The 2021 World Congress on Information Technology Applications and Services

"Advanced Mobile, Communications, Security, Multimedia, Vehicular, Cloud, IoT, and Computing"

> February 18-20, 2021 Jeju, Korea

Organized by

World IT Congress & KIPS SWRG





2021 International Conferences

(Sponsored/Technically Sponsored by KIPS/KIPS SWRG)

The 15th International Conference on Multimedia and Ubiquitous Engineering (MUE 2021)

- April 22-24, Jeju, Korea
- http://www.mue-conference.org/2021

The 16th International Conference on Future Information Technology (FutureTech 2021)

- April 22-24, Jeju, Korea
- http://www.futuretech-conference.org/2021

The 5th The International Conference on Big data, IoT, and Cloud Computing (BIC 2021)

- August 16-18, Jeju, Korea





General Chairs' Message from the World IT Congress 2021

The 2021 World Congress on Information Technology Applications and Services (World IT Congress 2021) - "Advanced Mobile, Communications, Security, Multimedia, Vehicular, Cloud, IoT, and Computing" will be held in Jeju, Korea on February 18~20, 2021. The World IT Congress 2021 is aimed at the address key themes on "Advanced Mobile, Communications, Security, Multimedia, Vehicular, Cloud, IoT, and Computing." World IT Congress 2021 will be the most comprehensive conference focused on information technology, computing, and applications, and will provide an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of Advances in IT, Applications, and Services. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications in advanced IT. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject.

Accepted and presented papers highlight new trends and challenges of computer science and its applications. The presenters will show how new research could lead to novel and innovative applications. We hope you will find these results useful and inspiring for your future research.

We would like to express our sincere thanks to Steering Committee: James J. (Jong Hyuk) Park (SeoulTech, Korea), Hamid R. Arabnia(The University of Georgia, USA), Han-Chieh Chao (National Ilan University, Taiwan), Young-Sik Jeong (Dongguk University, Korea), Jianhua Ma (Hosei University, Japan), Qun Jin (Waseda University, Japan). Our special thanks go to the program chairs, all program committee members and all the additional reviewers for their valuable efforts in the review process, which 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.

World IT Congress 2021 General Chairs

Yi Pan, Georgia State University, USA Ka Lok Man, Xi'an Jiaotong-Liverpool University, China Jungho Kang, Baewha Women's University, Korea





Program Chairs' Message from the World IT Congress 2021

Welcome to the 2021 World Congress on Information Technology Applications and Services (World IT Congress 2021) - "Advanced Mobile, Communications, Security, Multimedia, Vehicular, Cloud, IoT, and Computing", which will be held in Jeju, Korea on February 18~20, 2021. This congress will be the most comprehensive conference focused on the various aspects of Advances in IT, Applications, and Services (AITA).

This congress provides an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of computer science. In addition, the conference contains high quality papers which are closely related to the various theories and practical applications in computer science. Furthermore, we expect that this congress and its publications will be a trigger for further related research and technology improvements in this important subject. This congress contains high quality research papers submitted by researchers from all over the world. Each submitted paper was peer-reviewed by reviewers, who are experts in the subject area of the paper. Based on the review results, the program committee accepted papers.

For organizing this congress, the support and help of many people is needed. First, we would like to thank all authors for submitting their papers. We also appreciate the support from program committee members and reviewers who carried out the most difficult work of carefully evaluating the submitted papers.

We would like to give my special thanks to James J. (Jong Hyuk) Park (SeoulTech, Korea), Hamid R. Arabnia(The University of Georgia, USA), Han-Chieh Chao (National Ilan University, Taiwan), Young-Sik Jeong (Dongguk University, Korea), Jianhua Ma (Hosei University, Japan), Qun Jin (Waseda University, Japan) as the Steering Committee of World IT for their strong encouragement and guidance to organize the conference. We would like to thank World IT 2021 General Chairs for their advices to make possible organization of The World IT 2021. We would like to express special thanks to execute members for their timely unlimited support.

World IT Congress 2021 Program Chairs

Khamphoui Southisombath, National University of Laos, Laos Jin Wang, Changsha University of Science and Technology, China Muhammad Khurram Khan, King Saud University, Kingdom of Saudi Arabia Dohyun Kim, Catholic University of Pusan, Korea





Organization

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Invited Speaker

TBA





PROGRAM SCHEDULE FOR WOLRD IT CONGRESS 2021

Day 1, Feb. 18, 2021				
Time	Min	HALL-A		
08:40-09:00	20	Registration		
09:00-10:30	90	Session A-1 Chair:		
10:30-10:40	10	Coffee break		
10:40-12:10	90	Session A-2 Presentation of young researchers Chair: Pradip Kumar Sharma		
12:10-13:30	80	Lunch		
13:30-14:10	40	Keynote Speech: "TITLE"		
14:10-14:30	20	Coffee break		
14:30-15:30	60	Session A-3 (HCIS Winter Workshop) Chair:		
15:30-15:40	10	Coffee break		
15:40-17:10	90	Session A-4 Chair:		

Day 2, Feb. 19, 2021				
Time	Min	HALL –A		
10:00-12:00	120	Organizing Committee Meeting I (Only for Invited Members)		
12:00-13:00	60	Lunch		
13:00-15:00	120	Local Arrangement Committee Meeting (Only for Invited Members)		





Day 3, Feb. 20, 2021				
Time	Min	HALL-A		
10:00-12:00	120	Executive Meeting – Organized by World IT Congress 2021 (Only for Invited Members)		
12:00-13:00	60	Lunch		
13:00-15:00	120	Organizing Committee Meeting II (Only for Invited Members)		

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





Conference Venue



MAISON GLAD JEJU

- MAISONGLAD JEJU Hotel
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