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Technical Program

Welcome from Chairs

K.1: Opening Keynote 1 - Gentry Underwood (IDEO, Orchestra)

Coffee

1.1: Energy Management - Mobile Devices

Energy-based Fair Queuing: Trading Off Energy Management and Time-constraint Meeting in Mobile Systems

Jianguo Wei (Universidad Politécnica de Madrid, Spain); Eduardo Juarez (Universidad Politécnica de Madrid, Spain); Matias J Garrido (Universidad Politécnica de Madrid, Spain); Fernando Pescador (Universidad Politécnica de Madrid, Spain)
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An Application-level Energy-Efficient Scheduling for Dynamic Voltage and Frequency Scaling

Keunjoo Kwon (Samsung Electronics, Korea); Seungchul Chae (Samsung Electronics, Korea); Kyoung-Gu Woo (SAIT, Samsung Electronics, Korea)
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Energy Efficient Basestation Operation with Traffic-Specific Energy Consumption

JinHyeock Choi (Samsung AIT, Korea); Seonmin Jung (KAIST, Korea); Junhyuk Kim (KAIST, Korea); June-Koo Kevin Rhee (KAIST, Korea); Byung Moo Lee (Samsung Advanced Institute of Technology, Korea); Jongho Bang (SAMSUNG, Korea); Byung-Chang Kang (Samsung Electronics, Korea)
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Energy-Delay Tradeoff Analysis and Enhancement in LTE Power-Saving Mechanism

Wonjae Shin (Samsung Advanced Institute of Technology (SAIT), Korea); Jung Ryun Lee (Chung-Ang University, Korea); Hyun-Ho Choi (Hankyong National University, Korea)
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How to Extend Battery Life in Location Alarm

Jeong-Gwan Kang (Samsung Electronics, Korea); Namhoon Kim (Samsung Electronics, Korea); Sungmin Park (Samsung Electronics, Korea); Kyongha Park (Samsung Electronics, Korea); HyunSu Hong (Samsung Electronics, Korea)
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1.2: GPU Processing

Implementation of the Raster Pipeline Over the 3D Geometry Pipeline: a Point-Set Approach

Nakhon Baek (Kyungpook National University & Mobile Graphics Inc., Korea)
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Tile Binning Algorithm for Vector Graphics Minimizing False Overlap

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Fumiyo Takano (NEC Corporation, Japan); Tatsuji Moriyoshi (NEC Corporation, Japan)
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A Novel Mobile GPU Architecture Based on Ray Tracing

Won-Jong Lee (SAIT, SAMSUNG Electronics, Korea); Youngsam Shin (SAIT Samsung Electronics, Korea); Jaedon Lee (Samsung, Korea); Jin-Woo Kim (Yonsei University, Korea); Jae-Ho Nah

(Yonsei University, Korea); Hyun-Sang Park (Kongju National University, Korea); Seokyeon Jung (Samsung Advanced Institute of Technology, Korea); Shihwa Lee (SAIT Samsung Electronics, Korea)
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GPGPU Implementation of an Improved Nonparametric Background Modeling for Moving Object Detection Strategies

Carlos Cuevas (Universidad Politécnica de Madrid, Spain); Daniel Berjón (Universidad Politécnica de Madrid, Spain); Francisco Morán (Universidad Politécnica de Madrid, Spain); Narciso García (Universidad Politécnica de Madrid, Spain)
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1.3: Security for CE Devices

A Crash Course on Patents for Engineers

Peter Corcoran (National University of Ireland, Galway, Ireland)
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Bitstream Parsing Processor with Emulation Prevention Bytes Removal for H.264/AVC Decoder

Hyun-Ho Jo (Kwangwoon University, Korea); Jung-Han Seo (Kwangwoon University, Korea); Dong-Gyu Sim (Kwangwoon University, Korea); Doo-Hyun Kim (Samsung Electronics, Korea); Joon Ho Song (Samsung Electronics, Korea); Do-Hyung Kim (Samsung Electronics, Korea); Shihwa Lee (SAIT Samsung Electronics, Korea)
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Hardware Trojan for Security LSI

Masaya Yoshikawa (Meijo University, Japan); Ryusuke Satoh (Meijo University, Japan); Takeshi Kumaki (Ritsumeikan University & Dept. of VLSI System Design, Japan)
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Encryption for High Efficiency Video Coding with Video Adaptation Capabilities

Glenn Van Wallendael (Ghent University - IBBT, Belgium); Andras Boho (KU Leuven, Belgium); Jan De Cock (Ghent University - iMinds, Belgium); Adrian Munteanu (Vrije Universiteit Brussel, Belgium); Rik Van de Walle (Ghent University - IBBT, Belgium)
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1.4: Image Video Analysis

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Hyoung-Ki Lee (Samsung Advanced Institute of Technology, Korea); Kiwan Choi (Samsung Electronics, Korea); Donggeon Kong (Samsung Advanced Institute of Technology, Samsung Electronics, Korea); Jonghwa Won (Samsung Electronics, Korea)
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Clementine Nyirarugira (Chung-Ang University, Graduate School of Advanced Imaging, Korea); Tae-Yong Kim (GSAIM, Chung-Ang Univ, Korea)
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Multi-level Video Segmentation Using Visual Semantic Units

Huang-Chia Shih (Yuan Ze University, Taiwan)
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Salient Object Detection Based on Spatiotemporal Attention Models

Ruxandra Tapu (Institut Telecom / Telecom SudParis, France); Titus Zaharia (Institut TELECOM, France)
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Visual Saliency Based on Selective Integration of Feature Maps in Frequency Domain

Ki Tae Park (Hanyang University, Korea); Jeong Ho Lee (Hanyang University, Korea); Young Shik Moon (Hanyang University, Korea)
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T.1: TUTORIAL - 1 Baharav (Corning) Glass Interfaces

Lunch

K.2: Keynote 2 - Simon Crosby (Bromium)

1.5: Panel Session - Design for Usability

This session features a distinguished panel of industrial designers and product development engineers with particular expertise in the topic Design for Usability.

Panel members will open the session with their point of view on the importance and key challenges associated with masking the complexity of new consumer electronics products with ever increasing features. After a short opening statement, the session will be open for Q&A and discussion between the panel members and the audience.

We are pleased to welcome the following panellists:

- Matt Jones, Vice President GENIVI, from Jaguar Land Rover
- Klaus Rosburg, Principal at Sonic Design Solutions, Inc
- Nisha Sawhney, President/ CEO of SnS Design, Inc
- Srinivivasan, CEO of Lumium
- Jeremy Toeman, CEO of Dijit

1.6: Special Session: Haptics

A Smart Phone Peripheral with Bi-Manual Skin Stretch Haptic Feedback and User Input

Markus Montandon (University of Utah, USA); William Provancher (University of Utah, USA)
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Haptic Interaction with User Manipulation for Smartphone

Jong-uk Lee (Electronics and Telecommunications Research Institute, Korea); Jeong Mook Lim (Electronics and Telecommunications Research Institute, Korea); Heesook Shin (Electronics and Telecommunications Research Institute, Korea); Ki-Uk Kyung (Electronics and Telecommunications Research Institute, Korea)
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An Audio-Haptic Feedbacks for Enhancing User Experience in Mobile Devices

Jeong Mook Lim (Electronics and Telecommunications Research Institute, Korea); Jong-uk Lee (Electronics and Telecommunications Research Institute, Korea); Ki-Uk Kyung (Electronics and Telecommunications Research Institute, Korea); Jaecheol Ryou (Chung-Nam National University, Korea)
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A Novel Wearable Vibro-tactile Haptic Device

Andrei Ninu (Otto Bock Healthcare Products GmbH & Institut for Analysing and Scientific Computing, Austria); Strahinja Dosen (Aalborg University, Denmark); Frank Rattay (Vienna University of Technology, Austria); Hans Dietl (Otto Bock HealthCare GmbH, Germany); Dario Farina (Aalborg University, Denmark)
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Anak Agung Gede Dharma (Kyushu University, Japan); Kiyoshi Tomimatsu (Kyushu University, Japan)
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1.7: Indoor Localization

Distributed Architecture for Efficient Indoor Localization and Orientation

Félix J. Villanueva (University of Castilla-La Mancha, Spain); Julio Dondo Gazzano (UCLM University of Castilla La Mancha, Spain); David Villa (University of Castilla-La Mancha, Spain); David Vallejo (University of Castilla-La Mancha, Spain); Cesar Mora (University of Castilla-La Mancha, Spain);

Carlos Gonzalez Morcillo (University of Castilla-La Mancha & Escuela Superior de Informatica, Spain); Juan Carlos López (University of Castilla-La Mancha, Spain)
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Efficient Construction of Database by Indexing and Correcting Algorithms for Personal Computed Indoor Positioning System

Jong In Jung (University of Hanyang, Korea); Hyuk-Won Cho (Hanyang University, Korea); Jin Cha (Hanyang University, Korea); Jong-Kyun Hong (Hanyang University, Korea); Sang-Sun Lee (Hanyang University, Korea)
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Using a Wireless LAN to Perform Motion Detection

Cade Cashen (University of South Alabama, USA); Samuel Russ (University of South Alabama, USA); Thomas Thomas (University of South Alabama, USA)
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Received Signal Strength Ratio Based Optical Wireless Indoor Localization Using Light Emitting Diodes for Illumination

Soo-Yong Jung (Gwangju Institute of Science and Technology, Korea); Chang-Kuk Choi (Gwangju Institute of Science and Technology, Korea); Sang Hu Heo (Chosun University, Korea); Seong-Ro Lee (Mokpo National University, Korea); Chang-Soo Park (Gwangju Institute of Science and Technology, Singapore)
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Sensor Fusion-Based People Counting System Using the Active Appearance Model

Seung-Wook Kim (Korea University, Korea); June-Young Jung (Korea University, Korea); Seung-Jun Lee (Korea University, Korea); Aldo Morales (Penn State Harrisburg, USA); Sung Jea Ko (Korea University, Korea)
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1.8: Home Automation

An Efficient Path Planning Method for a Cleaning Robot Based on Ceiling Vision

Junho Park (Samsung Electronics, Korea); Woo Yeon Jeong (Esmartvision, Korea); Hyoung-Ki Lee (Samsung Advanced Institute of Technology, Korea); Jonghwa Won (Samsung Electronics, Korea)
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Marcos Santos-Pérez (University of Malaga, Spain); Eva González-Parada (University of Malaga, Spain); Jose Manuel Cano-García (University of Malaga, Spain)
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Steven Anderson (Auckland University of Technology, New Zealand); Acm Fong (Auckland University of Technology, New Zealand); Jie Tang (Tsinghua University, P.R. China)
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Danilo F S Santos (Federal University of Campina Grande, Brazil); Angelo Perkusich (Federal University of Campina Grande, Brazil); Hyggo Almeida (Federal University of Campina Grande, Brazil)
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A Hierarchical Path Planning of Cleaning Robot Based on Grid Map

Hyoung-Ki Lee (Samsung Advanced Institute of Technology, Korea); Woo Yeon Jeong (Esmartvision, Korea); Sujin Lee (Korea Ocean Research and Development Institute, Korea); Jonghwa Won (Samsung Electronics, Korea)
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Dong-bok Lee (Inha University, Korea); Byung Cheol Song (Inha University, Korea)

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A Cross-Channel Bilateral Filter for CFA Image Denoising

Yong Min Tai (SAIT, Samsung Electronics, Korea); Young-Su Moon (Samsung Advanced Institute of Technology, Samsung Electronics, Korea); Junguk Cho (SAIT, Samsung Electronics, Korea); Shihwa Lee (SAIT Samsung Electronics, Korea)

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A Fast Motion Deblurring Based on the Motion Blur Region Search for a Mobile Phone

Nam-Joon Kim (Samsung Electronics, Korea); Sungjoo Suh (Samsung Electronics, Korea); Changkyu Choi (Samsung Electronics, Korea); Dusik Park (Advanced Media Lab, SAIT, Samsung Electronics, Korea); Changyeong Kim (Samsung Advanced Institute of Technology, Korea)

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Spatially Adaptive Antialiasing for Enhancement of Mobile Imaging Systems Using Combined Wavelet-Fourier Transforms

Eunjung Chae (Chung-Ang University, Korea); Wonseok Kang (Image Processing and Intelligent Systems Laboratory, Chung-Ang University, Korea); Eunsung Lee (Image Processing and Intelligent System Laboratory, Chung-Ang University & Image Processing and Intelligent System Laboratory, Chung-Ang University, Korea); Sangjin Kim (Image Processing and Intelligent Systems Laboratory, Chung-Ang University, Korea); Joonki Paik (Chung-Ang University, Korea)

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Bahman Zafarifar (Eindhoven University of Technology & Sigma Designs, The Netherlands); Erwin Bellers (Sigma Designs, USA); Peter H.N. de With (Eindhoven University of Technology & CycloMedia Technology, The Netherlands)

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Coffee

1.10: In-Home Internet Technology

Enhanced Forwarding Engine for Content-Centric Networking (CCN)

JaeHoon Kim (Samsung Electronics, Korea); Myeong-Wuk Jang (Samsung Advanced Institute of Technology, Korea); Joonghong Park (Samsung Electronics & SAIT, Korea); Byoung-Joon BJ Lee (Samsung Advanced Institute of Technology, Korea)

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Jong-Geun Park (Electronics and Telecommunications Research Institute, Korea); Hoon Choi (Chungnam National University, Korea)

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Gang Ren (University of Rochester, USA); Samarth Shivaswamy (University of Rochester, USA); Stephen Roessner (University of Rochester, USA); Mark Bocko (University of Rochester, USA); Dave Headlam (University of Rochester, USA)

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Chengcheng Pei (Southeast University, P.R. China); Zaichen Zhang (Southeast University, P.R. China); Shujian Zhang (Southeast University, P.R. China)

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Qi Liu (Nanjing University of Information Science and Technology, P.R. China)
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Hyung-Chul Jo (Korea University, Korea); Sangwon Kim (Korea University, Korea); Sung-Kwan Joo (Korea University, Korea)
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Block-Based Detection Systems for Visual Artifact Location

Onno Eerenberg (Trident Microsystems, The Netherlands); Jeroen Kettenis (Trident Microsystems, The Netherlands); Peter H.N. de With (Eindhoven University of Technology & CycloMedia Technology, The Netherlands)
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Ryota Mase (NEC Corporation, Japan); Ryoma Oami (NEC Corporation, Japan); Toshiyuki Nomura (NEC Corporation, Japan)
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Kirill Gusev (St. Petersburg State University of Film and Television, Russia)
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Fernando Pescador (Universidad Politécnica de Madrid, Spain); Matias J Garrido (Universidad Politécnica de Madrid, Spain); Eduardo Juarez (Universidad Politécnica de Madrid, Spain); Cesar Sanz (Universidad Politécnica de Madrid, Spain)
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T. 2: TUTORIAL- 2 Sunish Gupta

K.3: Keynote 3 - Mary Czerwinski (Microsoft)

Coffee

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Vlado Menkovski (Technische Universiteit Eindhoven, The Netherlands); Antonio Liotta (Eindhoven University of Technology, The Netherlands)
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Juhan Bae (Multimedia IP Center & Korea Electronics Technology Institute, Korea); Youngbae Hwang (Korea Electronics Technology Institute, Korea); Byeong Ho Choi (Korea Electronic Technology Institute (KETI), Korea)
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Myoung-Kyu Sohn (Daegu Gyeongbuk Institute of Science & Technology, Korea); Sang-Heon Lee (Daegu Gyeongbuk Institute of Science & Technology, Korea); Dong-Ju Kim (Daegu Gyeongbuk

Institute of Science & Technology, Korea); Byungmin Kim (Daegu Gyeongbuk Institute of Science & Technology, Korea); Hyunduk Kim (Daegu Gyeongbuk Institute of Science & Technology, Korea)
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Sang-Heon Lee (Daegu Gyeongbuk Institute of Science & Technology, Korea); Myoung-Kyu Sohn (Daegu Gyeongbuk Institute of Science & Technology, Korea); Dong-Ju Kim (Daegu Gyeongbuk Institute of Science & Technology, Korea); Byungmin Kim (Daegu Gyeongbuk Institute of Science & Technology, Korea); Hyunduk Kim (Daegu Gyeongbuk Institute of Science & Technology, Korea)
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2.1: Power Management

Magnetic Resonance Wireless Power Transfer System for Practical Mid-Range Distance Powering Scenario References

Ki Young Kim (Samsung Advanced Institute of Technology, Korea); Changwook Yoon (Samsung Advanced Institute of Technology, Korea); Nam Yoon Kim (Samsung Advanced Institute of Technology, Korea); Jinsung Choi (Samsung Advanced Institute of Technology, Korea); Young-Ho Ryu (Samsung Advanced Institute of Technology, Korea); Dong-Zo Kim (Samsung Advanced Institute of Technology, Korea); Keum-Su Song (Samsung Advanced Institute of Technology, Korea); Chi-Hyung Ahn (Samsung Advanced Institute of Technology, Korea); Eunseok Park (Samsung Advanced Institute of Technology, Korea); Yun-Kwon Park (Samsung Advanced Institute of Technology, Korea); Sangwook Kwon (Samsung Advanced Institute of Technology, Korea)
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Cheng-Hung Tsai (National Taiwan University of Science and Technology, Taiwan); Y. W. Bai (Fu Jen Catholic University, Taiwan); Ming-Bo Lin (National Taiwan University of Science and Technology, Taiwan); Chih-Yu Chung (Fu-Jen Catholic University, Taiwan); Roger Jia Rong Jhang (Fu Jen Catholic University, Taiwan)
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Novel Level-up Shifters for High Performance and Low Power Mobile Devices

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Minyong Kim (Korea University, Korea); SungWoo Chung (Korea University, Korea)
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2.2: Associated Session: 3D Display

Low-complexity Depth Map Generation for Real-time 2D-to-3D Video Conversion

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Seung-woo Nam (ETRI, Korea); Hye-Sun Kim (ETRI, Korea); Yun-ji Ban (ETRI, Korea); Sung-II Chien (Kyungpook National University, Korea)
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Sebastiaan Van Leuven (Ghent University - IBBT, Belgium); Hari Kalva (Florida Atlantic University, USA); Glenn Van Wallendael (Ghent University - IBBT, Belgium); Jan De Cock (Ghent University - iMinds, Belgium); Rik Van de Walle (Ghent University - IBBT, Belgium)
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Byung Tae Oh (Samsung Advanced Institute of Technology, Korea); Jaejoon Lee (Samsung Electronics, Korea); Dusik Park (Advanced Media Lab, SAIT, Samsung Electronics, Korea)
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2.3: Medical Applications

Optical Heart Rate Monitoring Module Validation Study

Giulio Valenti (Maastricht University, The Netherlands); Klaas R Westerterp (Maastricht University, The Netherlands)
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A Remote Cardiac Monitoring System for Preventive Care

Keunjoo Kwon (Samsung Electronics, Korea); Heasoo Hwang (Samsung Electronics, Korea); Hyoa Kang (Samsung Electronics, Korea); Kyoung-Gu Woo (SAIT, Samsung Electronics, Korea); Kyuseok Shim (Seoul National University, Korea)
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Younghak Shin (Gwangju Institute of Science and Technology, Korea)
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Progressive Monitoring and Treatment Planning of Diabetes Mellitus in Smart Home Environment

Topi Pulkkinen (VTT Technical Research Centre of Finland, Finland); Young-Sung Son (ETRI, Korea); Joohyung Lee (ASU, Korea); Yann-Hang Lee (Arizona State University, USA); Mikko Sallinen (VTT - Technical Research Centre of Finland, Finland); Jun Hee Park (ETRI, Korea)
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2.4: Personal Computing

User Adaptive Application Program Management Among Multi-Devices for Personal Cloud Computing Services

Hyewon Song (ETRI, Korea); Eunjeong Choi (ETRI, Korea); Chang Seok Bae (ETRI, Korea); Jeunwoo Lee (ETRI, Korea)
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Efficient Seamless Content Sharing Among Separate Multiple WLANs for Pervasive Mobile Network Environment

Hiroyuki Kasai (The University of Electro-Communications, Japan)
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Flexible Computing for Personal Electronic Devices

Daniel Díaz-Sánchez (Universidad Carlos III de Madrid, Spain); Andrés Marín López (University Carlos III of Madrid, Spain); Florina Almenares (Universidad Carlos III de Madrid, Spain); Rosa Sánchez (Carlos III University of Madrid, Spain); Patricia Arias (Universidad Carlos III de Madrid, Spain)
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Implementation of an FPGA-Based Low-Power Video Processing Module for a Head-Mounted Display System

Assem A. M. Bsoul (University of British Columbia, Canada); Reynald Hoskinson (Recon Instruments, Canada); Milen Ivanov (Recon Instruments, Canada); Shahriar Mirabbasi (University of British Columbia, Canada); Hamid Abdollahi (Recon Instruments, Canada)
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How Costly are Secure Transactions on Handheld Devices?

Florina Almenares (Universidad Carlos III de Madrid, Spain); Patricia Arias (Universidad Carlos III de Madrid, Spain); Andrés Marín López (University Carlos III of Madrid, Spain); Daniel Díaz-Sánchez (Universidad Carlos III de Madrid, Spain); Rosa Sánchez (Carlos III University of Madrid, Spain)
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2.5: Smart Optics

The Portable Projection System Design Based on Light Emitting Diode Using Secondary Colors

Oh-Jin Kwon (Sejong University, Korea); Yongseok Chi (Dankook University, Korea); Youngseop Kim (Dankook University, Korea); Hack youp Noh (Dankook University, Korea)
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Initial Direction and Speed Decision System for Auto Focus Based on Blur Detection

Kien Quoc Vuong (Samsung Electronics, Korea); Jeongwon Lee (Samsung Electronics, Korea)
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A Simulation Tool for Digital Autofocus Design

Dong-Chen Tsai (National Taiwan University, Taiwan); Zuo-Min Tsai (Department of Electrical Engineering, National Chung Cheng University, Taiwan); Homer Chen (National Taiwan University, Taiwan)
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Mirrorless Interchangeable-Lens Light Field Digital Photography Camera System

ByungJoon Baek (Samsung Electronics Co., Korea); HyeongKoo Lee (Samsung Electronics, Korea); YoungJin Kim (Samsung Electronics Co., Korea); Tae-Chan Kim (Samsung Electronic Co. Ltd., Korea)
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Light Field Acquisition Using Wedge-Shaped Waveguide

Chang-Kun Lee (Kyung Hee University, Korea); Taewon Lee (Kyung Hee University, Korea); Hee-Jin Choi (Sejong University, Korea); Jae-Hyeung Park (Chungbuk National University, Korea); Sung-Wook Min (Kyung Hee University, Korea)
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Lunch

K.4: Keynote 4 - Ron Williams (Landmark)

2.6: Architectures & Devices

Parallel Pipelined Histogram Architecture Via C-slow Retiming

José O. Cadenas (University of Reading, United Kingdom); R. Simon Sherratt (University of Reading, United Kingdom); Pablo Huerta (Universidad Rey Juan Carlos, Spain); Wen-Chung Kao

(National Taiwan Normal University, Taiwan); Graham Megson (University of Westminster, London, United Kingdom)
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Energy-Efficient Data Synchronization for Cooperative Context-Aware Computing

Wonjong Noh (Samsung Advanced Institute of Technology, Korea); Tae-Suk Kim (Samsung Advanced Institute of Technology, Korea); JaeHoon Kim (Samsung Electronics, Korea); Changyong Shin (Samsung Advanced Institute of Technology, Korea); Kyunghun Jang (Samsung Advanced Institute of Technology, Korea)
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Efficient High Throughput Rate Cross-Correlation Logic Design for Sign-Bit Reference Waveforms

Seok Joong Hwang (Samsung Advanced Institute of Technology, Korea); Donghoon Yoo (Samsung Advanced Institute of Technology, Korea); Soojung Ryu (Samsung Advanced Institute of Technology, Korea); Jeongwook Kim (Samsung Advanced Institute of Technology, Korea)
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A Novel Readout Chip with Extendability for Multi-Channel EEG Measurement

Yi-Chung Chen (National Chiao Tung University, Taiwan); Chung-Han Tsai (National Chiao Tung University, Taiwan); Zong-Han Hsieh (National Chiao Tung University, Taiwan); Wai-Chi Fang (National Chiao Tung University, Taiwan)
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The Acceleration of Various Multimedia Applications on Reconfigurable Processor

Min-wook Ahn (Samsung Advanced Institute of Technology, Korea); Donghoon Yoo (Samsung Advanced Institute of Technology, Korea); Soojung Ryu (Samsung Advanced Institute of Technology, Korea); Jeongwook Kim (Samsung Advanced Institute of Technology, Korea)
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2.7: Mobile Technologies for Health (Inspired by Tricorder X-Prize)

Mobile and Wireless EEG Systems for Understanding Human Cognitive Function in Daily-Life Applications, Chin-Teng Lin and Li-Wei Ko, National Chiao Tung University, Taiwan

Use of Mobile & Social Technologies for Health Measurement and Intervention, Kevin Patrick, UCSD

Organizing for Innovation for Developing Solutions for the Seniors and Disabled, Sunish Gupta, MIT

Bringing It All Back Home: Can Consumer Electronics Help Cut Health Care Costs in the Connected Home? Rob Matthews, West Health Institute

2.8: Associated Session: Affective Computing

Real-time Realistic 3D Facial Expression Cloning for Smart TV

Jung-Bae Kim (Samsung Electronics Co., Korea)
pp. 240-241

Discovering Unusual Behavior Patterns From Motion Data

Kai-Lin Pang (National Cheng Kung University, Taiwan); Guan-Hong Chen (National Cheng Kung University, Taiwan); Wei-Guang Teng (National Cheng Kung University, Taiwan)
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Sentiment Diffusion in Large Scale Social Networks

Jie Tang (Tsinghua University, P.R. China); Acm Fong (Auckland University of Technology, New Zealand)
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Novel Approach of Device Collaboration Based on Device Social Network

Kyuchang Kang (ETRI, Korea); Dong-oh Kang (ETRI, Korea); Chang Seok Bae (ETRI, Korea)
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Development and Evaluation of Myoelectric Driving Interface

Jaesung Oh (Handong Global University, Korea); Minsuk Kwon (Handong Global University, Korea); Youngwon Kim (Handong Global University, Korea); Jungsoo Kim (Handong Global University, Korea); Sungyoon Lee (Handong Global University, Korea); Jaehyo Kim (Handong Global University, Korea)
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2.9: Smart Imaging I

A Novel Anti-Vignetting Method for Color Shading Artifact Suppression

Ja-Won Seo (KAIST, Korea); Jong-Hyub Lee (Samsung Electronics, Korea)
pp. 250-251

Half-Face Detector for Enhanced Performance of Flash-Eye Filter

Peter Corcoran (National University of Ireland, Galway, Ireland); Petronel Bigioi (DigitalOptics Corporation Europe Ltd. & National University of Ireland, Galway, Ireland); Florin Nanu (Tessera, Romania)
pp. 252-253

Moving Object-High Dynamic Range Imaging (HDRI) for Artifact-free Digital Camera

Wonhee Choe (Samsung Electronics, Samsung Advanced Institute of Technology, Korea); Sungchan Park (Samsung Electronics, Samsung Advanced Institute of Technology, Korea); Hyun-Hwa Oh (Samsung Electronics, Samsung Advanced Institute of Technology, Korea); Seong-Deok Lee (Samsung Electronics, Samsung Advanced Institute of Technology, Korea)
pp. 254-255

Stereo Panoramic Image Stitching with a Single Camera

Junguk Cho (SAIT, Samsung Electronics, Korea); Joon Hyuk Cha (Samsung Electronics, Korea); Yong Min Tai (SAIT, Samsung Electronics, Korea); Young-Su Moon (Samsung Advanced Institute of Technology, Samsung Electronics, Korea); Shihwa Lee (SAIT Samsung Electronics, Korea)
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AAM-based Face Reorientation Using a Single Camera

Dowan Kim (Samsung Electronics, Korea); Sungjin Kim (Samsung Electronics, Korea); Ying Huang (Samsung Electronics, P.R. China); Jianfa Zou (Samsung Electronics, P.R. China); Junjun Xiong (Samsung Electronics, P.R. China); Jongsul Min (Samsung Electronics, Korea)
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T.3: TUTORIAL - 3 (3D) Joe Kane

Coffee

Demo Session

2.10: Stereo

A Novel Stereoscopic Image Processing Pipeline

Ja-Won Seo (KAIST, Korea); HaeSun Lee (Samsung, Korea); Jong-Hyub Lee (Samsung Electronics, Korea); Sungjun Yim (Samsung Electronics, Korea); Sang bae Park (Samsung, Korea)
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Depth Estimation Based on Blur Measurement for Three Dimensional Camera

Ikhyun Lee (Gwangju Institute of Science and Technology, Korea); Muhammad Tariq Mahmood (Korea University of Technology and Education, Korea); Seong-O Shim (King Abdulaziz University, Saudi Arabia); Sung-An Lee (Gwangju Institute of Science and Technology, Korea); Tae-Sun Choi (Gwangju Institute of Science and Technology, Korea)
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Visual Quality Improvement for Hybrid 3DTV with Mixed Resolution Using Conditional Replenishment Algorithm

Kyeong Hoon Jung (Kookmin University, Korea); Min-Suk Bang (Kookmin University, Korea); Sung-Hoon Kim (Electronics & Telecommunications Research Institute, Korea); Hyon-Gon Choo (Electronics and Telecommunications Research Institute, Korea); Dong Wook Kang (Kookmin University, Korea)
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Analysis on the Susceptible Level of 3D Crosstalk and Its Effect on the 3D Nausea

Hee-Jin Choi (Sejong University, Korea); Minyoung Park (Sejong University, Korea); Joohwan Kim (University of California, Berkeley, USA); Jae-Hyeung Park (Chungbuk National University, Korea); Sung-Wook Min (Kyung Hee University, Korea)
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2.11: Digital Health

Scalable ECG Transmission to Improve the Diagnosability of Remote Patient

Yongwoo Cho (Seoul National University, Korea); Junhee Ryu (Seoul National University, Korea); Juyoung Park (Hanyang University, Korea); Jaemyoun Lee (Hanyang University, Korea); Heonshik Shin (Seoul National University, Korea); Kyungtae Kang (Hanyang University, Korea)
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Automatic Waist Airbag Drowning Prevention System Based on Underwater Time-lapse and Motion Information Measured by Smartphone's Pressure Sensor and Accelerometer

Mohamed Kharrat (The University of Tokyo, Japan); Yuki Wakuda (University of Tokyo, Japan); Noboru Koshizuka (The University of Tokyo, Japan); Ken Sakamura (The University of Tokyo, Japan)
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Leveraging Smart Grid Technology for Home Health Care

Thomas Thomas (University of South Alabama, USA); Cade Cashen (University of South Alabama, USA); Samuel Russ (University of South Alabama, USA)
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Active Monitoring for Lifestyle Disease Patient Using Data Mining of Home Sensors

Young-Sung Son (ETRI, Korea); Topi Pulkkinen (VTT Technical Research Centre of Finland, Finland); Jun Hee Park (ETRI, Korea)
pp. 276-277

2.12: Content Analysis

Positive and Negative Max Pooling for Image Classification

Bin Wang (National University of Defence Technology, P.R. China); Yu Liu (National University of Defence Technology, P.R. China); WenHua Xiao (National University of Defense Technology, P.R. China); Zhihui Xiong (National University of Defense Technology, P.R. China); Maojun Zhang (National University of Defense Technology, P.R. China)
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Visual Duplicate Based Topic Linking Using a Robust Video Signature

Kota Iwamoto (NEC Corporation, Japan); Takami Sato (NEC Corporation, Japan); Ryoma Oami (NEC Corporation, Japan); Toshiyuki Nomura (NEC Corporation, Japan)
pp. 280-283

Vision-based Absolute Indoor Point Positioning in the Hallway Without Image Database

Hyunho Lee (Korea Institute of Science and Technology, Korea); Jaehun Kim (KIST, Korea); Seok Lee (Korea Institute of Science and Technology, Korea); Sanghoon Lee (Yonsei University, Korea); Taikjin Lee (Korea Institute of Science and Technology, Korea)
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New Multi-Step Sampling with Adaptive Sampling Patterns in Particle Filtering for Tracking in Surveillance Systems

Wan-Chi Siu (The Hong Kong Polytechnic University, Hong Kong); Zhang Chen (Hong Kong Polytechnic University, Hong Kong)
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2.13: Smart Imaging II

An Extensible Framework for Facial Motion Tracking

Xiaolu Shen (Samsung Advanced Institute of Technology, P.R. China); Xuetao Feng (Samsung Advanced Institute of Technology, P.R. China); Jungbae Kim (Samsung Advanced Institute of Technology, Korea); Hui Zhang (Samsung Advanced Institute of Technology, P.R. China); Youngkyoo Hwang (Samsung Advanced Institute of Technology, Korea); Ji-yeun Kim (Samsung Advanced Institute of Technology, Korea)
pp. 288-291

Flash Image Quality Enhancement by Compensating the Quantity of Flash Light

Sung Kwang Cho (Samsung Electronics, Korea); Won Ho Cho (Samsung Electronics & System LSI, Korea); Tae-Chan Kim (Samsung Electronic Co. Ltd., Korea)
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Real-Time Digital Zooming for Mobile Consumer Cameras Using Directionally Adaptive Image Interpolation and Restoration

Wonseok Kang (Image Processing and Intelligent Systems Laboratory, Chung-Ang University, Korea); Jaehwan Jeon (Chung-Ang University, Korea); Eunjung Chae (Chung-Ang University, Korea); Min Kyu Park (Samsung Electronics, Korea); Joonki Paik (Chung-Ang University, Korea)
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Fast Adjustment Method of Spherical Aberration and Focus Offset by Elliptic Equation

Yusuke Kanatake (Mitsubishi Electric Corp., Japan)
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T.4: TUTORIAL - 4 Immersive Tech (Cooperstock)

K.5: Keynote 5 - Satwant Kaur (HP Labs)

Coffee

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Transparent Fast Resynchronization for Consumer RAID

Sung Hoon Baek (Jungwon University, Korea)
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Fast Coding Unit Decision Algorithm Based on Inter and Intra Prediction Unit Termination for HEVC

Hyang-mi Yoo (Chungbuk national university, Korea); Jae-Won Suh (Chungbuk National University, Korea)
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A Pseudo Metamesh Approach for 3D Mesh Morphing

Bogdan Mocanu (Institut TELECOM, France); Titus Zaharia (Institut TELECOM, France)
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Motion Estimation Algorithm for Periodic Pattern Objects Based on Spectral Image Analysis

Seung Gu Kim (Samsung Electronics, Korea); Tae-Gyoung Ahn (Samsung Electronics, Korea); Se-Hyeok Park (Samsung Electronics, Korea)
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Music Classification Applying Prime Form and Interval-Class Vector

Takashi Maekaku (UEC, Japan); Hiroyuki Kasai (The University of Electro-Communications, Japan)
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Speaker Dependent Visual Speech Recognition Using Extended Curvature Gabor Filters

Jeongwoo Ju (Korea Advanced Institute of Science and Technology, Korea); Heechul Jung (KAIST, Korea); Junmo Kim (KAIST, Korea)
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A New Low Energy IMF Based Audio Stenographic Technique

Saif alZahir (UNBC, Canada); Md Wahedul Islam (UNBC & University of Rajshahi, Canada)
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Hybrid Immersive Audio Architecture Based on 3D Object Layer

Young Woo Lee (Samsung Electronics, Korea); Sunmin Kim (Samsung Electronics, Korea)
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Integration of Face Recognition and Sound Localization for a Smart Door Phone System

Taewan Kim (Kyung Hee University, Korea); Hyungsoo Park (Kyung Hee University, Korea); Yunmo Chung (Kyung Hee University, Korea)
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Acoustic Signal Based Abnormal Event Detection System with Multiclass Adaboost

Younghyun Lee (Korea University, Korea); Hanseok Ko (Korea University, Korea); K. Han David (Office of Naval Research, USA)
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3D Sound Rendering System Based on Relationship Between Stereoscopic Image and Stereo Sound for 3DTV

Sunmin Kim (Samsung Electronics, Korea); Young Woo Lee (Samsung Electronics, Korea); Yoon Jae Lee (Samsung Electronics, Korea)
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A General Search Strategy for Multiple Reference Frame Motion Estimation

Chun-Su Park (SangMyung University, Korea)
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Complexity Scalable H.264/AVC-to-SVC Transcoding

Sebastian Van Leuven (Ghent University - IBBT, Belgium); Jan De Cock (Ghent University - iMinds, Belgium); Glenn Van Wallendael (Ghent University - IBBT, Belgium); Rosario Garrido-Cantos (University of Castilla-La Mancha, Spain); Rik Van de Walle (Ghent University - IBBT, Belgium)
pp. 328-329

Image Compression with Meanshift Based Inverse Colorization

Taekyung Ryu (Dongseo University, Korea); Ping Wang (Dongseo University, Korea); Sukho Lee (Dongseo University, Korea)
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Multi-histogram Based Scene Change Detection for Frame Rate Up-Conversion

Suk-Ju Kang (Dong-A University, Korea); Sung In Cho (Pohang University of Science and Technology, Korea); Sungjoo Yoo (Postech, Korea); Young Hwan Kim (Pohang University of Science and Technology, Korea)
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Active Shutter Glasses for 3D HDTV with Flexible Liquid Crystal Lens

Jeong In Han (Dongguk University, Korea)
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High-performance HOG Feature Extractor Circuit for Driver Assistance System

Seonyoung Lee (Korea Electronics Technology Institute, Korea); Haengseon Son (Korea Electronics Technology Institute, Korea); Jong-Chan Choi (KETI, Korea); Kyungwon Min (Korea Electronics Technology Institute, Korea)
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Speech Enhancement by Kalman Filtering with a Particle Filter-Based Preprocessor

Yun-Kyung Lee (Chungbuk National University, Korea); Gyeo-Woon Jung (Chungbuk National University, Korea); Oh-Wook Kwon (Chungbuk National University, Korea)
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3.1: Optimized Video Processing

Graph-Based Parallelization Algorithm for Deblocking Filter in H.264/AVC

Seongmin Jo (Hanyang University, Korea); Song Yong Ho (Hanyang University, Korea)
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Energy Efficient Video Decoding for the Android Operating System

Wen-Yew Liang (National Taipei University of Technology, Taiwan); Ming-Feng Chang (National Taipei University of Technology, Taiwan); Yen-Lin Chen (National Taipei University of Technology, Taiwan); Chin-Feng Lai (National Ilan University, Taiwan)
pp. 344-345

A Fast Low-Light Multi-Image Fusion with Online Image Restoration

Young-Su Moon (Samsung Advanced Institute of Technology, Samsung Electronics, Korea); Shihwa Lee (SAIT Samsung Electronics, Korea); Yong Min Tai (SAIT, Samsung Electronics, Korea); Junguk Cho (SAIT, Samsung Electronics, Korea)
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Fast Generating Thumbnail in MBAFF Mode of H.264/AVC Intra-Coded

Huy Tran (Kyung Hee University, Korea); Won-Ha Kim (Kyung Hee University, Korea)
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Constrained Two-bit Transform for Low Complexity Motion Estimation

Changryoul Choi (Hanyang University, Korea); Jechang Jeong (Hanyang University, Korea)
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3.2: Transactions on Consumer Electronics Talk

3.3: Audio for Consumer Healthcare

A High Performance Hearing Aid System with Fully Programmable Ultra Low Power DSP

Yunseo Ku (Samsung Advanced Institute of Technology, Samsung Electronics, Korea); Junil Sohn (Samsung Advanced Institute of Technology, Samsung Electronics, Korea); Jonghee Han (Samsung Advanced Institute of Technology, Korea); Yonghyun Baek (Yonsei University, Korea); Dong Wook Kim (Samsung Advanced Institute of Technology, Korea)
pp. 352-353

Implementation and Verification of a Platform for Bluetooth Linked Hearing Aids System with Smart Phone and Multimedia Devices

Dong Wook Kim (Kyungpook National University, Korea); Eui Sung Jung (Kyungpook National University, Korea); Ki Woong Seong (Kyungpook National University Hospital, Korea); Jyung Hyun Lee (Kyungpook National University Hospital, Korea); Jin Ho Cho (Kyungpook National University, Korea)
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Smartphone-based Self Hearing Assessment Using Phonemes

Jong Min Choi (Samsung Advanced Institute of Technology, Korea); Junil Sohn (Samsung Advanced Institute of Technology, Samsung Electronics, Korea); Yunseo Ku (Samsung Advanced Institute of Technology, Samsung Electronics, Korea); Dong Wook Kim (Samsung Advanced Institute of Technology, Korea)
pp. 356-357

Development of a Speech-distortionless Beamformer for Two-microphone Digital Hearing Aids

Jonghee Han (Samsung Advanced Institute of Technology, Korea); Kyeongwon Cho (Hanyang University, Korea); In Young Kim (Hanyang University, Korea); Sung Hwa Hong (Samsung Medical Center, Korea); Dong Wook Kim (Samsung Advanced Institute of Technology, Korea)
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Dialogue Enabling Speech-to-Text User Assistive Agent with Auditory Perceptual Beamforming for Hearing-Impaired

SeongJae Lee (University of SeoKyeong, Korea); Sunmee Kang (University of SeoKyeong, Korea); Hanseok Ko (Korea University, Korea); Jongseong Yoon (Korea University, Korea); Minseok Keum (Korea University, Korea)
pp. 360-361

3.4: RF-Transmission Techniques I

Wireless Powering Management by Analog Circuitry Based In-Band Signaling Controller

Dong-Zo Kim (Samsung Advanced Institute of Technology, Korea); Ki Young Kim (Samsung Advanced Institute of Technology, Korea); Young-Ho Ryu (Samsung Advanced Institute of Technology, Korea); Nam Yoon Kim (Samsung Advanced Institute of Technology, Korea); Yun-Kwon Park (Samsung Advanced Institute of Technology, Korea); Sangwook Kwon (Samsung Advanced Institute of Technology, Korea)
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A New Rate-2 2x2 STBC with Low Complexity ML Detection

Sung Ik Park (Electronics and Telecommunications Research Institute (ETRI), Korea); Heung Mook Kim (ETRI, Korea); Namho Hur (Electronics and Telecommunications Research Institute, Korea); Jeongchang Kim (Korea Maritime University, Korea)
pp. 364-365

Implementation of Interference Cancelling Repeater Based-on Software Defined Radio in Long Term Evolution

Jongmin Kim (Korea University, Korea)
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Forward Link ACM for Satellite Communication

JoonGyu Ryu (ETRI, Korea)
pp. 368-369

A Seamless Channel Handover Method for Service Continuity in Super Wi-Fi

Myeongyu Kim (Korea University, Korea); Youchan Jeon (Korea University, Korea); Sangwon Park (Korea Communications Commission (KCC), Korea); Jinwoo Park (Korea University, Korea)
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3.5: A/V Other

A Mobile Agent Framework for Ubiquitous Media Access

Craig Gelowitz (University of Regina, Canada); Luigi Benedicenti (University of Regina, Canada); Raman Paranjape (University of Regina, Canada)
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The Single Image Dehazing Based on Efficient Transmission Estimation

Soowoong Jeong (Chung-Ang University, Korea); Sangkeun Lee (Chung-Ang University, Korea)
pp. 376-377

Efficient Asynchronous Re-sampling Implementation on a Low-power Fixed-point DSP

Markus Borgh (Limes Audio, Sweden); Christian Schüldt (Blekinge Institute of Technology, Sweden); Ingvar Claesson (Blekinge Institute of Technology, Sweden)
pp. 378-379

Total Variation Regularization Algorithm for Video Stabilization in a Digital Camera

Wooram Son (Samsung Electronics, Korea); Sungbin Hong (Samsung Electronics, Korea); Seonghun Kim (Samsung Electronics, Korea)
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A Markovian Algorithm for Creating Immersive Public-Speaking Audiences

Nicklaus Thomas (University of South Alabama, USA); David Evans (University of South Alabama, USA); Samuel Russ (University of South Alabama, USA)
pp. 382-383

Lunch

3.6: Chester Sall Award \ Ibuka Award \ Presentation

3.6: Associated Session: 2D Display

Perceived Distortion Aware Backlight Dimming for Low Power and High Quality LCD Devices

Dong-Gon Yoo (Pohang University of Science and Technology, Korea); Young Hwan Kim (Pohang University of Science and Technology, Korea)
pp. 384-385

A Comparative Evaluation of Perceptibility of Lip-Sync Errors for Different Shots and Angles in 3DTV and 2DTV

Aleksandra Fedina (University of Film and Television, Russia); Konstantin Glasman (St. Petersburg State University of Film and Television, Russia); Eugenie Grinenko (St. Petersburg university of film and television, Russia)
pp. 386-388

Memory Reduction Method of Luminance Compensation Algorithm for Mobile AMOLED Display Applications

Kyonghwan Oh (Hanyang University, Korea); Nack-Hyun Keum (Hanyang University, Korea); Oh-Kyong Kwon (Hanyang University, Korea)
pp. 389-390

Edge Connectivity-Based Image Denoising for Digital TV Systems

Sung In Cho (Pohang University of Science and Technology, Korea); Young Hwan Kim (Pohang University of Science and Technology, Korea)
pp. 391-392

Adaptively Partitioned Block-Based Backlit Image Enhancement for Consumer Mobile Devices

Nahyun Kim (Chung-Ang University, Korea); Seungwon Lee (Chung-Ang University, Korea); Ewoo Chon (Nextchip Co, Korea); Monson Hayes (Georgia Institute of Technology, USA); Joonki Paik (Chung-Ang University, Korea)
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3.7: Audio Signal Processing

Feedback ANC Based Voice Enhancing Earmuffs System

Seong-Pil Moon (Chung-Ang University, Korea); Tae-Ho Roh (Chung-Ang University, Korea); Tae-Gyu Chang (Chung-Ang University, Korea)
pp. 395-396

The Improvement of Mobile Phone Voice Quality by Bone-Conduction Device

Hyung-woo Park (Soong-Sil University & Sori Engineering Lab., Korea); A-Ra Khil (Soong-Sil University, Korea); Myung-Jin Bae (Soongsil univ., Korea)
pp. 397-398

Virtual Bass System Based on a Multiband Harmonic Generation

Taegyu Lee (Yonsei University, Korea); Seokjin Lee (LG Electronics, Korea); Young-cheol Park (Yonsei University, Korea); Dae Hee Youn (Yonsei University, Korea)
pp. 399-400

Multi-Band Spectral Subtraction Based Zoom-Noise Suppression for Digital Cameras

Kwang Myung Jeon (Gwangju Institute of Science and Technology (GIST), Korea); Nam In Park (Gwangju Institute of Science and Technology (GIST), Korea); Hong Kook Kim (Gwangju Institute of Science and Technology (GIST), Korea); Myung Kyu Choi (Samsung Electronics, Korea); Kwang Il Hwang (Samsung Electronics, Korea)
pp. 401-402

A Zooming-Noise Suppressor with No A Priori Information for Digital Still Cameras

Akihiko K. Sugiyama (NEC Corporation, Japan); Ryoji Miyahara (NEC Engineering Ltd., Japan)
pp. 403-404

3.8: RF-Transmission Techniques 2

UHDTV Transmission Based on Broadcasting Channel Bonding

Woongshik You (ETRI, Korea); Joon-Young Jung (ETRI, Korea); Dong-Joon Choi (ETRI, Korea); Oh-yung Kwon (Digital Broadcasting Research Division, Broadcasting System Group, ETRI, Korea); Oh-Seok Kwon (Chungnam National University, Korea)
pp. 405-406

Minimizing the Bandwidth Consumption of the FlexRay Dynamic Segment

Minkoo Kang (Ajou University, Korea); Kiejin Park (Ajou University, Korea); Jinyoung Choi (Ajou University, Korea); Man-sik Kong (Institute for Advanced Engineering, Korea)
pp. 407-408

Self-mixed Interference Cancellation Method in Direct Conversion Receivers

Moonchang Choi (Yonsei University, Korea); Sooyong Choi (Yonsei University, Korea)
pp. 409-410

A Modified MIMO with High Data Rates for Set-Top Box in Single Carrier System

Bong Gyun Jo (School of Electronics Engineering, Kyungpook National University, Korea); Dong Seog Han (Kyungpook National University, Korea)
pp. 411-412

Protection Ratios for Interference Between ATSC Signals (Invited)

Charles Rhodes (Independent Consultant, USA)
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3.9: Video Transmission & QoE

Dynamic Voltage and Frequency Scaling Over Delay Constrained Mobile Multimedia Service

Jihyeok Yun (Kyunghee University, Korea); Kyungmo Park (Samsung eElectronics, Korea); Doug Young Suh (Kyunghee University, Korea)
pp. 414-417

Error Resilient Reference Selection for H.264/AVC Streaming Video Over Erroneous Network

Shaikhul Islam Chowdhury (Chosun University, Korea); Jenq-Neng Hwang (University of Washington, USA); Po-Han Wu (University of Washington, USA); Jae-Young Pyun (Chosun University & Dept. of Information and Communication Engineering, Korea); Goo-Rak Kwon (Chosun University, Korea)
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Efficient Video Transmission Using Network Coding Over WLAN

Kyu-Sung Hwang (Kyungil University, Korea); Ronny Yongho Kim (Korea National University of Transportation, Korea)
pp. 420-421

Implementation of a Seamless Uncompressed Video Transmission System in 60GHz Bands

Jonghwa Choi (ETRI, Korea); Hyoungjin Kwon (ETRI, Korea); Jin-kyeong Kim (ETRI, Korea); Woo Yong Lee (ETRI, Korea); Younggap You (Chungbuk National University, Korea)
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Development of HTTP-based Multivision Video Streaming Server and Benchmark Evaluation

Wakisaka Yuuki (The University of Electro-Communications, Japan); Hiroyuki Kasai (The University of Electro-Communications, Japan)
pp. 424-425

T.5: TUTORIAL - 5 LTE, Hirtz

Coffee

Poster Session HCI_3

Accessible Display Design to Control Home Area Networks

Laisa C. P. Costa (University of Sao Paulo & LSI-TEC, Brazil); Nicholas S. Almeida (University of Sao Paulo, Brazil); Marcelo K Zuffo (University of São Paulo, Brazil)
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A Sketch-Based Interface for Remote Robot Control on an Online Video Screen

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Donghyun Kim (Yonsei University & Department of Electrical and Electronic Engineering, Korea); Seungchul Ryu (Yonsei University, Korea); Sunghwan Choi (Yonsei University & Digital Image Media Laboratory, Korea); Kwang Hoon Sohn (Yonsei University, Korea)
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Petros Belimpasakis (Bang & Olufsen, Germany)
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YoonJin Kim (Chungbuk National University, Korea); Jong-Ha Im (Samsung Electronics, Korea); In-Sung Lee (Chungbuk National University, Korea)
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An UHDTV Cable Television Distribution in Combinations of Multiple 64 and 256 QAM Channels

Yoshitaka Hakamada (Japan Broadcasting Corporation (NHK), Japan); Naoyoshi Nakamura (NHK (Japan Broadcasting Corporation), Japan); Kimiyuki Oyamada (NHK (Japan Broadcasting Corporation), Japan); Takuya Kurakake (Nhk(Japan Broadcasting Corporation), Japan); Takeshi Kusakabe (Japan Broadcasting Corporation (NHK), Japan)
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Ryo Araki (Tokyo University of Science, Japan); Akira Nakamura (Tokyo University of Science, Japan); Kohei Ohno (Tokyo University of Science, Japan); Makoto Itami (Tokyo University of Science, Japan)
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Yuta Yamamura (Waseda University, Japan); Shinya Iwasaki (Waseda University, Japan); Yasutaka Matsuo (Waseda University & Japan Broadcasting Corporation (NHK), Japan); Jiro Katto (Waseda University, Japan)
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Yeong-Kang Lai (National Chung Hsing University, Taiwan); Yu-Fan Lai (National Chung Hsing University, Taiwan); Cheng-Han Dai (National Chung Hsing University, Taiwan); Thomas Schumann (Hochschule Darmstadt-University of Applied Sciences, Germany)
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Tsuyoshi Ikushima (Panasonic Corporation, Japan); Tsutomu Niiho (Panasonic Corporation, Japan); Osamu Shibata (Panasonic Corporation, Japan); Syuji Kato (Panasonic Corporation, Japan); Naoshi Usuki (Panasonic Corporation, Japan)
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Dhivya Govindasamy (Centre for Development of Advanced Computing, India); Subaashini Krishnamurthy (Centre for Development of Advanced Computing, India); Shamshudeen J (Centre for Development of Advanced Computing, India); Rekha G (Centre for Development of Advanced Computing, India); Pitchiah R (Centre for Development of Advanced Computing, India)
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Haitham Y Adarbah (De Montfort University, United Kingdom); Scott L Linfoot (De Montfort University & Fiteris Ltd, United Kingdom); Bassel Arafeh (Sultan Qaboos University, Oman); Alistair Duffy (De Montfort University, United Kingdom)
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Wenzhu Zhang (Xidian University, P.R. China); Kyung Sup Kwak (Inha University, Korea); Hongxiang Wang (Xidian University, P.R. China); Jae-doo Huh (Electronics and Telecommunications Research Institute, Korea)
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Joonghong Park (Samsung Electronics & SAIT, Korea); JaeHoon Kim (Samsung Electronics, Korea); Myeong-Wuk Jang (Samsung Advanced Institute of Technology, Korea); Byoung-Joon BJ Lee (Samsung Advanced Institute of Technology, Korea)
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Hierarchical Packet Scheduler for Supporting Fairness and QoS Over DVB-S2 ACM Systems

ManKyu Park (ETRI, Korea); Dongbae Kang (University of Science and Technology, Korea); Min-Su Shin (ETRI, Korea); DeokGil Oh (Electronics and Telecommunications Research Institute, Korea)
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Eunjeong Jang (Kyungpook National University, Korea); Rinara Woo (Kyungpook National University, Korea); Dong Seog Han (Kyungpook National University, Korea)
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Akiyoshi Wakatani (Konan University, Japan); Akio Murakami (Konan University, Japan)
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Seung Sik Lee (ETRI, Korea); Byounghak Kim (ETRI, Korea); Jae Young Kim (ETRI, Korea);
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Hosung Park (Chungnam National University, Korea); Jeongcheol Lee (Chungnam National
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National University, Korea); Sang-Ha Kim (Chungnam National University, Korea)
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Hiroyuki Kasai (The University of Electro-Communications, Japan)
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Molin Jia (Waseda University, Japan); Chaoyang Wang (Waseda University, Japan); Kui-Ting Chen
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Ee-May Fong (Pukyong National University, Korea); Tae-Ha Kwon (Pukyong National University,
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Jui-Chieh Liao (National Chiao Tung University, Taiwan); Wai-Chi Fang (National Chiao Tung
University, Taiwan)
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Agi Prasetiadi (Kumoh National Institute of Technology, Korea); Dong Sung Kim (Kumoh National
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Chei-Yol Kim (ETRI, Korea); Soo-Cheol Oh (Electronics and Telecommunications Research Institute,
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Ahn (Electronics and Telecommunications Research Institute (ETRI), Korea); Young-Kyun Kim
(Electronics and Telecommunications Research Institute, Korea)
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Hae-woo Park (Samsung Advanced Institute of Technology, Korea); Wonsub Kim (Samsung
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Kim (Samsung Advanced Institute of Technology, Korea)
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Sanghyuk Jung (Hanyang University, Korea); Yong Ho Song (Hanyang University, Korea)
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Francisco J. Bellido Outeiriño (University of Córdoba, Spain); José Flores Arias (Universidad de
Cordoba, Spain); Matías Liñán-Reyes (University of Cordoba, Spain); Emilio Palacios-García
(University of Cordoba, Spain)
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Smart Electric Vehicle Charging for Smart Home/Building with a Photovoltaic System

Young-Min Wi (Korea University, Korea); Jong-Uk Lee (Korea University, Korea); Sung-Kwan Joo
(Korea University, Korea)

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Real-Time Hand Shape Recognition by Orientation Invariant Data Learning for Smart TV

Jae-Joon Han (Samsung Advanced Institute of Technology, Korea); Changkyu Choi (Samsung Electronics, Korea); ByungIn Yoo (Samsung Electronics, Korea); Dusik Park (Advanced Media Lab, SAIT, Samsung Electronics, Korea); Changyeong Kim (Samsung Advanced Institute of Technology, Korea)
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A Robust Human Pointing Location Estimation Using 3D Hand and Face Poses with RGB-D Sensor

Donghun Kim (Purdue University, USA); Kihyun Hong (Purdue University, USA)
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Endowing Existing Desktop Applications with Customizable Body Gesture-based Interfaces

Fabrizio Lamberti (Politecnico di Torino, Italy); Andrea Sanna (Politecnico di Torino, Italy); Gianluca Paravati (Politecnico di Torino, Italy); Claudio Demartini (Politecnico di Torino, Italy)
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4.2: Enabling Technology

Non-Mating Connector for USB A Quality Waterproof Connection

Joshua Benjestorf (NMC Corporation & University of California, Davis, USA); Xiaoguang Liu (University of California, Davis, USA)
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Generation of Efficient Bitstreams for Functional Tests of Video Decoders

Soonwoo Choi (Seoul National University, Korea); JiCheon Kim (SNU, Korea)
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Compression Friendly Medical Image Encryption Based Order Relation

Ganzorig Gankhuyag (Yonsei University, Korea); Soongi Hong (Yonsei University, Korea); Yoonsik Choe (Yonsei University, Korea)
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Address Generation for Lossless Frame Memory Compression in an H.264/AVC Encoder

Hyun Kim (Seoul National University, Korea); Chae Eun Rhee (Seoul National University, Korea); Hyuk-Jae Lee (Seoul National University, Korea)
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A 0.67nJ/S Time-domain Temperature Sensor for Low Power On-chip Thermal Management

Young-Jae An (Yonsei University, Korea); Kyungho Ryu (Yonsei University, Korea); Dong Hoon Jung (Yonsei University, Korea); Seung-Han Woo (Yonsei University, Korea); Seong-Ook Jung (Yonsei University, Korea)
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4.3: OFDM-Applications

A Fast Adaptive Power Allocation for Maximizing a Discrete Utility Function of OFDMA System

Sungho Hwang (LIG Nex1, Korea); Youn-Seon Jang (Chungnam National University, Korea); Ho-Shin Cho (Kyungpook National University, Korea)
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Enhanced Min-Sum Decoding for DVB-T2 LDPC Codes

Sung Ik Park (Electronics and Telecommunications Research Institute (ETRI), Korea); Young Min Choi (Cleverlogic, Korea); Heung Mook Kim (ETRI, Korea); Jeongchang Kim (Korea Maritime University, Korea); Wangrok Oh (Chungnam National University, Korea)
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A Dual-Code-Rate Memoryless Viterbi Decoder for Wireless Communication Systems

Chu Yu (National ILan University, Taiwan); Yu-Shan Su (National ILan University, Taiwan); Bor-Shing Lin (National Taipei University, Taiwan); Po-Hsun Cheng (National Kaohsiung Normal University, Taiwan); Sao-Jie Chen (National Taiwan University, Taiwan)
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Software-Defined DVB-T2 Receiver Using Coarse-Grained Reconfigurable Array Processors

Navneet Basutkar (Samsung Advanced Institute of Technology, Korea); Ho Yang (Samsung Advanced Institute of Technology, Korea); Peng Xue (Samsung Advanced Institute of Technology (SAIT), Korea); Kitaek Bae (Samsung Advanced Institute of Technology, Korea); Young-Hwan Park (Samsung Advanced Institute of Technology, Korea)
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GPU Based Software DVB-T Receiver Design

Kyu-Hyung Lee (Hongik University, Korea); Seo Weon Heo (Hongik University, Korea)
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A Novel QR Code Guided Image Stenographic Technique

Md Wahedul Islam (UNBC & University of Rajshahi, Canada); Saif alZahir (UNBC, Canada)
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Live Video Streaming with Adaptive Pre-Processing by Using Scalable Video Coding

Dan Grois (Ben-Gurion University of the Negev, Israel); Ofer Hadar (Ben-Gurion University of the Negev, Israel); Roni Ohayon (Bar-Ilan University, Israel); Noam Amram (LiveU, Israel)
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Exploring Visual Temporal Masking for Video Compression

Velibor Adzic (Florida Atlantic University, USA); Hari Kalva (Florida Atlantic University, USA); Borko Furht (Florida Atlantic University, USA)
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Context Adaptive Block Scan for Video Coding

Si-Woong Lee (Hanbat National University, Korea); Hyun-Soo Kang (Chungbuk National University, Korea); Yun-Ho Ko (Chungnam National University, Korea)
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Subjective Quality Assessment of Object-Based Video Material

Juergen Wuenschmann (Universitaet Ulm, Germany); Albrecht Rothermel (University of Ulm, Germany)
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T.7: TUTORIAL - 7, White Space, Amr Fahim

Lunch

Best Paper Awards, Keynote 8: Joe Decuir (CSR)

4.5: Associated Session: Touch

PCA Based Shape Recognition for Capacitive Touch Display

Ivana Guarneri (STMicroelectronics, Italy); Alessandro Capra (ST Microelectronics, Italy); Alfio Castorina (ST Microelectronics, Italy); Sebastiano Battiato (University of Catania, Italy); Giovanni Maria Farinella (University of Catania, Italy)
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Touch Pointer: Rethink Point-and-Click for Accurate Indirect Touch Interactions on Small Touchscreens

Taekyoung Kwon (Sejong University, Korea); Sarang Na (Sejong Universtiy, Korea); Sooyeon Shin (Sejong Universtiy, Korea)
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Grip-Ball: A Spherical Multi-Touch Interface for Interacting with Virtual Worlds

Seungju Han (Samsung Electronics, Korea); Joonah Park (Samsung Advanced Institute of Technology, Korea)
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Design and Implementation of a New Thin Cost Effective AC Hum Based Touch Sensing Keyboard

Hatem Elfekey, student (German University in Cairo, Egypt); Hany A Bastawrous (German University in Cairo, Egypt)
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A Touch Based Affective User Interface for Smartphone

Mira Kim (Samsung Electronics, Korea); Hyun-Jun Kim (Samsung Advanced Institute of Technology & Samsung Electronics, Korea); Sunjae Lee (Samsung Electronics, Korea); Young Sang Choi (Samsung Electronics, Korea)
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4.6: Automotive 1

HW/SW Architecture for Speech Recognition Acceleration

Richard Fastow (Spansion, Inc., USA); Stephan Rosner (Spansion, Inc., USA); Venkat Natarajan (Spansion, Inc., USA); Qamrul Hasan (Spansion, Inc., USA); Jens Olson (Spansion, Inc., USA); Markus Unseld (Spansion, Inc., Germany); Feng Liu (Spansion, Inc., USA); Handoko Chendra (Spansion, Inc., USA); Ojas Bapat (Spansion, Inc., USA); Chen Liu (Spansion, Inc., USA)
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A Delay-based Transceiver with Over-current Protection for ECU Nodes in Automobile FlexRay Systems

Chih-Lin Chen (National Sun Yat-Sen University, Taiwan); Zong-You Hou (National Sun Yat-Sen University, Taiwan); Sheng-Chih Lin (National Sun Yat-Sen University, Taiwan); Chua-Chin Wang (National Sun Yat-Sen University, Taiwan)
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Reduction of the Amount of Probe -Data in Telematics Services

Yuta Nakase (Kanagawa Institute of Technology, Japan); Taro Hiei (Kanagawa Institute of Technology, Japan); Masashi Saito (Mitsubishi Electric Corporation, Japan); Hidetoshi Kambe (Morpho Inc., Japan); Ryoza Kiyohara (Kanagawa Institute of Technology, Japan)
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Traffic Information System: A Lightweight Geocast-based Piggybacking Strategy for Cooperative Awareness in VANET

Rasheed Hussain (Hanyang University & Information Security and Privacy Lab, Korea); Junggab Son (Hanyang university, Korea); Hasoo Eun (Hanyang University, Korea); Sangjin Kim (Korea University of Technology and Education & School of Computer Science and Engineering, Korea); Heekuck Oh (Hanyang University, Korea)
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A Color Scenario of Eco & Healthy Driving for the RGB LED

Hyeon-Jeong Suk (KAIST, Korea)
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4.7: Wireless Networks 1

Outage Probability of Network-Coding-Based Cooperative Communication System

Yi-Lin Sung (Penn State Harrisburg, USA); Aldo Morales (Penn State Harrisburg, USA); Sedig S Agili (Penn State University, USA)
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Device-to-Device Communication Assisted Interference Mitigation for Next Generation Cellular Networks

Wonjae Shin (Samsung Advanced Institute of Technology (SAIT), Korea); KyungHun Jang (Samsung Advanced Institute of Technology (SAIT), Korea); Hyun-Ho Choi (Hankyong National University, Korea)
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Deafness-aware MAC Protocol for Directional Antennas

Woong Soo Na (Chungang University, Korea); Lai Hyuk Park (Chungang University, Korea); Sungrae Cho (Chung-Ang University, Korea)
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Fast Three-Dimensional Node Localization in UWB Wireless Sensor Network Using Propagator Method

Hong Jiang (Jilin University, P.R. China); Yu Zhang (Jilin University, P.R. China); Haijing Cui (Jilin University, P.R. China); Chang Liu (Kansas State University, USA)
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3Gbit/s Transmission Over Plastic Optical Fiber with Adaptive Tomlinson-Harashima Precoded Systems

Yixuan Wang (University of Stuttgart, Germany)
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4.8: Video Coding 2

Variable Block Size Motion Estimation Implementation on Compute Unified Device Architecture (CUDA)

Dong-Kyu Lee (Kwangwoon University, Korea); Seoung-Jun Oh (Kwangwoon University, Korea)
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Ultra-Fast Live Video-in-Video Insertion for H.264/AVC

Dan Grois (Ben-Gurion University of the Negev, Israel); Maoz Loants (Ben-Gurion University of the Negev, Israel); Ofer Hadar (Ben-Gurion University of the Negev, Israel); Roni Ohayon (Bar-Ilan University, Israel); Noam Amram (LiveU, Israel)
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Fast Coding Unit Size Decision Algorithm for Intra Coding in HEVC

Jong-Ho Kim (Yonsei University, Korea); Yoonsik Choe (Yonsei University, Korea); Yong-Goo Kim (Korean German Institute of Technology, Korea)
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Human Mobile-Device Interaction on HEVC and H.264 Subjective Evaluation for Video Use in Mobile Environment

Ray Garcia (Florida Atlantic University, USA); Hari Kalva (Florida Atlantic University, USA)
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Block Boundary Filtering for Intra Prediction Samples

Akira Minezawa (Mitsubishi Electric Corporation, Japan); Kazuo Sugimoto (Mitsubishi Electric Corporation, Japan); Shun-ichi Sekiguchi (Mitsubishi Electric Corporation, Japan)
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T.8: TUTORIAL - 8: Nahum Gershon

Coffee

Doctoral Workshop

4.10: Algorithms, Tools and Development

Utilization Analysis of Trim-Enabled NAND Flash Memory

Boncheol Gu (SAIT, Samsung Electronics, Korea); Jupyung Lee (SAIT, Samsung Electronics, Korea); Brian Myungjune Jung (SAIT, Samsung Electronics, Korea); Jungmin Seo (SAIT, Samsung Electronics, Korea); Hyun-Jung Shin (SAIT, Samsung Electronics, Korea)
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Patching A Patch - Software Updates Using Horizontal Patching

Milosh Stolikj (Eindhoven University of Technology, The Netherlands); Pieter Cuijpers (Technische Universiteit Eindhoven, The Netherlands); Johan J. Lukkien (Eindhoven University of Technology, The Netherlands)
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Enhancing Application Performance by Memory Partitioning in Android Platforms

Geunsik Lim (Samsung Electronics, Korea); Changwoo Min (Sungkyunkwan University, Korea); Young Ik Eom (Sungkyunkwan University, Korea)
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RAID-Optimal Data Placement in a Hybrid Solid-State Drive

Jungmin Seo (SAIT, Samsung Electronics, Korea); Jupyung Lee (SAIT, Samsung Electronics, Korea); Boncheol Gu (SAIT, Samsung Electronics, Korea); Hyun-Jung Shin (SAIT, Samsung Electronics, Korea); Brian Myungjune Jung (SAIT, Samsung Electronics, Korea)
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4.11: Automotive 2

S3-RNC: A Novel V2V Transmission Scheme for Mobile Content Distribution

Woojin Ahn (Yonsei University, Korea); Young Kim (Yonsei University, Korea); Ronny Yongho Kim (Korea National University of Transportation, Korea)
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High-definition Video-based Multi-channel Top-view Vehicle Surrounding Monitoring System for Mobile Navigation Devices

SungRyull Sohn (KAIST, Korea); Hansang Lee (KAIST, Korea); Heechul Jung (KAIST, Korea); Junmo Kim (KAIST, Korea)
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Guidance Protocol Via Personal ITS Station for Advisory Safety Systems

Jeong-Dan Choi (Electronics and Telecommunications Research Institute, Korea); Kyoung-Wook Min (ETRI & Chungnam National University, Korea)
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4.12: Wireless Networks 2

Wireless Access Control System Based on IEEE 802.15.4

Dhivya Govindasamy (Centre for Development of Advanced Computing, India); Sethukkarasi C (Centre for Development of Advanced Computing, India); Pitchiah R (Centre for Development of Advanced Computing, India)
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Resource Allocation for Cyclic Prefixed Single-Carrier Cognitive Two-Way Relay Networks

Hongwu Liu (Inha University, Korea); Kyung Sup Kwak (Inha University, Korea)

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Software Design of Giga-bit WLAN on Coarse Grained Reconfigurable Array Processors

Kitaek Bae (Samsung Advanced Institute of Technology, Korea); Peng Xue (Samsung Advanced Institute of Technology (SAIT), Korea); Navneet Basutkar (Samsung Advanced Institute of Technology, Korea); Ho Yang (Samsung Advanced Institute of Technology, Korea)

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Rotation Multiple-Channel Allocation Scheme for Seamless Handoff in IEEE 802.11 WLANs

Youchan Jeon (Korea University, Korea); Myeongyu Kim (Korea University, Korea); Sangwon Park (Korea Communications Commission (KCC), Korea); Jinwoo Park (Korea University, Korea)

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4.9: Social

TV-centric Gaming Applications for Android OS: Architecture and a Framework

Milan Z. Bjelica (University of Novi Sad, Serbia); Vladan Zdravkovic (Sheffield Hallam University, United Kingdom); Marija Punt (University of Belgrade, School of Electrical Engineering, Serbia); Nikola Teslic (University of Novi Sad, Serbia)

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