



James J. (Jong Hyuk) Park, Jongsung Kim,  
Deqing Zou, and Yang Sun Lee (Eds.)

# Information Technology Convergence, Secure and Trust Computing, and Data Management

ITCS 2012 & STA 2012

### *Editors*

Prof. Dr. James J. (Jong Hyuk) Park  
Department of Computer Science  
and Engineering  
Seoul National University of Science  
and Technology (SeoulTech)  
Seoul  
Korea, Republic of (South Korea)

Prof. Dr. Jongsung Kim  
Division of e-Business  
Kyungnam University  
Changwon  
Korea, Republic of (South Korea)

Prof. Dr. Deqing Zou  
Department of Information Security  
School of Computer Science and Technology  
Huazhong University of Science  
and Technology  
Wuhan  
China

Dr. Yang Sun Lee  
Division of Computer Engineering  
Mokwon University  
Daejeon  
Korea, Republic of (South Korea)

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# Message from the ITCS 2012 General Chairs

On behalf of the organizing committees, it is our pleasure to welcome you to the 4th International Conference on Information Technology Convergence and Services (ITCS 2012), will be held in Gwangju, Korea on September 6–8, 2012.

In past decades or so, IT (Information Technology) influenced and changed every aspect of our lives and our cultures. Without various IT-based applications, we would find it difficult to keep information stored securely, to process information efficiently, and to communicate information conveniently. In the future world, IT will play a very important role in convergence of computing, communication, and all other computational sciences and application and IT also will influence the future world's various areas, including science, engineering, industry, business, law, politics, culture, medicine, and so on.

Our conference is intended to foster the dissemination of state-of-the-art research in all IT convergence areas, including its models, services, and novel applications associated with their utilization. We hope our conference will be the most comprehensive conference focused on the various aspects of advances in all future IT areas and IT-based service, sciences and engineering areas.

We would like to thank all authors of this conference for their paper contributions and presentations. And we would like to sincerely appreciate the following prestigious invited speakers who kindly accepted our invitations, and helped to meet the objectives of the conference:

- Yang Xiao, Ph.D  
Professor, The University of Alabama, USA
- Juan Carlos Augusto, Ph.D  
Professor, University of Ulster, UK
- Ned Kock, Ph.D  
Professor, Texas A&M International University, USA
- Leonard Barolli, Ph.D  
Professor, Department of Information and Communication Engineering, Faculty of Information Engineering, Fukuoka Institute of Technology (FIT), Japan
- Fatos Xhafa, Ph.D  
Professor, Technical University of Catalonia (BarcelonaTech), Spain

We are sure you will find many exciting and stimulating presentations in our oral sessions and want to thank Steering Chair, Jong Hyuk Park for making this conference a success and Program Chairs, Yang Sun Lee, Feng zhao, Der-Jiunn Deng, Eric Pardede for collecting an extremely strong set of papers across a wide range of topics.

Finally, we want to extend our thanks to all Chairs and Committees who are truly responsible for making the conference a success through their generous contributions.

Hai Jin  
Siao-Hwa Chen  
Habib F. Rashvand  
Andrew Kusiak  
ITCS 2012 General Chairs

# Message from the ITCS 2012 Program Chairs

A warm welcome to the 4th International Conference on Information Technology Convergence and Services (ITCS 2012), will be held in Gwangju, Korea on September 6–8, 2012.

Our conference provides a chance for academic and industry professionals to discuss the latest issues and progress in the area of new convergence technologies, novel applications and services, associated with the devices and systems based on the various information technologies.

We would like to express our appreciation to all the contributors and authors for the 41 submissions with the following topics to ITCS 2012 which we received from around the globe.

- Track 1. Advanced Computer Science and Applications
- Track 2. Advanced Electrical and Electronics Engineering and Technology
- Track 3. Intelligent Manufacturing Technology and Services
- Track 4. Advanced Management Information Systems and Services
- Track 5. Electronic Commerce, Business and Management
- Track 6. Intelligent Vehicular Systems and Communications
- Track 7. Bio-inspired Computing and Applications
- Track 8. Advanced IT Bio/Medical Engineering
- Track 9. Modeling and Services for Intelligent Building, Town, and City

And some papers were invited from Chairs and Committee members to be included in our ITCS 2012 proceedings.

Achieving such a high quality of proceedings would have been impossible without the huge work that was undertaken by the international Program Committee members. We take the opportunity to thank them for their great support and cooperation.

Sincerely yours,

Yang Sun Lee  
Feng Zhao  
Der-Jiunn Deng  
Eric Pardede  
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# Message from the STA 2012 General Chairs

We are pleased to welcome you to the 9th FTRA International Conference on Secure and Trust Computing, data management, and Applications (STA 2012), held in Gwangju, Korea, September 6–8, 2012.

STA 2012 addresses the various theories and practical applications of secure and trust computing and data management in future environments. It will present important results of significant value to solve the application services and various problems within the scope of STA 2012. In addition, we expect it will trigger further related research and technology developments which will improve our lives in the future.

We sincerely thank the STA 2012 steering chair, James J.(Jong Hyuk) Park. It would have been impossible to organize our program without the hard work of all our chairs and committees. Finally, we would like to thank the FSTA 2012 and IS 2012 workshop chairs for contributions that have added variety to the topics represented.

Hai Jin  
Yanchun Zhang  
Bo Jin  
STA 2012 General Chairs

# Message from the STA 2012 Program Chairs

On behalf of the STA 2012 organizing committee, it is our honor to welcome you to the 9th FTRA International Conference on Secure and Trust Computing, data management, and Applications (STA 2012).

The success of a conference is mainly determined by the quality of its technical program. This year's program will live up to high expectations due to the careful selection by the Program Committee. They have spent long hours in putting together an excellent program and deserve a big applaud.

There are many people who contributed to the success of STA 2012. We would like to thank the many authors from around the world for submitting their papers. We are deeply grateful to the Program Committee for their hard work and enthusiasm that each paper received a thorough and fair review. Finally, we would like to thank all the participants for their contribution to the conference.

Deqing Zou  
Jongsung Kim  
Jun Hong  
STA 2012 Program Chairs

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# **Message from the Workshop Chairs of FSTA 2012**

Welcome to the 2012 International Workshop on Future Security Technologies and Applications (FSTA 2012).

The goal of FSTA 2012 is to provide a chance for academic and industry researchers to present and discuss their research findings on various topics related to future Internet and security.

We would like to thank all authors for their work and presentation, all members of the program committee and reviewers for their cooperation and time spent in the reviewing process. Particularly, we thank the founding steering chair of FSTA 2012, James J. (Jong Hyuk) Park. Finally, Special thanks are extended to the staffs from STA 2012, who contributed so much to the success of the conference.

Namje Park  
Jeju National University  
Korea



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# **Message from the Workshop Chair of Information Security 2012**

Welcome to the 2012 International Workshop on Information Security 2012.

The goal of Information Security 2012 is to provide a chance for information and network security researchers to present and discuss their research findings on various topics related to information security.

The workshop is the result of the hard work of contributing authors, reviewers, and workshop committee members. We are grateful to all of them. Particularly, we thank the founding steering chair of Information Security 2012, James J. (Jong Hyuk) Park. Finally, we would like to thank all the participants for their contributions on Information Security 2012.

Wen-Chung Kuo  
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