ICTC 2017 Advanced Program (Technical Paper Sessions)

October 18 (Wednesday), 2017

[Session I-1] Advanced Wireless & Mobile Communication Systems and Infrastructure 1
Oct. 18, 09:00-10:40

I-1.1 Secure Channel for Molecular Communications
S. M. Riazul Islam (Sejong University, Korea); Farman Ali (Inha University, Korea); Hyeonjoon Moon (Sejong University, Korea); Kyung Sup Kwak (Inha University, Korea)
I-1.2 Signal Transmission Method for Measurement Used in Handover of Control and Non-Payload Communication of Unmanned Aerial Vehicle
Tae Chul Hong, Kunseok Kang, Kwangjae Lim, Byoung-Sun Lee and Jae Young Ahn (ETRI, Korea)
I-1.3 Implementation of PHY Rate and A-MPDU Length Adaptation Algorithm on WISHFUL Framework
Changmok Yang and Seongho Byeon (Seoul National University, Korea); Peter Ruckebusch, Spilios Giannoulis and Ingrid Moerman (Ghent University & IMEC, Belgium); Sunghyun Choi (Seoul National University, Korea)
I-1.4 A Study on the Sensor Network Authentication by Utilizing a Brownian Motion Behavior
Trong-Minh Hoang, Nguyen L.T, Tra N.T and Hai H.D (Posts and Telecommunications Institute of Technology, Vietnam)
I-1.5 Long Channel Multipath Shortening using Statistical Selection Rake Receiver
Chung Gwo Chin, Mohamad Yusoff Alias, Tiang Jun Jiat and Gan Ming Tao (Multimedia University, Malaysia)

[Session I-2] Internet of Things (IoT), Internet of Everything (IoE), Web of Objects (WoO) 1
Oct. 18, 09:00-10:40

I-2.1 Multi-Leveling for Higher Capacity of Wi-Fi Backscatter Communications
Wisnu Marti and Ji-Hoon Yun (Seoul National University of Science and Technology, Korea); Jae-Han Lim (University of California, Los Angeles, USA); Byung Jang Jeong, Woo Jin Byun (ETRI, Korea)
I-2.2 Efficient Router Node Deployment for ZigBee based Internet of Things Network using Physarum Optimization Algorithm
Lakman Rosyidi, Muhammad Asvial and Riri Fitri Sari (University of Indonesia, Indonesia)
I-2.3 A Framework to Support Data Interoperability in Web Objects based IoT Environments
Muhammad Golam Kibria, Sajjad Ali, Muhammad Aslam Jarwar and Il Young Chong (Hankuk University of Foreign Studies, Korea)
I-2.4 CoAP over BLE-GATT for OCF
Changbae Yoon, Hyungjun Choi, Jaehyun Cho and Young Woong Kim (Software Research and Development Center, Samsung Electronics Company, Ltd., Korea)
I-2.5 Analysis on Network Performance of Container Virtualization on IoT Devices
Kyungwoon Lee, Hyunjin Kim, Beomsu Kim and Chuck Yoo (Korea University, Korea)

Oct. 18, 09:00-10:40

I-3.1 Brownian-Motion-based Molecular Communication Network using Quorum Sensing Mechanism
Ponsuge Tissera and Sangho Choe (The Catholic University of Korea)
I-3.2 A Comprehensive Adaptive Filter to Eliminate Baseline Wander from ECG Signals
MD Saifur Rahman, Chulhyung Choi, Young-pil Kim and Sikyung Kim (Kongju National University, Korea)
I-3.3 Comparative Coevolutionary Analysis between Zika Virus and Dengue Virus
Jinhwa Jang (KISTI, Korea) and Se-Eun Bae (Seoul National University, Korea)
I-3.4 An Improved Brain Tumor Detection and Classification Mechanism
Sagar Kumar Shil, Farzana Parvin Polly and Mohammad Arif Hossain (East Delta University, Bangladesh); Mohammad Shareef Ifthekhar (Kookmin University, Korea); Mohammed Nazım Uddin (East Delta University, Bangladesh); Yeong Min Jang (Kookmin University, Korea)
I-3.5 Epidemic Simulation of H1N1 Influenza Virus using GIS in South Korea
Jooyeon Park, Jinhwa Jang and Insung Ahn (KISTI, Korea)

[Session I-4] Smart Grid and Energy/Power-Aware Technologies & Applications
Oct. 18, 09:00-10:40

Chair:
I-4.1 An Enhanced Spider Web Chart Method for Climate Change Risk Quantification in Electrical Facilities  
Sangjin Jeong, Hyunjoo Kang and Yoon-Young An (ETRI, Korea)

I-4.2 Review of Trends on ICT Convergence in Electric Industry  
Chankook Park, Daeyoun Lee and Hyun Lee (KEEI, Korea); Yangsoo Kim (National Disaster Management Research Institute, Korea)

I-4.3 Controlling Energy Consumption with the World-Wide Adaptive Thermostat using Fuzzy Inference System in Smart Grid  
Sakeena Javid and Nadeem Javid (COMSATS Institute of Information Technology, Islamabad, Pakistan); Sohail Iqbal (National University of Sciences and Technology (NUST), Islamabad, Pakistan); Muhammad Junaid Mughal (COMSATS Institute of Information Technology, Islamabad, Pakistan)

I-4.4 Estimation of Energy Self-Sufficiency Rate by EMS Simulation using SPICE  
Yuta Oshima, Itao Mizumoto and Hiroshi Oguma (National Institute of Technology, Toyama College, Japan); Noboru Ishihara and Kazuya Masu (Tokyo Institute of Technology, Japan)

[Session I-5] Big Data and Smart Computing
Oct. 18, 09:00-10:40

I-5.1 An Adaptive SLA-based Data Flow Mechanism for Stream Processing Engines  
Muhammad Sharif, Hyangduk Yoon, Sunglim Jang and Choonghwa Lee (Hanyang University, Korea)

I-5.2 Efficient Detection of Suspicious DNS Traffic by Resolver Separation per Application Program  
Yong Jin (Tokyo Institute of Technology, Japan); Kantaka Kakoi (Tokyo University of Agriculture and Technology, Japan); Masahiko Tomoishi (Tokyo Institute of Technology, Japan); Naruyoshi Yamai (Tokyo University of Agriculture and Technology, Japan)

I-5.3 Chaotic Dynamical Systems based Image Encryption Model  
Manish Kumar, Sunil Kumar, Mrinal kanti Das and Sanjeev Singh (University of Delhi, India); Rajat Budhiraja (Aricent Technologies (H). Ltd., India)

I-5.4 A Subspace Method for solving Unconstrained Optimization Problems without Derivatives  
Yimeng Zhang and Zuguo He (Beijing University of Posts and Telecommunications, P.R. China)

I-5.5 A Dynamic Service Allocation Algorithm in Mobile Edge Computing  
Bo HU, Jianye Chen and Fengcun Li (Beijing University of Posts and Telecommunications, P.R. China)

[Session P-1] Poster Session 1
Oct. 18, 09:00-10:40

P-1.1 Survey of Indoor Optical Camera Communication (OCC) systems for the Internet of Lights  
Thanh Luan Vu, Trung Nguyen and Yeong Min Jin (Kookmin University, Korea)

P-1.2 Compact GCM Implementations on 32-bit ARMv7-A Processors  
Hwangjae Seo (Hansung University, Korea); Taehwan Park, Garam Lee and Howon Kim (Pusan National University, Korea)

P-1.3 Deployment of an SDN-based UAV Network: Controller Placement and Tradeoff between Control Overhead and Delay  
Shams ur Rahman, Geon-Hwan Kim and You-ze Cho (Kyungpook National University, Korea); Ajmal Khan (COMSATS Institute of Technology Attock, Pakistan)

P-1.4 A Web-based Service Deployment Method to Edge Devices in Smart Factory Exploiting Docker  
Jihun Ha, Jangyong Kim, Heewon Park, Jaehong Lee, Hyuna Jo, Heejung Kim and Jaeheon Jang (Samsung Electronics, Korea)

P-1.5 Policy-based Clustering Service for Network Function Virtualization over Multi-site Clouds  
Kim Bao Long, Truong-Xuan Do and YoungHun Kim (Soongsil University, Korea)

P-1.6 Bimodal Flooding Scheme for Mitigating Contention and Redundancy in Relayed Broadcast  
Youngbo Kim and Eun-Chan Park (Dongguk University, Korea)

P-1.7 Line-Break Prediction of Hannon Text using Recurrent Neural Networks  
Dong Hoon Oh, Zahra Shah and Gil-Jin Jung (Kyungpook National University, Korea)

P-1.8 Long-Term Prediction of Vehicle Trajectory based on a Deep Neural Network  
Donggi Jeong, Minjin Baek and Sang-Sun Lee (Hanyang University, Korea)

P-1.9 An Analysis System of Pedestrian-Vehicle Interaction Risk Level using Drone Videos  
Jeong Ah Jang and Hyun Mi Lee (Ajou University, TOD-based Engineering Research Center)

P-1.10 Joint NOMA Beamforming and User Scheduling for Sum Rate Maximization in a Full-Duplex System  
Hieu V. Nguyen, Van-Dinh Nguyen and Oh-Soon Shin (Soongsil University, Korea)

P-1.11 Cell Selection Technique for 5G Millimeter-Wave Cellular Systems  
Mohammed Sajib Khan, Sung Joon Maeng and Yong Soo Cho (Chung-Ang University, Korea)

P-1.12 Hierarchical Multicast Transmission for Single Cell Point-to-Multipoint(SC-PTM) in Cellular Networks  
Doyle Kwon, Jae Hyun Park and Duk Kyung Kim (Inha University, Korea)

P-1.13 Diversification of ICT Suppliers for Technological Convergence: An Evolutionary Perspective on Technological Changes in Automotive Industry
Kyoung Sun Ham (KETI, Korea); Jung Hoon Lee and Jae Won Jun (Yonsei University, Korea)

P-1.14 LTE based V2X Receiver to Support High Speed

Jin-Yup Hwang, Manyoung Jung and Sang-Wook Lee (LG Electronics, Korea)

P-1.15 Near-field Magnetic MIMO Communication for Implantable Devices using Scalable Non-coupling Coil Array

Han-Joon Kim, Jaeseok Lee and Ji-Woong Choi (DGIST, Korea)

P-1.16 Integration of Transtheoretical Model with Wellness Big Data for Healthy Behavior Assessment to Adoption

Haiz; Syed Muhammad Bilal and Sungyoung Lee (Kyung Hee University, Korea)

P-1.17 Cylindrical 3D Force Sensor using a Flexible MCNTs/PDMS Composite Material

Sang Jun Moon (Ulsan National Institute of Science and Technology, Korea); Hyun-Woo Oh, Wang Joo Lee and Jae Doo Huh (ETRI, Korea)

P-1.18 A Study on Machine Learning Web Service using Spreadsheets

Chi-Yurl Yoon (University of Science and Technology, Korea) and Shin-Gak Kang (ETRI, Korea)

P-1.19 Development of a Handheld Line Information Reader and Generator for Efficient Management of Optical Communication Lines

Jaeyal Lee (Kyungpook National University, Korea); Hyungwoo Kwon (TDI Co. Ltd., Korea); Jaewon Song, Mansk Jeon and Jeehyun Kim (Kyungpook National University, Korea)

P-1.20 Performance Analysis of the Key Aspects Affecting Capacity of 4G LTE Networks

Igor Kim, Jungsun Um and Seungkeun Park (ETRI, Korea)

P-1.21 An Approach to Predicting and Estimating Risks in terms of Tasks and Zones

YouHee Choi, Jeong-Ho Park and Byungtae Jang (ETRI, Korea)

P-1.22 Secure Framework for Information Sharing and Management in a Distributed Design Environment

Soyoung Kim and Soyoung Park (ETRI, Korea)

P-1.23 Intelligent Operation Monitoring IoT Tag for Factory Legacy Device

Hyunyoung Han, Hyunchul Kang and Jiyon Son (ETRI, Korea)

P-1.24 A Detail Enhancement Strategy for Face Sketch Synthesis based on NSS

Wei guo Wan and Hyeong Lee (Chonbuk National University, Korea)

P-1.25 Optimization of Cognitive Radio Secondary Base Station Positioning and Operating Channel Selection for IoT Sensor Networks

Wen Jin yi, Yang Qin, Anish Prasad Shrestha and Sang-jo Yoo (Inha University, Korea)

P-1.26 A Study on the Discovering ATSC 3.0 Services Using DNS

Bongho Lee, Kyutae Yang, Sang-ik Park, Namho Hur and Heung Mook Kim (ETRI, Korea)

P-1.27 Emergency-Alert Services Framework Using Common Alert Protocol through Cable Set-Top Box

Eunjung Kwon, Hyunbo Park, Eui-Suk Kang and Yong-Tae Lee (ETRI, Korea)

P-1.28 Image Denoising Method based on Directional Total Variation Filtering

Abdul Wahid and Hyeong Lee (Chonbuk National University, Korea)

P-1.29 Object Detection with Sliding Window in Images Including Multiple Similar Objects

Jinsu Lee (University of Science & Technology & ETRI, Korea); Junseong Bang and Seong-II Yang (ETRI, Korea)

P-1.30 Performance of a Waveform Design for Wireless Power Transfer with Imperfect Channel State Information

Laiggi Cantos, Gerardo Sacarello, Yeojin Jeong and Yun Hee Kim (Kyung Hee University, Korea)

P-1.31 Energy Management based on Communication of Smart Plugs and Inverter for Smart Home Systems

Sewon Heo, Wan-Ki Park and Il-Woo Lee (ETRI, Korea)

P-1.32 Peer-to-Peer based Energy Trading System for Heterogeneous Small-scale DERs

Yoon-Sik Yoo, Taean Hwang and Shin young Kang (ETRI, Korea); Shah Hasan Shah Nawaz (universiti Teknologi Brunei(UTB), Brunei Darussalam); Il-Woo Lee (ETRI, Korea); Jun Kyun Choi (KAIST, Korea)

P-1.33 A Study on Location Information Aided Re-identification in CCTV Environment

Sangwon Byon, Eunjung Kwon, Eui-Suk Kang and Yong-Tae Lee (ETRI, Korea)

P-1.34 A Indoor Positioning using Wi-Fi Fingerprint with Signal Clustering

Chorang Park and Seung Hyong Rhee (University of Kwangwoon, Korea)

P-1.35 A Novel SDN Multicast for Large-scale IoT Environments

Hyeong-su Kim, Seongjin Yun, Hanjin Kim and Won-Tae Kim (Koreatech University, Korea)

P-1.36 SDNbox: A Portable Open-Source Testbed for SDN Study

Nhu-Ngoc Dao (Chung-Ang University, Korea); Quang Dieu Tran (Yeungnam University & Vietnam Academy of Science and Technology, Korea); Minho Park (Soongsil University, Korea); SungRae Cho (Chung-Ang University, Korea)

P-1.37 SDN-based Network Security Functions for Effective DDoS Attack Mitigation

DaeYoung Hyun, JinYong Kim, Dongjin Hong and Jaehoon (Paul) Jeong (Sungkyunkwan University, Korea)

P-1.38 Agile Management of 5G Core Network based on SDN/NFV Technology

Taesung Choi, TaeYeon Kim, Wouter TaverNier, Aki KORVALA and Jussi PAJUNPAA (ETRI, Korea)

P-1.39 Correction of Frequency Offset of FFT-based Frequency Hopping Detector

Kyung-Gyu Lee and Seong-Jun Oh (Korea University, Korea)

P-1.40 Grayscale Access Control: Applying Differential Privacy to Access Control for Internet of Thing Environment
P-1.41 A Programmable Data Plane to Support In-Network Data Processing in Software-Defined IoT
Ki-wook Kim and Sung-Gi Min (Korea University, Korea); Yoon-Hee Han (Korea University of Technology and Education, Korea)

P-1.42 Development of an IoT-based Atmospheric Environment Monitoring System
Seung Ho Kim, Jong Mun Jeong, Min Tae Hwang and Chang Soon Kang (Changwon National University, Korea)

P-1.43 Microservices Model in WoO based IoT Platform for Depressive Disorder Assistance
Sajjad Ali, Muhammad Golam Kibria, Muhammad Aslam Jarwar, Sunil Kumar and Byoung Chong (Hankuk University of Foreign Studies, Korea)

P-1.44 Device to Device Knowledge Transfer through Structured Data
Donghan Lee, Ingook Jung, Sooyoung Song, Jinchul Choi and Younsung Son (ETRI, Korea)

P-1.45 Analysis of LTE and NB-IoT Coexistence
Hyungjin Kim, Seongchul Cho, Junghoon Oh and Gweondo Jo (ETRI, Korea)

P-1.46 Data Management and Searching System and Method to Provide Increased Security for IoT Platform
Moon Yong Jung (Sogang University, Korea) and Ju Woak Jang (Sogang University, USA)

P-1.47 An Analysis of Economic Impact on IoT Under GDPR
Junwoo Seo, Kyounghin Kim and Mooky Park (Korea University, Korea); Moosung Park (ADD, Korea); Kyungho Lee (Korea University, Korea)

P-1.48 Emergent-MQTT over SDN
Jun-Hong Park, Seongjin Yun, Hyeong-su Kim and Won-Tae Kim (Koreaetech University, Korea)

P-1.49 Secure Full-Duplex Relay Network using Cooperative Jamming
Jungak Park, Sangseok Yun and Jeongseok Ha (KAIST, Korea)

P-1.50 Parameter Optimization of Block Interleaver for Polar Coding with Bit-interleaved Coded Modulation
Yeon Joon Choi, Jong-Hwan Kim and Sang-Hyo Kim (Sungkyunkwan University, Korea)

P-1.51 Vital Sign Quality Assessment based on IR-UWB Radar Sensor
Yuna Lee, Jeong Woo Choi and Sung Ho Cho (Hanyang University, Korea)

P-1.52 Rule Extraction Ontology Generation from an Adaptive IoT Ecosystem Database
JungHyen Ahn and Young B. Park (Dankook University, Korea)

P-1.53 PAPR-based DSSS Signal Detection
Heetae Jin and Suk Chan Kim (Pusan National University, Korea)

P-1.54 Turbo Equalizer Design and Performance Evaluation of BPSK-TCM based Satellite Receiver System
Changyoung An and Heung-Gyoon Ryu (Changbuk National University, Korea); Sang Bum Ryu and Sang Gyu Lee (KARI, Korea)

P-1.55 Design of Unidirectional Security Gateway System for Secure Monitoring of OPC-UA Data
Byoung-Koo Kim, Young-Jun Hoo and Jung-Chan Na (ETRI, Korea)

P-1.56 Control of Nonlinear, Complex and Black-Boxed Greenhouse System with Reinforcement Learning
Bryungyan Ban (KAIST, Korea) and Soobin Kim (Kyungbuk National University, Korea)

P-1.57 SDR Implementation of Energy Detection with Non-uniform Quantization Scheme
Dongho Seo, Hyeyung Kim and Haewoon Nam (Hanyang University, Korea)

P-1.58 Circularly Polarized Ground Radiation Antenna using Planar Metal Loop
Donghee Park, Longyu Qu, Jihwan Jeon, Shan Jiang and Hyeongdong Kim (Hanyang University, Korea)

P-1.59 Efficiency Null of Two-layered Wideband Ground Radiation Antenna using Magnetic Coupling
Shan Jiang, Longyu Qu, Hyunwoong Shin, Donghee Park and Hyeongdong Kim (Hanyang University, Korea)

P-1.60 Spectrum Characteristics and Predistortion Gain in the Nonlinear High Power Amplifier (HPA)
Kyeongsoo Jang and Heung-Gyoon Ryu (Changbuk National University, Korea); Sang Bum Ryu and Sang Gyu Lee (KARI, Korea)

P-1.61 Seasonal and Diurnal Variations of Rain Attenuation Measured with the Koreasat 6 at 20.73 GHz
Sujan Shrestha, Iram Nadeem, Jiwan Ghimire, Sun-Woong Kim, Ho Gyun Yu and Dong-You Choi (Chosun University, Korea)

P-1.62 Message Passing Algorithm based on QR Decomposition for an SCMA System with Multiple Antennas
Gil-Mo Kang, Hyeon Min Kim, Yoan Shin and Oh-Soon Shin (Soongsil University, Korea)

P-1.63 Analysis on MIMO Transmit Diversity and Multiplexing Techniques for Ship Ad-hoc Networks under a Maritime Channel Model in Coastaline Areas
Ishaq Ahmad and KyungHi Chang (Inha University, Korea)

P-1.64 System-Level Performance Evaluation for Non-Orthogonal Multiple Access in Coordinated Direct and Relay Transmission
Jung-Bin Kim and JunHwan Lee (ETRI, Korea); Dongwoo Kim and Yunsung Choi (Hanyang University, Korea)

P-1.65 A Novel Joint User Pairing and Dynamic Power Allocation Scheme in MIMO-NOMA System
Sanil Chinnadarai, Poongunran Selvakumthi and Moon Ho Lee (Changbuk National University, Korea)

P-1.66 A Single RF-chain Load Modulation Transmitter of Simple Structure for Massive MIMO
JungHoon Oh, Hyungjin Kim, Seongchul Cho and Gweondo Jo (ETRI, Korea)

P-1.67 Performance Comparison between Wavelet-Based OFDM System and iFFT-Based OFDM System
Jung Lee and Heung-Gyoon Ryu (Changbuk National University, Korea)

P-1.68 Radio Resource Allocation and Power Control Scheme to Mitigate Interference in Device-to-Device
Communication Underlying LTE-A Uplink Cellular Networks
Desarani Devi Ningombam and Seokjyo Shin (Chosun University, Korea)
P-1.69 A Computationally Efficient FBMC Transceiver based on Modified PPFB Structure
JaeHoon Park, Deok Won Yun and Won Choe Lee (Soongsil University, Korea); Soo Bin Um and Kwang Eog Lee (ADD, Korea)
P-1.70 MTTDL for Distributed Storage Systems with Double Node Failures
Yong Sang Kim and Sang-Hyo Kim (Sungkyunkwan University, Korea); Hosung Park (Chonnam National University, Korea)
P-1.71 An Indoor Positioning Method in a Concert Hall using Optical Camera Communication (OCC) Technology
Eunyoung Jeong, Bong-Seok Seo, Namtae Kim, Dongho You, Dong Ho Kim and Ye Hoon Lee (Seoul National University of Science and Technology, Korea)
P-1.72 Observation-Based Directional Energy Transmission Algorithm in Energy Harvesting Networks
Hanul Ko and Sangheon Pak (Korea University, Korea)
P-1.73 An Opportunistic Scheme for ICN in Disaster Situations
Min Wook Kang, Younghan Kim and Yun Won Chung (Soongsil University, Korea)
P-1.74 A Fast Content Delivery Mechanism using the CCN and Enhanced Base Stations
Nazib Abdun Nasir and Seong-Ho Jeong (Hankuk University of Foreign Studies, Korea)
P-1.75 Weight Based Movie Recommendation System Using K-Means Algorithm
Md. Tayeb Himel, Mohammed Nazim Uddin and Mohammad Arif Hossain (East Delta University, Bangladesh); Yeong Min Jang (Kookmin University, Korea)
P-1.76 CTMAC: A Cooperative TDMA MAC in Vehicular Ad Hoc Networks
Ye-Oon Yoon and Young-Bae Ko (Ajou University, Korea)

[Session II-1] 5G, 4G, LTE and LTE-Advanced 1
Oct. 18, 15:50-17:30
Chair:

II-1.1 NW-OFDM using Cyclic Postfix and Windowing for the eMBB Waveform of the 5G/B5G Mobile System
Changyoung An and Heung-Gyoon Ryu (Chungbuk National University, Korea); Yingshan Li (College of Information Technical Science, Nankai University, P.R. China); Mohammad Reza Asharif (University of Ryukyu, Japan)

II-1.2 A Way Forward for Accommodating NFV in 3GPP 5G Systems
Myung-Ki Shin, Seungik Lee, Soohwan Lee and Dongmyong Kim (ETRI/PEC, Korea)

II-1.3 Non-Orthogonal Random Access with Channel Inversion for 5G Networks
Jun-Bae Seo (Indian Institute of Technology Delhi, Canada); Hu Jin (Hanyang University, Korea); Bang Chul Jung (Changnan National University, Korea)

II-1.4 Channel Switching Operation of LTE-LAA in Unlicensed Spectrum
Sunwook Hwang, Kangjin Yoon and Sanghyun Choi (Seoul National University, Korea)

II-1.5 Analysis on how to Improve Throughput Efficiently in LTE-Advanced Network Controlled D2D Communication
Richard Musabe, Victoire Mugongo Ushindi and Said Rutabyiro Ngoga (University of Rwanda, Rwanda); Célestin Twizere (University of Rwanda, Rwanda); Gaurav Bajpai (Kigali Institute of Science and Technology & KIST, Rwanda)

[Session II-2] Artificial Intelligence and Machine Learning 1
Oct. 18, 15:50-17:30
Chair:

II-2.1 Image-based Disease Diagnosing and Predicting of the Crops through the Deep Learning Mechanism
Hyeon Park, Jee-Sook Eun and Se-Han Kim (ETRI, Korea)

II-2.2 GAN-D: Generative Adversarial Networks for Image Deconvolution
Ha Yeon Lee, Jin Myung Kwak, Byunghyun Ban, Seon Jin Na, Se Ra Lee and Heung-Kya Lee (KAIST, Korea)

II-2.3 Sentiment Analysis of Social Networking Sites (SNS) Data using Machine Learning Approach for the Measurement of Depression
Anees Ul Hassan, Jamil Hussain, Musarrat Hussain, Muhammad Sadiq and Sungyoung Lee (Kyung Hee University, Korea)

II-2.4 Predicting Rice Yield for Bangladesh by Exploiting Weather Conditions
Md. Akter Hossain, Mohammed Nazim Uddin and Mohammad Arif Hossain (East Delta University, Bangladesh); Yeong Min Jang (Kookmin University, Korea)

II-2.5 A Pupil Data based Classification Model for Education Learning States
Jungjin Lee, Eunjae Hong and Hyunggon Park (Ewha Womans University, Korea)

[Session II-3] Advanced Communication Networks and Future Internet Technologies 1
II-3.1 Improvement of a TCP Incast Avoidance Method using a Fine-grained Kernel Timer
Shigeyuki Osada (Japan Research Institute, Ltd., Japan); Shogo Wakai, Yukinobu Fukushima and Tokumi Yokohira (Okayama University, Japan)

II-3.2 Topology Construction for Flying Ad Hoc Networks (FANETs)
Do- Yup Kim and Jung-Won Lee (Yonsei University, Korea)

II-3.3 Impact of Rayleigh Fading Channel on Connectivity in Wireless Sensor Networks
Chunxiao Li, Fantian Zeng, Anran Zhen and Jun Sun (Yangzhou University, P.R. China)

II-3.4 Self-certifying ID based Trustworthy Networking System for IoT Smart Service Domain
Eungha Kim, Kisook Chung and Taesoo Jeong (ETRI, Korea)

II-3.5 MPTCP based In-Band Controlling for the Software Defined Networks
Ali Raza, Ali Gohar and Sanghwan Lee (Kookmin University, Korea)

[Session II-4] Systems, Services and Applications for ICT Convergence 1
Oct. 18, 15:50-17:30
Chair:

II-4.1 Mediated Reality Photography with CCTV-Assisted Object Elimination Using Graph Cut
Seonghun Park (University of Science and Technology (UST), Korea); Junseong Bang and Hunjoo Lee (ETRI, Korea)

II-4.2 Measuring the State of ECN on the Internet
Chun-Xiang Chen (Prefectural University of Hiroshima, Japan)

II-4.3 Unmanned Aerial Vehicle Surveillance System (UAVSS) for Forest Surveillance and Data Acquisition
Md. Nazynus Saadat (UPM, Malaysia), Muhammad Majahid Mohd Sharif (Universiti Kuala Lumpur Malaysia, Malaysia)

II-4.4 Computing and Communication Convergence Reflection to Legislation System and Higher Education Programs
Rihards Balodis and Inara Opmane (Institute of Mathematics and Computer Science, University of Latvia, Latvia)

II-4.5 Load Impedance Optimization of Magnetic Beamforming Wireless Power Transfer
Kyungtae Kim, Han-Joon Kim and Ji-Woong Choi (Daegu Gyeongbuk Institute of Science & Technology, Korea)

[Invited Paper Session I] Advanced Technologies for Future Network Services
Oct. 18, 15:50-17:30
Chair:

IP-5.1 Order Dependency-Aware Service Function Placement in Service Function Chaining
Hosung Baek, Insun Jang, Haneul Ko and Sangheon Puck (Korea University, Korea)

IP-5.2 SDN-based Wireless Access Network with Media Independent Management Capabilities
Hyeong Ho Lee, Yan Chul Choi and Byung Jun Ahn (ETRI, Korea)

IP-5.3 Medium Access with Implicit Contention Avoidance for Peer Aware Communications
Seong-Soon Joo, Nae-Soo Kim and Cheol Sig Pyo (ETRI, Korea)

IP-5.4 Performance Analysis of Energy Consumption in Machine-Type Communication
Yujin Lim (Sookmyung Women's University, Korea)

IP-5.5 Interference Reduction Mechanism for Fractional Frequency Reuse in Hybrid Wireless Network
Mohammad Arif Hossain (East Delta University, Bangladesh); Mohammed Shareef Ifihekar (Kookmin University, Korea); A. S. Ashiq and Mohammed Nazim Uddin (East Delta University, Bangladesh); Yeong Min Jang (Kookmin University, Korea)
October 19(Thursday), 2017

[Session III-1] Advanced Wireless & Mobile Communication Systems and Infrastructure 2
Oct. 19, 08:30-10:10

III-1.1 Complexity Reduced MIMO Detection with Three Iterative Loops
Saleem Ahmed and Fahad Iqbal (Dawood University of Engineering and Technology, Pakistan); Meixiang Zhang (Yangzhou University, P.R. China); Sooyoung Kim (Chonbuk National University, Korea)

III-1.2 Construction of Transmission Timing Control System using FPGA for QZSS Short Message Synchronized SS-CDMA Communication
Rei Kawai and Hiroshi Oguma (National Institute of Technology, Toyama College, Japan); Suguru Kameda and Noriharu Suematsu (Tohoku University, Japan)

III-1.3 Performance Evaluation of Dual-Band Polar Transmitter Architecture for the Connected Car
Jin-Kyu Choi and Byung-Tae Jang (ETRI, Korea); Heung-Gyoon Ryu (Chungbuk University, Korea)

III-1.4 Performance Evaluation of M-ary SS/OFDM Systems with Short Spread Spectrum Codes over Visible Light Channels
Qirui Xia, Fumihito Sasamori, Shiro Handa and Osamu Takyu (Shinshu University, Japan)

III-1.5 Content Popularity based Fast Content Transmission in the Wireless Environment
Nazib Abdun Nasir and Seong-Ho Jeong (Hankuk University of Foreign Studies, Korea)

[Session III-2] Vehicular Information and Communication Technologies 1
Oct. 19, 08:30-10:10

III-2.1 Enhanced Modulation Classification Algorithm based on Kolmogorov-Smirnov Test
Seongjin Ahn, Jaeyoon Lee, Dongweon Yoon and Jun Won Choi (Hanyang University, Korea)

III-2.2 Travel Prediction-based Data Forwarding using Realistic Traffic Model in Vehicular Networks
Youngwha Jo (Sungkyunkwan University, Korea); Youngmi Baek (DGIST, Korea); Jaehoon (Paul) Jeong (Sungkyunkwan University, Korea)

III-2.3 Joint Relay Selection and Spectrum Allocation in D2D-based Cooperative Vehicular Networks
Zhenyu Zhou (North China Electric Power University & Waseda University, P.R. China); Houjian Yu (North China Electric Power University, P.R. China); Chen Xu (North China Electric Power University, P.R. China) and Fei Xiong (North China Electric Power University, P.R. China); Yunjian Jia (Chongqing University, P.R. China); Guojun Li (Chongqing Communication Institute, P.R. China)

III-2.4 4-QAM Gray Coding for Deep Neural Network based Decoder Training
Minhoe Kim and Dong-Ho Cho (KAIST, Korea)

III-2.5 Integration of Photogrammetry and Optical Camera Communication Technologies for Vehicle Positioning
Md. Tanvir Hossan, Mostafa Zaman Chowdhury and Yeong Min Jang (Kookmin University, Korea)

[Session III-3] Smart Cities and Indoor Positioning
Oct. 19, 08:30-10:10

III-3.1 An Evolution-by-design Approach: Toward Multi-disciplinary Life-cycle Management of IoT in City Platform as a Service
Toshihiko Yamakami (ACCESS, Japan)

III-3.2 An Organizational Coordination Model for IoT: A Case Study of Requirement Engineering of City-Government in Tokyo in City Platform as a Service
Toshihiko Yamakami (ACCESS, Japan)

III-3.3 Influence of Multi Path on Positioning Accuracy in a Low Sky View Factor Environment
Sho Tatsuguchi, Yuta Oshima and Hiroshi Oguma (National Institute of Technology, Toyama College, Japan); Suguru Kameda and Noriharu Suematsu (Tohoku University, Japan)

III-3.4 Performance Evaluation of RSS Fingerprinting Method to Track ZigBee Devices Location Using Artificial Neural Networks
Hening Pram Pradityo, Lukman Rosyidi, Misbahuddin Misbahuddin and Riri Fitri Sari (University of Indonesia, Indonesia)

III-3.5 Improving Accuracy in Indoor Localization System Using Fingerprinting Technique
Saddam Alraih and Abdulraheeb Alhammadi (Faculty of Engineering, Multimedia University, Malaysia); Ibraheem Shayea and Ahmed M. Al-Sanman (Wireless Communication Centre, Universiti Teknologi Malaysia)
[Session III-4] Information & Communication Theory, and Their Applications 1
Oct. 19, 08:30-10:10
Chair:

III-4.1 Nuclear Quadrupole Resonance Signal Detectability Enhancement Methods - An Overview
Kairan Zhu, Zhijian Zhao and Huigan Jia (Xi’an Shiyou University, P.R. China)

III-4.2 Linear Time Complexity GF(256) RaptorQ Implementation on GPU
Sunwoong Joo (Samsung Electronics & POSTECH, Korea)

III-4.3 Cause-Effect Series Determination from Web Documents
Chaveevasri Petchsiri and Suniran Phainoun (Dhurakij Pundit University, Thailand); Rapepun Piriyakul (Ramkhamhaeng University, Thailand)

III-4.4 A Research of the Relationship between Customers’ Loyalty and Degree of Involvement in Virtual Game Props Trading Site
Yi-Lin Yu (Fu Jen Catholic University, Taiwan)

III-4.5 Implementation of Product-oriented Omni Channel Technology Using Multi-modal Information
Weon-Geun OH, Seung-Jae Lee, Keun-Dong Lee, Da-Un Jung, Hyung-Kwan Son and Jong-Kook Ko (ETRI, Korea)

[Session III-5] ICT Signal Processing
Oct. 19, 08:30-10:10
Chair:

III-5.1 Reconciliation with Polar Codes Constructed using Gaussian Approximation for Long-distance Continuous-variable Quantum Key Distribution
Yongseon Kim, Changho Suh and Jun-Keo Kevin Rhee (KAIST, Korea)

III-5.2 On Efficient Description of Rate Compatible Polar Codes
Jaejoel Kim (Samsung Electronics, Korea); Jong-Hwan Kim, Hysang Ju and Sang-Hyo Kim (Sungkyunkwan University, Korea)

III-5.3 Joint Activity Detection and Channel Estimation via Bayesian Orthogonal Matching Pursuit
Euitaek Lee, Jinyoup Ahn, Namik Kim and Kwang Bok Lee (Seoul National University, Korea)

III-5.4 Enhanced Clutter Removal and Peak Detection Methods for Localization Using IR-UWB Radar
Young-Jun Yoon, Seongwook Lee, Byeongho Lee and Seong-Cheol Kim (Seoul National University, Korea); Changmin Lee (Samsung Electronics Co., Ltd., Korea)

III-5.5 Enhanced Performance for LMMSE Equalizer with Factor Graphs
Liujun Zhang (Dalian University of Technology, P.R. China); Guiqiong Wang (SAP Chinese Co. Ltd, P.R. China); Minglu Jin (Dalian University of Technology, P.R. China); Jae Moung Kim and Sang-Jo Yoo (Inha University, Korea)

[Session IV-1] Systems, Services and Applications for ICT Convergence 2
Oct. 19, 10:30-12:10
Chair:

IV-1.1 Open-Source IO Visor eBPF-based Packet Tracing on Multiple Network Interfaces of Linux Boxes
Taekho Nam and JongWon Kim (Gwangju Institute of Science and Technology, Korea)

IV-1.2 Towards Interoperability in Mobile Coupons: Enabling Cross Retailer Coupon Validation
Fuchs Klaus, Vuckovac Denis and Ilie Alexander (ETH Zurich, Switzerland)

IV-1.3 Biodiversity Awareness Using Mobile Application: Ikimono Mikke
Aslina Baharum, Nordaliela Mohd. Rusli and Ericsson Kua Jack Sen (Universiti Malaysia Sabah, Malaysia); Nural Hidayah Mat Zain (International Islamic University Malaysia, Malaysia); Iza Azura Ahmad Bahar (Universiti Malaysia Sabah, Malaysia); Muhammad Omar (Universiti Teknologi MARA Sarawak, Malaysia)

IV-1.4 Recommender System Improvement Cases through Implicit Feedbacks from Social Network
Mohamad Ivan Fanany, Ibrahim Malik Khasbulloh, Azis Maarij Jamil and Muhammad K.A. Taqwim (Fakultas Ilmu Komputer, Universitas Indonesia, Indonesia)

IV-1.5 Connectivity for Autonomous Ships: Architecture, Use Cases, and Research Challenges
Marko Höyhtyä, Jyrki M Huusko and Markku Kiviranta (VTT Technical Research Centre of Finland Ltd, Finland); Kenneth Sohberg and Juha Kokka (Rolls-Royce Marine, Finland)

IV-1.6 Releasing Stress Using Music Mood Application: DeMuse
Aslina Baharum, Tan Wei Seong(Universiti Malaysia Sabah, Malaysia); Nural Hidayah Mat Zain (Universiti Teknologi MARA & Universiti Kebangsaan Malaysia, Malaysia); Nurhaftizah Moizyana Mohd Yusop (National Defence University of Malaysia, Malaysia); Muhammad Omar (Universiti Teknologi MARA, Malaysia); Nordaliela Mohd. Rusli (Universiti Malaysia Sabah, Malaysia)

[Session IV-2] Smart Media & Broadcasting, and Smart Devices/Appliances
Oct. 19, 10:30-12:10
Chair:
IV-2.1 Enhanced Quality Adaptation Scheme for Improving QoE of MPEG DASH  
Sungho Lee, Hyunsuk Roh and Namkyung Lee (ETRI, Korea)

IV-2.2 Adaptive High-Resolution Image Transmission Method using MPEG-DASH  
Sanho Seo, Youghwan Shin, Junuk Yu, Wonsik Yang and Jong-Moon Chung (Yonsei University, Korea)

IV-2.3 Nasolabial Angle Measuring System in Lateral Face Image for Bimaxillary Protrusion Judgment  
Junheum Park, Seongjoon Park and Hwangnam Kim (Korea University, Korea)

IV-2.4 A Study on Emotion Recognition Method and Its Application using Face Image  
Hyeon-Jung Lee and Kwang-Seok Hong (Sungkyunkwan University, Korea)

IV-2.5 Face Sketch Synthesis using Conditional Adversarial Networks  
Philip Chikontwe and Hyo Jong Lee (Chonbuk National University, Korea)

[Session IV-3] Advanced Communication Networks and Future Internet Technologies 2  
Oct. 19, 10:30-12:10

Chair:

IV-3.1 AODV-based Seamless Data Delivery in the Intermittent V2I Communication Environment  
Chanyuk Cho and Sanghyun Ahn (University of Seoul, Korea)

IV-3.2 Dynamic Resource Allocation Algorithm of UAS by Network Environment and Data Requirement  
Hye-Rim Cheon, Jun-Woo Cho and Jae-Hyun Kim (Ajou University, Korea)

IV-3.3 On CDF-based Scheduling with Non-Uniform User Distribution in Multi-Cell Networks  
Xuelian Wu, Waqas Tariq Toor and Hu Jin (Hanyang University, Korea); Bang Chul Jung (Chungnam National University, Korea)

IV-3.4 Performance Analysis of Medium Access Control using Appropriate Permission Probability Algorithm  
Warakorn Srichavengsup (Thai-Nich Institute of Technology, Thailand)

IV-3.5 Designing a Robust Network based on Network Degree Information  
Insoo Sohn (Dongguk University, Korea)

[Session IV-4] Encryption and Security for ICT Convergence  
Oct. 19, 10:30-12:10

Chair:

IV-4.1 An Efficient Approach to Securing User Data in Android  
Sunliya Jayan, Jangfeng Sun and Dongwan Shin (New Mexico Tech, USA)

IV-4.2 Improved Cryptographic Model for Better Information Security  
Sunil Kumar, Manish Kumar, Mrinal Kanti Das and Sanjeev Singh (University of Delhi, India); Rajat Budhiraja (Aricent Technologies (H) Ltd.)

IV-4.3 A Variant of Schnorr Signature Scheme with Tight Security Reduction  
Tiong-Sik Ng, Syh-Yuan Tan and Ji-Jian Chin (Multimedia University, Malaysia)

IV-4.4 Differential Privacy-based Data De-identification Protection and Risk Evaluation System  
Yao-Tung Tsou, Hung-Li Chen and Ya-Yang Chen (Feng Chia University, Taiwan); Yennan Huang (Academia Sinica, Taiwan); Pung-Chieh Wang (Industrial Technology Research Institute (ITRI) & Division for Mobile Internet Software Technology, Taiwan)

IV-4.5 Stream Cipher by Reed-Solomon Code  
Tao Wu (Shenzhen Research Institute by Sun Yat-Sen University, P.R. China) and Ruomei Wang (Sun Yat-Sen University, P.R. China)

[Invited Paper Session II] Physical Layer Techniques for 5G and Beyond  
Oct. 19, 10:30-12:10

Chair:

IP-5.1 Optimized Superposition Coding for Hybrid Soft-Transfer and Hard-Transfer Fronthauling in Fronthaul-Constrained C-RAN Systems  
Daesung Yu and Junbeom Kim (Chonbuk National University, Korea); In-Kyeong Choi (ETRI, Korea); Seok-Hwan Park (Chonbuk National University, Korea)

IP-5.2 Using Generalized Similarity Filter to Enhance Proximity Detection for Sparse Beacon Deployment  
Li Zhu and Rong Ran (Ajou University, Korea); Pai Chet Ng and James She (Hong Kong University of Science and Technology, Hong Kong)

IP-5.3 Beamforming Design and User Grouping for FDD Massive MIMO Systems  
Yo-Seh Jeon, Hwan-Seok Ku and Namyoum Lee (POSTECH, Korea)

IP-5.4 Joint User Activity and Data Detection for Grant-free Non-Orthogonal Multiple Access  
Sanho Park (Seoul National University, Korea); Hyounjung Ji (Seoul National University & Samsung Electronics. Co., Ltd, Korea); Seungnyun Kim and Byonghyo Shim (Seoul National University, Korea)

IP-5.5 Multi-Cell Pseudo-Random Beamforming: Opportunistic Feedback and Beam Selection  
Woong Son and Bang Chul Jung (Chungnam National University, Korea); Won-Yong Shin (Dankook University,
[Session P-2] Poster Session 2
Oct. 19, 10:30-12:10

P-2.1 CoAP-based Lightweight Information Exchange Technique for Demand Response
SeungChul Son, Hyungok Lee and Byung-Tak Lee (ETRI, Korea)

P-2.2 Building a Big Data Platform for Large-scale Security Data Analysis
Jong-Hoon Lee, Youngsoo Kim, Jonghyun Kim and Ikkyun Kim (ETRI, Korea); Ki Jun Han (Kyungpook National University, Korea)

P-2.3 Performance Analysis for the Battery Consumption of the 3GPP NB-IoT Device
Sang-Min Oh, KwangRyu Jung, MyungSan Bae and JaeSheung Shin (ETRI, Korea)

P-2.4 A Composite Structure of ICT for Smart City: Integration Infrastructure and Collaboration Platform
Jae Young Ahn, Hyun-Woo Lee and Jae-Doo Huh (ETRI, Korea); Dae Joon Hwang (SungKyunKwan University, Korea)

P-2.5 Eye-tracking on Smartphones using Regression-based Prediction
Young-Joo Han (Vieworks Co., Ltd., Korea); Wooseong Kim (Gachon University, Korea); Joon-Sang Park (Hongik University, Korea)

P-2.6 DeLightTouch: Light Sensor Assisted Multi-touch Gestures on Unmodified Commodity Smartwatches
Hyoseok Yoon, Se-Ho Park and Kyung-Taek Lee (KETI, Korea)

P-2.7 A Study on Jamming Technique against Monopulse Type Missile
Jeil Jo (ADD & Chungnam National University, Korea) and Jaemin Ahn (Chungnam National University, Korea)

P-2.8 Interference Alignment for Frequency Selective Fading Channels in Wireless Local Area Network
Jinhyung Oh and Young Jun Chong (ETRI, Korea)

P-2.9 Channel Occupancy Time Influence on LTE and Wi-Fi Coexistence Performance
Sungjin You and Seung Keun Park (ETRI, Korea)

P-2.10 Standardization Activities for RPAS CNPC systems
Hee Wook Kim, Kunseok Kang, Kwangjae Lim, Byoung-Sun Lee and Jae Young Ahn (ETRI, Korea)

P-2.11 Analysis of Periodic Broadcast Message for DSRC Systems under High-density Vehicle Environments
Yoo Seong Song and Shin Kyung Lee (ETRI, Korea)

P-2.12 SGDR: A Simple GPS-based Disrupt-tolerant Routing for Vehicular Networks
Heeyoung Jung (ETRI, Korea) and Chang Choo (San Jose State University, USA)

P-2.13 Test of Various Data Transmission by Multiple Nodes in WAVE Communication
Jeong-Woo Lee and Hyeon Seo Oh (ETRI, Korea)

P-2.14 Requirements for Older Drivers in the Driver-Adaptive Vehicle Interaction System
Kyongho Kim (Green Vehicle IT Research Team, ETRI, Korea); Dohyun Kim, HyunKyun Choi and Byungtae Jang (ETRI, Korea)

P-2.15 Vehicle Data Server Implementation based on Emerging Industry Standards
Wonsuk Lee (ETRI, Korea)

P-2.16 Proxy PSAP: Filtering out False Alarms for the PSAP Overload Problem
Taehyoung SHIM, Jun Seob LEE and Hyeong Jun KIM (ETRI, Korea)

P-2.17 Effects of the Providing an Augmented Reality Information on the Cognitive Reaction Behavior under the Reduced Visibility Traffic Environment
Yoonsook Hwang and Kyong-Ho Kim (Green Vehicle IT Research Team, ETRI, Korea); Hyun-Kyun Choi (ETRI, Korea)

P-2.18 Comparative Analysis of Machine Learning Algorithms to Urban Traffic Prediction
Jong-Ya Lee and Okhee Min (ETRI, Korea)

P-2.19 An IoT-based CBL Methodology to Create Real-world Clinical Cases for Medical Education
Maghoob Ali and Sungyoung Lee (Kyung Hee University, Korea); Byeong Ho Kang (UTAS, Australia)

P-2.20 Simple CNT Nanocomposite Piezoresistive Press Sensor
Wangjoo Lee, Hyun-Woo Oh and Jae-doo Huh (ETRI, Korea); Sang Jun Moon (Ulsan National Institute of Science and Technology, Korea)

P-2.21 3D Hand Gestures Calibration Method for Multi-Display by using a Depth Camera
Hee-Kwon Kim, Jisu Lee, ChoRong Yu, Heesook Shin, Youn-Hee Gil and Hyung-Keun Lee (ETRI, Korea)

P-2.22 Estimation of 3D Ball Motion using an Infrared and Acoustic Vector Sensor
Sang-Woo Seo and Myunggyu Kim (ETRI, Korea)

P-2.23 On the Mixed Support of TDMA and SCPC for Satellite Disaster Communications Network
Min-Su Shinn, Joon-Gyu Ryu and Deok-Gil Oh (ETRI, Korea)

P-2.24 Human Monitoring System using Drones for Riverside Area
Seonghyun Kim and Wonjae Lee (ETRI, Korea); Jihyeon Yim (UST-ETRI, Korea); Young-Su Park and Yong-Tae Lee (ETRI, Korea)

P-2.25 Comparison of Charging Region Differences According to Receiver Structure in Drone Wireless Charging System
Sang-Won Kim and In-Kut Cho (ETRI, Korea); Sungyoung Hong (Chungnam National University, Korea)
P-2.26 A Design of Power Amplifier for CMOS Crystal-less Wireless Connectivity  
Suk-hui Lee, Ki-Jin Kim and Kwang-Ho Ahn (KETI, Korea); Sung-il Bang (Dankook University, Korea)

P-2.27 Implementation of Model-Based Development Tool and Run-time Engine for Digital Cockpit System  
Changrak Yoon, Byoung-Jun Park and Dohyoun Kim (ETRI, Korea)

P-2.28 IoT-based Defect Predictive Manufacturing Systems  
YoungJin Kwon and Do Hyun Kim (ETRI, Korea)

P-2.29 A Cross-Browser, Web-based Geospatial Open Platform using HTML5 and WebGL  
Junghee Jo and Insung Jang (ETRI & Hyper-connected Communication Research Laboratory, Korea)

P-2.30 Physiological Signals and Recognition of Negative Emotions  
Byoung-Jun Park, Changrak Yoon, Eun-Hye Jung and Do-Hyun Kim (ETRI, Korea)

P-2.31 Implementation of IoT based PV Monitoring System with Message Queuing Telemetry Transfer protocol and Smart Utility Network  
Chang-Sic Choi, Jin-Doo Jeong, Jinsoo Han, Wan-Ki Park and Il-Woo Lee (ETRI, Korea)

P-2.32 Usage Scenario and User Interface for Ice Hockey Game Analysis  
Kwang-Yong Kim and Gi-Man Um (ETRI, Korea)

P-2.33 GIS-based Susceptibility Assessment of the Rockfall in Freeze-thaw Season  
Jin Son (ETRI, Korea); Jihwan Park (University of Seoul, Korea); Hyeong-Dong Park (Seoul National University, Korea); Yong-Tae Lee (ETRI, Korea)

P-2.34 Combinatorial Multi-Armed Bandits in Cognitive Radio Networks: A Brief Overview  
Sun-Jung Kang and Changhee Joo (UNIST, Korea)

P-2.35 Sports Motion Analysis System using Wearable Sensors and Video Cameras  
Woosuk Kim and Myunggyu Kim (ETRI, Korea)

P-2.36 Research on Scalable Bandwidth Transmission for Digital Terrestrial TV Broadcasting  
Jae-Hoon Baek, Je-Hyun Seo, Youngsik Kim, Jae-Young Lee, Namho Hur and Heung Mook Kim (ETRI, Korea)

P-2.37 Design and Implementation of the Companion App: Service for Scene-based Product Advertisement  
Sang-Yun Lee, Jeong-Woo Son, Wonjoo Park and Sunjoong Kim (ETRI, Korea)

P-2.38 Tagged Video Retrieval System using Domain Ontology and Word Embedding  
Gyeong-June Hahn, Chang-Uk Kwak and Sunjoong Kim (ETRI, Korea)

P-2.39 Object Screen Framework for Digital Signage Application  
Il-hong Shin, Sanghoon Lee, Eunjooon Rhee and Namkyung Lee (ETRI, Korea)

P-2.40 Scene Studio: Authoring Tool for VoD Clip Service  
Sang-Yun Lee, Wonjoo PARK, Jeong-Woo Son and Sun-Joong Kim (ETRI, Korea)

P-2.41 Patched-based Deep Boltzmann Shape Priors for Visual Tracking  
Sanghoon Lee, Il-hong Shin, Eunjooon Rhee, Sanghee Lee and Nam Kyung Lee (ETRI, Korea)

P-2.42 High Quality Texture Reconstruction from Multi-view Images  
Hye-sun Kim and Chang-joon Park (ETRI, Korea)

P-2.43 Distributed Energy Resources Monitoring and Control Based on IoT Protocol  
Mookin Choi and Ilwoo Lee (ETRI, Korea)

P-2.44 Multi-site Photovoltaic Power Generation Forecasts based on Deep-learning Algorithm  
Jeong In Lee and Il-Woo Lee (ETRI, Korea); Sang-Ha Kim (Chungnam National University, Korea)

P-2.45 Optimization Mechanism of Energy Cluster for Zero Energy Town  
Hong-Soon Nam, Seok-Jin Lee, Tae-Hyung Kim, Yoon-Kee Hong and Yoon-Kwae Jeong (ETRI, Korea)

P-2.46 CES Peak Demand Shaving with Energy Storage System  
Soyo Park and Wan-Ki (ETRI, Korea)

P-2.47 Detection Method of Dimmable Packet with Low Complexity for Cost-Effective Energy Management  
Jin-Doo Jeong and Iiwoo Lee (ETRI, Korea); Yong-Cha Chong (Hanyang University, Korea)

P-2.48 Energy Trading System of Distributed Resources  
Ji-yun Lee, Youngmee Shin and Ilwoo Lee (ETRI, Korea)

P-2.49 Energy Information Collecting Agent for IoT Big Data System  
Tai Yeon Ku and Wan-Ki Park (ETRI, Korea); Hoon Choi (Chungnam National University, Korea)

P-2.50 Multi-Log Analysis Platform for Supporting Public Safety Service  
Hyunho Park, Eunjungr Kwon, Eui-Suk Jung, Sungwon Byon, Hyun-Woo Lee and Yong-Tae Lee (ETRI, Korea)

P-2.51 Study on Requirements and Architecture for Enhancing Pedestrian Mobility  
Eunyoung Cho and Soyeon Lee (ETRI, Korea); Feyissa Woyano (ETRI, Ethiopia); Sangjoon Park (ETRI, Korea)

P-2.52 Network based vByod Scheme in NFV Platform  
Jonghwan Kim (ETRI, Korea); Jae-Young Kim (ETRI, Principal Research Engineer, Korea); Dohyung Kim (Sungkyunkwan University, Korea)

P-2.53 Virtual network services for Multiple Domain Transport Networks  
Bin Yeong Yoon and Sae Hyung Park (ETRI, Korea); Youngkil You (Woorinet, Korea)

P-2.54 Crowdedness Measuring System Considering View Angle of CCTV Camera  
Yewon Kim, Seongoon Park and Hwangnam Kim (Korea University, Korea)

P-2.55 A Lightweight Authentication Mechanism between IoT Devices  
Jin-Hee Han and Jeongnyeo Kim (ETRI, Korea)

P-2.56 DNS Naming Services for Service Discovery and Remote control for Internet-of-Things Devices  
Seokhwa Kim, Keuntae Lee and Jaehoon (Paul) Jeong (Sungkyunkwan University, Korea)
Seungyong Yoon and Jeonggyeo Kim (ETRI, Korea)

P-2.58 Blockchain based Smart Door Lock system
DongHee Han, Hongjin Kim and Jawook Jang (Sogang University, USA)

P-2.59 Resource Allocation Scheme for Wireless Powered Wiretap Channel
Myoungjun Ko, Sangseok Yun and Jeongseok Ha (KAIST, Korea)

P-2.60 Compressive Symbol Detection via Template Matching
Jae-Hyuck Park, Yookyoung Kim and Seonghyun Kim (ETRI, Korea)

P-2.61 Quadrature Spatial Modulation with Non-uniform Lattice Constellation
Yulong Shang, Hojun Kim, Seunghyeon Kim, Cheolsung Kim and Taejin Jung (Chonnam National University, Korea)

P-2.62 A Study on a Delay-Doppler Estimation Method in Fast Fading Channels of High-speed Mobile Vehicles
Woo Yong Lee (ETRI, Korea)

P-2.63 An LFM-based Preamble for Underwater Communication
Rodha Pec, Mohammed Saquib Khan and Yong Soo Cho (Chang-Ang University, Korea)

P-2.64 Analysis on Magneto-Inductive Wave Refraction in Underwater Communication Networks
Hao Li and Yoan Shin (Soongsil University, Korea)

P-2.65 Hierarchy Architecture Security Design for Energy Cloud
Yoon-Kee Hong, Hong-Soon Nam, Seok-Jin Lee, Taehyang Kim and Youn-Kwae Jeong (Research & ETRI, Korea)

P-2.66 Secure Voice Communication Service Based on Security Platform for Mobile Devices
GeonLyang Kim and JeongNyeo Kim (ETRI, Korea)

P-2.67 Malware Detection using Malware Image and Deep Learning
Sunoh Choi, Sungwook Jang, Youngsoo Kim and Jonghyan Kim (ETRI, Korea)

P-2.68 Implementation of a Distributed Processing Engine for Spatial Big-Data Processing Based on Batch and Stream
Sang-su Kim and Kwauk-Sik Song (ICTWAY, Korea)

P-2.69 National Repository of Papers based on Open Access
Heeseok Choi and Jaeseo Kim (KISTI, Korea)

P-2.70 Driver Distraction Detection using Single Convolutional Neural Network
Whai Kim, Hyun-Kyun Choi and Byung-Tae Jang (ETRI, Korea); Jinsa Lim (Chungnam National University, Korea)

P-2.71 Scene Emotion Detection using Closed Caption based on Hierarchical Attention Network
Chang-Uk Kwak, Jeong-Woo Son, Alex Lee and Sunjoong Kim (ETRI, Korea)

P-2.72 Accelerating Training of DNN in Distributed Machine Learning System with Shared Memory
Eun-Ji Lim, Shin-Young Ahn and Wan Choi (ETRI, Korea)

P-2.73 Compatibility Analysis between Field Disturbance Sensors and Intelligent Transport System in 5.8GHz Adjacent Bands
Suna Choi, Jungyun Eum and Seungeun Park (ETRI, Korea)

P-2.74 On the Network Clock Reference Variations Compensation for Satellite TDMA Network
Min-Su Shin, Joon-Gyu Ryu and Deock-Gil Oh (ETRI, Korea)

P-2.75 The Wideband Characteristics of 28/38 GHz in Urban Low-rise Environments
Jong Ho Kim, YoungKeun Yoon and Young Jun Chong (ETRI, Korea)

P-2.76 Wideband Channel Waveform and Structure for Unmanned Aircraft Systems
Kwangjae Lim, Heewook Kim, Tae Chul Hong and Jae Young Ahn (ETRI, Korea)

P-2.77 Analysis of the Interference Effects from Maritime Earth Station in Motion to 5G Mobile Service
Ho-Kyang Son and Young-Jun Chong (ETRI, Korea)

P-2.78 Use of Tractroid Factor in Deformed Parabolic Reflector Antenna which Transfers Orbital Angular Momentum Modes
Ja Yeon Hong, Wangjoo Lee, Bong-Su Kim, Min-Soo Kang, Jung-Bin Kim, Woo Jin Byun and Myung Sun Song (ETRI, Korea)

P-2.79 Outage Probability of Finite-Sized Selective Relaying Systems with Unreliable Backhauls
Hongwu Liu and Kyung Sup Kwak (Inha University, Korea)

P-2.80 Energy-aware Cooperative MAC Protocol for Mobile Ad hoc Networks
Jaehin Jang (Inje University, Korea) and Balasubramanian Natarajan (Kansas State University, USA)

P-2.81 Fast Tunable Laser Assembly and Burst Mode Receiver for Photonic Switched Optical Networks
Sanghwa Yoo, Joone Ki Lee and Kwangjoon Kim (ETRI, Korea)

P-2.82 Low-Power Consumption Beacon Recognition Method to Access Wireless Sensor Networks
Soonyong Song, Ingook Jung, Donghun Lee, Jinchul Choi and Youngsung Sun (ETRI, Korea)

P-2.83 Trust Domain based Trustworthy Networking
Byoung Ok Kwak and Tae Soo Chung (ETRI, Korea)

P-2.84 Low Delay Switching Schedule for Data Center Optical Switch
Jongtae Song and Kyeong-Eun Han (ETRI, Korea); Dae-Ub Kim (ETRI & Chungnam National University, Korea); Chansung Park and Kwangjoon Kim (ETRI, Korea)

P-2.85 Design of Tele-Commanding System using Asynchronous Message Service based on Delay Tolerant Network for Space Communication
Kyung-Rak Lee, Jin-Ho Jo and Byoung-Sun Lee (ETRI, Korea); Jin-Woo Kim (Hanyang University, Korea)
P-2.86 FSK PHY Design with Enhanced Synchronization for Low-Power Wide-Area Connectivity
Mi-Kyung Oh and Cheol-ho Shin (ETRI, Korea)

P-2.87 Hybrid Beamforming for Multi-User Transmission in Millimeter Wave Communications
Minhyun Kim, Junghoon Lee and Junhwan Lee (ETRI, Korea)

P-2.88 A Study on Management of Multi-RAT Unit in Mobile Hotspot Network Enhancement System
You-Sun Hwang, MyungSang Bae and Jaesheung Shin (ETRI, Korea)

P-2.89 Clutter Loss Characteristic in mm-Wave Bands for Small Urban Environment
YoungKeun Yoon, JongHo Kim, KyungWon Kim, MyungDon Kim and YoungJun Chong (ETRI, Korea)

P-2.90 The structure of NB-loT NodeB systems
Eunjeong Shin and Gweondo Jo (ETRI, Korea)

P-2.91 Mobile Crowd Sensing based on CICN
Taewan You (ETRI, Korea); Muhammad Umair (University of Science and Technology ETRI Campus, Korea); Yong-Geun Hong (ETRI, Korea)

P-2.92 Name Resolution Service for CCN
Jungha Hong, Taewan You and Yong-Geun Hong (ETRI, Korea)

P-2.93 Multi-tier Multi-access Edge Computing: The Role for the Fourth Industrial Revolution
Nhu-Ngoc Dao, Yunseong Lee and Sungrae Cho (Chung-Ang University, Korea); Eungha Kim, Ki-Sook Chung and Changsup Keum (ETRI, Korea)

October 20(Friday), 2017

[Session V-1] Advanced Wireless & Mobile Communication Systems and Infrastructure 3
Oct. 20, 08:30-10:10

Chair:

V-1.1 A Modified Primary Sidelink Synchronization Signal for Vehicular-to-Vehicular Communications
Joohaeum Yoon, Yeonjin Jeong, Gerardo Sacarello and Yun Hee Kim (Kyung Hee University, Korea)

V-1.2 A Study of the Effect of IDTs and Input Signals on the Amplitude of Propagation Waves of the Passive SAW Structure
Nguyen Thu Ha, Phan Dang Hung and Hoang Si Hong (School of Electrical Engineering, Hanoi University of Science and Technology, Vietnam); Nguyen The Trayen (Vietnam Research Institute of Electronics, Informatics and Automation, Vietnam)

V-1.3 Proposal of Relay Type GPS Using Many Mobile Terminals
Norifumi Murai and Takatoshi Sugiyama (Kogakuin University, Japan)

V-1.4 Adaptive Borrow-Repay Resource Allocation on Disruptive Satellite Communication with PEP
Ji-Hoon Oh, Jong-Mu Kim and Jae-Hyun Kim (Ajou University, Korea)

V-1.5 FLMF: Fractional Least Mean Fourth Algorithm for Channel Estimation in non-Gaussian Environment
Shujaat Khan (KAIST & Iqra University, Korea); Naveed Ahmed (Yonsei University, Korea); Muhammad Ammar Malik (Chosun University, Pakistan); Imran Naseem and Roberto Togneri (University of Western Australia, Australia); Mohammed Bennamoun (The University of Western Australia, Australia)

[Session V-2] Smart Radio and Cognitive Radio
Oct. 20, 08:30-10:10

Chair:

V-2.1 Reinforcement Learning for Dynamic Sensing Parameter Control in Cognitive Radio Systems
Sung-Jeewang and Sang-Jo Yoo (Inha University, Korea)

V-2.2 Spectrum Sensing Utilizing Combination of Comb Filter and Autocorrelator in Cognitive Radio Systems
Moussami Haque and Tetsuya Shimamura (Saitama University, Japan)

V-2.3 A Blind Weighted MUSIC based Detection for Spatial Spectrum Sensing
Syed Sajjad Ali (Dalian University of Technology, Pakistan); Chang Liu, Jialong Liu and Minghu Jin (Dalian University of Technology, P.R. China); Sang-Jo Yoo and Jae Moong Kim (Inha University, Korea)

V-2.4 Fuzzy C-means and Spatial Correlation based Clustering for Cooperative Spectrum Sensing
Dost Muhammad Sajib Bhatti, Bushra Shaikh and Syed Ejaz Hussain Zaidi (Darwood University of Engineering and Technology Karachi, Pakistan)

V-2.5 Performance Evaluation of LBT Spectrum Sharing via Modified Matern Hardcore Point Process Type
Gak-Hui Shin and Han-Kyu Park (Seoul National University of Science and Technology, Korea); Yunbae Kim and Seungkeun Park (ETRI, Korea); Taesoo Kwon (Seoul National University of Science and Technology, Korea)
[Session V-3] Vehicular Information and Communication Technologies 2
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V-3.1 Characterizing Driving Environments through Bluetooth Discovery
Walter Bronzi, Sébastien Faye, Raphael Frank and Thomas Engel (University of Luxembourg, Luxembourg)

V-3.2 V2V Communication Modeling for Environmental Channel Throughput and Radio Propagation
Mohammed Abdulhakim Al-Abst (Dongseo University, Korea); Ahmed Abdulhakim Al-Abst (Kyungdong University, Korea); HoonJae Lee (Dongseo University, Korea)

V-3.3 Fast and Reliable Two-wheeler Detection Algorithm for Blind Spot Detection Systems
Jung Woon Baek, Byung-Gil Han, Hyunwoo Kang and Yoonsu Chang (ETRI, Korea)

V-3.4 Vehicle to Vehicle Distance Estimation Using Camera based Visible Light Communications
Vo Thi Bich Tran and Myung Sik Yoo (Soongsil University, Korea)

V-3.5 Self-Adaptive Requirements for Intelligent Transportation System: A Case Study
Irish Singh and Seok-Won Lee (Ajou University, Korea)

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V-4.1 Random Access for Millimeter-Wave Cellular Systems with Directional Beams
Mohammed Saqaib Khan and Yong Soo Cho (Chung-Ang University, Korea)

V-4.2 Quasi-Gray Coding Scheme for a \( (3 \times 2^{2m+1}) \)-ary QAM with Two-Time Dimensions
Hyunhwa Lee, Jihoon Lee and Hae Chung (Kumoh National Institute of Technology, Korea); Liangping Ma (Interdigital, USA); Byung K. Yi (LG Electronics, USA); Byung Keun Lim (Interdigital, Korea)

V-4.3 LTE-M Adaptive eNodeB for Emergency Scenarios
Ahmad Hani EL Fawal (ENSTA Bretagne & AUL University, Lebanon); Ali Mansour, Mohamad Najem, F. Le Roy and Denis Le Jeune (ENSTA Bretagne, France)

V-4.4 Transmit Antenna Selection in Massive MIMO Systems
Daeyoung Park (Inha University, Korea)

V-4.5 Convolutional Codes for MGFDM system
Shravan Kumar Bandari and Venkata Mani Vakamulla (National Institute of Technology Warangal, India); Anastasios Drosopoulos (TEI of Western Greece, Greece)

[Session V-5] Military and Defense Technologies
Oct. 20, 08:30-10:10

V-5.1 Deep Neural Network-based Blind Modulation Classification for Fading Channels
JungHwan Lee, ByeongDo Kim, Jaekyun Kim, Dongweon Yoon and Jun Won Choi (Hanyang University, Korea)

V-5.2 Intra-pulse Modulation Recognition using Pulse Description Words and Complex Waveforms
Byungkoo Park and Jae Min Ahn (Chungnam National University, Korea)

V-5.3 Blind Detection of Interleaver Parameter using Error-less Symbols
Youngkyun Jeon, Changhyoul Choi and Dongweon Yoon (Hanyang University, Korea)

V-5.4 Low-profile Ferrite Loaded Conical Antenna
Won Bin Park (Sungkyunkwan University, Korea); Yong Mi Park (ADD, Korea); Keum Cheol Hwang (Sungkyunkwan University, Korea)

V-5.5 Comparison of Methods for Parameter Estimation of Frequency Hopping Signals
Nam-Kyoung Kim and Seong-Jun Oh (Korea University, Korea)

[Session VI-1] Artificial Intelligence and Machine Learning 2
Oct. 20, 10:30-12:10

VI-1.1 Automatic Identification of Acacia Leaf Diseases in Plantation Forests using Wavelet Energy and Shannon Entropy
Yeni Herdiyeni, Tri Setio Bukhtiar and Vektor Dewanto (Bogor Agricultural University, Indonesia); Budi Tjahjono, Bayo Alhusaeri Siregar and Leonardo S.S. Oliveira (PT Arara Abadi, Indonesia)

VI-1.2 Sensor Faults Detection and Classification using SVM with Diverse Features
Sana Ullah Jan and In Soo Koo (University of Ulsan, Korea)

VI-1.3 Recognition Model based on Residual Networks for Cursive Hanja Recognition
Sangwon Lee and Gil-Jin Jang (Kyungpook National University, Korea)

VI-1.4 A Study of Reference Metadata Classification with Deep Learning
Wonjun Choi, Jayhoon Kim, Soonyoung Kim and Jeonghwan Kim (KISTI, Korea)
VI-1.5 Artificial Companion Conversation Application for Android-based Robot
Thi Thanh Nhan Le (Bonavision Inc., Korea); Nam Tuan Le and Yeong Min Jang (Kookmin University, Korea)

[Session VI-2] WLAN, WPAN and WBAN
Oct. 20, 10:30-12:10

VI-2.1 Beacon Flooding Problem in High-density WLANs
Hyunjoong Lee and Saewoong Bahk (Seoul National University, Korea)

VI-2.2 A Study on Adjusting EDCA Parameters of QoE-based Wireless LAN Base Station
Kosuke Niwa and Yoshihiro Ito (Nagoya Institute of Technology, Japan)

VI-2.3 An Encounter-based Social Link Prediction Method using Bluetooth Traces
Thi-Nga Dao and Seokhoon Yoon (University of Ulsan, Korea)

VI-2.4 Comparative Study of Access Class Barring and Extended Access Barring for Machine Type Communications
Waqas Tariq Toor and Hu Jin (Hanyang University, Korea)

VI-2.5 QoS-based Interference Mitigation Scheme in WBANs
Chan-Jae Lee and Jung-Ryun Lee (Chung-Ang University, Korea)

[Session VI-3] Internet of Things (IoT), Internet of Everything (IoE), Web of Objects (WoO)
Oct. 20, 10:30-12:10

VI-3.1 Bridging OCF Devices to Legacy IoT Devices
Joo-Chul Lee and Hyong-Jun Kim (ETRI, Korea); Sang-Ha Kim (Chungnam National University, Korea)

VI-3.2 Development of Internet of Things Indicators in Rwanda based on Stakeholder Analysis
Theodette Mukayisenga Kacenga and Jean Bonfils Twishimire (Carnegie Mellon University Africa, Rwanda);
Aminata A. Garba (Carnegie Mellon University, USA); Martin Saint (Carnegie Mellon University & University of Colorado Boulder, Rwanda); Linda Deen (Carnegie Mellon University Africa, Rwanda)

VI-3.3 A Data Streaming Performance Evaluation using Resource Constrained Edge Device
Hwejoo Lee, Junghyun Oh and Kyungrae Kim (Samsung Electronics, Korea); Hun-je Yeon (Yonsei University &
Samsung Electronics, Korea)

VI-3.4 Sensor-based Self-Organized Traffic Control at Intersections
Ajmal Khan, Farman Ullah and Zeeshan Kaleem (COMSATS Institute of Information Technology, Pakistan);
Shams ur Rahman and You Ze Cho (Kyungpook National University, Korea)

[Session VI-4] Information & Communication Theory, and Their Applications 2
Oct. 20, 10:30-12:10

VI-4.1 An Enhanced Polar Codec Design for High Reliable Train-to-Ground Communications
Chunxia Guo and Yan Yang (Beijing Jiaotong University, P.R. China)

VI-4.2 Generalized OFDM
Myungsup Kim and Do Young Kwak (KAIST, Korea)

VI-4.3 Clipping Method for Adaptive QRD-M Detection
Hyeongyong Lim, Gihong Park and Dongweon Yoon (Hanyang University, Korea)

VI-4.4 Secrecy Rate of Channel-Aware Randomized Secure Transmission Schemes in Multicarrier Systems
Jinho Choi (Gwangju Institute of Science and Technology (GIST), Korea)

VI-4.5 A Study on Super-Efficient Monte Carlo Integration Using One-Dimensional Chaotic Maps
Kentaro Fujitani and Akio Tsuneda (Kumamoto University, Japan)

[Session VI-5] SDN and Network Virtualization
Oct. 20, 10:30-12:10

VI-5.1 A Monitoring-based Load Balancing Scheme for Network Security Functions
Dongjin Hong, JinYong Kim, Daeyeong Hyun and Jaehoon (Paul) Jeong (Sungkyunkwan University, Korea)

VI-5.2 Advanced Controller Resiliency in Software-Defined Networking Enabled Critical Infrastructure Communications
Fabian Kurtz (TU Dortmund University, Germany) and Christian Wietfeld (TU Dortmund University &
Communication Networks Institute, Germany)

VI-5.3 An RNS-based Forwarding Approach To Implement SFC
Mingyu ZHAO and Zhiyuan HU (Nokia Shanghai Bell Co., Ltd., P.R. China)
VI-5.4 Implementation of VNFC Monitoring Driver in the NFV Architecture

Hyunsik Yang, Briyone Matichiro and Younghan Kim (Soongsil University, Korea)