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# Message from the General Chairs

On behalf of the organizing committees, it is our pleasure to welcome you to the 7<sup>th</sup> FTRA International Conference on Future Information Technology(FutureTech 2012), will be held in Vancouver, Canada, June 26–28, 2012.

FutureTech 2012 is the next edition of FutureTech 2011(Loutraki, Greece), FutureTech 2010 (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).

Future technology information technology would stand for all of continuously evolving and converging information technologies, including digital convergence, multi-media convergence, intelligent applications, embedded systems, mobile and wireless communications, bio-inspired computing, grid and cloud computing, semantic web, user experience and HCI, security and trust computing and so on, for satisfying our ever-changing needs.

We also sincerely thank all our chairs and committees, and these are listed in the following pages. Without their hard work, the success of FutureTech 2012 would not have been possible. We hope you find FutureTech 2012 enjoyable and please let us know any suggestions for improvement.

Sang Soo Yeo, Mokwon University, Korea  
Victor Leung, University of British Columbia, Canada  
C.S. Raghavendra, University of Southern California, USA  
FutureTech 2012 General Chairs

# Message from the Program Chairs

Welcome to the 7<sup>th</sup> FTRA International Conference on Future Information Technology (FutureTech 2012) will be held in Vancouver, Canada, June 26–28, 2012.

Our conference is intended to foster the dissemination of state-of-the-art research in all future IT areas, including their models, services, and novel applications associated with their utilization. FutureTech 2012 will foster state-of-the-art research in the area of converging information technologies, including digital convergence, multimedia convergence, intelligent applications, embedded systems, mobile and wireless communications, bio-inspired computing, grid and cloud computing, semantic web, user experience and HCI, security and trust computing as well as algorithms and performance evaluation and measurement in Future Computing. The FutureTech 2012 will also provide an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of convergence future computing technologies and applications.

Due to many high quality paper submissions and the lack of space in proceedings, the review process was very tough and we had no choice but to reject several good papers. Each paper was accessed by at least three peer reviewers. In summary the respective calls for papers attracted a total of 266 submissions out of which 92 papers were selected for presentation with 34% acceptance rate and are included in this volume.

Finally, we would like to thank you all for your participation in our conference, and thank all the authors, reviewers and organizing committee members.

Thank you and enjoy the conference!

Taeshik Shon, Ajou University, Korea  
Parimala Thulasiraman, University of Manitoba, Canada  
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Sen Gupta Gourab	Palmerston North New Zealand

# Message from the BITSC 2012 Chairs

It is our great pleasure to welcome you to the International Workshop on Biological IT-System Convergence (BITSC-2012), which will be held in conjunction with the 3rd International Conference on Mobile, Ubiquitous and Intelligent Computing (MUSIC-2012) in Vancouver, Canada, from June 26 to 28, 2012.

For the development and evaluation of new biomedical devices, *in vitro* biological systems, such as isolated cells, tissues or isolated organs, are useful in pre-clinical research. However *in vitro* systems are nonphysiological, therefore *in vivo* biological systems using live animals are necessary to study how developed devices behave under clinical or pathophysiological conditions.

Even though small animals (e.g., mice, rats, gerbils) are often more cost-effective, and allow for relatively simpler management, they are quite different in terms of anatomy and functional aspects compared to the human. On the other hand, large animals (e.g., cats, dogs, pigs, sheep, and monkeys) are structurally and functionally similar to the human. In addition, the size of large animals is suitable for testing human medical devices.

For organizing an international workshop, there were the support and help of many people. First, we would like to thank all the authors for submitting their outstanding papers. Also, we thank the program committee members and reviewers who carefully evaluated the submitted papers.

We hope that this workshop will provide a good opportunity for researchers to know and discuss what kinds of animal models have been developed and the application of models in biomedical research.

Byeong-Teck Kang  
BITSC 2012 Chair

# **BITSC 2012 Organization**

## **Workshop Organizer**

Byeong-Teck Kang

Chungbuk National University, Korea

## **Program Committee Members**

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Chungbuk National University, Korea

Dong-In Jung

Gyeongsang National University, Korea

Jungho Cho

Chungbuk National University, Korea

Renata Leoni

National Institutes of Health, USA

# Message from the CIA 2012 Chairs

It is our great pleasure to welcome you to the International Workshop on Computer Images and its Applications (CIA-2012), which will be held in conjunction with the 7th International Conference on Future Information Technology (FutureTech-2012) in Vancouver, Canada, from June 26 to 28, 2012.

With the fast developments in electronics industry and the amazing growing of the potential customers, multimedia are increasingly ubiquitous: more and more people live in a world of Internet pop-ups and streaming television, mobile phone texting and video clips and pod-casting. Especially, there have been rapid advancements in computer graphics, imaging, multimedia service and game technologies. The influence and impact of digital images on modern society is tremendous, and image processing and computer graphics are now a critical component in science and technology. Image processing has become such a critical component in contemporary science and technology that many tasks would not be attempted without it. The rapid progress in handling the digital image by computer or human, and the associated developments in analysis methods, has propelled computer imagery into one of the most important sub-fields in scientific imaging. It is a truly interdisciplinary subject that draws from synergistic developments involving many disciplines and is used in computer graphics, computer vision, computer art and many other fields.

We thank the authors of all the submitted papers, the Program Committee, and all the other reviewers for the many hours of hard work that went toward making the workshop a success. We hope that this workshop will provide a good opportunity for researchers to know and discuss what kinds of theories and applications have been developed in computer Imaging research.

SangHyun Seo, Alicja Wiczorkowska, and Yingcai Xiao  
CIA 2012 Chairs

# CIA 2012 Organization

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# Message from the MPCA 2012 Chairs

On the behalf of the organizing committees, it is our great pleasure to welcome you to the joint workshop of the Second International Workshop on Mobile Platform, Computing and Applications (MPCA-2012) which will be held in conjunction with the 7th International Conference on Future Information Technology (FutureTech 2012) in Vancouver, Canada, from June 26 to 28, 2012.

Mobile platform and computing devices such as smart phones, tablets, notebooks and other mobile devices are becoming very popular and essential to interact with each other in an increasingly mobile and collaborative global mobile cloud community. This environment gives chance for developers and researchers to have challenges of multitude of specific research fields, including mobile system design, mobile platform, applications, interaction between mobile devices, networking and protocols, mobile cloud computing. The International Workshop on Mobile Platform, Computing and Applications (MPCA-2012) aims to bring academicians and researchers to present novel ideas and discuss their design and developments in mobile platform, computing and applications for mobile aspects.

For organizing an international workshop, there were the support and help of many people. First, we would like to thank all the authors for submitting their outstanding papers. Also, we thank the program committee members and reviewers who carefully evaluated the submitted papers.

Seung-Ho Lim  
MPCA 2012 Chair



# MPCA 2012 Organization

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Korea

# Message from the SocialComNet 2012 Chairs

Welcome to the 2012 International Workshop on Social Computing, Network, and Services (SocialComNet 2012).

The goal of SocialComNet 2012 is to provide a chance for academic and industry researchers to present and discuss their research findings on various topics related to Social Computing, Network, and Services.

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 SocialComNet 2012, James J. (Jong Hyuk) Park. Finally, we would like to thank all the participants for their contributions on SocialComNet 2012.

Kae Won Choi, SeoulTech, Korea  
Jong Sung Kim, Kyungnam University, Korea  
Yau-Hwang Kuo, National Cheng Kung University, Taiwan

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# Message from the DFIS 2012 Chairs

On behalf of the DFIS 2012 workshop committees, we are pleased to welcome you to the 6th International Symposium on Digital Forensics and Information Security (DFIS-12), which will be held at the Vancouver of Canada on 26<sup>th</sup>–28<sup>th</sup> June, 2012.

This year the DFIS 2011 addresses the various theories and practical applications of the digital forensic and information security. It will present important results of significant value to solve the various problems within the scope of DFIS 2012. Specially, we are convinced that the DFIS 2012 will be an important forum for researchers and industry practitioners to exchange information regarding advancements in the state of art and practice of information and communication technologies-driven business services and their applications, as well as to identify emerging research topics and define the future directions of digital forensic and information security.

The DFIS 2012 is the next event in a series of highly successful the 5th International Workshop on Forensics for Future Generation Communication environments: F2GC-11 (Loutraki, Greece), F2GC-10 (Cebu, Philippines), F2GC-09 (Jeju , Korea), F2GC-08 (Sanya, China), F2GC-09 (Jeju , Korea).

Finally, there are many people who contributed to the success of the DFIS 2012. We first would like to thank the many authors from around the world for submitting their papers. we would like to thank all the workshop chairs and committees and the participants for their contribution to the conference.

DFIS 2012 Workshop Chairs

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# Message from the ISCC 2012 Chairs

It is our pleasure to welcome you to The 4th International Workshop on IT Service & Cloud Computing (ISCC 2012), held in Vancouver, Canada, June 26–28, 2012.

The ISCC 2012 provides a forum for academic and industry professionals to present novel ideas on ISCC. We expect that the ISCC technologies have become state-of-the-art research topics and are expected to play an important role in human life in the future. The ISCC 2012 will be the most comprehensive workshop focused on the various aspects of IT Services and Cloud Computing. The ISCC 2012 will provide an opportunity for academic and industry professionals to discuss the latest issues, progress, projects, research cooperation, and new idea in the areas of IS and CC.

In addition, the workshop will publish high quality papers which are closely related to the various theories and practical applications in IS and CC, with Springer's CCIS series. Furthermore, we expect that the workshop and its publications will be a trigger for further related research and technology improvements in this important subject.

We would like to send our sincere appreciation to all participating members who contributed directly to ISCC 2012. We would like to thank all Program Committee members for their excellent job in reviewing the submissions. We also want to thank the members of the organizing committee, all the authors and participants for their contributions to make ISCC 2012 a grand success.

Dae-Sik Ko, James J. (Jong Hyuk) Park, Sang-Soo Yeo  
ISCC 2012 General Chairs

# ISCC 2012 Organization

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# Contents

## Part I: Future Information Technology

<b>Blind Watermarking Scheme for H.264/AVC Based on Intra 4x4 Prediction Modes</b> .....	1
<i>Nasir Mehmood, Mubashar Mushtaq</i>	
<b>Improvement of MASC Secure Tunnel Protocol for Monitoring Transport Containers</b> .....	9
<i>Sung-Woon Lee</i>	
<b>A Study on Network System Design for the Open USN Services</b> .....	17
<i>Jaehak Yu, Yoon-Sik Yoo, Hyo-Chan Bang</i>	
<b>Sentiment-Property Extraction Using Korean Syntactic Features</b> .....	23
<i>Won Hee Yu, Yeongwook Yang, Ki Nam Park, Heuseok Lim</i>	
<b>On Unambiguity of Languages Related to Codes</b> .....	31
<i>Nguyen Dinh Han, Phan Trung Huy</i>	
<b>A Mobile-Based Cognitive Social Influence Model for Recommender Systems</b> .....	39
<i>Mucheol Kim, SangOh Park, Jae-Soo Kim, Kiseok Choi</i>	
<b>A Design of R&amp;D Planning Workbench Based on Research Outcome Analysis</b> .....	45
<i>Heeseok Choi, Sung-Jin Jhun, Kiseok Choi, Jae-Soo Kim, Heejun Han</i>	
<b>Similar Document Retrieval among the Different Kind of National R&amp;D Outcomes</b> .....	53
<i>Heejun Han, Kiseok Choi, Jae-Soo Kim, Heeseok Choi</i>	
<b>Soft Realtime Xen Virtual Machine Scheduling Using Compositional Model</b> .....	59
<i>Young Woong Ko, Se Hak Chun, Jin Kim</i>	

<b>Energy Efficient Deduplication System Exploiting Similarity Information</b> .....	67
<i>Ho Min Jung, Jae Min Park, Sun Jeong Kim, Young Woong Ko</i>	
<b>Secure UMTS/EPS Authentication and Key Agreement</b> .....	75
<i>Jung-Sik Cho, Dongwan Kang, Sekwon Kim, JooHyoun Oh, Cheateae Im</i>	
<b>A Method of Generating Customer's Profile without History for Providing Recommendation to New Customers in E-Commerce</b> .....	83
<i>Keonsoo Lee, Seungmin Rho</i>	
<b>LARSSs: Design of Middleware for Location-Based Augmented Reality Services</b> .....	89
<i>Jaehwa Chung, Joon-Min Gil, Young-Sik Jeong, Doo-Soon Park, Jong-Hyuk Park</i>	
<b>A Study on Image Processing Based Leaf Area Measurement</b> .....	97
<i>Dae-Heon Park, Hyun-Joong Kang, Se-Han Kim</i>	
<b>Analysis of IPTV Service Quality Applying Real-Time QoE Measurement Technology</b> .....	103
<i>Hae-Jong Joo, Bong-Hwa Hong, Eu-Soo Lee, Hae-Kil Choi</i>	
<b>The Design of Non-financial Information System for Inter-organizational Collaboration</b> .....	111
<i>Hangbae Chang</i>	
<b>Part II: Biological Information Technology Convergence</b>	
<b>MRI Features in a Canine Model of Intracerebral Hemorrhage</b> .....	117
<i>Dong-In Jung, Byeong-Teck Kang</i>	
<b>Esophageal and Gastric Endoscopic Foreign Body Removal of 19 Dogs (2009-2011)</b> .....	123
<i>Jong-Hyun Moon, Byeong-Teck Kang, Do-Hyung Kwon, Hee-Chun Lee, Joon-Hyeok Jeon, Kyu-Woan Cho, Hae-Won Jung, Dong-In Jung</i>	
<b>Response Rates and Survival Times for Dogs with Lymphoma Treated with the University of Wisconsin-Madison Chemotherapy Protocol</b> .....	129
<i>Hae-Won Jung, Byeong-Teck Kang, Kyu-Woan Cho, Joon-Hyeok Jeon, Hee-Chun Lee, Jong-Hyun Moon, Hyo-Mi Jang, Ji-Hyun Kim, Dong-In Jung</i>	
<b>A Retrospective Study of 172 Neurological Patients Presented to the Gyeongsang National University Animal Medical Center; From Jan. 2008 to Jan. 2012</b> .....	135
<i>Joon-Hyeok Jeon, Byeong-Teck Kang, Chang-Moo Ji, Hee-Chun Lee, Jong-Hyun Moon, Kyu-Woan Cho, Hae-Won Jung, Dong-In Jung</i>	

**Part III: Computer Image and Its Applications**

**Gesture Recognition Using Simple-OpenNI for Implement Interactive Contents** ..... 141  
*Ok-Hue Cho, Won-Hyung Lee*

**Tracing Time through Interactive Artworks** ..... 147  
*Young-Eun Kim, Sang-Hun Nam, Jin-Wan Park*

**QRS Complexes Detection in Electrocardiogram Signals Based on Multiresolution Analysis** ..... 153  
*Kil-Sang Yoo, Won-Hyung Lee*

**Data Embedding Scheme for Reversible Authentication** ..... 159  
*Kil-Sang Yoo, Won-Hyung Lee*

**Representation of Dispersion Effect Using N-Way Color Based White Light** ..... 165  
*Seung-Taek Ryoo, Jae-Khun Chang*

**Image-Based Emotion Retrieval Approach with Multi-machine Learning Schemes** ..... 177  
*Jae-Khun Chang, Seung-Taek Ryoo*

**Part IV: Mobile Platform, Computing and Applications**

**Supporting Multi-tenancy in SaaS Environments** ..... 187  
*Wonjae Lee, Min Choi*

**Part V: Social Computing, Network, and Services**

**On the Suitability of the Social Web Environment for Agile Requirements Engineering** ..... 193  
*Pankaj Kamthan*

**The Relationship of Positive Personal Traits in Blended Learning: Meaning-Making, Self-regulation, and Knowledge Management** ..... 201  
*Yu-chu Yeh, Chun Fu Lin, Yi-Ling Yeh, Han Hsuan Yang*

**Towards an Understanding of Digital Social Networks and Web 2.0 in Supply Chain Management** ..... 205  
*Holger Schrödl*

**Part VI: Digital Forensics and Information Security**

**A Based on Identity Surveillance System in Aviation Security** ..... 215  
*Deok Gyu Lee, Jong Wook Han*

<b>EVM: A New Methodology for Evidential Video Management in Digital CCTV Systems</b> .....	225
<i>Kyung-Soo Lim, Su-Wan Park, Jong Wook Han</i>	
<b>Peer-to-Peer Botnet Investigation: A Review</b> .....	231
<i>Mark Scanlon, Tahar Kechadi</i>	
<b>Videos Analytic Retrieval System for CCTV Surveillance</b> .....	239
<i>Su-Wan Park, Kyung-Soo Lim, Jong Wook Han</i>	
<b>State of the Art in Trusted Computing Forensics</b> .....	249
<i>Waleed Halboob, Ramlan Mahmud</i>	
<b>Part VII: IT Service &amp; Cloud Computing</b>	
<b>Work Load Calculation Algorithm for Postal Delivery Operation</b> .....	259
<i>Jeong-Hyun Park, Jong-Heung Park</i>	
<b>Concept of the Need Coexistence Model for Finding ICT Convergence Business Opportunities</b> .....	269
<i>Hiyeob Joo, Manjin Kim</i>	
<b>Study on Virtual Education System Modeling in Hybrid Cloud Computing</b> .....	275
<i>Si-Jung Kim, Do-Eun Cho</i>	
<b>Study on Safe Remote Control Method of Home Device under Environment of Smart Grid</b> .....	281
<i>Do-Eun Cho, Si-Jung Kim</i>	
<b>Designing Service Model for the Smart Science Center by ICT Services</b> ....	287
<i>Hiyeob Joo, Hyeogin Kwon, Jinhwa Lee, Kil-Sang Yoo</i>	
<b>Design and Evaluation of Safe Seamless Service Model between Multiple Wireless Network Sections of u-Wellness Environment</b> .....	293
<i>Young-Hyuk Kim, Il-Kwon Lim, Jae-Gwang Lee, Jae-Pil Lee, Jae-Kwang Lee</i>	
<b>A Study of Presence Services in SIP-Based Group Communication Systems</b> .....	301
<i>Daeseung Yoo, Jinkyu Choi, Byungtae Jang, Soonghwan Ro</i>	
<b>Fast Return Routability Test for Mobile Management</b> .....	309
<i>Soonghwan Ro</i>	
<b>VPN Certification Structure Design through Specific Biometric Data in Remote Health Monitoring System</b> .....	317
<i>Il-Kwon Lim, Young-Hyuk Kim, Jae-Gwang Lee, Jae-Pil Lee, Jae-Kwang Lee</i>	

**A Study on Design of Microstrip Patch Antenna for Mobile Communication Systems** ..... 325  
*Jong-Dae Park, Sung-Won Jang, Byeong-Ho Park, Chan-Hong Park, Myung-Dong Kim, Hyeon-Kyeong Seong*

**Korean University Students' Utilization of Social Networking Systems** ..... 331  
*Sang-Zo Nam*

**A Study on Multimedia Emotion/Mood Classification and Recognition** ..... 337  
*Sang-Soo Yeo*

**A Predictive Surveillance System Using Context-Aware Data of u-City** ..... 343  
*Jaehyuk Cho*

**Implementation of Cluster Surveillance Network Structural Algorithm Simulator for Fire Safety Equipment Management System** ..... 353  
*Jae-Myeong Choi, Sang-Soo Yeo, Heau-Jo Kang*

**Author Index** ..... 359