The 13th International Conference on Future Information Technology (FutureTech 2018)
&
The 12th International Conference on Multimedia and Ubiquitous Engineering (MUE 2018)

April 23-25, 2018
Salerno, Italy

Organized by

FutureTech, MUE & KIPS CSWRG

2018 International Conferences
(Sponsored / Technically Sponsored by KIPS / KIPS SWRG)

Aug. 21-23, Jeju, Korea

- The 2nd International Conference on Big data, IoT, and Cloud Computing (BIC 2018)

Message from the FutureTech 2018 General Chairs

FutureTech 2018 is the 13th event of the series of international scientific conference. This conference takes place on April 23-25, 2018 in Salerno, Italy. The aim of the FutureTech 2018 is to provide an international forum for scientific research in the technologies and application of information technology. FutureTech 2018 is the next edition of 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). Our special thanks go to the Program Chairs: Giuseppe Fenza (University of Salerno, Italy), Guangchun (Luo University of Electronic Science and Technology of China, China), Ching-Hsien Hsu (Chung Hua University, Taiwan), Jungho Kang (Baewha Women's University, Korea), Houcine Hassan (Universitat Politecnica de Valencia, Spain), Kwang-il Hwang (Incheon national University, Korea), Jin Wang (Yangzhou 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.

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FutureTech 2018 General Chairs

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Message from the FutureTech 2018 Program Chairs

Welcome to the 13th International Conference on Future Information Technology (FutureTech 2018), which will be held in Salerno, Italy on April 23-25, 2018. FutureTech 2018 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 2018, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the FutureTech 2018 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 speaker who kindly accepted our invitations, and, in this way, helped to meet the objectives of the conference: Prof. Yi Pan, Regents' Professor and Chair of Department of Computer Science, Georgia State University, Atlanta, Georgia, 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!

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Message from the MUE 2018 General Chairs

MUE 2018 is the 12th event of the series of international scientific conference. This conference takes place on April 23-25, 2018 in Salerno, Italy. The aim of the MUE 2018 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-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:
Carmen De Maio (University of Salerno, Italy), Naveen Chilamkurti (La Trobe University, Australia), Ka Lok Man (Xi'an Jiaotong-Liverpool University, China), Yunsick Sung, (Dongguk University, Korea), Joon-Min Gil (Catholic University of Daegu, Korea), Wei Song (North China 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.

MUE 2018 General Chairs

Vincenzo Loia, University of Salerno, Italy
Shu-Ching Chen, Florida International University, USA
Yi Pan, Georgia State University USA
Jianhua Ma, Hosei University, Japan

Message from the MUE 2018 Program Chairs

Welcome to the 12th International Conference on Multimedia and Ubiquitous Engineering (MUE 2018), which will be held Seoul, South Korea on May 22-24, 2018. MUE 2018 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 2018, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the MUE 2018 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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Invited Speaker

Deep Learning for Big Data Applications
- Challenges and Future Directions

Yi Pan, Ph.D.

Regents' Professor and Chair
Department of Computer Science
Georgia State University
Atlanta, Georgia, USA

Abstract

Due to improvements in mathematical formulas and increasingly powerful computers, we can now model many more layers of virtual neurons (deep neural networks or deep learning) than ever before. Deep learning is now producing many remarkable recent successes in computer vision, automatic speech recognition, natural language processing, audio recognition, and medical imaging processing. Although various deep learning architectures have been applied to many big data applications, extending deep learning into more complicated applications such as bioinformatics will require more conceptual and software breakthroughs, not to mention many more advances in processing power. In this talk, I will outline the challenges and problems in existing deep learning methods when applying it to big data in general and bioinformatics in particular. I will describe a few novel architectures and algorithms recently proposed by us to improve the accuracies and learning speeds of the existing deep learning technologies. These new deep learning architectures and algorithms will be applied to several big data applications including image processing, DNA sequence annotation, long intergenic non-coding RNA detection, and gene structure prediction. The data encoding schemes, the choice of architectures and methods used will be described in details. Performance comparisons with other machine learning and existing deep learning methods will be reported. The experimental results show that deep learning is very promising for many big data applications, but requires selection of suitable models and a lot of tuning to be effective. Future research directions in this exciting area will also be outlined.

Biography

Yi Pan is currently a Regents' Professor and Chair of Computer Science at Georgia State University, USA. He has served as an Associate Dean and Chair of Biology Department during 2013-2017 and Chair of Computer Science during 2006-2013. 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 200 journal papers with over 80 papers published in various IEEE journals. In addition, he has published over 150 papers in refereed conferences. He has also co-authored/co-edited 43 books. His work has been cited more than 8000 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 other conference and journal best paper awards, 4 IBM Faculty Awards, 2 JSPS Senior Invitation Fellowships, 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 60 international conferences around the world.

PROGRAM SCHEDULE FOR FUTURETECH2018 & MUE2018

Day 1, April 23, 2018				
Time	**Min**	**HALL A**	**HALL B**	**HALL C**
08:40-09:00	20	Registration		
09:00-10:30	90	**Session A-1** **FT-1** Chair: Seung-Ho Lim	**Session B-1** **MUE-1** Chair: Byoungwook Kim	**Session C-1** **SBDA 2018** Chair: De Maio Carmen
10:30-11:00	30	Coffee Break		
11:00-12:00	60	**Plenary Talk: Prof. Yi Pan** Department of Computer Science, Georgia State University, Atlanta, Georgia, USA **Keynote: Deep Learning for Big Data Applications** **- Challenges and Future Directions** Chair: Neil Yen Yuwen		
12:00-13:00	60	Lunch		
13:00-14:30	90	**Session A-2** **FT-2** Chair: Mimmo Parente	**Session B-2** **MUE-2** Chair: Jeong Ah Kim	**Session C-2** **ISWP 2018** Chair: Shin Hyoung Park
14:30-15:00	30	Coffee Break		
15:00-16:30	90	**Session A-3** **FT-3** Chair: Halim Benhabiles & Karim Hammoudi	**Session B-3** **MUE-3** Chair: Giuseppe Fenza	**Session C-3** **MUE-4 / FT-4** Chair: Jin Gon Shon
16:30-18:00	90	**Break** **(Bus will depart at 17:00 in the University of Salerno and** **will depart at 17:30 in front of the Grand Salerno hotel.)**		
18:30-20:30	120	**Banquet at Oasis Village Resort** Chair: Neil Yen Yuwen		
20:30-21:15	45	**Break (Bus will depart at 20:30 at Oasis Village Resort.)**		

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

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Day 2, April 24, 2018				
Time	**Min**	**HALL A**	**HALL B**	**HALL C**
09:00-10:30	90	**Session A-4** **FT-5** Chair: Byoungwook Kim	**Session B-4** **MUE-5** Chair: Jin Liu	**Session C-4** **FT-6** Chair: Yunsick Sung
10:30-11:00	30	**Break**		
11:00-12:30	90	**Session A-5** **HRH 2018** Chair: Jun-Ho Hur	**Session B-5** **MUE-6** Chair: Jin Wang	**Session C-5** **FT-7** Chair: Jin Gon Shon
12:30-13:30	60	**Break**		
13:30-15:00	90	**Session A-6** **HRH 2018** Chair: Jun-Ho Hur	**Session B-6** **FT-8** Chair: Hyunwoo Kim	**Session C-6** **FT-9** Chair: Byoungwook Kim

* The lunch on the April 24, 2018 is not provided.

Day 3, April 25, 2018		
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 13TH INTERNATIONAL CONFERENCE ON FUTURE INFORMATION TECHNOLOGY (FUTURETECH 2018)
AND
THE 12TH INTERNATIONAL CONFERENCE ON MULTIMEDIA AND UBIQUITOUS ENGINEERING (MUE 2018)

Day 1, April 23, 2018 (Monday)

08:40-9:00　　**Registration**

09:00-10:30　　**Session A-1 : FT-1**
(HALL A, Chair: Seung-Ho Lim)

1. **Recovery Schemes for the Higher Reliable Flash Storage Systems**
   Seung-Ho Lim
2. **Load Predicting Algorithm based on improved Growing Self-Organized Map**
   Nawaf Alharbe
3. **Superpixel based ImageCut using Object Detection**
   Jong-Won Ko, Seung-Hyuck Choi
4. **Towards Unified Deep Learning Model for NSFW Image and Video Captioning**
   Jong-Won Ko, Dong-Hyun Hwang
5. **Quantization Parameter and Lagrange Multiplier Determination for Virtual Reality 360 Video Source Coding**
   Ling Tian, Chengzong Peng, Yimin Zhou, Hongyu Wang
6. **Measurement Framework of Firm E-business Capability: A Total Capability Perspective**
   Chui Young Yoon

09:00-10:30　　**Session B-1 : MUE-1**
(HALL B, Chair: Byoungwook Kim)

1. **Extended MF Config Module for FreeType Rasterizer**
   Jaeyoung Choi, Ammar Ul Hassan
2. **The Analysis of Consumption Behavior Pattern Cluster that reflects both on-offline by Region**
   Jinah Kim, Nammee Moon
3. **A Scene Change Detection Framework Based on deep learning and image matching**
   Dayou Jiang, Jongweon Kim
4. **Detecting (k,r)-clique Communities from Social Networks**
   Fei Hao, Liang Wang, Yifei Sun, Doo-Soon Park

5. **A Uniformed Evidence Process Model for Big Data Forensic Analysis**
   Ning Wang, Yanyan Tan, Shuyang Guo
6. **Evidence Collection Agent Model Design for Big Data Forensic Analysis**
   Zhihao yuan, Hao Li, Xian Li
7. **GFramework: Implementation of the Gamification Framework for Web Applications**
   JAE-HO Choi, KyoungHwa Do

09:00-10:30   Session C-1 : SBDA 2018
(HALL C, Chair: De Maio Carmen)

1. **A deep learning approach for road damage classification**
   Gioele Ciaparrone, Angela Serra, Vito Covito, Paolo Finelli, Carlo Alberto Scarpato, Roberto Tagliaferri
2. **A Framework for Situated Learning Scenarios based on Learning Cells and Augmented Reality**
   Angelo Gaeta, Francesco Orciuoli, Mimmo Parente, Minjuan Wang
3. **Discovery of Interesting Users in Twitter by using Rough sets**
   Carmen De Maio, Stefania Boffa
4. **A Big Data Application in Renewable Energy Domain: The Wind Plant Case**
   Emanuela Mattia Cafaro, Pietro Luise, Raffaele D'Alessio, Valerio Antonelli

10:30-11:00   Coffee break

11:00-12:00   Plenary Talk
(Big Hall, Chair: Neil Yen Yuwen)

   "Deep Learning for Big Data Applications - Challenges and Future Directions"

   Dr. Yi Pan,
   Department of Computer Science, Georgia State University,
   Atlanta, Georgia, USA

12:00-13:00   Lunch

13:00-14:30   Session A-2 : FT-2
(HALL A, Chair: Mimmo Parente)

1. **Verification of Stop-motion Method Allowing the Shortest Moving Time in (sRd-Camera-pRd) Type**
   Soon-Ho Kim, Chi-Su Kim
2. **A Long-term Highway Traffic Flow Prediction Method for Holiday**
   Guoming Lu, Jiaxin Li, Jian Chen, Aiguo Chen, Jianbin Gu, Ruiting Pang
3. **Machine Learning based Materials Properties Prediction Platform for Fast Discovery of Advanced Materials**
   Jeongcheol Lee, Sunil Ahn, Jaesung Kim, Sik Lee, Kumwon Cho
4. **View Designer: Building Extensible and Customizable Presentation for Various Scientific Data**

Jaesung Kim, Sunil Ahn, Jeongchoel Lee, Sik Lee, Kumwon Cho

5. **Anomaly Detection via Trajectory Representation**
Ruizhi Wu, Guangchun Luo, Qing Cai, Chunyu Wang

6. **A Test Data Generation for Performance Testing in Massive Data Processing Systems**
Sunkyung Kim, Ji Su Park, Kang Hyun Kim, Jin Gon Shon

13:00-14:30   Session B-2 : MUE-2
(HALL B, Chair: Jeong Ah Kim)

1. **A Scene Change Detection Framework Based on deep learning and image matching**
Dayou Jiang, Jongweon Kim

2. **Predicting the Audience Behavior in Selecting TV Channels**
Ciro Gaglione, Elena Mejuto Villa

3. **Intelligent Security Event Threat Ticket Management System on Secure Cloud Security Infrastructures being able to Dynamic Reconfiguration**
Youngsoo Kim, Jungtae Kim, Jonghyun Kim

4. **Design and Implementation on the Access Control Scheme against V2N Connected Car Attacks**
Sokjoon Lee, Byungho Chung, Joongyong Choi, Hyeokchan Kwon

5. **OpenCL based Implementation of ECDSA Signature Verification for V2X Communication**
Sokjoon Lee, Hwajeong Seo, Byungho Chung, Joongyong Choi, Hyeokchan Kwon, Hyunsoo Yoon

6. **A Taxonomic Modeling for Cloud-based Intelligent Video Surveillance Platform**
Kyung-Soo Lim, Jong Wook Han, Geon-Woo Kim

7. **A Secure Group Management Scheme for Join/Leave Procedures of UAV Squadrons**
Seungmin Kim, Moon-Won Choi, Wooyeob Lee, Donguk Gye, Inwhee Joe

13:00-14:30   Session C-2 : ISWP 2018
(HALL C, Chair: Shin Hyoung Park)

1. **Natural UAV Path Generation Method between Two Waypoints using Max-Min Algorithm**
Jeonghoon Kwak, Yunsick Sung

2. **K-means and CRP-based Characteristic Investigating Method of Traffic Accidents with Automated speed Enforcement Cameras**
Shin Hyung Park, Shin Hyoung Park, Oh Hoon Kwon

3. **Development of a Crash Risk Prediction Model Using the k-Nearest Neighbor Algorithm**
Min Ji Kang, Oh Hoon Kwon, Shin Hyoung Park

4. **Traffic Big Data Analysis for the Effect Evaluation of a Traffic Management Plan**
Yong Woo Park, Oh Hoon Kwon, Shin Hyoung Park

5. **Enhanced Usability Assessment on User Satisfaction with Multiple Devices**
Jeyoun Dong, Myunghwan Byun

6. **A GPU-based Training of BP Neural Network for Healthcare Data Analysis**
Wei Song, Shuanghui Zou, Yifei Tian, Simon Fong

7. **Local Feature Based CNN for Face Recognition**
Mengti Liang, Baocheng Wang, Chen Li, Linda Markowsky, Hui Zhou

8. **An Interactive Augmented Reality System Based on LeapMotion and Metaio**
   Xingquan Cai, Yuxin Tu, Xin He

14:30-15:00   Coffee Break

15:00-16:30   Session A-3 : FT-3
(HALL A, Chair: Halim Benhabiles & Karim Hammoudi)

1. **A Hash-based K-Prototype Algorithm**
   Byoungwook Kim, Jaehwa Chung, Hong-Jun Jang
2. **Online Data Flow Prediction using Generalized Inverse Based Extreme Learning Machine**
   Ying Jia
3. **Parallel Generator of Discrete Chaotic Sequences using Multi-Threading Approach**
   Mohammed Abutaha, Safwan elassad, Audrey Queduet
4. **A Study on the variability analysis method with cases for process tailoring**
   SeungYoung Choi, Jeong Ah Kim, Yeonghwa Cho
5. **A forecasting model Based on enhanced Elman Neural Network for Air quality Prediction**
   Lizong Zhang, Yingying Xie, Aiguo Chen, Guiduo Duan
6. **An anomaly detection algorithm for spatiotemporal data based on attribute correlation**
   Aiguo Chen, Yuanfan Chen, Guoming Lu, Lizong Zhang, Jiacheng Luo
7. **Behavior of Social Network Users to Privacy Leakage : An Agent-based Approach**
   Kaiyang Li, Guangchun Luo, Huaigu Wu, Chunyu Wang
8. **A Comparative Study of 2 Resolution-level LBP Descriptors and Compact Versions for Visual Analysis**
   Karim Hammoudi, Mahmoud Melkemi, Fadi Dornaika, Halim Benhabiles, Feryal Windal, Oussama Taoufik

15:00-16:30   Session B-3 : MUE-3
(HALL B, Chair: Giuseppe Fenza)

1. **Preliminary of Selfish Mining Strategy on the Decentralized Model of Personal Health Information**
   Sandi Rahmadika, Kyung-Hyune Rhee
2. **A Blockchain-Based Access Control with Micropayment Channels**
   Siwan Noh, Youngho Park, Kyung-Hyune Rhee
3. **A Fog Computing-based Automotive Data Overload Protection System with Real-Time Analysis**
   Byung Wook Kwon, Jungho Kang, Jong Hyuk Park
4. **A Design of Enhanced Integrity Preservation based on Blockchain**
   Jung Hyuk Ryu, Jungho Kang, Jong Hyuk Park
5. **Personalized Movie Recommendation System using Adjacent k-Cliques**
   Phonexay Vilakone, Khamphaphone Xinchang, JinSoo Park, Doo-Soon Park
6. **Rapid parallel transcoding scheme for providing multiple-format of a single multimedia**
   Seungchul Kim, Mu He, Hyun-Woo Kim, Young-Sik Jeong

7. **Adaptive Task Scheduler Simulator for Resource High-availability based on Mobile Cloud Computing**
    Jueun Jeon, Mingeun Ji, Hyun-Woo Kim, Young-Sik Jeong

14:30-16:30   Session C-3 : MUE-4 / FT-4
(HALL C, Chair: Jin Gon Son)

1. **Practice of Hybrid Approach to Develop State-based Control Embedded Software Product Line**
    Jeong Ah Kim, Jin Seok Yang
2. **Design of competency evaluation system using type matching algorithm**
    Seung-Su Yang, Hyung-Joon Kim, Seok-Cheon Park
3. **Design of Social Content Recommendation System Based on Influential Ranking Algorithm**
    Young-Hwan Jang, Hyung-Joon Kim, Seok-Cheon Park
4. **Index Design for Efficient Ontological Data Management**
    Min-Hyung Park, Hyung-Joon Kim, Seok-Cheon Park
5. **Toward the Spatio-Temporal Search System for Reliable Results in Crowdsourced LBSs**
    Byoungwook Kim, Kyung-Ho Jung, Hong-Jun Jang
6. **A Zero-watermarking Algorithm Based on Visual Cryptography and Matrix Norm in order to Withstand Printing and Scanning**
    De Li, XianLong Dai, Liang Chen, LiHua Cui
7. **Animation Zero Watermarking Algorithm Based on Edge Feature**
    De Li, Shan Yang, ZhiXun Zheng, LiHua Cui
8. **Separate Human Activity recognition model based on Recognition-weighted kNN Algorithm**
    Haiqing Tan, Lei Zhang

16:30-18:00   Break

18:30-20:30   Banquet at Oasis Village Resort
(Chair: Neil Yen Yuwen)

Day 2, April 24, 2018 (Tuesday)

09:00-10:30   Session A-4 : FT-5
(HALL A, Chair: Byungwook Kim)

1. **Mobile Application for the Teaching of English**
    Blanka Klímová, Aleš Berger
2. **Mobile Phone Apps as Support Tools for People with Dementia**
    Blanka Klímová, Zuzana Boučková, Josef Toman
3. **Optimization of running a Personal Assistance Center – A Czech case study**
    Petra Poulova, Blanka Klimova
4. **Data Science – A Future Educational Potential**

Petra Poulova, Blanka Klimova, Jaroslava Mikulecká

5. **A Citywide Distributed inVANETs-Based Protocol for Managing Traffic**
   Sarah Hasan, Mourad Elhadef

09:00-10:30   Session B-4 : MUE-5
(HALL B, Chair: Jin Liu)

1. **Network Data Stream Classification by Deep Packet Inspection and Machine Learning**
   Chunyong Yin, Hongyi Wang, Jin Wang
2. **Improved Collaborative Filtering Recommendation Algorithm Based on Differential Privacy Protection**
   Chunyong Yin, Lingfeng Shi, Jin Wang
3. **Transport Related Policies For Regional Balance in China**
   Weiwei Liu, Qian Wang, Yuhui Zheng, Jin Wang
4. **Transportation Systems Damage and Emergency Recovery based on SD Mechanism**
   Weiwei Liu, Qian Wang, Yuhui Zheng, Jin Wang
5. **Chinese Question Classification Based on Deep Learning**
   Yihe Yang, Jin Liu, Yunlu Liao Zheng
6. **A Domain Adaptation Method for Neural Machine Translation**
   Xiaohu Tian, Jin Liu, Jiachen Pu, Jin Wang,
7. **Natural Answer Generation with QA Pairs using Sequence to Sequence Model**
   Minjie Liu, Jin Liu, Haoliang Ren

09:00-10:30   Session C-4 : FT-6
(HALL C, Chair: Yunsick Sung)

1. **A novel on Altered K-means Algorithm for Clustering Cost Decrease of Non-labeling Big-data**
   Se-Hoon Jung, Won-Ho So, Kang-Soo You, Chun-Bo Sim
2. **Security Threats in Connected Car Environment and Proposal of In-vehicle Infotainment-Based Access Control Mechanism**
   Joongyong Choi, Seong-il Jin
3. **Software Defined Cloud-based Vehicular framework for lowering the Barriers of Applications of Cloud-Based Vehicular Network**
   Lionel Nkenyereye, Jong Wook Jang
4. **Hardware Design of HEVC In-Loop Filter for Ultra-HD Video Encoding**
   Seungyong Park, Kwangki Ryoo
5. **Design of Cryptographic Core for Protecting Low Cost IoT Devices**
   Dennis Gookyi, Kwangki Ryoo
6. **Efficient Integrated Circuit Design for High Throughput AES**
   Alexander O.A Antwi, Kwangki Ryoo
7. **Hardware Architecture Design of AES Cryptosystem with 163-bit Elliptic Curve**
   Guard Kanda, Alexander Antwi, Kwangki Ryoo
8. **Area-Efficient Design of Modular Exponentiation using Montgomery Multiplier for RSA Cryptosystem**
   Richard Boateng Nti, Kwangki Ryoo
9. **Efficient Hardware Architecture Design of Adaptive Search Range for Video Encoding**

Inhan Hwang, Kwangki Ryoo

10:30-11:00   Break

11:00-12:30   Session A-5 : HRH 2018
(HALL A, Chair: Jun-Ho Hur)

1. **A study on the RFID and 2D barcode, and NFC and performance improvement**
   Seong -Kyu Kim, Jun-Ho Huh
2. **A study on the security performance improvement in BoT perspective in order to overcome security weaknesses of IoT devices**
   Seong-Kyu Kim, Jun-Ho Huh
3. **A study on the BlockChain certificate in order to overcome existing certification system**
   Seong-Kyu Kim, Jun-Ho Huh
4. **A Study on the Method of Propelling by Analyzing the Form of Bird's Movement**
   Nak-Hao Kim, Jun-Ho Huh
5. **Artificial Intelligence Shoe Cabinet Using Deep Learning for Smart Home**
   Jun-Ho Huh, Kyungryong Seo
6. **Case Analysis and Study of Improvement Direction in Relation to the Copyright of the Customer Editing Screen and Used Pattern at Clothing Shopping Mall for Customer's Participation in Design**
   Ying Yuan, Jun-Ho Huh
7. **Developing Automatic Pattern Setting System Reacting to Customer Design**
   Ying Yuan, Jun-Ho Huh
8. **Technical Development in Relation to the Handling Process of Automation Location Per Size and Pattern Grouping for the Creation of Pattern Image for Automatic Printing**
   Ying Yuan, Jun-Ho Huh

11:00-12:30   Session B-5 : MUE-6
(HALL B, Chair: Jin Wang)

1. **Improved Personalized Recommendation Method Based on Preference-aware and Time Factor**
   Chunyong Yin, Shilei Ding, Jin Wang
2. **A multi-objective signal transition optimization model for urban transportation emergency rescue**
   Youding Fan, Jiao Yao, Yuhui Zheng, Jin Wang
3. **Modeling analysis on the influencing factors of taxi driver's illegal behavior in metropolis**
   Tianyu Wang, Jiao Yao, Yuhui Zheng, Jin Wang
4. **Evaluation of Passenger Service Quality in Urban Rail Transit: Case Study in Shanghai**
   Chenpeng Li, Jiao Yao, Yuhui Zheng, Jin Wang
5. **Research on the Mechanism of Value creation and Capture Process for Mass Rail Transit Development**
   Weiwei Liu, Qian Wang, Yuhui Zheng, Jin Wang

11:00-12:30   Session C-5 : FT-7
(HALL C, Chair: Jin Gon Shon)

1. **Effect: Business Environment Factors on Business Strategy and Business Performance**
   Won-hyun So, Ha-kyun Kim
2. **Economic Aspect: Corporate Social Responsibility and Its Effect on the Social Environment and Corporate Value**
   Won-hyun So, Ha-kyun Kim
3. **Effect: Information Welfare Policies on the Activation of Information Welfare and Information Satisfaction**
   Won-hyun So, Ha-kyun Kim
4. **Study on the Design Process of Screen using a Prototype Method**
   Taewoo Kim, Sunyi Park, Jeongmo Yeo
5. **Study on the Business Process Procedure Based on the Analysis of Requirements**
   Sunyi Park, Taewoo Kim, Jeongmo Yeo
6. **A Study on the harmony of music and TV Lighting through Music Analysis**
   Jeong-Min Lee, Jun-Ho Huh, Hyun-Suk Kim

12:30-13:30   Break

13:30-15:00   Session A-6 : HRH 2018
(HALL A, Chair: Jun-Ho Hur)

1. **Developing Participatory Clothing Shopping Platform for Customer's Participation in Design**
   Ying Yuan, Jun-Ho Huh
2. **Clothing Size Coding and Size Recommending System Applicable to Clothing Shopping Mall**
   Ying Yuan, Jun-Ho Huh
3. **Defining Drawing of Clothing Pattern in Digital Printing Type for Mass Customizing**
   Ying Yuan, Jun-Ho Huh
4. **A Method of Propelling with many Whirlpools Used by Inland Birds**
   Nak-Hao Kim, Jun-Ho Huh
5. **Designing 3D Propeller by Applying Bird's Wing and Making a Test Product**
   Nak-Hao Kim, Jun-Ho Huh
6. **A Study on the Bumps at the Leading Edge of the Wing Used by Hovering Birds**
   Nak-Hao Kim, Jun-Ho Huh
7. **A study on the LMS platform performance and the performance improvement of K-MOOC platform from the learner's perspective**
   Seong-Kyu Kim, Jun-Ho Huh

13:30-15:00   Session C-6 : FT-8
(HALL C, Chair: Byoungwook Kim)

1. **Design and Development of Power Module for Server BMC Board**
   Cheol Shim, Min Choi
2. **Development of Working History Monitoring and Electronic Approval on Android**
   Injun Ohk, Min Choi
3. **A Design of Demand Response Energy Optimization System for Micro Grid**
   Sooyoung Jung, Jun-Ho Huh
4. **Demand Response Resource Energy Optimization System for Residential Buildings: Smart Grid Approach**

Sooyoung Jung, Jun-Ho Huh
5. **Mobile Atmospheric Quality Measurement and Monitoring System**
   Kyeongseok Park, Sungkuk Kim, Sojeong Lee, Jun Lee, Kyoung-Sook Kim, Soyoung Hwang
6. **Design of Simulator for Time Comparison and Synchronization Method between Ground Clock and Onboard Clock**
   Donghui Yu, Soyoung Hwang

13:30-15:00   Session C-6 : FT-9
(HALL C, Chair: Byoungwook Kim)

1. **One Time Password by Tree Hash of Event Stream with Past Data**
   Yun hwa Chong, Young B. Park
2. **A Study on Research Trends of Technologies for Industry 4.0; 3D Printing, Artificial Intelligence, Big Data, Cloud Computing, and Internet of Things**
   Ki Woo Chun, Haedo Kim, Keonsoo Lee
3. **A Study on the Recovery Method of PPG Signal for IPI-based Key Exchange**
   Juyoung Kim, Kwantae Cho, Yong-Kyun Kim, Kyung-Soo Lim, Sang Uk Shin
4. **A Study on the Security Vulnerabilities of Fuzzy Vault based on Photoplethysmogram**
   Juyoung Kim, Kwantae Cho, Sang Uk Shin
5. **Improvement of Multi-Chain PEGASIS using Relative Distance**
   Bok Gi Min, JiSu Park**, Hyoung Guen Kim*, Jin Gon Shon*
6. **The Design and Implementation of an Enhanced Document Archive System based on PDF**
   Hyun Cheon Hwang, JiSu Park, Byeong Rae Lee, Jin Gon Shon
7. **Design of Readability Improvement Control System for Electric Signboard based on Brightness adjustment**
   Phyoung Jung Kim, Sung Woong Hong

Day 3, April 25, 2018 (Wednesday)

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

10:30-10:40   Break

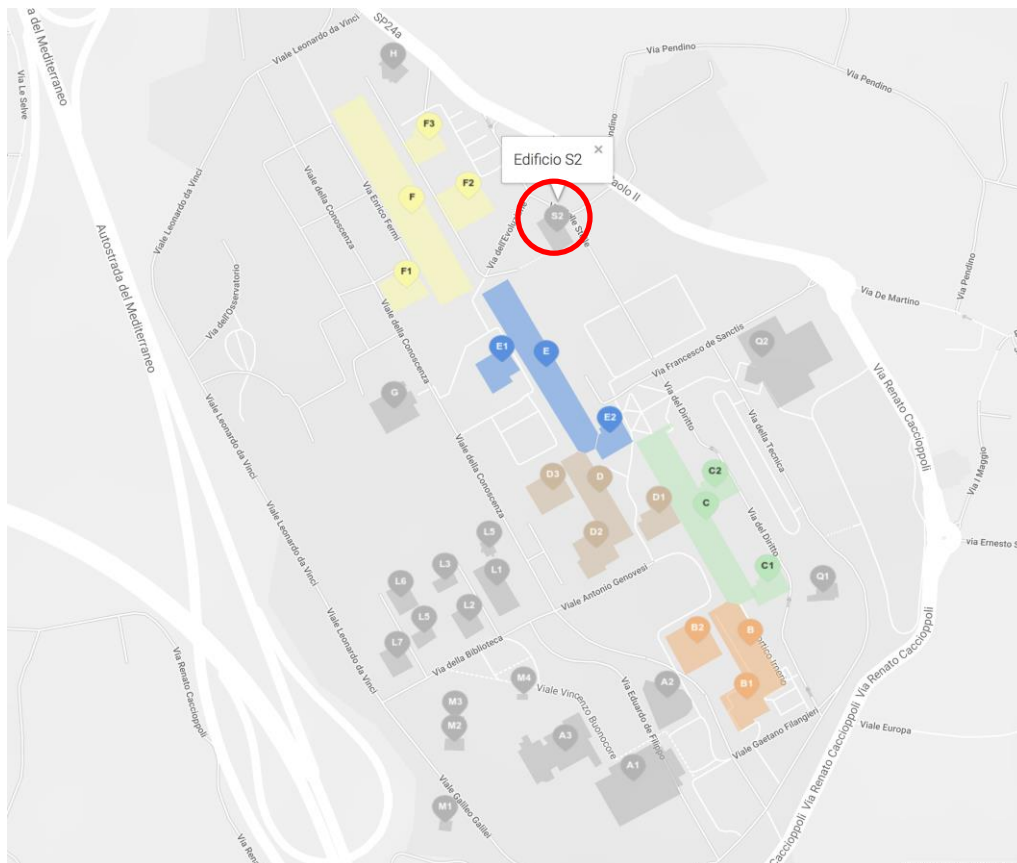**10:40-12:10   Local Committee Meeting**
(HALL A)

CONFERENCE VENUE

University of Salerno (http://web.unisa.it/en)

Via Giovanni Paolo II, 132, 84084 Fisciano SA, Italy (Map)

Registration Desk location, Session Location and Plenary Talk Location in the campus is in the **Fondazione Unisa, red** Building number **S2** (as highlight in the following map).

How to get the University of Salerno

I. By Bus

- From Salerno: Vittorio Veneto Square-Rail, courier CSTP ran nr.7, 17, 27 (every 20').
- From Naples: SITA courier Via Ferraris, where is the INPS, at 300 meters from Garibaldi Square (Central Station).

II. By Car

- From Naples: A3 motorway (Napoli-Salerno-Reggio Calabria); continue towards the south and take the freeway Salerno-Avellino; continue towards Avellino and exit at University, at the roundabout turn right and continue to the right.
- From Naples: Motorway A16 (Napoli-Bari); from barrier _ East Naples merge onto A30 (Caserta-Salerno), direction Salerno, and go up the ramp to Avellino. Shortly after entering on the motorway Salerno-Avellino, exit at Fisciano-Mercato San Severino; at the end of the exit go to the right.
- From the East (Bari): Motorway A16 (Bari-Napoli); exit Avellino East and take the freeway Avellino Square-Salerno; exit at Fisciano-Mercato San Severino; at the end of the exit go to the right.
- From the South (Reggio Calabria): Motorway A3 (Salerno-Reggio Calabria-Naples); before Salerno take the fork for the A1 and A16 motorways, and, continuing in the direction Avellino, exit at University, at the roundabout turn right and continue to the right.

III. By Train

- From Salerno station: in front the station courier CSTP for Fisciano University or Taxi
- From Naples Central Station to station Salerno:
  - autolinee SITA: Via Ferraris, where is the INPS, at 300 meters from Garibaldi Square (Central Station).
  - Treno

IV. By Plane

- Capodichino Airport (Naples):
- From the airport: SITA for Fisciano University (9:30, 13:30 and 19:30) and 16:00 for Salerno center (Place de la Concorde in front of the train station)
- From the airport: bus Alibus (direct line of the Neapolitan Mobility connecting the airport to the railway station in Garibaldi Square. Periodicity average in minutes: 20 weekdays, Saturday 20, festive 20. Tickets can be purchased on board).

CONFERENCE BANQUET

The congress Banquet will be held at "RESORT VILLAGE OASIS"
(https://www.villaggiooasis.it/en/index.html), via Colombo 4/8, 84047 Laura di Paestum
(SA) • Italia, evening (7:30 - 10:30 pm), 23 April 2018.

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