

**The 12th International Conference on
Future Information Technology
(FutureTech 2017)
&
The 11th International Conference on
Multimedia and Ubiquitous Engineering
(MUE 2017)**

May 22-24, 2017
Seoul, Korea

Organized by

FutureTech, MUE & KIPS CSWRG

2017 International Conferences
(Sponsored / Technically Sponsored by KIPS / KIPS SWRG)

Aug 22-24, Jeju, Korea

- The International Conference on Big data, IoT, and Cloud Computing (BIC 2017)

Dec. 18 - 20, Taichung, Taiwan

- The 12st KIPS International Conference on Ubiquitous Information Technologies and Applications (CUTE 2017)

Message from the FutureTech2017 General Chairs

FutureTech2017 is the 12th event of the series of international scientific conference. This conference takes place on May 22-24, 2017 in Seoul, South Korea. The aim of the FutureTech2017 is to provide an international forum for scientific research in the technologies and application of information technology. FutureTech 2017 is the next edition of 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 Program Chairs: Ching-Hsien Hsu (Chung Hua University, Taiwan), Yunsick Sung (Dongguk University, Korea), Kwang-il Hwang (Incheon National University, Korea), Houcine Hassan (Universitat Politècnica de Valencia, Spain), 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.

FutureTech 2017 General Chairs

Kim-Kwang Raymond Choo, University of South Australia, Australia,
Gangman Yi, Dongguk University, Korea,
Jiannong Cao, The Hong Kong Polytechnic University, Hong Kong

Message from the FutureTech2017 Program Chairs

Welcome to the 12th International Conference on Future Information Technology (FutureTech 2017), which will be held in Seoul, Korea on May 22-24, 2017. FutureTech2017 will be 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 FutureTech2017, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the FutureTech2017 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. Weijia Jia, Director of Cyber-Space Intelligent Computing Lab, Shanghai Jiaotong University, China and Prof. Han-Chieh Chao, President of National Dong Hwa University, Taiwan. 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 2017 Program Chairs

Ching-Hsien Hsu, Chung Hua University, Taiwan,
Yunsick Sung, Dongguk University, Korea,
Houcine Hassan, Universitat Politecnica de Valencia, Spain,
Kwang-il Hwang, Incheon national University, Korea,
Jin Wang, Yangzhou University, China

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Gangman Yi, Dongguk University, Korea
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Message from the MUE2017 General Chairs

MUE 2017 is the 11th event of the series of international scientific conference. This conference takes place on May 22-24, 2017 in Seoul, South Korea. The aim of the MUE2017 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-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: Naveen Chilamkurti (La Trobe University, Australia), Jungho Kang (Soongsil University, Korea), Ka Lok Man, Xi'an(Jiaotong-Liverpool University, China), Joon-Min Gil(Catholic University of Daegu, 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.

MUE2017 General Chairs

Shu-Ching Chen, Florida International University, USA,
Yi Pan, Georgia State University USA,
Jianhua Ma, Hosei University, Japan,
Young-Sik Jeong, Dongguk University, Korea

Message from the MUE2017 Program Chairs

Welcome to the 11th International Conference on Multimedia and Ubiquitous Engineering (MUE 2017), which will be held Seoul, South Korea on May 22-24, 2017. MUE2017 will be the most comprehensive conference focused on the various aspects of multimedia and ubiquitous engineering. It will provide an opportunity for academic and industry professionals to discuss recent progress in the area of multimedia and ubiquitous environment. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications in multimedia and ubiquitous engineering. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in these important subjects.

For MUE2017, we received many paper submissions, after a rigorous peer review process, we accepted only articles with high quality for the MUE2017 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 2017 Program Chairs

Naveen Chilamkurti, La Trobe University, Australia,
Jungho Kang, Soongsil University, Korea,
Ka Lok Man, Xi'an Jiaotong-Liverpool University, China,
Joon-Min Gil, Catholic University of Daegu, Korea

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Yong-Yoon Cho, Sunchon National University, Korea
Zheng-Jun Zha, National University of Singapore, Singapore

Invited Speaker



Ubiquitous Collaborative Sensing

Dr. Weijia Jia

Professor
Director of Cyber-Space Intelligent Computing Lab
Shanghai Jiaotong University
PR China

Abstract

Ubiquitous Sensing requires the sensing mechanism be deployed in Tenary-Cyberspace (TC) which includes social/Internet and physical world machines interconnected by wired/wireless networks. This talk focuses on the challenges of realizing the Ubiquitous Collaborative Sensing on TC.

Biography

Prof. Weijia Jia is currently a Zhiyuan Chair Professor at the Department of Computer Science & Engineering, Shanghai Jiaotong University, China. He is leading several large R&D projects on next-generation Internet of Things, environmental sensing, smart cities etc. He received BSc and MSc from Center South University, China in 1982 and 1984 and Master of Applied Sci. and PhD from Polytechnic Faculty of Mons, Belgium in 1992 and 1993 respectively, all in Computer Science. He joined German National Research Center for Information Science (GMD) in Bonn (St. Augustine) from 1993 to 1995 as a research fellow. From 1995 to 2013, he has worked in City U-HK as a full professor. His research interests include next generation of IoT, smart cities, wireless communication, protocols and heterogeneous networks; distributed systems, multicast and anycast QoS routing protocols. In these fields, he has a number of publications in the prestige international journals and conference proceedings. In 2005 and 2008, he has been awarded total HK\$22 millions from the Innovation & Technology Fund of the HKSAR Government for two projects with intentions of design and implementation of cyber cross-platform secure communications to integrate the Internet with 3G, WiFi, WiMAX, ad-hoc network, Sensor and networks for real-time multimedia communications and mobile video surveillance. He is the Senior Member of IEEE and the Member of ACM.

Invited Speaker



A Bacteria-Inspired Solution for 5G Mobile Communication

Dr. Han-Chieh Chao

President
National Dong Hwa University
Taiwan

Abstract

A surge of innovation in technologies for 5G mobile communication is on the horizon, but its specification is still just being discussed. The only know is that 5G must introduce many novel hardware/software techniques, service types and network interfaces due to the requirement. There is very frequent interaction between these components that is like an ecosystem. An ecosystem has a very diverse species so that there are complex interaction happened. However, it can always maintain a balanced state because an ecosystem is a Self-Organizing Network (SON). 5G should consider to concept of SON so that the interaction of 5G functions can be well managed. This is the first step towards ecosystem by using biologically inspired method. This speech will introduce what is the biologically inspired method and how to use it for the real environment. Finally, we will present a novel network platform for 5G mobile communication system, viz Software Defined Wireless Bacteria-Inspired Network (SDWBIN). The SDWBIN platform integrates the concepts of molecular and bacterial communication into traditional mobile communications so that the features of molecule and bacteria (i.e., perception, infection and diffusion) could be applied to end devices, such as vehicle-to-vehicle, machine-to-machine and device-to-device. In order to realize the design of SDWBIN platform, we exploit the framework of Software Defined Wireless Network to implement the core network in SDWBIN. We expect that the proposed SDWBIN platform can tackle with the communication from an enormous number of devices in 5G systems.

Biography

Dr. Han-Chieh Chao is a joint appointed Chair Professor of the Department of Computer Science & Information Engineering, Electronic Engineering of National Ilan University, I-Lan, Taiwan (NIU) and Fujian University of Technology. He is serving as the President since 2016 for NDHU as well. He was the Director of the Computer Center for Ministry of Education Taiwan from September 2008 to July 2010. His research interests include High Speed Networks, Wireless Networks, IPv6 based Networks, Digital Creative Arts, e-Government and Digital Divide. He received his MS and Ph.D. degrees in Electrical Engineering from Purdue University in 1989 and 1993 respectively. He has authored or co-authored 4 books and has published about 400 refereed professional research papers. He has completed more than 150 MSEE thesis students and 5 PhD students. Dr. Chao is the Editor-in-Chief for IET Networks, Journal of Internet Technology. He is the founding Editor-in-Chief for International Journal of Internet Protocol Technology, and International Journal of Ad Hoc and Ubiquitous Computing. He is also the associate editor for IEEE Network Magazine and IEEE Wireless Communications Magazine. Dr. Chao has served as the guest editors for Mobile Networking and Applications (ACM MONET), IEEE JSAC, IEEE Communications Magazine, IEEE Systems Journal, Computer Communications, IEE Proceedings Communications, the Computer Journal, Telecommunication Systems, Wireless Personal Communications, and Wireless Communications & Mobile Computing. Dr. Chao is an IEEE senior member and a Fellow of IET (IEE).

PROGRAM SCHEDULE FOR FUTURETECH & MUE 2017

Day 1, May 22, 2017				
Time	Min	HALL A	HALL B	HALL C
10: 00-12: 00	120	FutureTech - Organizing Committee Meeting		
13: 00-15: 00	120	MUE - Organizing Committee Meeting		
15: 00-17: 00	120	Local Arrangement Committee Meeting		

Day 2, May 23, 2017				
Time	Min	HALL A	HALL B	HALL C
08: 40-09: 00	20	Registration		
09: 00-10: 30	90	Session A-1 FT	Session B-1 FT	Session C-1 MUE
10: 30-10: 40	10	Coffee Break		
10: 40-12: 10	90	Session A-2 FT	Session B-2 FT	Session C-2 MUE
12: 10-13: 10	60	Lunch		
13: 10-14: 40	90	Session A-3 FT	Session B-3 FT	Session C-3 MUE
14: 40-14: 50	10	Coffee Break		
14: 50-15: 40	50	Keynote I		
15: 40-15: 50	10	Coffee Break		
15: 50-16: 40	50	Keynote II		
16: 40-16: 50	10	Coffee Break		
16: 50-17: 50	60	Session A-4 FT	Session B-4 FT & BlockFinTech	Session C-4 MUE
18: 00-20: 00	120	Banquet		

Day 3, May 24, 2017				
Time	Min	HALL A	HALL B	HALL C
08: 40-09: 00	20	Registration		
09: 00-10: 30	90	Session A-5 SMSE	Session B-5 HRH	Session C-5 MUE & WNGS
10: 30-10: 40	10	Coffee Break		
10: 40-12: 10	90	Session A-6 SMSE	Session B-6 HRH	Session C-6 FIDPS

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

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2. By Airport Limousine Bus (No. 6200)

Between Incheon Int'l Airport <=> Seoul Olympic Parktel (Adult 15,000 KRW).

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