

ICUFN 2022 Advance Program

[Program at a Glance]

July 4, 2022 (Monday)			
14:00 ~ 17:00	ICUFN Committee Meeting (IAC/SC/OC)		
Room	Room A (VX S208)	Room B (VX S218)	Room C (VX S219)
July 5, 2022 (Tuesday)			
13:00 ~ 14:30	Registration		
14:30 ~ 16:00	Tutorial 1 6G Wireless Systems: Challenges and Opportunities Prof. Walid Saad, IEEE Fellow, Virginia Tech, USA		
16:00 ~ 16:30	Break		
16:30 ~ 17:30	Workshop 1A The 9th International Workshop on Intelligent Vehicles (IV 2022)	Workshop 1B The 3rd International Workshop on Smart Radio for IoT Era I (SRIoT 2022 I)	Workshop 1C The 3rd International Workshop on Smart Radio for IoT Era II (SRIoT 2022 II)
July 6, 2022 (Wednesday)			
09:30 ~ 10:30	Tutorial 2 Machine Learning Techniques for Satellite Communications Dr. Miguel Angel Vazquez, Head of Space and Resilient Communications and Systems Unit, CTTC, Spain		
10:30 ~ 11:30	Opening Address Prof. Seong Ho Jeong, Organizing Committee Co-Chair Welcome Address 1 Prof. Yoan Shin, President of KICS Welcome Address 2 Prof. Lourdes Reig Puig, Vice Rector, Universitat Politecnica de Catalunya, Spain		

	<p>Keynote Speech 1 Reconfigurable Holographic Surfaces: A New Paradigm to Holographic Communications for 6G Prof. Lingyang Song, IEEE Fellow, Peking University</p>		
11:30 ~ 13:00	Lunch		
13:00 ~ 14:30	<p>Session 1A 6G, 5G, PS-LTE, LTE-R, LTE-Advanced</p>	<p>Session 1B Open Wireless Networking</p>	<p>Session 1C Future Internet and Network</p>
14:30 ~ 14:40	Break		
14:40 ~ 16:10	<p>Session 2A AI/Machine Learning for Mobile Communications</p>	<p>Session 2B Security and Network Management</p>	<p>Session 2C AI/Machine Learning for Internet of Things (IoT)</p>
16:10 ~ 16:40	Break		
16:40 ~ 18:10	<p>Session 3A Vehicular Ad-hoc Networks and Autonomous Vehicles</p>	<p>Session 3B Ubiquitous Computing and Sensor Networks</p>	<p>Poster Session 1</p>
18:30 ~ 20:30	Banquet		
July 7, 2022 (Thursday)			
09:30 ~ 10:30	<p>Keynote Speech 2 Joint Radar and Communication Design: Applications, State-of-the-Art and the Road Ahead Prof. Lajos Hanzo, IEEE Life Fellow, University of Southampton, UK</p> <p>Keynote Speech 3 A Light in Digital Darkness: Free Space Optics to Connect the Unconnected Prof. Mohamed-Slim Alouini, IEEE Fellow, KAUST</p>		

10:30 ~ 11:30	<p style="text-align: center;">Tutorial 3 Simulation Acceleration and Inverse Design with Artificial Intelligence Prof. Junhee Seok, Korea University</p>		
11:30 ~ 13:00	Lunch		
13:00 ~ 14:00	<p style="text-align: center;">Tutorial 4 A Paradigm Shift in Future Networks with Quantum Deep Learning Prof. Joongheon Kim, IEEE ComSoc Distinguished Lecturer, Korea University</p>		
14:00 ~ 14:30	Break		
14:30 ~ 16:00	Session 4A Cloud Computing and Networks	Session 4B SDN, Security, and Network Virtualization	Poster Session 2
16:00 ~ 16:30	Break		
16:30 ~ 18:10	Session 5A Machine Learning and Computational Intelligence	Session 5B 6G, 5G, Computer Vision Applications & Autonomous Vehicles	Poster Session 3
July 8, 2022 (Friday)			
9:30 ~ 11:00	Session 6A Cyber-Physical System (CPS) & Information Networks	Session 6B Network Theory and Network Science	Poster Session 4
Closing			
* Tentative Schedule, Subject to change			

[ICFUN 2022 Technical Sessions]

Session 1A: 6G, 5G, PS-LTE, LTE-R, LTE-Advanced

Session Chair: Prof. Sunwoong Choi, Kookmin University

Room B, Time 13:00 ~ 14:30

1A.1: 1570810472 Rate Splitting Multiple Access for a MISO SWIPT System Aided by a Power Beacon

Mario Rodrigo Camana, Carla Estefania Garcia and Insoo Koo (University of Ulsan, Korea (South))

1A.2: 1570803533 Throughput Improvement by Transmit 3D Beamforming and MCS Incorporating 1024-QAM

Kentaro Yoda, Takumi Yasaka and Hiroyuki Otsuka (Kogakuin University, Japan)

1A.3: 1570808251 Reflection Design with LS Channel Estimation for RIS-Enhanced OFDM Systems

Fan-Shuo Tseng and Tsang-Yi Wang (National Sun Yat-sen University, Taiwan)

1A.4: 1570801359 A Low-Complexity Multiuser Adaptive Modulation Scheme for MRC Receivers in Massive MIMO Systems

Amin Radbord (University of Guilan, Iran); Mohammed Abdel-Hafez (United Arab Emirates University, United Arab Emirates); Mohammadreza Amini (Carleton University, Canada)

1A.5: 1570806936 Characteristics of Transmit Power Allocation for Poor Conditioned End Devices in LPWAN with Peak Detection Based Carrier Sense

Shusuke Narieda (Mie University, Japan); Takeo Fujii (The University of Electro-Communications, Japan)

Session 1B: Open Wireless Networking

Session Chair: Danfeng Sun, Institut f. Automation und Kommunikation

Room B, Time 13:00 ~ 14:30

1B.1: 1570803586 On Designing Interfaces to Access Deep Learning Inference Services

Seung Woo Kum (Korea Electronics Technology Institute, Korea (South)); Seungtaek Oh (Korea Electronics Technology Institute, Korea (South)); Jc Yeom (KETI, Korea (South)); Jaewon Moon (Korea Electronics Technology Institute, Korea (South))

1B.2: 1570800151 Real-Time Dynamic Traffic Scheduling for Medical Applications on IEEE 802.15.6

Guilherme Gil (University of Aveiro, Portugal); Paulo Pedreiras (University of Aveiro & Instituto de Telecomunicacoes, Portugal); Luis Moutinho (University of Aveiro, Portugal)

1B.3: 1570812294 Spectrum Based Traffic Classification in Wireless Network Using Deep Hybrid Neural Network

Md. Habibur Rahman, Raihan Bin Mofidul and Yeong Min Jang (Kookmin University, Korea (South))

1B.4: 1570800427 QoE Comparison of Retransmission and AL-FEC on Audiovisual Groupcast over Wireless LANs

Toshiro Nunome and Minoru Ishida (Nagoya Institute of Technology, Japan)

1B.5: 1570800240 Dynamic Adaptive Agent with Critical Movement Detection for the Next Generation of Spatial Reuse

Yoshima Syach Putri, Dion Tanjung, Kim DongHyun and Jong Deok Kim (Pusan National University, Korea (South))

Session 1C: Future Internet and Network

Session Chair: Prof. Kae Won Choi, Sungkyunkwan University

Room C, Time 13:00 ~ 14:30

1C.1: 1570805928 Intelligent Addressing and Routing Strategy for Smart Devices on Interactive Internet of Everything Platforms

Pradheep Kumar Kamalasekaran (Assistant Professor & BITS Pilani, India); Srinivasan Narayansamy and Murali Bhaskaran Bhaskaran (Rajalakshmi Engineering College, India)

1C.2: 1570803860 Optimization of Millimeter-Wave Base Station Deployment in 5G Networks

Qingwen Zeng (BNU-HKBU United International College, China)

1C.3: 1570803719 Centralized Ultra-Precision Service Control System for Providing Ultra-Precision Services in Large-Scale Deterministic Networks

Eung Ha Kim and Yeoncheol Ryoo (ETRI, Korea (South))

1C.4: 1570805081 Deep Neural Network Based Parallel Signal Detection in SM-OFDM System

Jinmei Zhang, Zhiquan Bai, Kaiyue Yang and Abeer Mohamed (Shandong University, China); Kyung Sup Kwak (Inha University, Korea (South)); Xinhong Hao (Beijing Institute of Technology, China)

1C.5: 1570804936 Beamspace Based AIC and MDL Algorithm for Counting the Number of Signals in Specific Range

Heui-Seon Park, Suk-seung Hwang and Seokjoo Shin (Chosun University, Korea (South)); Jae-Young Pyun (Chosun University & Dept. of Information and Communication Engineering, Korea (South))

Session 2A: AI/Machine Learning for Mobile Communications

Session Chair: Prof. Mohammed Abdel Hafez, United Arab Emirates University

Room A, Time 14:40 ~ 16:10

2A.1: 1570803310 Channel BlaQLisT: Channel Blacklist Using Q-Learning for TSCH

Junmyeung Kim and Sang-Hwa Chung (Pusan National University, Korea (South))

2A.2: 1570806899 Deep Learning Based Signal Detection in Dual Mode Generalized Spatial Modulation

Kaiyue Yang, Zhiquan Bai, Jinmei Zhang and Ke Pang (Shandong University, China); Xinhong Hao (Beijing Institute of Technology, China)

2A.3: 1570810499 An Explainable Multi-Task Learning Approach for RF-Based UAV Surveillance Systems

Rubina Akter (Kumoh National Institute of Technology & Networked Systems Laboratory, Korea (South)); Sang Van Doan (Vietnam Naval Academy, Vietnam & ICT CRC, Kumoh National Institute of Technology, Korea (South)); Ahmad Zainudin and Dong Seong Kim (Kumoh National Institute of Technology, Korea (South))

2A.4: 1570810697 Dependability Prediction with Logical Link Correlation for Industrial Wireless Communication Systems

Danfeng Sun (Institut f. Automation und Kommunikation, Germany); Zeyun Xiao and Huifeng Wu (Hangzhou Dianzi University, China)

2A.5: 1570810531 DNN Aided PSO Based-Scheme for a Secure Energy Efficiency Maximization in a Cooperative NOMA System with a Non-Linear EH

Carla Estefania Garcia, Mario Rodrigo Camana and Insoo Koo (University of Ulsan, Korea (South))

Session 2B: Security and Network Management

Session Chair: Prof. Insoo Sohn, Dongguk University

Room B, Time 14:40 ~ 16:10

2B.1: 1570800977 Ethereum Based Storage Aware Mining for Permissioned Blockchain Network

Ikechi Igboanusi, Allwinnaldo Allwinnaldo and Revin Naufal Alief (Kumoh National Institute of Technology, Korea (South)); Muhammad Rasyid Redha Ansori (Kumoh National Institute of Technology, Gumi, Korea (South)); Jae-Min Lee and Dong Seong Kim (Kumoh National Institute of Technology, Korea (South))

2B.2: 1570810656 RPL Authenticated Mode Evaluation: Authenticated Key Exchange and Network Behavioral

Arif Burak Ordu and Mehmet Bayar (Istanbul Technical University & Aselsan Inc., Turkey); Berna Ors (Istanbul Technical University, Turkey)

2B.3: 1570806562 Blockchain-Based Secure Ambulance-To-Everything Communications in Emergency Rescue Operations

Chakkaphong Suthaputchakun (Bangkok University, Thailand); Yue Cao (Wuhan University, China)

2B.4: 1570810133 Joint Power and Subcarrier Allocation in Multi-Cell Multi-Carrier NOMA

Subhankar Banerjee (University of Maryland, USA); Chung Shue Chen (Nokia Bell Labs, France); Marceau Coupechoux (LTCL, Télécom Paris, Institut Polytechnique de Paris, France); Abhishek Sinha (Tata Institute of Fundamental Research, India)

2B.5: 1570803369 Intent-Based 5G UPF Configuration via Kubernetes Operators in the Edge

Akos Leiter and Attila Hegyi (Nokia Bell Labs, Hungary); Istvan Kispal (Nokia - Bell Labs Research, Hungary); Nandor Galambosi (Nokia Bell labs,

Hungary); Peter Fazekas (Budapest University of Technology and Economics, Hungary); Peter Kulics, Péter Hegyi and Jozsef Biro (Nokia Bell Labs, Hungary)

Session 2C: AI/Machine Learning for Internet of Things (IoT)

Session Chair: Prof. Jae Yun Jun, ECE Paris

Room C, Time 14:40 ~ 16:10

2C.1: 1570794073 Implicit Multi-Hop Communication Scheme Based on Overhearing in IoT LoRa Networks

Dick Mugerwa, Euisin Lee, Youngju Nam, Hyunseok Choi and Yongje Shin (Chungbuk National University, Korea (South)); Hyunchong Cho (Chungbuk National University & Research Institute for Computer and Information Communication, Korea (South))

2C.2: 1570804922 Deep Learning and Power Allocation Analysis in NOMA System

Mohammad Gaballa and Maysam F Abbod (Brunel University London, United Kingdom (Great Britain)); Ammar Sami Aldallal (Ahlia University, Bahrain)

2C.3: 1570800986 Unslotted CSMA/CA Mechanism with Reinforcement Learning of Wi-SUN MAC Layer

Sihyeon Lee and Sang-Hwa Chung (Pusan National University, Korea (South))

2C.4: 1570804240 Unicast Subslot Scheduling for Wi-SUN FAN System with Packet Collision Reduction

Hee-Jun Lee and Sang-Hwa Chung (Pusan National University, Korea (South))

2C.5: 1570804897 Lightweight P2P-RPL for Efficient P2P Communication in 6TiSCH Networks

Jeongbae Park and Sang-Hwa Chung (Pusan National University, Korea (South))

Session 3A: Vehicular Ad-hoc Networks and Autonomous Vehicles

Session Chair: Dr. Sang Kil Lee, IITP

Room A, Time 16:40 ~ 18:10

3A.1: 1570806493 Enhanced Velocity Estimation Based on Joint Doppler Frequency and Range Rate Measurements

Sohee Lim, Jaehoon Jung and Jihye Kim (Seoul National University, Korea (South)); Jeongsik Choi (Kyungpook National University, Korea (South)); Seong-Cheol Kim (Seoul National University, Korea (South))

3A.2: 1570806937 Cyber Threats and Cybersecurity Reassessed in UAVs Assisted Cyber Physical Systems

Majumder Haider, Imtiaz Ahmed and Danda B. Rawat (Howard University, USA)

3A.3: 1570804877 Object Detection Performance According to Packet Loss of C-V2X

Eunmin Choi (DGIST, Korea (South)); Dongyoon Kwon and Kyungtae Kim (Daegu Gyeongbuk Institute of Science and Technology, Korea (South)); Ji-Woong Choi (DGIST, Korea (South))

3A.4: 1570800767 Decentralized Collaborative Decision-Making for Topology Building in Mobile Ad-Hoc Networks

Philipp Helle, Sergio Feo Arenis, Kevin Shortt and Carsten Strobel (Airbus, Germany)

3A.5: 1570817436 Introduction to Secure Computing Methods in Unmanned Aerial Vehicles

Soohyun Park and Minjae Yoo (Korea University, Korea (South)); Soyi Jung (Hallym University, Korea (South)); Minseok Choi (Kyung Hee University, Korea (South)); Joongheon Kim (Korea University, Korea (South))

Session 3B: Ubiquitous Computing and Sensor Networks

Session Chair: Prof. Hyunggon Park, Ewha Womans University

Room B, Time 16:40 ~ 18:10

3B.1: 1570804250 An Autonomous Sailboat for Environment Monitoring

Yung-Wey Chong, Yee-Teng Ang and Wey-Kean Ng (Universiti Sains Malaysia, Malaysia); Jian Wan (Aston University, United Kingdom (Great Britain)); Chee Su-Yin (Universiti Sains Malaysia, Malaysia); Firth Louise (University of Plymouth, United Kingdom (Great Britain))

3B.2: 1570806934 Accident Detection and Road Condition Monitoring Using Blackbox Module

Insan Arafat Jahan (IUT, Bangladesh); Insan Arafat Jamil (CUET, Bangladesh); Mohammad Shakhawat Hossain Fahim (BRAC University, Bangladesh); Armana Sabiha Huq (BUET, Bangladesh); Fahim

Faisal and Mirza Muntasir Nishat (Islamic University of Technology, Bangladesh)

3B.3: 1570804817 Reinforcement Learning-Based MAC for Reconfigurable Intelligent Surface-Assisted Wireless Sensor Networks

Faisal Ahmed, Ethungshan Shitiri and Ho-Shin Cho (Kyungpook National University, Korea (South))

3B.4: 1570806274 TinyML Smart Sensor for Energy Saving in IoT Precision Agriculture Platform

Nicolas Chollet (ECE Paris & LISV - Université de Paris Saclay, France); Naila Bouchemal (ECE Paris, France); Amar Ramdane-Cherif (Université de Versailles St.-Quentin en Yvelines & LISV Laboratory, France)

3B.5: 1570803512 Design of Middle Range Microwave Power Transfer (MPT) System for the Mobile Power Receiver

Changyoung An and Heung-Gyoon Ryu (Chungbuk National University, Korea (South))

Session 4A: Cloud Computing and Networks

Session Chair: Akos Leiter, Nokia Bell Labs

Room A, Time 14:30 ~ 16:00

4A.1: 1570806914 A Survey of Autoscaling in Kubernetes

Minh-Ngoc Tran, Younghan Kim and Dai Dinh Vu (Soongsil University, Korea (South))

4A.2: 1570800958 Modelling the Offload of AI Tasks in Mobile Clouds

Zhiyan Chen and Ligang He (University of Warwick, United Kingdom (Great Britain))

4A.3: 1570810582 Design and Development of Server-Client Cooperation Framework for Federated Learning

Jongbin Park (Korea Electronics Technology Institute & KETI, Korea (South)); Seung-woo Kum (Korea Electronics Technology Institute, Korea (South))

4A.4: 1570800410 Optimum Control Method of Workload Placement and Air Conditioners in a GPU Server Environment

Nakazato Hikotoshi (NTT Network Service Systems Laboratories, Japan); Seisuke Arai (NTT, Japan); Masashi Kaneko (NTT Corporation, Japan)

4A.5: 1570800666 Temperature-Compensated Overcharge Protection Indirect Measurement Circuit

JinUk Yeon and KunSik Kim (Sunmoon University, Korea (South)); Innyeal Oh (Sunmoon University & WiseJet Inc., Korea (South))

Session 4B: SDN, Security, and Network Virtualization

Session Chair: Prof. Dong Seog Han, Kyungpook National University

Room B, Time 14:30 ~ 16:00

4B.1: 1570800673 Performance Analysis of Python Based SDN Controllers over Real Internet Topology

Jisi Chandroth, Jehad Ali and Byeong-hee Roh (Ajou University, Korea (South))

4B.2: 1570803820 An NFV-Based Scheduling and Flexible Deployment Scheme for RaaS Functions in Cloud Data Centers

Tseng Hsueh-Wen (National Chung-Hsing University, Taiwan); Ting-Ting Yang (National Defense University, Taiwan); Pei-Shan Chen (National Chung-Hsing University, Taiwan)

4B.3: 1570799510 Assessing the RPKI Validator Ecosystem

Paul Friedemann (Universität der Bundeswehr München, Germany); Nils Rodday (Universität der Bundeswehr München, Germany & University of Twente, The Netherlands); Gabi Dreo Rodosek (Universität der Bundeswehr München, Germany)

4B.4: 1570801569 Privacy-Preserving Surveillance for Smart Cities

Ijaz Ahmad (Chosun University, Korea (South)); Eunkyung Kim (Hanbat National University, Korea (South)); Suk-seung Hwang and Seokjoo Shin (Chosun University, Korea (South))

4B.5: 1570801998 Software-Defined Networking: A New Approach to Fifth Generation Networks - Security Issues and Challenges Ahead

Behrooz Daneshmand (ITMO University, Russia); Tu Anh Le (University ITMO, Kronverkskiy Prospekt, 49, St Petersburg, Russia)

Session 5A: Machine Learning and Computational Intelligence

Session Chair: Prof. Junhee Seok, Korea University

Room A, Time 16:30 ~ 18:00

5A.1: 1570811364 Efficient Device-Edge Inference for Disaster Classification

Nathaniel Tan Sze Yang (Universiti Tunku Abdul Rahman, Malaysia); Tham Mau Luen (UTAR, Malaysia); Sing Yee Chua and Ying Loong Lee (Universiti Tunku Abdul Rahman, Malaysia); Yasunori Owada (National Institute of Information and Communications Technology, Japan); Suvit Poomrittigul (Pathumwan Institute of Technology, Thailand)

5A.2: 1570806885 Evaluating Correctness of Reinforcement Learning Based on Actor-Critic Algorithms

Youngjae Kim, Manzoor Hussain, Jae-Won Suh and Jang-Eui Hong (Chungbuk National University, Korea (South))

5A.3: 1570806943 Leveraging Vehicular Communications in Automatic VRUs Accidents Detection

Bruno Ribeiro (University of Minho, Portugal); Alexandre Santos (University of Minho & Centro Algoritmi, Portugal); Maria João M. R. da C. Nicolau (Universidade do Minho & Centro ALGORITMI, Portugal)

5A.4: 1570798670 Signal Relaying Method for High Data Rate in the MIMO System

Yong-An Jung, Dong-Cheul Han, Soo-Hyun Cho and Han-Jae Shin (Gumi Electronics & Information Technology Research Institute, Korea (South)); Sunghun Lee (GERI, Korea (South)); Jae-Hyun Ro (Jeonbuk Institute of Automotive Convergence Technology, Korea (South))

5A.5: 1570799558 Optimization Technique of Indoor-Outdoor User Pairing in DL-NOMA System

Adel Alqahtani (University of Manchester, United Kingdom (Great Britain)); Emad Alsusa (Manchester University, United Kingdom (Great Britain))

Session 5B: 6G, 5G, Computer Vision Applications & Autonomous Vehicles

Session Chair: Prof. Seokjoo Shin, Chosun University

Room B, Time 16:30 ~ 18:00

5B.1: 1570817443 Learning-Based Second Price Auction for Distributed Delivery Scheduling in Smart and Autonomous Urban Air Mobility

Joongheon Kim (Korea University, Korea (South))

5B.2: 1570800978 Technical Challenges and Categorization of 5G Mobile Services

Ronald Beaubrun (Université Laval, Canada)

5B.3: 1570800011 Infrastructure-Independent Pseudonym Swap Protocol for Vehicular Networks

Abdueli Paulo Mdee, Muhammad Toaha Raza Khan, Junho Seo and Dongkyun Kim (Kyungpook National University, Korea (South))

5B.4: 1570807022 Recent Advances in a Medical Domain Metaverse: Status, Challenges, and Perspective

Jose M Ruiz Mejia and Danda B. Rawat (Howard University, USA)

5B.5: 1570814430 Search Space Adaptation for Differentiable Neural Architecture Search in Image Classification

Youngkee Kim (Korea University, Korea (South)); Soyi Jung (Hallym University, Korea (South)); Minseok Choi (Kyung Hee University, Korea (South)); Joongheon Kim (Korea University, Korea (South))

Session 6A: Cyber-physical system (CPS) & Information Networks

Session Chair: Prof. Ki-Hyung Kim, Ajou University

Room A, Time 9:30 ~ 11:00

6A.1: 1570803890 Design and Implementation of a Digital Twin Platform in Vertical Farming Systems

Taehwan Ko and Lee Hea-Min (Korea Electronics Technology Institute, Korea (South)); Sung-Woo Byun (Korea Electronics Technology Institute (KETI) & Jeonbuk Regional Branch, Korea (South)); Donghee Noh and Choi Ju-Hwan (Korea Electronics Technology Institute, Korea (South))

6A.2: 1570810652 User-Centered Design to Enhance IoT Cybersecurity Awareness of Non-Experts in Smart Buildings

Hanning Zhao and Bilhanan Silverajan (Tampere University, Finland)

6A.3: 1570801766 CNN Based Multi-View Image Quality Enhancement

Gyu-Lee Jeon (Ewha Womans University, Korea (South)); Hee-Jae Kim, Eun Yeo and Jewon Kang (Ewha Womans University, Korea (South))

6A.4: 1570800681 Improving Per-Flow Fairness by ML-Based Estimation of Competing Flows' Congestion Control Algorithm

Keito Maeta, Gen Kitagata and Go Hasegawa (Tohoku University, Japan)

6A.5: 1570806779 Mitigating Coordinate Transformation for Solving Partial Differential Equations with Physics-Informed Neural Networks

Hyo-Seok Hwang and Suhan Son (Korea University, Korea (South)); Yoojoong Kim (The Catholic University of Korea, Korea (South)); Junhee Seok (Korea University, Korea (South))

Session 6B: Network Theory and Network Science

Session Chair: Prof. Sanghwan Lee, Kookmin University

Room B, Time 9:30 ~ 11:00

6B.1: 1570800940 Experimental Evaluation of Roaming Performance of Cellular IoT Networks

Kalpit Ballal (Danmarks Tekniske Universitet, Denmark); Radheshyam Singh, Lars Dittmann and Sarah Ruepp (Technical University of Denmark, Denmark)

6B.2: 1570806888 Traffic Analytics Development Kits (TADK): Enable Real-Time AI Inference in Networking Apps

Kun Qiu and Harry Chang (Intel, China); Ying Wang (Intel R&D, China); Xiahui Yu, Wenjun Zhu, Yingqi Liu, Jianwei Ma and Weigang Li (Intel, China); Xiaobo Liu and Shuo Dai (ZTE, China)

6B.3: 1570804257 A Framework for Named Networking on Edge AI

Fritz Kevin Flores and Marnel Peradilla (De La Salle University, Philippines)

6B.4: 1570810721 Fault-Tolerant Distributed AAA Architecture Supporting Connectivity Disruption

Karri Huhtanen (Radiator Software Oy, Finland); Antti Kolehmainen (Tampere University, Finland)

6B.5: 1570798619 An Improved Relay Selection Scheme for FD-MIMO Based System

Sung-hun Lee, Sang-Bong Byun, Dong-Cheul Han, Han-Jae Shin, Soo-Hyun Cho and Yong-An Jung (Gumi Electronics & Information Technology Research Institute, Korea (South))

Workshop 1A: IV 2022

Session Chair: Prof. Dong Seog Han, Kyungpook National University

Room A, Time 16:30 ~ 17:30, July 5, 2022 (Tuesday)

W1A.1: 1570814358 Analysis of V2V Communication Performance on Roads and Tunnels Surrounded by Mountains

Young Jin Yoon (University of Kyung Pook, Korea (South)); Dong Seog Han (Kyungpook National University, Korea (South))

W1A.2: 1570806761 3D Map Reconstruction from Single Satellite Image Using a Deep Monocular Depth Network

ChangMin Son and Soon-Yong Park (Kyungpook National University, Korea (South))

W1A.3: 1570808271 Pig Treatment Classification on Thermal Image Data Using Deep Learning

Savina Colaco (Kyungpook National University, Korea (South)); Jung Hwan Kim (KyungPook National University, Korea (South)); Alwin Poulouse (Kyungpook National University, Korea (South)); Sanne Van Zutphen and Suresh Neethirajan (Wageningen University & Research, The Netherlands); Dong Seog Han (Kyungpook National University, Korea (South))

W1A.4: 1570812813 Dual-Inferences Mechanism for Real-Time Semantic Segmentation

Min Young Kim and Quyen Van Toan (Kyungpook National University, Korea (South))

W1A.5: 1570812992 End-To-End Autonomous Driving Using the Ape-X Algorithm in Carla Simulation Environment

Maxence Hussonnois (Deakin University, Australia); Jae Yun Jun Kim (ECE Paris, France)

Workshop 1B: SRIoT 2022 I

Session Chair: Prof. Takeo Fujii, The University of Electro-Communications

Room A, Time 16:30 ~ 17:30, July 5, 2022 (Tuesday)

W1B.1: 1570812956 Device Adaptive Control Method Considering Power Consumption for Pedestrian-to-Infrastructure Communication

Noriyuki Oki and Atsuki Mukoda (The University of Electro-Communications & Advanced Wireless and Communication Research Center (AWCC), Japan); Ayumu Ueda (The University of Electro-Communications & Advanced Wireless

and Communication Research Center (AWCC), Japan); Takeo Fujii (The University of Electro-Communications, Japan)

W1B.2: 1570808419 Evaluation of Transmission Timing Control Error for QZSS Short Message SS-CDMA Communication System

Hiroshi Oguma and Rei Kawai (National Institute of Technology, Toyama College, Japan); Suguru Kameda (Hiroshima University, Japan); Noriharu Suematsu (Tohoku University, Japan)

W1B.3: 1570810779 Characteristics of RSSI Kriging Interpolated Value in Neighborhood of Buildings

Ryo Miyamoto and Shusuke Narieda (Mie University, Japan); Takeo Fujii (The University of Electro-Communications, Japan); Hiroshi Naruse (MIE UNIV, Japan)

W1B.4: 1570816038 Differential Packet Level Index Modulation for Low Power Wide Area System

Mai Ohta (Fukuoka University, Japan); Takeo Fujii (The University of Electro-Communications, Japan)

Workshop 1C: SRIoT 2022 II

Session Chair: Prof. Suguru Kameda, Hiroshima University

Room A, Time 16:30 ~ 17:30, July 5, 2022 (Tuesday)

W1C.1: 1570816513 Dual Energy-Aware Based Trajectory Optimization for UAV Emergency Wireless Communication Network: A Multi-Armed Bandit Approach

Amr Amrallah (Tokyo Institute of Technology, Japan); Ehab Mahmoud Mohamed (Aswan University, Egypt); Gia Khanh Tran (Tokyo Institute of Technology, Japan); Kei Sakaguchi (Tokyo Institute of Technology & Fraunhofer HHI, Japan)

W1C.2: 1570810217 Identifying Invalid Nodes in Bluetooth Mesh Networks by Using the Bayesian Probability Classification Algorithm and Time to Live

Ta-Te Lu, Yi-Hsuan Li and Yu-Jheng Bo (Chien Hsin University of Science and Technology, Taiwan)

W1C.3: 1570814582 Performance Evaluation of Highly Efficient Information Collection Methods by Trend Analysis of Sensor Information Using Pre-Learning

Ryuji Miyamoto, Osamu Takyu and Hiroshi Fujiwara (Shinshu University, Japan); Koichi Adachi (The University of Electro-Communications, Japan); Mai Ohta (Fukuoka University, Japan); Takeo Fujii (The University of Electro-Communications, Japan)

W1C.4: 1570814960 High-Sensitivity Detection Method for Signals in PhyC-SN

Toshi Ito and Osamu Takyu (Shinshu University, Japan); Mai Ohta (Fukuoka University, Japan); Takeo Fujii and Koichi Adachi (The University of Electro-Communications, Japan)

Poster Session 1

Session Chair: Prof. Hyunhee Park, Myongji University

Room C, Time 16:30 ~ 18:00, July 6, 2022 (Wednesday)

P1.1: 1570800436 A Lightweight End-To-End Neural Networks for Decoding Motor Imagery Brain Signal

Hyeon Kyu Lee, Ji-Soo Myoung and Young-Seok Choi (Kwangwoon University, Korea (South))

P1.2: 1570804484 Reinforcement Learning-Based Multiple Camera Collaboration Control Scheme

Dongchil Kim (Korea Electronics Techonlogy Institute (KETI), Korea (South)); Chang Mo Yang (Korea Electronics Technology Institute, Korea (South))

P1.3: 1570808974 Multi-Label Text Classification of Economic Concepts from Economic News Articles Using Natural Language Processing

Soo Jeong Kim and Junhee Seok (Korea University, Korea (South)); Minhyeok Lee (Chung-Ang University, Korea (South))

P1.4: 1570811375 TCAE: Temporal Convolutional Autoencoders for Time Series Anomaly Detection

Jinuk Park (Korea Electronics Technology Institute, Korea (South)); Yongju Park (Korea Electronics Technology Institute (KETI), Korea (South)); Chang-il Kim (Korea Electronics Technology Institute, Korea (South))

P1.5: 1570804942 Ride-Hailing Service Aware Electric Taxi Fleet Management Using Reinforcement Learning

Paul Silva (Jeonbuk National University, Korea (South)); Young-Joo Han (Hyundai Motor Group, Korea (South)); Young-Chon Kim (Chonbuk

National University, Korea (South)); Dong-Ki Kang (Jeonbuk National University, Korea (South))

P1.6: 1570819844 Decentralized Identifiers (DIDs)-Based Authentication Scheme for Smart Health Care System,

Alnazif Mohammed Alnour and Ki-Hyung Kim (Ajou University, Korea (South))

Poster Session 2

Session Chair: Prof. Junsu Kim, Tech University of Korea

Room C, Time 14:30 ~ 16:00, July 7, 2022 (Thursday)

P2.1: 1570800935 Accelerating University Admission System Using Machine Learning Techniques

Basil Y Alothman (Kuwait College of Science and Technology (KCST), Kuwait); Hanadi Alazmi, Mohammad Bin Ali and Noor Alqallaf (Kuwait College of Science and Technology, Kuwait); Murad Khan (Kyungpook National University & Sarhad University of Science and Technology, Korea (South))

P2.2: 1570799726 Unsupervised Deep Learning-Based End-To-End Network for Anomaly Detection

Bekhzod Olimov, Barathi Subramanian and Jeonghong Kim (Kyungpook National University, Korea (South))

P2.3: 1570800952 VLC Positioning by Hybrid Wk-NN/DNN in Indoor Environment

Sung Hyun Oh (Tech University of Korea, Korea (South)); Jeong Gon Kim (Korea Polytechnic University, Korea (South))

P2.4: 1570800696 Detecting the Ripeness of Strawberries and the Coordinates of the Hull Using Deep Learning

Seojeong Kim and Sunghwan Jeong (Korea Electronics Technology Institute, Korea (South)); Heegon Kim and Sooho Jeong (Jeonnam Agricultural Research & Extension Services, Korea (South)); Yun Ga-yun (Jeonnam Agricultural Research & Extension Services, Korea (South), Korea (South)); Keunho Park (Korea Electronics Technology Institute, Korea (South))

P2.5: 1570810893 Introduction to a New Use-Case Based on MPEG-IoMT: Time-Series Temperature Data Analysis by the Flower Condition

Jaewon Moon (Korea Electronics Technology Institute, Korea (South)); Seung Woo Kum (Korea Electronics Technology Institute, Korea (South)); Seungtaek Oh (Korea Electronics Technology Institute, Korea (South))

Poster Session 3

Session Chair: Prof. Junbeom Hur, Korea University

Room C, Time 16:30 ~ 18:00, July 7, 2022 (Thursday)

P3.1: 1570812110 Short-Term PM2.5 Prediction Using Modified Attention Seq2Seq BiLSTMM

Ida Bagus Krishna Yoga Utama, Duc Hoang Tran and Yeong Min Jang (Kookmin University, Korea (South))

P3.2: 1570812114 An Improved Sensor Anomaly Detection Method in IoT System Using Federated Learning

Duc Hoang Tran, Van Linh Nguyen, Ida Bagus Krishna Yoga Utama and Yeong Min Jang (Kookmin University, Korea (South))

P3.3: 1570800412 Enhanced 3D Action Recognition Based on Deep Neural Network

Sungjoo Park (KETI, Korea (South)); Dongchil Kim (Korea Electronics Technology Institute (KETI), Korea (South))

P3.4: 1570800442 Object Tracking of Aerial Imaging Device Image Using Variational Autoencoder and External Memory

Keunho Park, Byoungjun Kim, Donghoon Kim, Seon-Hyeong Kim, Seojeong Kim and Sunghwan Jeong (Korea Electronics Technology Institute, Korea (South))

P3.5: 1570812296 Abnormal Voltage Regulation Detection in On-Grid PV-ESS System by Support Vector Machine with Principal Component Analysis

Md. Morshed Alam, Raihan Bin Mofidul, Radityo Fajar Pamungkas and Yeong Min Jang (Kookmin University, Korea (South))

Poster Session 4

Session Chair: Prof. Jeong Ryun Lee, Chung-Ang University

Room C, Time 9:30 ~ 11:00, July 8, 2022 (Friday)

P4.1: 1570800824 A Comparative Analysis of 2D Deep CNN Models for Arrhythmia Detection Using STFT-Based Long Duration ECG Spectrogram

Tabassum Islam Toma and Sunwoong Choi (Kookmin University, Korea (South))

P4.2: 1570804518 Learning Based Clinical Diagnosis Framework for Inconsistently and Partially Labeled Dataset

Jae-Wook Jung and Sang-Eun Jeon (Pukyong National University, Korea (South)); Jae Hyun Lee, Juhyeon Kim and Yeong Kyun Bae (Kosin University Gospel Hospital, Korea (South)); Jun-Pyo Hong (Pukyong National University, Korea (South))

P4.3: 1570804279 Design of Obstacle Detection Method for Autonomous Driving in Agricultural Environments

Sung-Woo Byun (Korea Electronics Technology Institute (KETI) & Jeonbuk Regional Branch, Korea (South)); Donghee Noh and Lee Hea-Min (Korea Electronics Technology Institute, Korea (South))

P4.4: 1570804441 Design of Autonomous Driving Algorithms for Fruit Harvesting in Orchards

Hea-Min Lee, Donghee Noh and HyunGu Kang (Korea Electronics Technology Institute, Korea (South)); Sung-Woo Byun (Korea Electronics Technology Institute (KETI) & Jeonbuk Regional Branch, Korea (South)); Choi Ju-Hwan (Korea Electronics Technology Institute, Korea (South))

P4.5: 1570812436 MissVoxelNet: 3D Object Detection for Autonomous Vehicle in Snow Conditions

Myungsik Yoo and Anh Do (Soongsil University, Korea (South))