

# The 2014 International Conference on Green and Human Information Technology



## ICGHIT 2014

Posts and Telecommunications Institute of Technology  
Ho Chi Minh City, Vietnam  
February 12 - 14, 2014



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## International Conference on Green and Human Information Technology 2014 Program



[Section II-Oral 1](#): The last paper presentation ends before (16:50) the session end time of 17:10.

[Section III-Oral 1](#): The last paper presentation ends before (09:40) the session end time of 10:00.

[Section III-Oral 2](#): The last paper presentation ends before (09:40) the session end time of 10:00.

[Section V-Oral 1](#): The last paper presentation ends before (14:50) the session end time of 15:10.

[Section VI-Oral 2](#): The last paper presentation ends before (16:50) the session end time of 17:10.

Time	Hanoi	Lobby	Seoul
<b>Wednesday, February 12</b>			
08:30		<a href="#">Registration</a>	
09:30		<a href="#">Welcoming Address - Congratulatory Address</a>	
10:00		<a href="#">Plenary Talk 1</a>	
10:50		<a href="#">Coffee Break</a>	
11:10		<a href="#">Plenary Talk 2</a>	
12:00		<a href="#">Lunch Break</a>	
13:30	Section I-Oral 1: <a href="#">Communication and Ubiquitous</a>	Section I-Poster: <a href="#">Multimedia and Signal Processing</a>	Section I-Oral 2: <a href="#">Control and Intelligent System</a>
15:10		<a href="#">Coffee Break</a>	
15:30	Section II-Oral 1: <a href="#">Communication and Ubiquitous</a>	Section II-Poster 1: <a href="#">Control and Intelligent System</a>	Section II-Oral 2: <a href="#">Green Information Technology</a>
17:10	<a href="#">Student Interview 1</a>	Section II-Poster 2: <a href="#">Multimedia and Signal Processing</a>	<a href="#">Student Interview 2</a>
<b>Thursday, February 13</b>			
08:00		<a href="#">Registration</a>	
08:20	Section III-Oral 1: <a href="#">Communication and Ubiquitous</a>	Section III-Poster: <a href="#">Communication and Ubiquitous</a>	Section III-Oral 2: <a href="#">Multimedia and Signal Processing</a>
10:00		<a href="#">Coffee Break</a>	
10:20	Section IV-Oral 1: <a href="#">Communication and Ubiquitous</a>	Section IV-Poster: <a href="#">Multimedia and Signal Processing</a>	Section IV-Oral 2: <a href="#">Control and Intelligent System</a>
12:00		<a href="#">Lunch Break</a>	
13:30	Section V-Oral 1: <a href="#">Communication and Ubiquitous</a>	Section V-Poster: <a href="#">Communication and Ubiquitous</a>	Section V-Oral 2: <a href="#">Multimedia and Signal Processing</a>
15:10		<a href="#">Coffee Break</a>	
15:30	Section VI-Oral 1: <a href="#">Communication and Ubiquitous</a>	Section VI-Poster: <a href="#">Communication and Ubiquitous</a>	Section VI-Oral 2: <a href="#">Multimedia and Signal Processing</a>
17:10	<a href="#">Research Group Discussion 1</a>		<a href="#">Research Group Discussion 2</a>
18:00		<a href="#">Banquet</a>	
<b>Friday, February 14</b>			
09:00	<a href="#">Organizing Committee Meeting</a>		<a href="#">Participant Panel Discussion</a>
11:30		<a href="#">Lunch Break</a>	
13:30		<a href="#">Campus Visiting Ceremony</a>	

Wednesday, February 12

**08:30 - 09:30**

**Registration**

**09:30 - 10:00**

**Welcoming Address - Congratulatory Address**

**10:00 - 10:50**

## Plenary Talk 1

A New Trend On Data Compression

**Prof. Hyoung-Joong Kim (Korea University, Korea)**

Chair: Thuong Le-Tien (Hochiminh city University of Technology, Vietnam)

**10:50 - 11:10**

## Coffee Break

**11:10 - 12:00**

## Plenary Talk 2

Non Gaussian Modeling with applications

**Prof. Hữu Tuệ Huỳnh (International University VNU-HCM, Vietnam)**

Chair: Kyutae Lee (Kongju National University, Korea)

**12:00 - 13:30**

## Lunch Break

**13:30 - 15:10**

## Section I-Oral 1: Communication and Ubiquitous

Room: Hanoi

Chair: Vo Nguyen Quoc Bao (Posts and Telecommunications Institute of Technology, Vietnam)

### **13:30 Physical Layer Security in UWB Communication Systems**

Dac-Binh Ha (Duy Tan University, Vietnam), Vu Tran-Ha (Kyung Hee University, South Korea, Vietnam) and Dung Tran (Duy Tan University, Vietnam)

pp. 1-5

### **13:50 Jamming Detection and Classification in 802.11**

Ahmad Yusri Dak (Universiti Teknologi MARA, Malaysia), Noor Elaiza Abd Khalid (UiTM, Malaysia) and Saadiah Yahya (Universiti Teknologi MARA, Malaysia)

pp. 6-10

### **14:10 Secrecy Outage Probability of Dual-hop Network in Presence of Co-channel Interference**

Tran Trung Duy (Posts and Telecommunications Institute of Technology, Vietnam), Tu Lam Thanh (Posts and Telecommunications Institute of Technology, Vietnam) and Vo Bao (PTIT, Vietnam)

pp. 11-15

### **14:30 SeDIC - Securing on Demand IP based Connection**

Ahmad Yusri Dak (Universiti Teknologi MARA, Malaysia) and Saadiah Yahya (Universiti Teknologi MARA, Malaysia)

pp. 16-20

### **14:50 Design Telematics Car System**

Bac Hoai Dang (PTIT, Vietnam), Nguyen Thanh Vinh (Posts and Telecommunications Institute of Technology, Vietnam) and Nguyen Thuong Tin (Posts and Telecommunications Institute of Technology, Vietnam)

pp. 21-24

## Section I-Oral 2: Control and Intelligent System

Room: Seoul

Chair: Huu Tue Huynh (International University, HCMC VNU, Vietnam)

### **13:30 A Network Model for Taxi Pooling**

Shangyao Yan (National Central University, Taiwan), Chia-Hung Chen (Shu-Te University, Taiwan) and Hsin-Yein Chen (National Central University, Taiwan)

pp. 25-30

### **13:50 Mobile Robot Trajectory Tracking Using Model Predictive Control of Laguerre Functions**

Mapopa Chipofya (Chonbuk National University, Korea), Deok-Jin Lee (Kunsan National University, Korea) and Kil To Chong (Jeonbuk National University, Korea)

pp. 31-36

### **14:10 Robust Adaptive Control of Wheeled Mobile Robot via Backstepping and Neural Networks**

Hoang Ngoc Bach (University of Ulsan, Korea), Tien Dung Le (Danang University of Science and Technology, Vietnam) and Hee-Jun Kang (University of Ulsan, Korea)

pp. 37-42

### **14:30 High-Gain Observer- Based Adaptive Sliding Mode Control for Robot Manipulators**

Toa Tran (University of Ulsan, Korea), Tien Dung Le (Danang University of Science and Technology, Vietnam) and Hee-Jun Kang (University of Ulsan, Korea)

**14:50 Safety system in Five Wheels Electric Wheelchair with Ultrasonic**

Theerawat Chongcharoen (King Mongkut's Institute of Technology Ladkrabang, Thailand), Noppadol Maneerat (King Mongkut's Institute of Technology Ladkrabang, Thailand), Don Isarakorn (King Mongkut's Institute of Technology Ladkrabang, Thailand), Songmoung Nundrakwang (King Mongkut's Institute of Technology Ladkrabang, Thailand) and Kasemsuk Sepsirisuk (King Mongkut's Institute of Technology Ladkrabang, Thailand)  
pp. 48-51

## Section I-Poster: Multimedia and Signal Processing

Room: Lobby

Chair: DoHyeun Kim (Jeju National University, Korea)

**A Modified Hough Scheme Based Automated Cell Counting Method for the Lens-free Shadow Imaging Platform**

Mohendra Roy (Korea University, Korea), Geonsoo Jin (Korea University, Korea), Dongmin Seo (Korea University, Korea), Sangwoo Oh (Korea Institute of Ocean Science & Technology, Korea) and Sungkyu Seo (Korea University, Korea)  
pp. 52-54

**Traffic Sign Detection Using Retinex and Various Color Models**

Sungje Eom (University of Kwangwoon, Korea) and Jeong Yong Jin (Kwangwoon University, Korea)  
pp. 55-57

**Hardware structure for BA(Bundle Adjustment) algorithm**

Hyun Kim (University of Kwangwoon, Korea) and Jeong Yong Jin (Kwangwoon University, Korea)  
pp. 58-60

**Spatiotemporal Reasoning Using Memory DB in a Cognitive Robot**

Hyunsik Ahn (Tongmyong University, Korea)  
pp. 61-63

**Analysis on the retro-reflection effective area of the truncated corner cubes**

Eunkyong Moon (KOREA University, Korea), Seung-Hwan Kim (KOREA University, Korea), Ji-Woon Yang (Korea, Korea) and Hwi Kim (Korea University, Korea)  
pp. 64-65

**A Design of a Memory Interface for Texturing in a Programmable Stream Processing GPU**

Kwangyeob Lee (Seokyeong University, Korea), Taeryong Park (Seokyeong University, Korea), Jae-Chang Kwak (Seokyeong University, Korea) and Yongseo Koo (University of Dankook, Korea)  
pp. 66-68

**Improved Target Detection for Moving Object in IR-UWB Radar**

Van Han Nguyen (Chosun University, Korea) and Jae-Young Pyun (Chosun University & Dept. of Information and Communication Engineering, Korea)  
pp. 69-73

**A Study of Vessel Collision Risk Calculation Method Using Fuzzy Algorithm in a Seaway**

Shu Chen (Jeju National University, P.R. China), Do-Hyeun Kim (Jeju National University, Korea), Byung-Gil Lee (Electronics and Telecommunications Research Institute (ETRI), Korea) and Byung-Doo Kim (Electronics & Telecommunication Research Institute, Korea)  
pp. 74-77

**15:10 - 15:30**

**Coffee Break**

**15:30 - 17:10**

## Section II-Oral 1: Communication and Ubiquitous

Room: Hanoi

Chair: Kyutae Lee (Kongju National University, Korea)

**15:30 A Compact High-Q Resonator Using Interdigital Hair-pin Resonator and Meander-line with  $\mu$ -Near Zero Metamaterial**

Ki-Cheol Yoon (Kwangwoon University, Korea)  
pp. 78-80

**15:50 Analysis of Crossed Planar Monopole SPA**

Taek Kyun Oh (Dept. of Electronics Engineering University of Dankook San29 Anseo-dong Dongnam-gu Cheonan-si, Korea), Hak Keun Choi (Dept. of Electronics Engineering University of Dankook in Korea, Korea), Kyutae Lee (Kongju National University, Korea), Jae Hyung Kim (Dept. of Control and Measurement Engineering Changwon National University, Korea) and Dong Cheol Son (Dept. of Electronics Engineering, University of Dankook, Korea)  
pp. 81-83

**16:10 Asym-AWPC Antenna and Compressive Sensing for DOA estimation in Correlated Environment**

Tran Thi Thuy Quynh (VNU University of Engineering and Technology, Vietnam), Nguyen Linh-Trung (Vietnam National University, Hanoi, Vietnam), Tran Duc-Tan (University of Engineering and Technology (UET), VNUH, Vietnam) and Phan Anh (REV, Vietnam)  
pp. 84-88

**16:30 Point-to-point H.264 Video Streaming over IEEE 802.15.4 with Reed-Solomon Error Correction**

Wei chun Tung (The University of Electro-communications, Japan), Pham Cong-Kha (The University of Electro-Communications (UEC), Japan), Huynh Huu Thuan (Ho Chi Minh University of Science, Vietnam), Nhat-Tan Mai (Ho Chi Minh University of Science, Vietnam) and Duy-Tung Dao (Ho Chi Minh University of Science, Vietnam)

## Section II-Oral 2: Green Information Technology

Room: Seoul

Chair: Jinhong Kim (Myongji University, Korea)

### 15:30 *Effect of Device Performance on Signal Transmission Characteristics of SATA Cable Assembly*

Moonjung Kim (Kongju National University, Korea)  
pp. 94-97

### 15:50 *A Supercharged Policy-based Dynamic Power Management Architecture for Cluster System*

Hyunjiik Lee (ETRI, Korea)  
pp. 98-100

### 16:10 *Link Based Energy Saving Method for OpenFlow Based Networks*

Bhed Bahadur Bista (Iwate Prefectural University, Japan), Toyoo Takata (Iwate Prefectural University, Japan) and Danda B. Rawat (Georgia Southern University, USA)  
pp. 101-106

### 16:30 *The Non-Parametrics Approches For Time-Varying Delay Estimation With Application To The Electromyographics Signals*

Luu Gia Thien (Posts and Telecommunications Institute of Technology, Vietnam), Philippe Ravier (Université d'Orléans, France) and Olivier Butteli (Université d'Orléans, France)  
pp. 107-112

### 16:50 *Design and Implementation of Multi-standard Digital Radio Chipset with Shared Logic and Memory*

Se-Ho Park (Korea Electronics Technology Institute, Korea), Yong-Suk Park (Korea Electronics Technology Institute & Yonsei University, Korea), Min-goo Kang (Hanshin University, Korea) and Jun-rim Choi (Kyungpook University, Korea)  
pp. 113-118

## Section II-Poster 1: Control and Intelligent System

Room: Lobby

Chair: Hyunsik Ahn (Tongmyong University, Korea)

### *Vision-Based Formation Control of Multiple Mobile Robot System*

Aamir Revaz Khan (Chonbuk National University, Korea), Deok-Jin Lee (Kunsan National University, Korea), Bayanjargal Baasandorj (Chonbuk National University, Korea) and Kil To Chong (Jeonbuk National University, Korea)  
pp. 119-121

### *An Simple and High-Efficiency High-Brightness LED Driver with Flicker Reduction*

Van Ha Nguyen (Inje University, Korea), Hyunsik Son (Inje University, Korea), Minji Lee (Inje University, Korea) and Hanjung Song (Inje University, Korea)  
pp. 122-124

### *Distributed Power Control Scheme for MIMO Cognitive Industrial Sensor Networks*

Minh-Phuong Tran (Kumoh National Institute of Technology, Korea) and Dong Seong Kim (Kumoh National Institute of Technology, Korea)  
pp. 125-127

### *Automatic Translation System for Web Accessibility*

Seungcheon Kim (Hansung University, Korea), Jinhong Kim (Myongji University, Korea) and Hoon Jin (Sungkyunkwan University, Korea)  
pp. 128-131

### *Design of a Model for a Machine Learning Technique Based Late Blight Forecasting System*

Yun Hwan Kim (Sejong University, Korea), Seong Joon Yoo (Sejong University, Korea), Yeong Hyeon Gu (Sejong University, Korea), Na Ra Lee (Sejong University, Korea), Dongil Han (Sejong University, Korea), Jin Hee Lim (Sejong University, Korea) and Sung Baik (Sejong University, Korea)  
pp. 132-134

### *A Smart Vision Sensor based Disaster Events Monitoring System*

Won-Ho Kim (Kongju National University & College of Engineering, Korea)  
pp. 135-137

**17:10 - 18:00**

## Student Interview 1

Room: Hanoi

Chair: YongSoo Choi (Sungkyul University &amp; IEEK, Korea)

## Student Interview 2

Room: Seoul

Chair: Kyutae Lee (Kongju National University, Korea)

**17:10 - 17:40**

## Section II-Poster 2: Multimedia and Signal Processing

Room: Lobby

Chair: Soo-Hyun Park (Kookmin University, Korea)

**An Efficient Identity-Based Broadcast Encryption for Large-Scale Wireless Sensor Networks**

In Tae Kim (Hongik University, Korea) and Seong Oun Hwang (Hongik University, Korea)  
pp. 138-141

**Design of Underwater Things and IoUT Architecture using Delay Tolerant Network**

Kalyani Muppalla (Kookmin University, Korea), Chang Hwa Kim (Gangneung-Wonju National University, Korea), Soo-Hyun Park (Kookmin University, Korea) and NamYeol Yun (Kookmin University, Korea)  
pp. 142-145

**Cryptanalysis of a Novel Biometric-Based Remote User Authentication Scheme Using Quadratic Residues**

Eun-Jun Yoon (Kyungil University, Korea) and Kee-Young Yoo (Kyungpook National University, Korea)  
pp. 146-149

**Glucose Concentration Measurement by Evaluating Flow Rate Change in Thin Capillary Tubes**

Hie Sik Kim (University of Seoul, Korea)  
pp. 150-151

**AVA Model: Adaptive Vehicular Agents Model**

Jinhong Kim (Myongji University, Korea), Seungcheon Kim (Hansung University, Korea) and Hoon Jin (Sungkyunkwan University, Korea)  
pp. 152-155

Thursday, February 13

**08:00 - 08:20**

**Registration** 📄

**08:20 - 10:00**

**Section III-Oral 1: Communication and Ubiquitous** 📄

Room: Hanoi

Chair: Eun-Jun Yoon (Kyungil University, Korea)

**08:20 Outage Performance with Selection Decode and Forward in Cognitive Radio with Imperfect CSI**

Tu Lam Thanh (Posts and Telecommunications Institute of Technology, Vietnam), Tran Trung Duy (Posts and Telecommunications Institute of Technology, Vietnam), Vo Bao (PTIT, Vietnam) and Nguyen Luong Nhat (Posts and Telecommunications Institute of Technology, Vietnam)  
pp. 156-161

**08:40 An Improved Error Resilient Scheme for Wireless Video Applications**

Yu-ning Dong (Nanjing University of Posts and Telecommunications, P.R. China), Haibo Chen (Nanjing University of Posts and Telecom, P.R. China) and Hai-xian Shi (Nanjing Agricultural University, P.R. China)  
pp. 162-166

**09:00 Distributed Scheduling for Secondary Users in Multi-hop Cognitive Radio Ad Hoc Networks**

Mui Van Nguyen (Posts and Telecom Insitute of Technology (PTIT), Vietnam), Tan Hanh (Posts and Telecommunications Institute of Technology, Vietnam) and Nguyen Khac Chien (The People's Police University, Vietnam)  
pp. 167-171

**09:20 Measurement and Interpretation of Brain Reaction during Mental Calculation**

Jungeun Lim (Kyungpook National University, Korea), Bohyeok Seo (Kyungpook National University, Korea) and Soonyong Chun (Dongyang University, Korea)  
pp. 172-176

**Section III-Oral 2: Multimedia and Signal Processing** 📄

Room: Seoul

Chair: Ha H Kha (Ho Chi Minh City University of Technology, Vietnam)

**08:20 Fast Motion Estimation with Considering Motion of Moving Objects Using Histogram Preprocessing**

YongRak Jo (SungKyunKwan University, Korea), Jong Hak Kim (Sungkyunkwan University, Korea), Sang-hyeob Song (SungKyunKwan University, Korea), Sung-Muk Kang (Sungkyunkwan University, Korea) and Jun Dong Cho (Sungkyunkwan University, Korea)  
pp. 177-180

**08:40 The effect of MFCC extraction methods on speech recognition embedded system**

Hoang Trang (University of Technology, HoChiMinh City, Vietnam)  
pp. 181-185

**09:00 Sequential Multidimensional Scaling For Realtime Sensor Network Localization**

Trinh Lan Anh (Posts and Telecommunications Institute of Technology, Vietnam), Nguyen Duc Thang (HCMIU, Vietnam), Nguyen Luong Nhat (Posts and Telecommunications Institute of Technology, Vietnam), Cong Hung Tran (Posts and Telecoms Institute of Technology, Vietnam) and Tran Hoang Hai (Hanoi University of Science and Technology, Vietnam)  
pp. 186-191

**09:20 Advance Machine Learning Methods for Evaluation of Human Mental Workloads Using Functional Near-Infrared Spectroscopy**

Thao Pham Thanh (International University, Vietnam), [Nguyen Duc Thang](#) (HCMIU, Vietnam), Vo Toi (HCMIU, Vietnam) and Huy Cu Gia (International University, Vietnam)  
pp. 192-197

## Section III-Poster: Communication and Ubiquitous

Room: Lobby

Chair: Luu Gia Thien (Posts and Telecommunications Institute of Technology, Vietnam)

### ***On the Analysis of Network Coding Gain in Mobile Ad-hoc Wireless Networks***

[Beongku An](#) (Hongik University, Korea) and [Dung Le The](#) (Hongik University, Korea)  
pp. 198-200

### ***Underlay Approach based Soft Combination Schemes for Cooperative Spectrum Sensing in Cognitive Radio Networks***

[Beongku An](#) (Hongik University, Korea) and [Tri-Nhu Do](#) (Hongik University, Korea)  
pp. 201-203

### ***Total-Phosphorus Analysis Lab-on-a-chip for monitoring water quality***

[Dong Geon Jung](#) (School of Electronics Engineering, Kyungpook National University, Korea), Seong Ho Han (Kyungpook National University, Korea), Geunbae Lim (Pohang University of Science and Technology(POSTECH), Korea) and Seong Ho Kong (Kyungpook National University, Korea)  
pp. 204-206

### ***Matrix Based Decoding Algorithm to Avoid Decoding Failure of LT Code***

GoangSeog Choi (Chosun University, Korea) and [Md. Tariq Hasan](#) (Chosun University, Korea)  
pp. 207-209

### ***Design of ESPAR Antenna Using Square Cylindrical Monopole***

[Kwang-Woo Park](#) (University of Dankook, Korea), Hak Keun Choi (Dept. of Electronics Engineering University of Dankook in Korea, Korea), Kyutae Lee (Kongju National University, Korea), Jae-Sung Park (Dankook University, Korea) and Kyu-Bo Kim (Dankook University, Korea)  
pp. 210-212

### ***Smart Active Multi-pad Acupuncture Systems using Fuzzy Inference Rules***

[Kyutae Lee](#) (Kongju National University, Korea), You-Sik Hong (SangJI University, Korea), Duck Je Park (Korea Airport Corporation, Korea), Sangsuk Lee (Sangji University, Korea), Eun-Jun Yoon (Kyungil University, Korea) and HanGyu Kim (Anyang University, Korea)  
pp. 213-219

### ***Human Motion Tracking using the Image Subtraction and SVM with the Physical Characteristics***

[Min Jae Kim](#) (Dong-A University, Korea), Hye-Youn Lim (University of Dong-A, Korea) and Dae-Seong Kang (University of Dong-A, Korea)  
pp. 220-223

### ***Simplified System for the Forest Fire Detection in the Moving Camera***

[Seung-Hwan Yeom](#) (Dong-A University, Korea), Hye-Youn Lim (University of Dong-A, Korea) and Dae-Seong Kang (University of Dong-A, Korea)  
pp. 224-227

**10:00 - 10:20**

**Coffee Break **

**10:20 - 12:00**

## Section IV-Oral 1: Communication and Ubiquitous

Room: Hanoi

Chair: Mui Van Nguyen (Posts and Telecom Insitute of Technology (PTIT), Vietnam)

### ***10:20 Multipath FAST TCP for Large Bandwidth-Delay Product Networks***

[Bich Phuong Ha](#) (Posts and Telecoms Institute of Technology, HCM Campus & HCM University of Transport, Vietnam), Bao-Yen Tran (Posts and Telecommunications Institute of Technology, Vietnam), [Tuan-Anh Le](#) (Posts and Telecommunications Institute of Technology, Vietnam) and Cong Hung Tran (Posts and Telecoms Institute of Technology, Vietnam)  
pp. 228-231

### ***10:40 A distributed architecture and Non-adaptive Group Testing approach to fast detect Hot-IPs in ISP Networks***

[Chinh Huynh](#) (University of Technical Education, Ho Chi Minh City, Vietnam), Thuc Nguyen (University of Science, HCM, Vietnam) and Tan Hanh (Posts and Telecommunications Institute of Technology, Vietnam)  
pp. 232-236

### ***11:00 On the AP Virtualization of IEEE 802.11 WLANs***

[Jaebeom Kim](#) (Ajou University, Korea) and Young-Bae Ko (Ajou University, Korea)  
pp. 237-242

### ***11:20 A High Efficiency Blood Warmer System***

[Park Suksantisakul](#) (King Mongkut's Institute of Technology Ladkrabang, Thailand), Noppadol Maneerat (King Mongkut's Institute of Technology Ladkrabang, Thailand) and Ruttikorn Varakulsiripunth (Thai-Nichi Institute of Technology, Thailand)  
pp. 243-246

### ***11:40 Determination of Automobile Sound Towards Sound Maps***

[Itaru Usami](#) (Aoyama Gakuin University, Japan), Niwat Thepvilojanapong (Mie University, Japan), Naofumi Kitsunezaki (Aoyama Gakuin University, Japan) and Yoshito Tobe (Aoyama Gakuin University, Japan)  
pp. 247-249

## Section IV-Oral 2: Control and Intelligent System

Room: Seoul

Chair: Seungcheon Kim (Hansung University, Korea)

### 10:20 **Adaptability Improvement of Learning from Demonstration by Stochastic Trajectory Optimization**

Jeong-Jung Kim (KAIST, Korea) and Ju-Jang Lee (KAIST, Korea)  
pp. 250-254

### 10:40 **Application of Robust Multi-parametric MPC to Low Dimensional Systems**

H. Chang (Kookmin University, Korea), Kyung-Jung Lee (Kookmin University, Korea), Gu-Min Jeong (Kookmin University, Korea) and Chanwoo Moon (Kookmin University, Korea)  
pp. 255-258

### 11:00 **Efficient Similarity Search for Static Queries in Streaming Time Series**

Giao Cong Bui (Posts and Telecommunications Institute of Technology, Vietnam) and Tuan Anh Duong (Ho Chi Minh City University of Technology, Vietnam)  
pp. 259-265

### 11:20 **PID Control Speed of DC Motor Using Parallel Particle Swarm Optimization**

Hilal Tavara (Chonbuk National University, Korea), Kil To Chong (Chonbuk National University, Korea) and Deok-Jin Lee (Kunsan National University, Korea)  
pp. 266-270

### 11:40 **PDSP-based architecture for speech recognition system**

Hoang Trang (University of Technology, HoChiMinh City, Vietnam)  
pp. 271-275

## Section IV-Poster: Multimedia and Signal Processing

Room: Lobby

Chair: Beongku An (Hongik University, Korea)

### **Saliency-directed Multi-dimensional Dictionary Learning for MR Image Denoising**

Irfan Mehmood (Sejong University, Korea), Muhammad Sajjad (Sejong University, Korea), Seong Joon Yoo (Sejong University, Korea), Dongil Han (Sejong University, Korea) and Sung Baik (Sejong University, Korea)  
pp. 276-280

### **A modified block matching 3D filtering by using variable block sizes**

Cheonghee Kang (Hanyang University, Korea), Dokyung Lee (Hanyang University, Korea), Changryoul Choi (Hanyang University, Korea) and Jechang Jeong (Hanyang University, Korea)  
pp. 281-286

### **A New Visual Secret Image Sharing based on Random Grids and Steganography**

Gil-Je Lee (Kyungpook National University, Korea), Eun-Jun Yoon (Kyungil University, Korea) and Kee-Young Yoo (Kyungpook National University, Korea)  
pp. 287-290

### **Phase regularization in polygon computer generated hologram synthesis**

DaJeong Im (Korea University, Korea), Eunkyong Moon (KOREA University, Korea) and Hwi Kim (Korea University, Korea)  
pp. 291-292

### **Real-time video-based displacement measurement system for monitoring the vibrational motion of Goega bridge**

Yohan Park (KOREA University, Korea), Jinyoung Roh (Korea, Korea), Jin-Hwan Oh (Korea, Korea), Ji-Woon Yang (Korea, Korea) and Hwi Kim (Korea University, Korea)  
pp. 293-294

### **Color Image Quantization with Virtual 2 Dimensional Color Map Extension**

YongSoo Choi (Sungkyul University & IEEK, Korea) and Cheong Kim (Namseoul University, Korea)  
pp. 295-298

### **Emotion Appraisal in a Sentence Based Cognitive System**

Hyunsik Ahn (Tongmyong University, Korea)  
pp. 299-302

### **An Effective Ship Recognition and Classification Scheme through the Image from UAV**

Yong-Ho Kim (Chung-Ang University, Korea), Soowoong Jeong (ChungAng University, Korea) and Sangkeun Lee (Chung-Ang University, Korea)  
pp. 303-308

**12:00 - 13:30**

**Lunch Break **

**13:30 - 15:10**

## Section V-Oral 1: Communication and Ubiquitous

Room: Hanoi

Chair: Cong Hung Tran (Posts and Telecoms Institute of Technology, Vietnam)

**13:30 Analyses of Attacks and Vulnerability on the U-healthcare System**

Jung Tae Kim (Mokwon University, Korea)  
pp. 309-312

**13:50 Fast Location-based Association of Wi-Fi Direct for Distributed Wireless Docking Services**

Jina Han (Ajou University, Korea), Keun-Woo Lim (Ajou University, Korea) and Young-Bae Ko (Ajou University, Korea)  
pp. 313-317

**14:10 Designing Information Architecture for Directing Activities**

Szumiao Chen (National Cheng Kung University, Taiwan)  
pp. 318-321

**14:30 Load-Aware Rebroadcasting Algorithm in MANET**

Sweungwon Cheung (Samsung Techwin, Korea), DaeIn Choi (Korea University, Korea), Chang Min Lee (Korea University, Korea), Woo Suk Choi (Korea University, Korea) and Hyun-Kook Kahng (Korea University, Korea)  
pp. 322-326

## Section V-Oral 2: Multimedia and Signal Processing

Room: Seoul

Chair: YongSoo Choi (Sungkyul University & IEEK, Korea)

**13:30 Comparative Study for Classification Algorithms adaptable for Liver Patients Prediction**

Hoon Jin (Sungkyunkwan University, Korea), Jinhong Kim (Myongji University, Korea) and Seungcheon Kim (Hansung University, Korea)  
pp. 327-331

**13:50 Optimizing Access Probability for WBAN with Cluster-based CSMA/CA of IEEE802.15.6**

Pham Thanh Hiep (Yokohama National University, Japan), Nguyen Huy Hoang (Le Quy Don Technical University, Vietnam) and Nguyen Nhu Thang (University of Communication, Vietnam)  
pp. 332-336

**14:10 Control on MAC Layer for Cluster-based WBAN of IEEE802.15.6**

Pham Thanh Hiep (Yokohama National University, Japan), Nguyen Huy Hoang (Le Quy Don Technical University, Vietnam) and Nguyen Nhu Thang (University of Communication, Vietnam)  
pp. 337-341

**14:30 Impact of CSI Imperfection on Underlay Decode-and-Forward Multihop Networks over Nakagami-m Channels**

Thien Thanh Tran (Ho Chi Minh City University of Transport, Vietnam) and Thanh Dinh Vu (HoChiMinh City University of Technology, Vietnam)  
pp. 342-347

**14:50 A Review on TV White Spaces in Vietnam**

Vo Bao (PTIT, Vietnam) and Le Quoc Cuong (HCMC DIC, Vietnam)  
pp. 348-352

## Section V-Poster: Communication and Ubiquitous

Room: Lobby

Chair: Jinhong Kim (Myongji University, Korea)

**On the false positive probability of the Bloom filter**

Ji Hong Kim, Professor (Semyung University, Korea)  
pp. 353-354

**Location-based User Selection Scheme for Cooperative Spectrum Sensing in Cognitive Radio Networks**

Beongku An (Hongik University, Korea) and Tri-Nhu Do (Hongik University, Korea)  
pp. 355-356

**Performance Analysis of Synchronization Signals for Efficient D2D Communications in Unlicensed Band**

Hyungjin Kim (ETRI, Korea), Sung Cheol Chang (ETRI, Korea) and Jaemin Ahn (Chungnam National University, Korea)  
pp. 357-358

**Performance analysis of STBC-OFDM transmit diversity for mobile internet access networks**

Seong Chul Cho (ETRI, Korea) and Seung Hwan Lee (ETRI, Korea)  
pp. 359-361

**Calculation of the traffic safety speed using Fuzzy Reasoning Rules**

Byung Soon Cho (Green Building, BEMS System, Micro Hydropower Generator & C&C Instruments, Korea), You-Sik Hong (SangJI University, Korea), Chun Kwan Park (Mokpo Maritime National University, Korea), JaeMin Lee (Kwandong University, Korea) and ByungMin Lim (XML Company, Korea)  
pp. 362-367

**Modeling and Evaluation of Network-based Partial Distributed Mobility Management**

Jang-Geun Ki (Kongju National University, Korea), Kyutae Lee (Kongju National University, Korea) and DoHyeun Kim (Jeju National University, Korea)  
pp. 362-367

**15:10 - 15:30**

**Coffee Break **



**15:30 - 17:10**

## **Section VI-Oral 1: Communication and Ubiquitous**

Room: Hanoi

Chair: Mui Van Nguyen (Posts and Telecom Institute of Technology (PTIT), Vietnam)

### **15:30 Robust Carrier Phase Estimation in MIMO Systems for Smart Grid Environment**

Jin-Woong Cho (Korea Electronics Technology Institute, Korea), Yong-Seong Kim (Korea Electronics Technology Institute, Korea) and Hong Dae-Ki (University of SangMyung, Korea)  
pp. 368-371

### **15:50 Gesture-Based Session Establishment for Multi-User Data Exchange**

Ryo Kanaoka (Aoyama Gakuin University, Japan), Niwat Thepvilojanapong (Mie University, Japan), Ryosuke Ozaki (Aoyama Gakuin University, Japan), Naofumi Kitsunezaki (Aoyama Gakuin University, Japan), Yoshikatsu Ohta (Mie University, Japan) and Yoshito Tobe (Aoyama Gakuin University, Japan)  
pp. 372-377

### **16:10 Evaluating Perception Value of Contextual Network Information in Data Visualization towards Dynamic Proficiency Levels**

Aun Yichiet (National Advance IPv6 Centre, NAv6 & Universiti Sains Malaysia, Malaysia) and Sureswaran Ramadass (National Advanced IPv6 Centre, Malaysia)  
pp. 378-383

### **16:30 A Low Power Node for A Wireless Body Sensor Network**

Thang Tran (Pukyong National University, Korea) and Wan Young Chung (Pukyong National University, Korea)  
pp. 384-387

### **16:50 Cloud computing-based malicious code countermeasures**

HyunHo Kim (Dongseo University, Korea), Young Jin Kang (Dongseo University, Korea), Su Hyun Park (Dongseo University, Korea) and HoonJae Lee (Dongseo University, Korea)  
pp. 388-392

## **Section VI-Oral 2: Multimedia and Signal Processing**

Room: Seoul

Chair: YongSoo Choi (Sungkyul, Korea)

### **15:30 Analysis of Corner and Blob Feature Detection for Image Processing**

Byung-Jae Choi (5407B, College of Information and Communication, Korea)  
pp. 393-398

### **15:50 MRI System Evaluation Using Cubic / Triangular / Vessel and Low-Contrast Tissue Phantoms**

Jong-Min Kim (Korea University, Korea), Cha Jang-Gyu (Soonchunhyang University Bucheon Hospital, Korea), Hwang Ji-Young (Ewha Women's University Mokdong Hospital, Korea), Jung Seung-Eun (The Catholic University of Korea Seoul St. Mary's Hospital, Korea), Hyun Kyoan Lim (Korea Research Institute of Standards and Science & University of Science and Technology (UST), Korea), Kim Do-Wan (Korean Institute for Accreditation of Medical Imaging, Korea), Kim Kwang-Su (Korean Institute for Accreditation of Medical Imaging, Korea), Lee Hyun Goo (Korean Institute for Accreditation of Medical Imaging, Korea), Kang Sung-Jin (Soonchunhyang University Bucheon Hospital, Korea), Young-Seng Jo (Korea University, Korea), Sang-Doc Han (Korea University, Korea), Suchit Kumar (Korea University, Korea), Jong-Hoon Han (Korea University, Korea), Han-Joong Kim (Korea University, Korea), Park Junyong (Korea Basic Science Institute, Korea), Lee Chulhyun (Korea Basic Science Institute, Korea) and Oh Chang-Hyun (Korea University, Korea)  
pp. 399-401

### **16:10 'A Pipeline Schedule and Data Reuse Scheme for Merge Mode Operations in a Hardware-based HEVC Encoder**

Thang Nguyen (Seoul National University, Korea), Truong Nguyen (Seoul National University, Korea), Duy Thanh Nguyen (Seoul National University, Korea), Hyuk-Jae Lee (Seoul National University, Korea) and Chae Eun Rhee (Inha University, Korea)  
pp. 402-405

### **16:30 Illumination Removal by Using Low-pass Filter and Trimmed Normalization**

Sang-hyeob Song (SungKyunKwan University, Korea), Jong Hak Kim (Sungkyunkwan University, Korea), YongRak Jo (SungKyunKwan University, Korea), Sung-Muk Kang (Sungkyunkwan University, Korea) and Jun Dong Cho (Sungkyunkwan University, Korea)  
pp. 406-409

## **Section VI-Poster: Communication and Ubiquitous**

Room: Lobby

Chair: Tuan-Anh Le (Posts and Telecommunications Institute of Technology, Vietnam)

### **A Low-power CNT based Chaotic Generator for Chaos based Secure Communication and Neural Network Applications**

Van Ha Nguyen (Inje University, Korea), Sangguk Nam (University of INJE, Korea), Bookang Kim (Inje University, Korea) and Hanjung Song (Inje University, Korea)  
pp. 410-412

### **Termite-Inspired Optimization Unbalanced Radius Scheme for Zone Routing Protocol in Mobile Ad-Hoc Networks**

Thu Pham (Kumoh National Institute of Technology, Korea) and Dong Seong Kim (Kumoh National Institute of Technology, Korea)  
pp. 413-415

### **Performance Comparisons of Concatenated Codes with Different Inner Coding Scheme**

Ye Hoon Lee (Seoul National University of Technology, Korea) and Nam-Soo Kim (Cheongju University, Korea)  
pp. 416-419

### **Virtualization Technologies in Cloud Computing: Its Security Issues and Countermeasures**

Young Jin Kang (Dongseo University, Korea), HyunHo Kim (Dongseo University, Korea), Su Hyun Park (Dongseo University, Korea) and HoonJae Lee (Dongseo University, Korea)  
pp. 420-424

**Research on EV Charging Process using V2G Communication**

Hyang Won Lee (Hanyang University, Korea), Sung-kwon Park (Hanyang University, Korea), Eunjo Lee (Hanyang University, Korea) and Chul-sun Park (Hanyang University, Korea)  
pp. 425-429

**A Simulation Tool Based on Run-Time Log for a Separated Software Execution Environment**

Yeoneo Kim (Pusan National University, Korea), Pilsu Lee (Pusan National University, Korea), YunJung Lee (Pusan National University, Korea), Won Young Kim (ETRI, Korea) and Gyun Woo (Pusan National University, Korea)  
pp. 430-433

**A Study of Hierarchical Data Model for Sensor Web in Pig Farm**

Rajani Gorrepati (Jeju National University, India), Do-Hyeun Kim (Jeju National University, Korea) and HyoChan Bang (ETRI, Korea)  
pp. 434-437

**Design of a helix antenna for GPS receivers**

Gangil Byun (Hanyang University, Korea), Byung Jun Jang (Kookmin Univ, Korea), SangKyu Han (Kookmin University, Korea) and Hosung Choo (Hongik University, Korea)  
pp. 438-439

**17:10 - 18:00**

**Research Group Discussion 1** 

Room: Hanoi

**Research Group Discussion 2** 

Room: Seoul

**18:00 - 20:59**

**Banquet** 

Friday, February 14

**09:00 - 11:30**

**Organizing Committee Meeting** 

Room: Hanoi

Chair: Beongku An (Hongik University, Korea)

**Participant Panel Discussion** 

Room: Seoul

Chair: Hyunsik Ahn (Tongmyong University, Korea)

**11:30 - 13:30**

**Lunch Break** 

**13:30 - 16:30**

**Campus Visiting Ceremony** 

Chair: Vo Nguyen Quoc Bao (Posts and Telecommunications Institute of Technology, Vietnam)