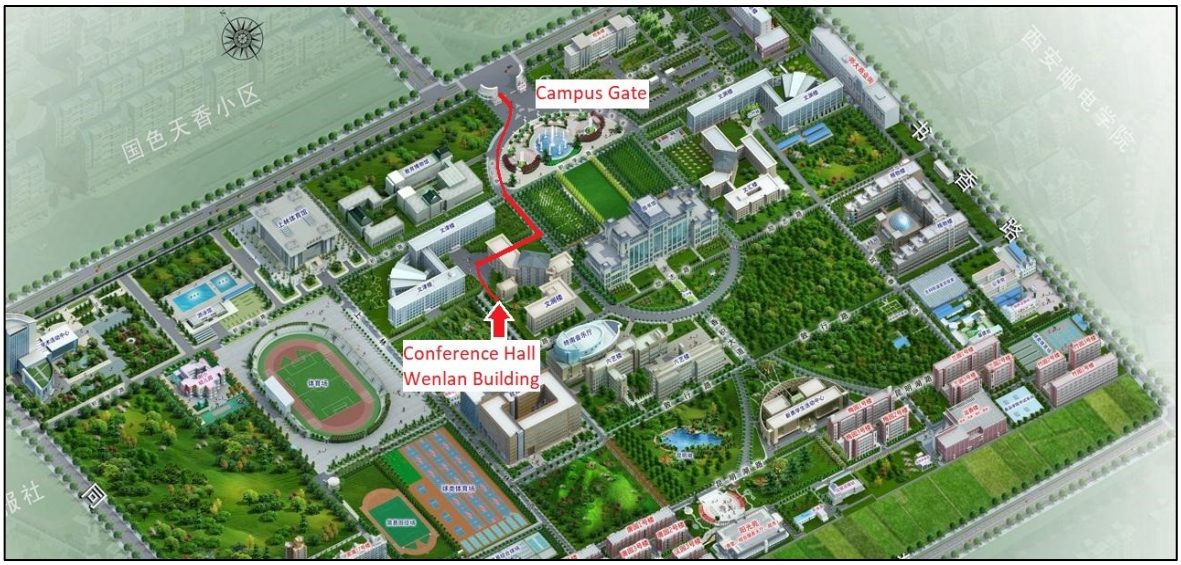
Conference Location

- **Shaanxi Normal University (Chang'an Campus)**
- **Address: No. 620, West Chang'an Avenue, Chang'an District, Xi'an, Shaanxi, China**

Map







How to get the Shaanxi Normal University (Chang'an Campus)

I. By Car

- From Xi'an Xianyang International Airport: G70 expressway (airport expressway) towards the south; continue to G3001 expressway (Xi'an Circumferential Expressway); take exit G210, continue to West Chang'an Avenue. (by TAXI about 120 RMB)

- From Xi'an North (Xi'an Bei) Railway Station: G3001 expressway (Xi'an Circumferential Expressway); take exit G210, continue to West Chang'an Avenue. (by TAXI about 95 RMB)

II. By Bus

- From Xi'an Xianyang International Airport: take Airport bus Changan District Jiyuan International Hotel line （吉源国际酒店专线） to Jiyuan International Hotel (25 RMB/ each, about 90 min), then take TAXI to Shaanxi Normal University （陕西师范大学）(about 10 RMB, about 5 min)

- From Xi'an North (Xi'an Bei) Railway Station: Take Xi'an Metro Line 2 to Hangtiancheng Station （航天城站）, then take TAXI to Shaanxi Normal University （陕西师范大学） (about 20 RMB, about 10 min)