Congratulatory Address

Ladies and Gentlemen!

Welcome to the 2012 International Conference on Convergence Technology, which is held in Ho Chi Minh, Vietnam. As the general chair of the conference, I take great pleasure in hosting today's events and it is my pleasure and honor to bring a congratulatory address on behalf of the 2012 international conference of convergence technology (ICCT 2012). Actually, this conference was organized by both Korea Institute of Science and Technology Information, called KISTI, and our society. So, now let me introduce the chair of National Science Technology Information Service Division, Jae-Su KIM. Please give him a big round of applause to him. Thank you very much for help and economic assistance.

Before we begin, I will greet some related members of the conference. First of all, I greatly appreciate program committee chair and its members' assistance. Please give a big round of applause to her. Also, I appreciate for general co-chair of the conference professor Dr. Kun-Hee HAN. In addition, I would like to express to my sincere gratitude for each of you attending the conference and also, I would like to express my deepest congratulations on the success of your work.

Next, I am sure that this conference contributes on exchange of research experiences and culture among the members of conference participants from especially Bangladesh, China, Indonesia, Japan, Korea, Malaysia, Mongolia, The Philippines, Vietnam, and others. Even though this conference is the 1st time, but I am sure that the quality and quantity of the conference are excellent by all of you

Lastly, I am anticipating that all of you will have a fruitful experience today and I wish this conference to be a remarkable success for everyone. Thank you very much.

General Chair of ICCT2012

Jong Yun LEE.

▶ Steering Committee

General Co-Chair	Jong Yun LEE (Chungbuk National University, Korea)
	Jae Soo Kim (Korea Institute of Science and Technology Information,KISTI)

▶ Organizing Committee

Organizing Committee Chair	Keun-Ho LEE (Baekseok University, Korea)
Organizing Committee Members	Woo Sik Bae(Ajou Moter College, Korea)
	Suk-Young Jung (Dongyang Mirae University, Korea)
	Kwang-Hwan Kim(Konyang University, Korea)
	Chang Gyu Kim(Gimcheon University, Korea)
	Hong-Ro Lee(NTIS Division, KISTI, Korea)
	Oyun-Erdene NAMSRAI (National University of Mongolia, Mongolia)
	Vu Thi Hong NHAN(Vietnam National University,Vietnam)
	SeucHo RYU(Kongju National University, Korea)
	Sung Hyun YUN(Baekseok University, Korea)
	Keun Ho RYU(Chungbuk National University, Korea)
	Jong Min YOON(Chungbuk National University, Korea)

▶ Program Committee

Program Committee Chair	Kyung-hee KANG (Konyang University, Korea)
Program Committee Members	Md. Afsar Ali (Bangladesh University of Engineering and Technology, Bangladesh)
	Kiseok CHOI (NTIS Division, KISTI, Korea)
	Jungwon CHO (Jeju National University, Korea)
	Jung Soo HAN (Baekseok University, Korea)
	Hyung-Woo LEE (Hanshin University, Korea)
	Myoun Jae LEE (Baekseok University, Korea)
	Sanghyuk LEE (Xi'an Jiaotong – Liverpool University, China)
	Sang Hun LEE (Kwang Woon University, Korea)
	Yun Hi KANG (Baekseok University, Korea)
	Jee Hee KIM (Kang Won University, Korea)
	Youn-Gyou KOOK (NTIS Division, KISTI, Korea)
	Jungpil SHIN (The University of Aizu, Japan)
	Chua Hong SIANG (Science Swinburne University of Technology (Sarawak Campus), Malaysia)
	Hoang Do Thanh TUNG (Vietnam Institute of Information Technology, Vietnam)

2012

ICCT 2012

"The 2012 International Conference on Convergence Technology"

- **Date:** January 26~28 , 2012

- **Place:** Ramana Hotel, Ho Chi Minh, Vietnam

- **Co-organized by:** Korea Institute of Science and Technology Information (KISTI) Korea Convergence Society (KCS)

- **Sponsored by:**
  KISTI, Samsung SDS, LG CNS, Selim Technical Service Group(Co.),
  LOTTE Data Communication Company, LG N-sys INC., JT Co., Ltd.,
  Hanbit Media.Inc,Hyundai Information Technology Co.,Ltd.,
  DUPLEX Co.,Ltd., Informade CO.LTD,
  Korea IT Audit &Consulting, Innogdn.inc, DongHaTech Co.Ltd,
  GS Intervision, I&T Inc, HIMS, UNIEVER Co.Ltd, DAELIM Co.Ltd,
  BOKANG SYSTEM Co.Ltd,
  SUNGWON Information Technology Co.Ltd,Blueriver Co.Ltd, SEJOONG INFOMATION TECHNOLOGY Co.Ltd, BestKS Co.Ltd, KUNGBONG Co.Ltd, Network &System Co.Ltd,
  Next Information Technology Co.Ltd, KMNET Co.Ltd, Hyunhaksa

KCS KOREA CONVERGENCE SOCIETY

Program for the ICCT 2012

Thursday January 26, 2012

14:00 - 15:00 Registrations   (Lobby)

15:00 - 17:00 Oral & Poster Presentation Sessions I

Time	Room-1	Room-2	Lobby
15:00- 15:55	Session A-1	Session A-2	Session D-1 (Poster)
15:55- 16:05	Break Time		
16:05- 17:00	Session B-1	Session B-2	

* Session A1, A2, B1: IT / CT, Session B2: BT / NT / MT

Banquet and Plenary Session

Presider: Gyoo-Soo Chae (Baekseok University, Korea)

Location : Convention Hall

17:00 - Opening Greeting:
Jong Yun LEE, Ph.D.,   General Chair of ICCT2012

17:15 - Keynote Address I :
Nipon Theera-Umpon, Ph.D., Chiang Mai University, Thailand

17:35 - Keynote Address II :
Keun Ho Ryu, Ph.D., Chungbuk National University, Korea

18:00 - Banquet & Reception

Friday January 27, 2012

11:00 - 16:00 Oral & Poster Presentation Sessions II

Time	Room1	Room2
11:00-12:00	Session C-1	Session C-2
12:00- 14:00	Lunch	
14:00-16:00	Lobby	
	Poster Sessions D-2	

* Session C1, C2: IT / CT

Saturday January 28, 2012

10:00 - 11:30   Board of Directors Meeting   (Headquarters)

12:00 -12:10   Final Closing Declarations

12:00 - 13:00   Lunch   (Restaurant)

[Presentation]

Oral Presentation Sessions   15:00 ~ 15:55

● Research Session A-1: IT/CT

Chair: Keun-Ho Lee   (BaekSeok University, Korea)
Location : Room-1

01 _ Improving the Performance of Arrhythmia Classification using Ensemble Method
Erdenetuya Namsrai, Tsendsuren Munkhdalai, Meijing Li
(Chungbuk National University, Korea),
Oyun-Erdene Namsrai (National University of Mongolia, Mongolia),
Keun Ho Ryu(Chungbuk National University, Korea &The University of Aizu, Japan),
Jeong Seon-phil (BNU-HKBU United International College, China)

02 _ Information Management by Data Quantification with Fuzzy Entropy and Similarity Measure
Sanghyuk Lee,Xin Tu (Xi'an Jiaotong-Liverpool University, China),
Chua Hong Siang(Science Swinburne University of Technology(Sarawak Campus), Malaysia)

03 _ Security Technology Trend in M2M
Jung-Soo Han ,Byoung-Ho Sim, Kun-Hee Han (Baekseok University, Korea),
Hyun Yoo (Osan University, Korea)

04 _ The Simulation of D2O supply system in Heavy water nuclear power plant
Sung-Won Choi, Seong-Geun Gwak, Ji-Hyoung Ryu, Chang-Goo Lee
(Chonbuk National University, Korea)

05 _ Authentication Scheme based on VANET Cluster in M2M(Machine to Machine)
Keun-Ho Lee (BaekSeok University, Korea)

● Research Session A-2 : IT/CT

Chair : Hyung-Woo Lee   (Hanshin University, Korea)
Location : Room-2

01 _ Requirement of Information Security in M2M
Mi-Sung Lee (Baekseok University, Korea)

02 _ A Breadth-First Search Based Algorithm for Mining Frequent Movements From Spatiotemporal Databases
Thi Hong Nhan Vu (Vietnam National University, Vietnam),
The Duy Bui (Vietnam National University, Vietnam),
Quang Hiep Vu (Chungbuk National University, Korea),
Viet Cuong Ta (Vietnam National University, Vietnam)

03 _ A Multi-Agent Architecture For Smart Home
Viet Cuong Ta, Thi Hong Nhan Vu,
The Duy Bui (Vietnam National University, Vietnam)

04 _ A Rooting Vulnerability Analysis and the Related Countermeasure Mechanism on the Android-based Smart Work Device
Won-Jun Jang (Hanshin University, Korea),
Sung Hyun Yun (Baekseok University, Korea),
Hongill Ju, Jeong-Nyeo Kim (ETRI, Korea),
Hyung-Woo Lee (Hanshin University, Korea)

● Research Session B-1: IT/CT

Chair : Suk-Yong Jung (Dongyang Mirae University, Korea)
Location :Room1

01 _ Frequent Pattern Mining for Protein Function Prediction in Protein-Protein Interaction Network
Seo In Jeon (Korea Army Logistics Command, Korea),
Tae wook Kim (Chungbuk National University, Korea),
Meijing Li (Chungbuk National University, Korea),
Ho Sun Shon (Chungbuk National University, Korea),
Keun Ho Ryu (Chungbuk National University, Korea &The University of Aizu, Japan),
Jungpil Shin (The University of Aizu, Japan)

02 _ A Study on the Effective Security Module in the Smart Grid Environment
Si-Jung Kim (ATN LTD.,Co. , Korea),
Gui-Jung Kim (Konyang University, Korea),
Do-Eun Cho (Mokwon University, Korea)

03 _ Safety Verification of RFID Security Protocol Using Random Numbers and Hash Function
Woo-Sik BAE (Ajou Motor College, Korea),
Jong Yun LEE (Chungbuk National University, Korea)

04 _ Performance Analysis and Enhancement to Serve Multimedia Services in Ubiquitous Home Network
Suk-Yong Jung (Dongyang Mirae University, Korea),
Sung-Hwa Hon (National Mokpo Maritime University, Korea)

● Research Session B-2 :BT/NT/MT

Chair : Sanghyuk Lee (Xi'an Jiaotong-Liverpool University, China)
Location : Room-2

01 _ Concept Design of multimedia contents for enriched caller ID Service
Tae-Yul Kim, Byung-Pyo Kyung,
Seuc-Ho Ryu (Kongju National University, Korea)

02 _ An Architecture of Approximation System for Discrete Spatiotemporal Data
Jong Yun LEE (Chungbuk National University, Korea)

03 _ The smoothing algorithm for unit GOP assuring QoS
DaeYoung Kim(Hongik University, Korea), Myoun-Jae Lee(BaekSeok University, Korea)

04 _ Grouping DNA sequences with similarity measure and application
Sanghyuk Lee (Xi'an Jiaotong-Liverpool University, China),
Xin Tu,(Xi'an Jiaotong-Liverpool University, China),
Md. Afsar Ali (Bangladesh University, Bangladesh)

● Research Session C-1: IT/CT

Chair : Myeong-Ho Lee (Semyung University, Korea)
Location : Room-1

01 _ Dynamic Changes of Workflows based on Goal-Scenario by Adaptation Strategy
Jong-Won Ko (Kyung Hee University, Korea)

02 _ Security Requirements of Intelligent Automobiles
Gui-Jung Kim (Konyang University, Korea)

03 _ Model Transformation for Validation of UML Software Design Model
Young-Jae Song (Kyung Hee University, Korea)

04 _ A Study on the Rule for Software Quality Improvement

Tae-Won Kyung (R&D Patent Center, Korea),

Kyung-Hun Kim, Young-Jae Song(Kyunghee University, Korea)

05 _ A Study on the Weight Analysis for Information Security Level

Kyung-Hun Kim (Kyunghee University, Korea),

● Research Session C-2 : IT/CT

Chair : Sun-Myung Hwang   (Daejeon University, Korea)
Location : Room-2

01 _ Metadata selection administrator for User-oriented Web services selection

Sung-Ho Sim (Kyung Hee University, Korea)

02 _ Deriving Security Elements in M2M

Hyun Yoo (Osan University, Korea)

03 _ A study on Web Service Selection method considering multi attributes

Seung-Hyung Lee (KyungHee University, Korea)

04 _ A Metamodel based Approach for Model Transformation Verification

Soo-Jin Beak (Kyung Hee University, Korea)

[Poster Presentation Sessions]

● Poster Session D-1

Chair : SungHyun Yun (Baekseok University, Korea)
Location : Lobby

P01 _A Study on the Approach to Interoperating the Distributed Information in Korea e-Government

Jae-Soo Kim, Ki-Seok Choi, Youn-Gyou Kook

(KISTI, Korea)

P02 _The Purpose and Effects of Legislation of the Industrial Convergence Promotion Act in South Korea

Chong-Min Yoon (Chungbuk National University, Korea)

P03 _ Adaptive Mesh Rendering for Mobile Contents

Dae young Kim(Hongik University, Korea), Myoun-Jae Lee(BaekSeok University, Korea)

P04 _Mobile Application for Business Card Contents Management Using Cloud Service

Dae-Hyun Kim (BaekSeok University, Korea), Daeyoung Kim (Hongik University, Korea), Kyoung-Nam Kim (Chung-Ang University, Korea), Myoun-Jae Lee (BaekSeok University, Korea)

P05 _Analysis of funny element in mental curing game

Daeyoung Kim (Hongik University, Korea), Kyoung-Nam Kim (Chung-Ang University, Korea), Myoun-Jae Lee (BaekSeok University, Korea)

P06_A study on the mode and field pattern in the finite periodic dielectric gratings

Min-Nyun Kim, Gyoo-Soo Chae (Baekseok university, Korea),

B.Weaver (Amphenol Mobile, USA)

P07_Development of Personalized Recommendation System using Clustering of Item Category based on RFM

Seo In Jeon, Keun Ho Ryu, Young Sung Cho (Chungbuk National University, Korea)

P08 _Design and Implementation of Data Interoperability Framework

Ki-Seok Choi (KISTI, Korea)

Young-Kook Kim (Chungnam National University, Korea)

P09_Study of Health Program Requests by Workers in Health Centers

Moon Sook Shim,Kyung-heeKang (Konyang University, Korea)

P10_Study of Awareness of Health Center Users on Business Areas of Health Centers

Moo-Sik Lee, Kwang-Hwan Kim (Konyang University, Korea)

P11_The evaluation of the radiation dose and the image quality during MDCT using Glass Rod Detector

Chang-Gyu Kim (Gimcheon University, Korea)

P12_Development of Disaster and Bioterrorism Education

Jee-Hee Kim (Kangwon National University, Korea)

P13_Development Method of Psychotherapeutic Serious Game

Myoun-Jae Lee, Ki-Suk Ko, Youngeun Kim (BaekSeok University, Korea)

P14_ An approach to generate and execute the dynamic user-defined rule for data quality

Youn-Gyou Kook (KISTI, Korea)

● Poster Session D-2

Chair : Youn-Gyou Kook (KISTI, , Korea)
Location : Lobby

P01_Study on Design and Embodiment of reference Image Renewal System based on CBSD

Kyoung-Hun Kim, Young-Jae Song (Kyung Hee University, Korea)

P02_Confrontation for Convergence Security Threats

Young-Kwon Kim (Osan University, Korea)

P03_Dynamic Workflow Changes for Contextual Situations Adaptation using Process Model Variants

Su-Jin Baek (Kyung Hee University, Korea)

P04_A Study on the Mobile Voice ID and Its Application

SungHyun Yun (Baekseok University, Korea),

Hyung-Woo Lee (Hanshin University, Korea)

P05 _Object Detection and Classification Using Integrated Descriptors

Mohammad Khairul Islam,

Farah Jahan, Jae-Hong Min, In-Kyu Kim, Sung-Jun Hwang, Joong-Hwan Baek

(Korea Aerospace University, Korea)

P06_A Study on the Analysis of Personal Information in the R&D Report

Hongro Lee, Young ju Shin, Jeong kyeom Kim, Ki seok Choi, Jae soo Kim

(KISTI, Korea)

P07_Open Cloud Platform System-based Integrated Intelligent Application Development Studio

Sun Myung Hwang,Nguyen Nhu Duc (DaeJeon University, Korea),

Young Whan Bang (Korea Institute of Industrial Technology, Korea)

P08 _An investigation study of a reentrant cavity with axial ridges

Mahesh P. Abegaonkar (IIT Delhi, India), Myeong-Ho Lee (Semyung University, Korea), Gyoo-Soo Chae (Baekseok University, Korea)

P09 _A Study on Scalable Global Snapshot Algorithms

Seok-Hyun Kim (Namseoul University, Korea),

Myoun-Jae Lee (Bekseok University, Korea)

P10_A Design of User Authentication System using QR Code

Kwang-Youn Jin (Kangwon National University, Korea)

P11 _A study on the methodology for software reliability improvement and quality evaluation

Kwang Hyeon Lim (ATEC Company Limited, Korea),

Ho Sun Shon,Keun Ho Ryu (Chungbuk National University, Korea)

P12_Smartphone Application Development for Logistics Network Monitoring Service

Byung Jun Song, Hye jeong Ahn (Korea Trade Network, Korea)

P13 _Smart Contents of Jeju Olle Tea for Revitalization of Jeju Water Industry

Jeong Uk Ko,Jung won Cho,Do-Hyun Kim (Jeju National University, Korea)

P14 _Robot Mechanism with Self –Adaptive Variable Wheels

Sun Myung Hwang (Daejeon University, Korea), Yun Ja Jo (IM Technology Inc, Korea)

P15_Abstract Syntax Analysis and Abstract Syntax Structure based Process

Seung-Hyung Lee (Kyung Hee University, Korea), Sung-Ho Sim (Kyung Hee University, Korea), Hyun Yoo (Osan University, Korea), Young-Jae Song (Kyung Hee University, Korea)

P16_Aspect Mining System Implementation for an Auto Extract of the Crosscutting Concern

Seung-Hyung Lee, Sung-Ho Sim, Young-Jae Song (Kyung Hee University, Korea)

P17_3D View for Engine Assembly

Su-Jin Baek (Kyunghee University, Korea), Do-EunCho (Mokwon University, Korea), Si-Jung Kim (ATN LTD., Co, Korea), Gui-Jung Kim (Konyang University, Korea)

P18 _A Study on Learning Community Model Using the Mobile Devices

Do-Eun Cho (Mokwon University, Korea), Gui-Jung Kim (Konyang University, Korea), Si-Jung Kim (ATN LTD.,Co, Korea)

P19_The Development of an Improved Beehive with a Plastic Beehive Foundation

Doo-Hee Han (Chungwoon University, Korea)

P20_A Serious Game Design for Frozen Shoulder Rehabilitation Treatment

Mi-Hye Kim (Chungbuk National University, Korea), Seung-Soo Shin (Tongmyong University, Korea), Yong-Young Kim (Konkuk University, Korea)

P21_A Free Mask Photolithography System Utilizing Photolithography for Applying Liquid Crystal Mask as a Photomask

Min-Sup Oh, Chang-Kyo Kim (Soonchunhyang University, Korea),

Jae-Hong Lee, Hee-Joon Lee (NST Co. Ltd, Korea)

P22_Characteristics of Photovoltaic Organic Light-Emitting Diodes According to the Hole Injection Conditions

Mun-Su Choi , Ho-Nyeon Lee (Soonchunhyang University, Korea)

P23_The physical Properties of Polymer Concrete Composites Using Recycled Resources

Eui-Hwan Hwang, Jin-Man Kim (Kongju National University, Korea)

P24_LED Lighting System applying Dimming Control Method

Young-Ho Jang, Soon-Ja Lim ,Hwan-Yong Kim (Wonkwang University, Korea)

P25_Removals of fluoride and nitrate ions in small water treatment plants

Sun-Hee Yang, S-Y Kim, Song-Hee Han, In-Soung Chnag (Hoseo University, Korea)

P26_The Design of Optical Structure according to Optimization Design Method

Jeong-Ick Lee (INHA Technical College, Korea)

P27_An Experimental Study on the BSR of Vehicle Seat Depending on Road Condition

Doo-Seuk Choi, Kyung-Tae Lee (Kongju National University, Korea)