

2018 IEEE International Conference on Consumer Electronics (ICCE 2018)

**Las Vegas, Nevada, USA
12-14 January 2018**

Pages 1-498



**IEEE Catalog Number: CFP18CCE-POD
ISBN: 978-1-5386-3026-6**

**Copyright © 2018 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP18CCE-POD
ISBN (Print-On-Demand):	978-1-5386-3026-6
ISBN (Online):	978-1-5386-3025-9
ISSN:	2158-3994

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

DEEP LEARNING NETWORKS IN CE	1
<i>Petronel Bigioi</i>	
SMART HEALTHCARE	2
<i>Niraj K. Jha</i>	
INTERNET OF THINGS SECURITY: ARE WE PARANOID ENOUGH?	3
<i>Swarup Bhunia</i>	
2020: LIFE WITH 50 BILLION CONNECTED DEVICES	4
<i>Gary Davis</i>	
EMERGING NUI-BASED METHODS FOR USER AUTHENTICATION	5
<i>Nasir Memon</i>	
MULTI-PHASE WATERMARK FOR IP CORE PROTECTION	6
<i>Anirban Sengupta ; Dipanjan Roy</i>	
REUSABLE INTELLECTUAL PROPERTY CORE PROTECTION FOR BOTH BUYER AND SELLER	9
<i>Anirban Sengupta ; Dipanjan Roy</i>	
RELBAT: A RELIABLE BATTERY SYSTEM TOWARDS THE REALIZATION OF SUSTAINABLE ELECTRONICS	12
<i>Obinna Okpokwasili ; Saraju P. Mohanty ; Elias Kougianos ; Venkata P. Yanambaka</i>	
PROACTIVE CYBER SECURITY RESPONSE BY UTILIZING PASSIVE MONITORING TECHNOLOGIES	16
<i>Koji Nakao</i>	
USER-FRIENDLY INTER-PUPILLARY DISTANCE CALIBRATION METHOD USING A SINGLE CAMERA FOR AUTOSTEREOSCOPIC 3D DISPLAYS	17
<i>Hyoseok Hwang ; Dongwoo Kang</i>	
AN ENERGY EFFICIENT EPILEPTIC SEIZURE DETECTOR	20
<i>Md Abu Sayeed ; Saraju P. Mohanty ; Elias Kougianos ; Hitten Zaveri</i>	
WIDE FIELD OF VIEW OPTICAL COMBINER FOR AUGMENTED REALITY HEAD-UP DISPLAYS	24
<i>Haruhiko Okumura ; Aira Hotta ; Takashi Sasaki ; Kazuo Horiuchi ; Naotada Okada</i>	
SMART-WALK: AN INTELLIGENT PHYSIOLOGICAL MONITORING SYSTEM FOR SMART FAMILIES	28
<i>Prabha Sundaravadivel ; Saraju P. Mohanty ; Elias Kougianos ; Venkata P. Yanambaka ; Madhavi K. Ganapathiraju</i>	
CAMERA-RECOGNIZABLE VISUAL CRYPTOGRAPHY FOR PRINTED DOCUMENTS: ENHANCING THE USER INTERFACE	32
<i>Wooram Ann ; Taeyoung Lee ; Chulhee Hahm</i>	
ROBUST, PRECISE, AND CALIBRATION-FREE SHAPE ACQUISITION WITH AN OFF-THE-SHELF CAMERA AND PROJECTOR	34
<i>Chunyu Li ; Akihiko Torii ; Masatoshi Okutomi</i>	
SMART-LOG: AN AUTOMATED, PREDICTIVE NUTRITION MONITORING SYSTEM FOR INFANTS THROUGH THE IOT	40
<i>Prabha Sundaravadivel ; Kavya Kesavan ; Lokeshwar Kesavan ; Saraju P. Mohanty ; Elias Kougianos ; Madhavi Ganapathiraju</i>	
PANEL THEME: ENERGY AND CYBERSECURITY CONSTRAINTS ON CONSUMER ELECTRONICS	44
<i>Himanshu Thapliyal</i>	
REAL-TIME HUMAN ACTIVITY-BASED ENERGY MANAGEMENT SYSTEM USING MODEL PREDICTIVE CONTROL	45
<i>Chiyang Zhong ; Jingfan Sun ; Jiahao Xie ; Santiago Grijalva ; A. P. Sakis Meliopoulos</i>	
A FREQUENCY-SHIFT READOUT SYSTEM WITH OFFSET CANCELLATION OPA FOR PORTABLE DEVICES OF MARIJUANA DETECTION	51
<i>Hao-Chun Huang ; Deng-Shian Wang ; Chua-Chin Wangt</i>	
DYNAMIC STATE-PREDICTIVE CONTROL FOR A REMOTE CONTROL SYSTEM WITH LARGE DELAY FLUCTUATION	53
<i>Hiroshi Yoshida ; Taichi Kumagai ; Kozo Satoda</i>	
A QOE-AWARE QUALITY SELECTION CONTROLLER FOR HTTP ADAPTIVE STREAMING	59
<i>Yu Mizoguchif ; Takumi Kurosaka ; Masaki Bandai</i>	

FACIAL BIOHASHING BASED USER-DEVICE PHYSICAL UNCLONABLE FUNCTION FOR BRING YOUR OWN DEVICE SECURITY	61
<i>Yue Zheng ; Yuan Cao ; Chip-Hong Chang</i>	
BIOMETRICS-AS-A-SERVICE: A FRAMEWORK TO PROMOTE INNOVATIVE BIOMETRIC RECOGNITION IN THE CLOUD	67
<i>Veeru Talreja ; Terry Ferrett ; Matthew C. Valenti ; Arun Ross</i>	
VISIBLE-LIGHT WEARABLE EYE GAZE TRACKING BY GRADIENTS-BASED EYE CENTER LOCATION AND HEAD MOVEMENT COMPENSATION WITH IMU	73
<i>Ting-Lun Liu ; Chih-Peng Fan</i>	
A STUDY ON DEVELOPMENT OF THE BLIND SPOT DETECTION SYSTEM FOR THE IOT- BASED SMART CONNECTED CAR.....	75
<i>Donghwoon Kwon ; Suwoo Park ; Sunhee Baek ; Ritesh K. Malaiya ; Geumchae Yoon ; Jeong-Tak Ryu</i>	
SECURE AND ROBUST USER AUTHENTICATION USING PARTIAL FINGERPRINT MATCHING	79
<i>Geuntae Bae ; Hojae Lee ; Sunghoon Son ; Doha Hwang ; Jongseok Kim</i>	
HARDWARE AND SOFTWARE IMPLEMENTATION OF A NEW ALGORITHM ON PHOTOACOUSTIC MEDICAL IMAGING	85
<i>Woonchul Ham ; Enkhbat Batbayar ; Ju Yeon Lee ; Chulgyu Song</i>	
DOWNLOADABLE TRUSTED APPLICATIONS ON TIZEN™ TV: TRUSTWARE™EXTENSION: AS A DOWNLOADABLE APPLICATION FRAMEWORK	89
<i>Yongcheol Yang ; Jiyoung Moon ; Kiuhae Jung ; Jeik Kim</i>	
MOSAIC BLOCK DETECTION BASED ON HOG WITH SVM CLASSIFIER AND TEMPLATE MATCHING	93
<i>Keiichi Shirasuka</i>	
A TIME DELAY CONVOLUTIONAL NEURAL NETWORK FOR ACOUSTIC SCENE CLASSIFICATION.....	95
<i>Younglo Lee ; Sangwook Park ; Hanseok Ko</i>	
OPTIMIZATION OF HEVC λ -DOMAIN RATE CONTROL ALGORITHM FOR HDR VIDEO	98
<i>Junaid Mir ; Dumidu S. Talagala ; Anil Fernando</i>	
FIELD EXPERIMENT OF HYBRID VIDEO DELIVERY USING NEXT-GENERATION TERRESTRIAL BROADCASTING AND A CELLULAR NETWORK	102
<i>Yuki Kawamura ; Kazuhiro Otsuki</i>	
RRPHISH: ANTI-PHISHING VIA MINING BRAND RESOURCES REQUEST	104
<i>Guang-Gang Geng ; Zhi-Wei Yan ; Yu Zeng ; Xiao-Bo Jin</i>	
A PROTOTYPE FOOT-SOLE ACETONE ANALYZER AND ITS APPLICABILITY TO CALORIC BALANCE MONITORING	106
<i>Tatsuya Nakamura ; Yuki Yamada ; Satoshi Hiyama</i>	
AUTOMATIC 3D FACE COMPONENT ANALYSIS TECHNIQUE	110
<i>Seong-Jae Lim ; Bon-Woo Hwang ; Seung-Uk Yoon ; Jin Sung Choi ; Chang-Joon Park</i>	
CNN-BASED APPROACH FOR VISUAL QUALITY IMPROVEMENT ON HEVC.....	112
<i>Young-Woon Lee ; Ji-Hae Kim ; Young-Ju Choi ; Byung-Gyu Kim</i>	
A VIRTUAL TWINNING SYSTEM FOR USER-CENTERED EIDETIC HUMAN-OBJECT INTERACTION.....	115
<i>Jinchul Choi ; Inook Jang ; Donghun Lee ; Youngsung Son</i>	
REAL-TIME COW ACTION RECOGNITION BASED ON MOTION HISTORY IMAGE FEATURE	117
<i>Sung-Jin Ahn ; Dong-Min Ko ; Eui-Ju Heo ; Kang-Sun Choi</i>	
DEPTH MAP ESTIMATION WITH UNKNOWN FIXED PATTERN PROJECTION	119
<i>Masayuki Tanaka ; Katsuhiko Fujita ; Masatoshi Okutomi</i>	
A NEW APPROACH TO MOTION JUDDER CANCELLATION: TIME STAMP MODEL USING INSTANT FRAME RATE.....	122
<i>J. H. Lee ; D. Kim ; T. J. Kim ; H. N. Byun ; C. G. Kim</i>	
QOE-AWARE QUALITY SELECTION METHOD FOR ADAPTIVE VIDEO STREAMING WITH SCALABLE VIDEO CODING	126
<i>Shungo Mori ; Masaki Bandai</i>	
PRNU-BASED SOURCE IDENTIFICATION FOR NETWORK VIDEO SURVEILLANCE SYSTEM.....	130
<i>Sai-Chung Law ; Ngai-Fong Law</i>	
AN HEVC REAL-TIME ENCODING SYSTEM WITH HIGH QUALITY HDR COLOR REPRESENTATIONS	132
<i>Daisuke Kobayashi ; Ken Nakamura ; Takayuki Onishi ; Yasuyuki Nakajima ; Hiroe Iwasaki ; Mitsuo Ikeda ; Atsushi Shimizu</i>	

LOCALLY ADAPTIVE CONTRAST ENHANCEMENT USING CONVOLUTIONAL NEURAL NETWORK.....	134
<i>Bok Gyu Han ; Hyeon Seok Yang ; Young Shik Moon</i>	
SOUND SOURCE SEPARATION FOR PLURAL PASSENGER SPEECH RECOGNITION IN SMART MOBILITY SYSTEM.....	136
<i>Masahiro Fukui ; Youhei Wakisaka ; Toshihiko Watanabe ; Minato Kanazawa</i>	
SPECTRAL EFFICIENCY GAINS THROUGH THE USE OF FBMC/OQAM FOR DOCSIS SYSTEMS	138
<i>Florian Jackisch</i>	
A SECURITY EVALUATION OF POPULAR INTERNET OF THINGS PROTOCOLS FOR MANUFACTURERS	142
<i>Daniel Celebucki ; Maj Alan Lin ; Scott Graham</i>	
RFID-BASED SCHEME FOR TV RECEIVER CONTROL IN CASE OF THEFT	148
<i>Allan R. A. Da Silva ; Caio F. S. Da Cruz ; Jose Eduardo L. Fernandes ; Jeferson B. Da Costa ; Xianpan Chen ; Romulo Fabricio ; Eddie B. De Lima Filho</i>	
TRAINING ENVIRONMENT FOR ELECTRIC POWERED WHEELCHAIRS USING TELEOPERATION THROUGH A HEAD MOUNTED DISPLAY	154
<i>Yuri Silva ; Walter Simões ; Mauro Teófilo ; Eduardo Naves ; Vicente Lucena</i>	
AN EFFICIENT AUTOMATIC ELECTROCARDIOGRAM ANALYSIS METHOD USING SMARTPHONES	156
<i>Xiaomao Fan ; Qihang Yao ; Yunpeng Cai ; Ye Li</i>	
EFFICIENT LIGHT HARVESTING FOR ACCURATE NEURAL CLASSIFICATION OF HUMAN ACTIVITIES.....	161
<i>Alessandro Nicosia ; Danilo Pau ; Davide Giacalone ; Emanuele Plebani ; Angelo Bosco ; Antonio Iacchetti</i>	
MONITORING SYSTEM FOR A SINGLE AGED PERSON ON THE BASIS OF ELECTRICITY USE — HEATSTROKE-PREVENTION SYSTEM.....	165
<i>Yukio Nakano ; Takashi Nose ; Kazutaka Hotta ; Hideki Kawarai ; Tsuyoshi Ueno</i>	
STEREOSCOPIC REALTIME 360-DEGREE VIDEO STITCHING	168
<i>Alexander Limonov ; Xiao Yu ; Lei Juan ; Cao Lei ; Yang Jian</i>	
HDR IMAGE FROM SINGLE LDR IMAGE AFTER REMOVING HIGHLIGHT.....	174
<i>Partha Pratim Banik ; Rappy Saha ; Ki-Doo Kim</i>	
MASS PRODUCTION EMC STATUS QUICK EVALUATION THROUGH CLOUD COMPUTING — A NEW OPTION FOR ELECTRIC PRODUCT QUALITY CONTROL	178
<i>Wei Wu ; Yuejia Wu</i>	
MOBILE LOCK SCREEN UI DESIGN FOR CHILDREN TO ENHANCE POSITIVE EMOTIONS USING FACE RECOGNITION TECHNOLOGY	182
<i>Hyunjin Lee ; Jeongmin Yu ; Woontack Woo</i>	
A HUMAN ACTIVITY RECOGNITION-AWARE FRAMEWORK USING MULTI-MODAL SENSOR DATA FUSION	187
<i>Eunjung Kwon ; Hyunho Park ; Sungwon Byon ; Eui-Suk Jung ; Yong-Tae Lee</i>	
DECODING COMPLEXITY-AWARE, RATE, DISTORTION OPTIMIZED HEVC VIDEO ENCODING	189
<i>Thanuja Mallikarachchi ; Dumidu S. Talagala ; Hemantha Kodikara Arachchi ; Anil Fernando</i>	
CONVERSION OF LDR IMAGE TO HDR-LIKE IMAGE THROUGH HIGH-LEVEL SYNTHESIS TOOL FOR FPGA IMPLEMENTATION.....	193
<i>Rappy Saha ; Partha Pratim Banik ; Ki-Doo Kim</i>	
DESIGN OF AN LPWAN COMMUNICATION MODULE BASED ON SECURE ELEMENT FOR SMART PARKING APPLICATION	195
<i>Yongsung Jeon ; Hong-Il Ju ; Seungyong Yoon</i>	
MOTORCYCLE HUD DESIGN OF PRESENTING INFORMATION FOR NAVIGATION SYSTEM.....	197
<i>Kenichiro Ito ; Hidekazu Nishimura ; Tetsuro Ogi</i>	
KNOWLEDGE OF THINGS: A NOVEL APPROACH TO SHARE SELF-TAUGHT KNOWLEDGE BETWEEN IOT DEVICES	200
<i>Ingook Jang ; Donghun Lee ; Jinchul Choi ; Young-Sung Son</i>	
ESTIMATING DRIVER'S READINESS BY UNDERSTANDING DRIVING POSTURE	202
<i>Takahiro Yamada ; Hidetsugu Irie ; Masahiro Kunitake ; Eiji Nagano ; Shuichi Sakai</i>	
SMARTPHONE BASED LIFELOG WITH MEANINGFUL PLACE DETECTION.....	206
<i>Dailin Li ; Yanlei Gu ; Shunsuke Kamijo</i>	
ADAPTIVE REMOTE CONTROL OF A MOBILE ROBOT SYSTEM WITH DELAY FLUCTUATION.....	211
<i>Taichi Kumagai ; Hiroshi Yoshida ; Kozo Satoda</i>	

DNSLEDGER: DECENTRALIZED AND DISTRIBUTED NAME RESOLUTION FOR UBIQUITOUS IOT	216
<i>Xinan Duan ; Zhiwei Yan ; Guanggang Geng ; Baoping Yan</i>	
WHITE LIST-BASED RANSOMWARE REAL-TIME DETECTION AND PREVENTION FOR USER DEVICE PROTECTION	219
<i>Dae-Youb Kim ; Geun-Yeong Choi ; Ji-Hoon Lee</i>	
EARLY MODE SELECTION OF HIGH RESOLUTION FOR HEVC BASE ON BITS-MAPPING	224
<i>Kazuki Kuroda ; Takafumi Katayama ; Tian Song ; Takashi Shimamoto</i>	
STUDY OF PERSONAL CUSTOMIZED LIFE ASSISTING SYSTEM CONSISTING OF MODULAR DEVICES	230
<i>S. Kazuno ; K. Nakamura ; Y. Kumakura ; M. Okumura ; M. Isshiki</i>	
CRITICAL AREAS DETECTION AND VEHICLE SPEED ESTIMATION SYSTEM TOWARDS INTERSECTION-RELATED DRIVING BEHAVIOR ANALYSIS	232
<i>Qianlong Wang ; Yongjie Liu ; Jingwen Liu ; Yanlei Gu ; Shunsuke Kamijo</i>	
DRIVING METHOD FOR SUPPRESSING IMAGE DISTORTION IN TILED OLED DISPLAYS	238
<i>Takenobu Usui ; Takuya Okada ; Yoshimichi Takano ; Yoshihide Fujisaki ; Toshihiro Yamamoto</i>	
FIVE ACTS OF CONSUMER BEHAVIOR: A POTENTIAL SECURITY AND PRIVACY THREAT TO INTERNET OF THINGS.....	240
<i>Wazir Zada Khan ; Mohammed Y Aalsalem ; Muhammad Khurram Khan</i>	
DEVELOPMENT OF LAUNDRY-WORK ASSISTANCE ROBOT BY USING IOT TECHNOLOGY.....	243
<i>K. Kanazawa ; S. Kazuno ; Y. Shiozawa ; M. Isshiki ; M. Okumura</i>	
MULTIPLE SPORTS PLAYER TRACKING SYSTEM BASED ON GRAPH OPTIMIZATION USING LOW-COST CAMERAS.....	245
<i>Yuri Nishikawa ; Hitoshi Sato ; Jun Ozawa</i>	
PERFORMANCE ACCELERATION OF NEURAL NETWORKS ON MOBILE EMBEDDED SYSTEMS	249
<i>Yongsung Jeon ; Chang-Sik Kim ; Young-Jin Kim</i>	
SYSTEM ARCHITECTURE FOR IOT SERVICES WITH BROADCAST CONTENT.....	251
<i>Hiromu Ogawa ; Masaya Ikeo ; Hisayuki Ohmata ; Chigusa Yamamura ; Hiroshi Fujisawa</i>	
END-TO-END PEDESTRIAN COLLISION WARNING SYSTEM BASED ON A CONVOLUTIONAL NEURAL NETWORK WITH SEMANTIC SEGMENTATION	253
<i>Heechul Jung ; Min-Kook Choi ; Kwon Soon ; Woo Young Jung</i>	
ROBUST REMOTE HEART RATE ESTIMATION IN CAR DRIVING ENVIRONMENT.....	256
<i>Kanghyu Lee ; Dubok Park ; Chuljin Cho ; Hanseok Ko</i>	
SCALABLE MONITORING OF END-TO-END DELAY IN LIVE VIDEO SERVICES	258
<i>Álvaro Villegas ; Pablo Pérez ; Jaime J. Ruiz ; Javier López-Ponceta</i>	
SIMPLE ONLINE AND REALTIME TRACKING WITH SPHERICAL PANORAMIC CAMERA	260
<i>Keng-Chi Liu ; Yi-Ting Shen ; Liang-Gee Chen</i>	
EMI DESIGNS SUPPORT SYSTEM USING AUGMENTED REALITY	266
<i>Yoshitaka Watanabe ; Shinya Manabe ; Taishiro Tanaka ; Yasuhito Fukui ; Kiyoshi Okuizumi ; Jun Nakamura ; Noriyuki Kushi</i>	
SOLID STATE CACHE MANAGEMENT SCHEME FOR IMPROVING I/O PERFORMANCE OF HARD DISK DRIVE	268
<i>Jung Kyu Park ; Yunjung Seo ; Jaeho Kim</i>	
HARDWARE-ORIENTED LOW COMPLEXITY MOTION ESTIMATION FOR HEVC.....	272
<i>Yoshiki Ito ; Tian Song ; Wen Shi ; Takafumi Katayama ; Takashi Shimamoto</i>	
PERSONAL CHARACTERISTICS EXPRESSION BY CHANGING FORMS OF THE EYELID FOR DEFORMED FACE ROBOT	277
<i>Kazakuki Takeuchi ; Masao Isshiki ; Takuya Hashimoto ; Yoichi Yamazaki</i>	
IMAGE PLACEMENT ORDER OPTIMIZATION FOR MOBILE COMMERCE	279
<i>Yeongnam Chae ; Daniel Crane ; Björn Stenger ; Soh Masuko</i>	
COLOR NAVIGATION BY QUALITATIVE ATTRIBUTES FOR FASHION RECOMMENDATION.....	284
<i>Yeongnam Chae ; Jiu Xu ; Björn Stenger ; Soh Masuko</i>	
A STUDY ON DRM APPLICATION ON HIGH-QUALITY AUDIO	287
<i>Jungwon Moon ; Uk Kim</i>	
PREDICTION OF THE TIME TO PREGNANCY BY KERNEL DENSITY ESTIMATION ON LIFESTYLE QUESTIONNAIRE	290
<i>Shunsuke Nakamura ; Toshihiko Yamasaki ; Kiyoharu Aizawa ; Yusuke Ishikawa</i>	
IMAGE PROCESSING-BASED POTHOLE DETECTING SYSTEM FOR DRIVING ENVIRONMENT	296
<i>Sungwon Lee ; Seokjin Kim ; Kwang Eun An ; Seung-Ki Ryu ; Dongmahn Seo</i>	

DETECTING A POTHOLE USING DEEP CONVOLUTIONAL NEURAL NETWORK MODELS FOR AN ADAPTIVE SHOCK OBSERVING IN A VEHICLE DRIVING	298
<i>Kwang Eun An ; Sung Won Lee ; Seung-Ki Ryu ; Dongmahn Seo</i>	
FRAME SEQUENTIAL VIDEO SYSTEM WITH COMPLEMENTARY PASTEL COLOR AND ITS CONVERSION.....	300
<i>Yoshikazu Honma ; Naoyuki Awano ; Kenji Sugiyama</i>	
A QUADRUPLE-POLARIZED RECONFIGURABLE ANTENNA FOR 915 MHZ ISM BAND APPLICATIONS	304
<i>Ji-Hong Kim ; Chan-Hee Joo ; Seong-Hyeop Ahn ; Wang-Sang Lee</i>	
OPTIMIZED VISION-DIRECTED DEPLOYMENT OF UAVS FOR RAPID TRAFFIC MONITORING.....	306
<i>Christos Kyrkou ; Stelios Timotheou ; Panayiotis Kolios ; Theocharis Theocharides ; Christos G. Panayiotou</i>	
PROTOTYPE GESTURE RECOGNITION INTERFACE FOR VEHICULAR HEAD-UP DISPLAY SYSTEM.....	312
<i>Ramesh Lagoo ; Vassilis Charissis ; Warren Chan ; Soheeb Khan ; David Harrison</i>	
AN LC BALUN INTEGRATED MICROSTRIP TWA FOR PRECISE NEAR-FIELD LOCALIZATION SYSTEM IN UHF RFID	318
<i>Min-Gyo Jeong ; Seong-Hyeop Ahn ; Min-Hyeok Jin ; Wang-Sang Lee</i>	
DEPTH EXTRACTION USING DEPTH OF FIELD IMAGING WITH TILTED RETROREFLECTIVE STRUCTURE.....	320
<i>Sungwon Choi ; Sung-Wook Min</i>	
ON THE SUCCESSFUL DEPLOYMENT OF COMMUNITY POLICING SERVICES THE TRILLION PROJECT CASE	323
<i>Charalampos Z. Patrikakis ; Dimitrios G. Kogias ; George Loukas ; Avgoustinos Filippoupolitis ; William Oliff ; Syed Sadiqur Rahman ; Silvio Sorace ; Ernesto La Mattina ; Quercia Elisabeth</i>	
COMPUTATIONAL COMPLEXITY REDUCTION OF TWO-CHANNEL PMWF USING FREQUENCY AVERAGING TECHNIQUE	329
<i>Youngil Kim ; Kiwon Seo ; Sangbae Jeong</i>	
A NOVEL VIDEO WATERMARKING APPROACH BASED ON IMPLICIT DISTORTIONS	331
<i>Hannes Mareen ; Johan De Praeter ; Glenn Van Wallendael ; Peter Lambert</i>	
CONTENT ADAPTIVE TILING METHOD BASED ON USER ACCESS PREFERENCE FOR STREAMING PANORAMIC VIDEO.....	333
<i>Zhengzhong Tu ; Tongyu Zong ; Xueliang Xi ; Li Ai ; Yize Jin ; Xiaoyang Zeng ; Yibo Fan</i>	
LIGHT FIELD COMPRESSION BY SUPERPIXEL BASED FILTERING AND PSEUDO-TEMPORAL REORDERING	337
<i>Harini Priyadarshini Hariharan ; Thorsten Herfet</i>	
PROPOSAL OF NEXT-GENERATION HMI UTILIZING CONTEXT AND PERSONALITY THEORIES	341
<i>Takanobu Matsuura ; Keita Sato</i>	
A PIXEL-BASED COMPLEXITY MODEL TO ESTIMATE ENERGY CONSUMPTION IN VIDEO DECODERS	344
<i>Victor H. Costa ; Pedro A. Assuncao ; Paulo J. Cordeiro</i>	
LIGHTWEIGHT SMART HOME SECURITY SYSTEM USING MULTIPLE RSS-BASED VOTING.....	349
<i>Teasung Kim ; Jeehyeong Kim ; Jaewon Noh ; Sunghyun Cho</i>	
FOCUS-FREE HEAD-MOUNTED DISPLAY USING PINHOLE AND RETROREFLECTOR FILM.....	353
<i>Hyeongkyu Do ; Young Min Kim ; Sung-Wook Min</i>	
HUMAN INTERFACE BASED ON AN INTERACTION BETWEEN DRIVER'S CAPABILITY AND TASK DEMANDS.....	355
<i>Toshihisa Sato</i>	
ONE-SIDE AUTOMATED IMPEDANCE MATCHING SCHEME FOR MULTI-TRANSMITTER WIRELESS POWER TRANSMISSION	357
<i>Jingsheng Liu ; Xiaodong Wang</i>	
SPARSE AUDIO INPAINTING WITH VARIATIONAL BAYESIAN INFERENCE	363
<i>Giannis Chantas ; Spiros Nikolopoulos ; Ioannis Kompatsiaris</i>	
REAL-TIME SPEAKER RECOGNITION SYSTEM USING MULTI-STREAM I-VECTORS FOR AI ASSISTANT.....	369
<i>Keunseok Cho ; Jaeyoung Roh ; Youngho Han ; Namhoon Kim ; Jaewon Lee</i>	
DEVELOPMENT OF PROJECTION LED GUIDING SIGN FOR DYNAMIC MOTION IMAGING.....	373
<i>Masahige Suwa ; Ritsuya Oshima ; Reiko Sakata</i>	

SIMILAR FLOOR PLAN RETRIEVAL FEATURING MULTI-TASK LEARNING OF LAYOUT TYPE CLASSIFICATION AND ROOM PRESENCE PREDICTION	375
<i>Yuki Takada ; Naoto Inoue ; Toshihiko Yamasaki ; Kiyoharu Aizawa</i>	
MAKING ONLINE CONTENT VIRAL THROUGH TEXT ANALYSIS	381
<i>R. C. Dilip ; T. Lucas ; A. Saarangan ; Sagara Sumathipala ; Chinthaka Premachandra</i>	
SELECTIVE MAPPING BASED RF WATERMARK TECHNIQUE FOR ROBUST DATA TRANSMISSION IN ATSC SYSTEM	387
<i>Jaekwon Lee ; Dong Ku Kim</i>	
ADAPTIVE COLOR BALANCE ALGORITHM FOR USERS' CONVENIENCES	389
<i>Soyeon Jeon ; Jihye Jeon ; Gooman Park</i>	
EVALUATING ACCESSIBILITY FEATURES DESIGNED FOR VIRTUAL REALITY CONTEXT	392
<i>Mauro Teófilo ; Vicente F. Lucena ; Josiane Nascimento ; Taynah Miyagawa ; Francimar Maciel</i>	
AN IOT-READY STREAMING MANAGER DEVICE FOR CLASSROOM ENVIRONMENTS IN A SMART CAMPUS	398
<i>Tomás Herrera ; Felipe Núñez</i>	
MEASUREMENT AND EVALUATION OF COMFORT LEVELS OF APARTMENTS USING IOT SENSORS	403
<i>Yuki Obuchi ; Toshihiko Yamasaki ; Kiyoharu Aizawa ; Satoshi Toriumi ; Mikihiya Hayashi</i>	
STRONG PRIVACY PRESERVING AUTHENTICATION SCHEME FOR UNMANNED CARS	409
<i>Sangil Jeon ; Jaewon Noh ; Jeehyeong Kim ; Sunghyun Cho</i>	
MULTI-FRAME SUPER RESOLUTION USING FRAME SELECTION AND MULTIPLE FUSION FOR 250 MILLION PIXEL IMAGES	413
<i>Yinhao Li ; Yutaro Iwamoto ; Katsuhisa Ogawa ; Yen-Wei Chen</i>	
SELF-INTERFERENCE DIGITAL HOLOGRAPHIC CAMERA USING GEOMETRICAL PHASE LENS	417
<i>Kihong Choi ; Junkyu Yim ; Seunghwi Yoo ; Hee-Jin Choi ; Sung-Wook Min</i>	
SELF-CONFIGURATION WITHOUT COMMISSIONING FOR WIRELESS INTERNET OF THINGS USING SUBJECTIVE LOGIC	421
<i>Tanir Ozcelebi ; Johan Lukkien ; Bert Van Kraaij ; Maarten Brock</i>	
AUTOMOTIVE DISPLAYS FROM DIRECT VIEW TO AR HEAD-UP	423
<i>Karlheinz Blankenbach</i>	
DATA FLOW SYNCHRONIZATION OF A REAL-TIME FUSION SYSTEM TO DETECT AND RECOGNIZE SMART TV GESTURES	425
<i>Neha Dawar ; Nasser Kehtarnavaz</i>	
FUNCTIONAL AND COMPUTATIONAL REQUIREMENTS FOR MOBILE AUGMENTED REALITY APPLICATIONS	429
<i>Hyong-Euk Lee ; Dusik Park</i>	
SMART COFFEE ROASTER DESIGN WITH CONNECTED DEVICES	431
<i>Yao Xu ; Jonathan Shaull ; Travis Bavar ; Lizhe Tan</i>	
RECONSTRUCTION OF CONFORMAI ARRAY BEAM PATTERN USING COMPRESSIVE SENSING	436
<i>K. Kang ; J. Koh ; S. Han</i>	
RCS PREDICTION USING CAUCHY METHOD WITH INCREASING PREDICTION FREQUENCY	441
<i>K. Seol ; J. Koh ; S. Han</i>	
STUDY OF HARDWARE TROJANS BASED SECURITY VULNERABILITIES IN CYBER PHYSICAL SYSTEMS	445
<i>Karthikeyan Lingasubramanian ; Ranveer Kumar ; Nagendra Babu Gunti ; Thomas Morris</i>	
CONSTRUCTING UNIVERSAL SECURE MULTI-MEDIUM DATA NETWORKS ACROSS CONSUMER SYSTEMS	451
<i>Christopher Whittington ; Edward Cady ; Daniel Ratchen ; Yunus Dawji</i>	
CONSTRUCTING SECURE PEER DATA CONNECTIVITY FOR MOBILE SYSTEMS	457
<i>Christopher Whittington ; Edward Cady ; Daniel Ratchen ; Yunus Dawji</i>	
CONSTRUCTING UNIVERSAL SECURE AND PRIVATE DATA NETWORKS ACROSS CONSUMER SYSTEMS	463
<i>Christopher Whittington ; Edward Cady ; Daniel Ratchen ; Yunus Dawji</i>	
RE-ENVISIONING DIGITAL ARCHITECTURES CONNECTING CE HARDWARE FOR SECURITY, RELIABILITY AND LOW ENERGY	469
<i>Christopher Whittington ; Edward Cady ; Daniel Ratchen ; Yunus Dawji</i>	
BASE STATION POSITIONING FOT INDUSTRIAL WIRELESS SENSOR	475
<i>Reza Abrishambaf ; Mert Bal</i>	

EXPERIMENTAL PROTOTYPE OF SD MEMORY CARD RECORDABLE 8K/60P CAMRECORDER	479
<i>Ryohei Funatsu ; Takeshi Kajiyama ; Tomoki Matsubara ; Hiroshi Shimamoto</i>	
DRONES AS COLLABORATIVE SENSORS FOR IMAGE RECOGNITION	481
<i>Peter A. Zientara ; Jinhang Choi ; Jack Sampson ; Vijaykrishnan Narayanan</i>	
WEARABLE BRAIN COMPUTER INTERFACE (BCI) TO ASSIST COMMUNICATION IN THE INTENSIVE CARE UNIT (ICU)	485
<i>Omid Dehzangi ; Muhamed Farooq</i>	
A NOVEL METHOD TO GENERATE A HIGH-QUALITY IMAGE BY USING A STEREO CAMERA	489
<i>Seo-Won Ji ; Yoon-Jae Yeo ; Seok-Jae Kang ; Joon-Hyuk Im ; Sung-Jea Ko</i>	
FORCE AND ACTIVITY MONITORING SYSTEM FOR SCOLIOSIS PATIENTS WEARING BACK BRACES	491
<i>Omid Dehzangi ; Omar Iftikhar ; Bhavani Anantapur Bache ; Jeffrey Wensman ; Ying Li</i>	
I-JACK: WEARABLE SYSTEM FOR COLLECTION AND EVALUATION PHYSIOLOGICAL DATA.....	495
<i>Elpidio H. Júnior ; Lucas F. Da Cruz ; Vandermi J. Da Silva ; Mauro R. Da S. Teófilo Raimundo ; Barreto ; Vicente F. Lucena</i>	
EARLY DETECTION SYSTEM OF DEMENTIA BASED ON HOME BEHAVIORS AND LIFESTYLE BACKGROUNDS.....	499
<i>Keisuke Kimino ; Haruka Ishii ; Maher Aljehani ; Masahiro Inoue</i>	
EFFECT OF HARDWARE TROJANS ON THE PERFORMANCE OF A CODED COMMUNICATION SYSTEM	501
<i>A. R. Aravind ; S. R. Kesavaraman ; Karthi Balasubramanian ; B. Yamuna ; Karthikeyan Lingasubramanian</i>	
HYBRID AUTOFOCUS SYSTEM BY USING A COMBINATION OF THE SENSOR-BASED PHASE-DIFFERENCE DETECTION AND FOCUS-AID SIGNAL	507
<i>Takahiro Yamasaki ; Tomohiro Nakamura ; Ryohei Funatsu ; Hiroshi Shimamoto</i>	
FAST-LSTM ACOUSTIC MODEL FOR DISTANT SPEECH RECOGNITION	509
<i>Rezki Trianto ; Tzu-Chiang Tai ; Jia-Ching Wang</i>	
PHASE HOLOGRAM 3D HEAD MOUNTED DISPLAYS WITHOUT ZERO ORDER DIFFRACTION	513
<i>Yoshitomo Isomae ; Yosei Shibata ; Takahiro Ishinabe ; Hideo Fujikake</i>	
THE FUTURE OF HOLOGRAPHIC HEAD UP DISPLAY	515
<i>Philippe Coni ; Jean-Luc Bardon</i>	
EDGE-AWARE FACIAL SKIN BEAUTIFICATION BASED ON SKIN TONE PROBABILITY	517
<i>Ja-Won Seo ; Miae Kim ; Youngkwon Yoon</i>	
PANEL THEME: CLOUD FEDERATION STANDARDS	520
<i>Stephen L. Diamond</i>	
STABILITY IMPROVEMENT OF AN ACCELERATED ANDROID OPERATING SYSTEM FOR APPLICATION OBSERVATION	521
<i>Shoki Fukuda ; Shun Kurihara ; Masato Oguchi ; Saneyasu Yamaguchi</i>	
ROBUST BOUNDED-ERROR SUBSET SELECTION	527
<i>Masoud Alghoniemy</i>	
INDOOR LOCALIZATION USING VISIBLE LIGHT COMMUNICATION AND IMAGE PROCESSING	532
<i>P K Aswin ; P. Shyama ; Lyla B. Das</i>	
THE MINIMAL-EFFORT WRITE I/O SCHEDULER FOR FLASH-BASED STORAGE DEVICES.....	538
<i>Daekyu Park ; Dong Hyun Kang ; Seung Min Ahn ; Young Ik Eom</i>	
ANALYSIS OF MODULATION SCHEMES FOR BLUETOOTH-LE MODULE FOR INTERNET-OF-THINGS (IOT) APPLICATIONS	541
<i>Divyesh Sachan ; Manish Goswami ; Prasanna Kumar Misra</i>	
USING NFC TAGS AND SMARTPHONES TO DESIGN A RELIABLE MECHANISM TO PICK A CHILD UP FROM SCHOOL.....	545
<i>Ying-Wen Bai ; Chi-Ning Fu ; Jen-Hung Yang</i>	
DESIGN OF SPECTRUM SHAPING CODES FOR HIGH-DENSITY DATA STORAGE	549
<i>Kui Cai ; Kees A. Schouhamer Immink ; Mu Zhang ; Rong Zhao</i>	
ROAD-ILLUMINANCE LEVEL INFERENCE ACROSS ROAD NETWORKS BASED ON BAYESIAN ANALYSIS	551
<i>Siya Bao ; Masao Yanagisawa ; Nozomu Togawa</i>	
IMPROVEMENT OF H.265/HEVC ENCODING FOR 8K UHDTV BY CU SIZE EXPANSION AND INTER/INTRA PREDICTION MODE SELECTION	557
<i>Shintaro Saika ; Masaru Takeuchi ; Yasutaka Matsuo ; Jiro Katto</i>	

A REAL-TIME SLEEPING POSITION RECOGNITION SYSTEM USING IMU SENSOR MOTION DATA.....	559
<i>Odongo Steven Eyobu ; Young Woo Kim ; Daewoong Cha ; Dong Seog Han</i>	
A STUDY ON LLR CALCULATION SCHEME UNDER MOBILE RECEPTION OF OFDM.....	561
<i>Akira Nakamura ; Makoto Itami</i>	
PERFORMANCE EVALUATION OF DUAL-POLARIZED MIMO ULTRA-MULTILEVEL OFDM USING NU-QAM UNDER MOBILE RECEPTION.....	563
<i>Hiroaki Otsubo ; Akira Nakamura ; Makoto Itami</i>	
A STUDY ON CLASS A IMPULSIVE NOISE CANCELLATION AND CHANNEL ESTIMATION UNDER RAYLEIGH FADING ENVIRONMENT	565
<i>Keisuke Ogura ; Akira Nakamura ; Makoto Itami</i>	
UTILIZATION OF TWO MICROPHONES FOR REAL-TIME LOW-LATENCY AUDIO SMARTPHONE APPS.....	567
<i>Abhishek Sehgal ; Nasser Kehtarnavaz</i>	
PANORAMIC VIDEO DELIVERY BASED ON LAPLACE COMPENSATION AND SPHERE-MARKOV PROBABILITY MODEL.....	573
<i>Tongyu Zong ; Zhengzhong Tu ; Li Ai ; Xueliang Xi ; Yize Jin ; Xiaoyang Zeng ; Yibo Fan</i>	
EFFICIENT DATA CLUSTER MANAGEMENT SCHEME FOR QCOW2-BASED VIRTUAL DISK IN HOME CLOUD SERVER.....	577
<i>Minho Lee ; Young Ik Eom</i>	
MITIGATING WRITE INTERFERENCE ON SSD IN HOME CLOUD SERVER	580
<i>Hyeji Lee ; Minho Lee ; Young Ik Eom</i>	
TOWARD SECURE PACKET DELIVERY IN FUTURE INTERNET COMMUNICATIONS.....	583
<i>Bander Alzahrani ; Mohammed Alreshoodi ; Vassilios Vassilaki ; Abdullah Almuhaimeed ; Fawaz Alarfaj</i>	
SUPPORT FOR ECHONET-BASED SMART HOME ENVIRONMENTS IN THE UNIVERSAAL ECOSYSTEM	585
<i>Van Cu Pham ; Yuto Lim ; Yasuo Tan ; Nak Young Chong</i>	
ENHANCING IRIS AUTHENTICATION ON HANDHELD DEVICES USING DEEP LEARNING DERIVED SEGMENTATION TECHNIQUES.....	589
<i>Shabab Bazrafkan ; Peter Corcoran</i>	
SMARTPHONE AS UNOBTRUSIVE SENSOR FOR REAL-TIME SLEEP RECOGNITION	591
<i>Laura Montanini ; Nicola Sabino ; Susanna Spinsante ; Ennio Gambi</i>	
KKT-CONDITIONS BASED RESOURCE ALLOCATION ALGORITHM FOR DASH STREAMING SERVICE OVER LTE.....	595
<i>Hyun Jun Kim ; Ye Seul Son ; Joon Tae Kim</i>	
OPTIMIZING MEMORY SWAPPING SCHEME ON THE MEMORY DEBUGGING PLATFORM OF CE DEVICES	598
<i>Youngho Choi ; Dong Hyun Kang ; Jaeook Kwon ; Young Ik Eonf</i>	
IMPROVED DURABILITY OF SOIL HUMIDITY SENSOR FOR AGRICULTURAL IOT ENVIRONMENTS	601
<i>Young Ju Jeong ; Kwang Eun An ; Sung Won Lee ; Dongmahn Seo</i>	
A NOVEL DESIGN OF UHF RFID PASSIVE TAG ANTENNA TARGETING SMART CARDS LIMITED AREA	603
<i>Mahreen Riaz ; Grzegorz Rymar ; Mohammad Ghavami ; Sandra Dudley</i>	
IOT BASED INDOOR LOCATION DETECTION SYSTEM FOR SMART HOME ENVIRONMENT	607
<i>Rajdeep Kumar Nath ; Rajnish Bajpai ; Himanshu Thapliyal</i>	
DESIGN AND PERFORMANCE EVALUATION OF A LOCALIZATION SYSTEM TO LOCATE UNWANTED DRONES BY USING WIRELESS SIGNALS	610
<i>Chen Li ; Yu Li ; Zilu Tian ; Suzanne L. Weekes ; Kaveh Pahlavan</i>	
VERSATILE PREDICTION CORE FOR IOT APPLICATIONS	616
<i>Toshiaki Uejima ; Hiroki Mizosoe ; Kunihiro Suzuki ; Takashi Yamada</i>	
DETECTING FAULTY SOLAR PANELS BASED ON THERMAL IMAGE PROCESSING	618
<i>Sungwon Lee ; Kwang Eun An ; Byung Don Jeon ; Kyoung Yeon Cho ; Seung Jae Lee ; Dongmahn Seo</i>	
END-TO-END DEEP LEARNING FOR AUTONOMOUS NAVIGATION OF MOBILE ROBOT.....	620
<i>Ye-Hoon Kim ; Jun-Ik Jang ; Sojung Yun</i>	
WATT : A NOVEL WEB-BASED TOOLKIT TO GENERATE WEBASSEMBLY-BASED LIBRARIES AND APPLICATIONS.....	626
<i>Hunseop Jeong ; Jinwoo Jeong ; Sangyong Park ; Kwanghyuk Kim</i>	
VERIFICATION OF HMI FOR AN AUTOMATED DRIVING SYSTEM BY USING A DRIVING SIMULATOR	628
<i>Hidekazu Nishimura</i>	

ENABLING AUTONOMOUS NAVIGATION IN A COMMERCIAL OFF-THE-SHELF TOY ROBOT FOR ROBOTIC GAMING.....	630
<i>Giovanni Piumatti ; Filippo G. Prattico ; Gianluca Paravati ; Fabrizio Lamberti</i>	
LOW-COST AUTHENTICATION PARADIGM FOR CONSUMER ELECTRONICS WITHIN THE INTERNET OF WEARABLE FITNESS TRACKING APPLICATIONS.....	636
<i>Fateme Tehranipoor ; Nima Karimian ; Paul A. Wortman ; John A. Chandy</i>	
LCAR — LOW COST AUGMENTED REALITY FOR THE AUTOMOTIVE INDUSTRY	642
<i>Kousik Sankar Ramasubramaniam ; Raghavendra Bhat</i>	
VIABILITY ANALYSIS OF CONTENT PREPARATION CONFIGURATIONS TO DELIVER 360VR VIDEO VIA MPEG-DASH TECHNOLOGY	645
<i>C. Díaz ; J. Cabrera ; M. Orduna ; L. Muñoz ; P. Pérez ; J. Ruiz ; N. García</i>	
A NOVEL DC CIRCUIT BREAKER DESIGN USING A MAGNETICALLY COUPLED- INDUCTOR FOR DC APPLICATIONS.....	647
<i>Ibrahim Almutairy ; Johnson Asumadu</i>	
ACCURATE POSITIONING OF BICYCLES FOR IMPROVED SAFETY	652
<i>Benjamin Vedder ; Jonny Vinter ; Magnus Jonsson</i>	
MONOCULAR COLOR-IR IMAGING SYSTEM APPLICABLE FOR VARIOUS LIGHT ENVIRONMENTS	658
<i>Yuichi Nonaka ; Daisuke Yoshida ; Shogo Kitamura ; Takashi Yokota ; Madoka Hasegawa ; Kanemitsu Ootsu</i>	
ANN-BASED STRIDE DETECTION USING SMARTPHONES FOR PEDESTRIAN DEAD RECKONING	663
<i>Youngwoo Kim ; Odongo Steven Eyobu ; Dong Seog Han</i>	
EFFICIENT AND SECURE DEVICE CLUSTERING FOR NETWORKED HOME DOMAINS	665
<i>Dae-Youb Kim Ji-Hoon Lee</i>	
FUZZY BASED PREDICTION SCHEMA FRAMEWORK FOR IOT BASED INDOOR ENVIRONMENTAL MONITORING.....	671
<i>Thinagaran Perumal ; Soumya Kanti Datta ; T. Ramachandran ; Chui Yew Leong ; Christian Bonnet</i>	
SYSTEMATIC NETWORK CODING BASED RELIABLE REAL-TIME MULTIMEDIA STREAMING SYSTEM	673
<i>Minhae Kwon ; Hyojin Kim ; Insoo Zhang ; Singyu Bai ; Hyunggon Park</i>	
A PRIORITY MUTEX WITH BOUNDED WAITING FOR INTERACTIVE CONSUMER ELECTRONICS SYSTEMS.....	675
<i>Hojung Choi ; Euseong Seo</i>	
ON ANALYSIS OF SUBSTITUTABILITY FOR SYSTEM RESILIENCE IN IOT SYSTEM BASED ON PN2.....	677
<i>Muhammad Syafiq Bin Ab Malek ; Kazuya Nakahori ; Mohd Anuaruddin Bin Ahmadon ; Shingo Yamaguchi</i>	
PIXEL-BASED FAST CU DEPTH DECISION ALGORITHM WITH EDGE STRENGTH FOR HEVC	683
<i>Takafumi Katayama ; Wen Shi ; Tian Song ; Takashi Shimamoto</i>	
A STUDY ON COLOR-SPACE CONVERSION METHOD CONSIDERING COLOR INFORMATION RESTORATION	689
<i>Masaru Takeuchi ; Shintaro Saika ; Yusuke Sakamoto ; Yasutaka Matsuo ; Jiro Katto</i>	
A HARDWARE-TROJAN CLASSIFICATION METHOD UTILIZING BOUNDARY NET STRUCTURES	691
<i>Kento Hasegawa ; Masao Yanagisawa ; Nozomu Togawa</i>	
LOW-POWER IMAGE STITCHING MANAGEMENT FOR REDUCING POWER CONSUMPTION OF UAVS FOR DISASTER MANAGEMENT SYSTEM	695
<i>Jihyeon Yim ; Hyunho Park ; Eunjung Kwon ; Seonghyun Kim ; Yong-Tae Lee</i>	
EFFICIENT SIMD IMPLEMENTATION OF BINARIZED CONVOLUTIONAL NEURAL NETWORK.....	698
<i>Yongmin Park ; Seongchan Kim ; Tae-Hwan Kim</i>	
USER-BASED RESOURCE SCHEDULING FOR MULTI-USER SURFACE COMPUTING SYSTEMS	701
<i>Hwan Kirn ; Jonggyu Park ; Young Ik Eom</i>	
A RECEIVER POSITION ESTIMATION SCHEME IN WIRELESS POWER TRANSFER SYSTEM.....	704
<i>Qi Jiang ; Yuannian Qin ; Yubin Zhao ; Cheng-Zhong Xu ; Xiaodong Wang</i>	
METHODOLOGY FOR IMPROVING DETECTION SPEED OF PEDESTRIANS IN AUTONOMOUS VEHICLE BY IMAGE CLASS CLASSIFICATION	708
<i>Junkwang Kim ; Woo Young Jung ; Heechul Jung ; Dong Seog Han</i>	

EFFICIENT INTRA PREDICTION BASED ON ADAPTIVE DOWNSAMPLING SIGNAL FOR PARALLEL HEVC ENCODING	710
<i>Wen Shi ; Takafumi Katayama ; Tian Song ; Takashi Shimamoto</i>	
DESIGN OF FALSE HEART RATE FEEDBACK SYSTEM FOR IMPROVING GAME EXPERIENCE	714
<i>Sayaka Ogawa ; Koichi Fujiwara ; Toshitaka Yamakawa ; Erika Abe ; Manabu Kano</i>	
CNN-BASED LDR-TO-HDR CONVERSION SYSTEM	718
<i>Seungjun Shin ; Kyeongbo Kong ; Woo-Jin Song</i>	
EVALUATION OF A SECURE END-TO-END REMOTE CONTROL SYSTEM FOR SMART HOME APPLIANCES	720
<i>Hisayoshi Tanaka ; Hidekazu Suzuki ; Akira Watanabe ; Katsuhiro Naito</i>	
DIRECT CANVAS: OPTIMIZED WEBGL RENDERING MODEL	722
<i>Hyowon Kim ; Sunwoo Nam ; Joonghun Park ; Daehyun Ko</i>	
LAZY TRIM: OPTIMIZING THE JOURNALING OVERHEAD CAUSED BY TRIM COMMANDS ON EXT4 FILE SYSTEM	725
<i>Kitae Lee ; Dong Hyun Kang ; Daeho Jeong ; Young Ik Eom</i>	
VARIABLE RESOLUTION VIEW MULTIPLEXING FOR MOBILE 3D DISPLAY	728
<i>Hong-Chang Shin ; Joonsoo Kim ; Gwangsoon Lee ; Ho Min Eum ; Jeongil Seo</i>	
INTEROPERABILITY AND RELIABILITY OF WEARABLE HEALTHCARE DEVICES FOR EMERGENCY CARE.....	731
<i>A. C. M. Fong ; B. Fong ; P. Davey ; H. Gholamhosseini ; C. K. Li</i>	
A NEW AUTO-BRIGHTNESS CONTROL TECHNOLOGY FOR TRANSPARENT DISPLAYS	733
<i>Jeong-Sik Kim ; Seung-Ryeol Kim ; Seung-Woo Lee</i>	
A NOVEL SECURE SIMPLE BLUETOOTH PAIRING USING PHYSICAL VIBRATION	735
<i>Young-Jae Min ; Byungjin Hwang ; Youngsun Han</i>	
COORDINATE-BASED DIRECTION-OF-ARRIVAL ESTIMATION METHOD USING DISTRIBUTED MICROPHONES	737
<i>Seo Hyeon Shin ; Kwang Myung Jeon ; Nam Kyun Kim ; Hong Kook Kim ; Jeong Eun Lim ; Jinsoo Park</i>	
ENERGY-AWARE CORE SWITCHING FOR BIG,LITTLE MULTICORE MOBILE PLATFORM.....	739
<i>Yeomin Nam ; Moonju Park</i>	
SAVING POWER CONSUMPTION OF SMARTPHONES IN THE SCREEN-OFF STATE WITH DISABLING THE WI-FI.....	741
<i>Tsubasa Murakami ; Shun Kurihara ; Shoki Fukuda ; Masato Oguchi ; Saneyasu Yamaguchi</i>	
FEATURE BASED ANALYSIS FRIENDLY VIDEO CODING SCHEME FOR HEVC	747
<i>Sovann Chen ; Htoo Maung Maung ; Supavadee Aramvith</i>	
MULTI-ROBOT ENGAGEMENT IN SPECIAL EDUCATION: A PRELIMINARY STUDY IN AUTISM	749
<i>V. G. Kaburlasos ; Ch. Dardani ; M. Dimitrova ; A. Amanatiadis</i>	
LAB AUTOMATION DRONES FOR MOBILE MANIPULATION IN HIGH THROUGHPUT SYSTEMS	751
<i>Dongbin Kim ; Paul Y. Oh</i>	
A CAPTCHA-LIKE IMPLICIT AUTHENTICATION MODEL FOR SMART TV BASED ON MACHINE LEARNING ALGORITHMS	756
<i>Jinhyun Kim ; Gihoon Park ; Jaewook Kwon ; Eun-Ae Cho</i>	
PROJECT OURPUPPET: A SYSTEM TO SUPPORT PEOPLE WITH DEMENTIA AND THEIR CAREGIVING RELATIVES AT HOME	758
<i>Edwin Naroska ; Sebastian Schmitz ; Tobias Bolten ; Chih-Wei Lee ; Ping-Chen Tsai ; Shanq-Jang Ruan</i>	
GPU-ACCELERATED HIGH-RESOLUTION IMAGE STITCHING WITH BETTER INITIAL GUESS.....	762
<i>Chia-Ho Lin ; Yuhsiang M. Tsai ; Weichung Wang ; Liang-Gee Chen</i>	
HLS-BASED 360 VR USING SPATIAL SEGMENTED ADAPTIVE STREAMING	765
<i>Hyeon Su Kim ; Sang Bum Nam ; Sang Geun Choi ; Chang Hyung Kim ; Tegg Tae Kyong Sung ; Chae-Bong Sohn</i>	
A FRAMEWORK FOR VIEW PROGRESSIVE CODING OF LIGHT FIELD	769
<i>Cristian Perra ; Daniele Giusto</i>	
LIGHT-WEIGHT VISUAL PLACE RECOGNITION USING CONVOLUTIONAL NEURAL NETWORK FOR MOBILE ROBOTS.....	772
<i>Chanjong Park ; Junik Jang ; Lei Zhang ; Jae-Il Jung</i>	
CENSUS: CONTINUOUS POSTURE SENSING CHAIR FOR OFFICE WORKERS	776
<i>Yasuhiro Otda ; Teruhiro Mizumoto ; Yutaka Arakawa ; Chihiro Nakajima ; Mitsuhiro Kohana ; Motohiro Uenishi ; Keiichi Yasumoto</i>	
DESIGN OF A SMART GREENHOUSE SYSTEM BASED ON MAPE-K AND ISO/IEC-11179	778
<i>Young-Duk Seo ; Young-Gab Kim ; Euijong Lee ; Kwang-Soo Seol ; Doo-Kwon Baik</i>	

APPLICATION LEVEL NETWORK VIRTUALIZATION USING SELECTIVE CONNECTION	780
<i>Injung Hwang ; Dongkun Shin</i>	
INFRARED-CAMERA-BASED METAMER MARKER FOR USE IN DARK ENVIRONMENTS	782
<i>Kanghoon Lee ; Chanran Kim ; Jong-Il Park</i>	
STUDY OF LOCALIZATION METHOD FOR SWITCHING BETWEEN LOW ELECTRICITY CONSUMPTION AND HIGH PRECISION FOR A WATCHING SYSTEM	785
<i>Hideyuki Kobayashi ; Akiko Takahashi ; Shinji Chiba ; Nahomi M. Fujiki ; Yoshihiro Hayakawa</i>	
ECONOMIC INCENTIVE BASED SOLUTION AGAINST DISTRIBUTED DENIAL OF SERVICE ATTACKS FOR IOT CUSTOMERS	791
<i>Vipindev Adat ; Amrita Dahiya ; B. B. Gupta</i>	
MALWARE PROPAGATION EFFECTS ON SCADA SYSTEM AND SMART POWER GRID	796
<i>Tafseer Akhtar ; B. B. Gupta ; Shingo Yamaguchi</i>	
A ROBUST ANONYMITY PRESERVING AUTHENTICATION PROTOCOL FOR IOT DEVICES	802
<i>Aakanksha Tewari ; B. B. Gupta</i>	
COMPLEX ACTIVITY RECOGNITION SYSTEM BASED ON CASCADE CLASSIFIERS AND WEARABLE DEVICE DATA	807
<i>L. Ciabattoni ; G. Foresi ; A. Monteriù ; D. Proietti Pagnotta ; L. Romeo ; L. Spalazzi ; A. De Cesare</i>	
AN IMPROVED DESIGN OF A LIGHTING SWITCH SYSTEM WITH AUGMENTED REALITY TECHNOLOGY	809
<i>Chi-Huang Hung ; Yong-Yi Fanjiang ; Yi-Shiun Lee ; Hsin-Yu Huang</i>	
DEEP LEARNING IN LOW-POWER STEREO VISION ACCELERATOR FOR AUTOMOTIVE	811
<i>Mihaela Malita ; Octavian Nedescu ; Alexandru Negoita ; Gheorghe M. Stefan</i>	
LOAD MONITORING EFFECTS AND CHARACTERISTICS OF DC HOME	817
<i>Jinwook Lee ; Sung-Yong Son ; Eunsung Oh ; Tae Hoon Kim ; Ju Yong Kim</i>	
BIT ALLOCATION AND ENCODING PARAMETER SELECTION FOR RATE-CONTROLLED ERROR RESILIENT HEVC VIDEO ENCODING	819
<i>Gosala Kulupana ; Dumidu S. Talagala ; Anil Fernando ; Hemantha Kodikara Arachchi</i>	
EFFECTIVE NATURAL COMMUNICATION BETWEEN HUMAN HAND AND MOBILE ROBOT USING RASPBERRY-PI	823
<i>Prabath Chinthaka ; Chinthaka Premachandra ; Senaka Amarakeerthi</i>	
HYBRID APPLICATION SERVICE WITH COMPANION DEVICES BASED ON T-UHDTV	826
<i>Nayeon Kim ; Yongseong Cho ; Sungheun Oh ; Byungjun Bae</i>	
A SMART MIDDLEWARE TO DETECT ON-OFF TRUST ATTACKS IN THE INTERNET OF THINGS	829
<i>Jean Caminha ; Angelo Perkusich ; Mirko Perkusich</i>	
IMPROVING MOBILITY AND AUTONOMY OF DISABLED USERS VIA COOPERATION OF ASSISTIVE ROBOTS	831
<i>Gabriele Foresi ; Alessandro Freddi ; Andrea Monteriù ; Davide Ortenzi ; Daniele Proietti Pagnotta</i>	
A SAFETY ENGINEERING ON THE DESIGN OF HEMODIALYSIS SYSTEMS	833
<i>Túlio H. Costa ; Breno L. A. Paiva ; Andrei G. Lopes ; Frederico M. Bublitz</i>	
DDEFENDER: ANDROID APPLICATION THREAT DETECTION USING STATIC AND DYNAMIC ANALYSIS	835
<i>Hani Alshahrani ; Harrison Mansourt ; Seaver Thorn ; Ali Alshehri ; Abdulrahman Alzahrani ; Huirong Fu</i>	
TRANSFORMER-DARWIN: A MINIATURE HUMANOID FOR POTENTIAL ROBOT COMPANION	841
<i>Jean Chagas Vaz ; Paul Oh</i>	
BANDWIDTH-AWARE DRAM PAGE MIGRATION FOR HETEROGENEOUS MOBILE MEMORY SYSTEMS	846
<i>Dongsuk Shin ; Jae W. Lee</i>	
STUDY OF THE SMARTPHONE OPERATION SUPPORT SYSTEM FOR VISUALLY IMPAIRED PEOPLE	851
<i>Taiki Torigoe ; Yoshihisa Nakatoh</i>	
STUDY ON HEADPHONE HEARING LOSS PREVENTION METHODS BASED ON THE MELODY STRUCTURE OF MUSIC ON PORTABLE MUSIC PLAYER	853
<i>Daiki Okabe ; Yoshihisa Nakatoh</i>	
ON THE CYBERSECURITY OF M-HEALTH IOT SYSTEMS WITH LED BITSlice IMPLEMENTATION	855
<i>Abdelrahman Eldosouky ; Walid Saad</i>	
SINGLE-CHANNEL SPEECH DEREVERBERATION BASED ON BLOCK-WISE WEIGHTED PREDICTION ERROR AND NONNEGATIVE MATRIX FACTORIZATION	861
<i>Chan Woong Kwak ; Kwang Myung Jeon ; In Young Park ; Hong Kook Kim ; Jeong Eun Lim ; Ji Hyun Park</i>	

STANDARD CELL CAMOUFLAGE METHOD TO COUNTER SILICON REVERSE ENGINEERING	863
<i>Hector Gomez ; Ckristian Duran ; Elkim Roa</i>	
S-CHIRP: SECURE COMMUNICATION FOR HETEROGENEOUS IOTS WITH ROUND-ROBIN PROTECTION	867
<i>Mike Borowczak ; George Purdy</i>	
REAL-TIME EYE TRACKING FOR PASSWORD AUTHENTICATION.....	873
<i>Mehrube Mehrubeoglu ; Vuong Nguyen</i>	
CAMERA ORIENTATION ESTIMATION USING MOTION BASED VANISHING POINT DETECTION FOR AUTOMATIC DRIVING ASSISTANCE SYSTEM	877
<i>Youngran Jo ; Jinbeum Jang ; Joonki Paik</i>	
TONE MAPPING FOR VIDEO GAMING APPLICATIONS.....	879
<i>Ahmad Khaldieh ; Stelios Ploumis ; Mahsa T. Pourazad ; Panos Nasiopoulos ; Victor Leung</i>	
A PRACTICAL DIGITAL DOOR LOCK FOR SMART HOME	881
<i>Yuan-Chih Yu</i>	
EXTENDED FASTER R-CNN FOR LONG DISTANCE HUMAN DETECTION: FINDING PEDESTRIANS IN UAV IMAGES	883
<i>Tong Liu ; Hui Yuan Fu ; Qing Wen ; Deng Kui Zhang ; Ling Fei Li</i>	
SIMULATION FRAMEWORK FOR IMPROVED UI/UX OF AR-HUD DISPLAY.....	885
<i>Min-Kook Choi ; Jin-Hee Lee ; Heechul Jung ; Iman R. Tayibnapis ; Soon Kwon</i>	
DRIVER'S GAZE ZONE ESTIMATION BY TRANSFER LEARNING.....	889
<i>Iman Rahmansyah Tayibnapis ; Min-Kook Choi ; Soon Kwon</i>	
DEVELOPMENT OF MAGNETIC RESONANT WIRELESS POWER TRANSFER SYSTEM ROBUST TO POSITION GAP	894
<i>Yoshiki Tsuchida ; Soichiro Ito ; Masahiro Fukui</i>	
AGE CATEGORY ESTIMATION USING MATCHING CONVOLUTIONAL NEURAL NETWORK.....	898
<i>Jun Hee Cho ; Dong-Won Jang ; Rae-Hong Park</i>	
ASIAN-STYLE FOOD INTAKE PATTERN ESTIMATION BASED ON CONVOLUTIONAL NEURAL NETWORK	900
<i>Jinwoo Cho ; Ahyoung Choi</i>	
AN HEVC FRACTIONAL INTERPOLATION HARDWARE USING MEMORY BASED CONSTANT MULTIPLICATION	902
<i>Ahmet Can Mert ; Ercan Kalali ; Ilker Hamzaoglu</i>	
AN AUTOMATIC TEMPERATURE CONTROL FOR INDUCTION COOKTOPS TO REDUCE ENERGY CONSUMPTION	907
<i>M. Prist ; E. Pallotta ; P. Cicconi ; A. C. Russo ; A. Monteriù ; M. Germani ; S. Longhi</i>	
ROBUST PHOTOMETRIC ALIGNMENT FOR ASYMMETRIC CAMERA SYSTEM	913
<i>N. Anirudh ; B H Pawan Prasad ; Anurag Jain ; Venkat Peddigari</i>	
ACOUSTIC SCENE CLASSIFICATION USING CONVOLUTIONAL NEURAL NETWORKS AND MULTI-SCALE MULTI-FEATURE EXTRACTION.....	917
<i>An Dang ; Toan H. Vu ; Jia-Ching Wang</i>	
PRECODING DESIGN FOR TWO-WAY MIMO RELAYING WITH ANTENNA SELECTION.....	921
<i>Chia-Chang Hu ; Bo-Hung Chen ; Guan-Fu Liu</i>	
ENSEMBLE BASED REAL-TIME INDOOR LOCALIZATION USING STRAY WIFI SIGNAL	926
<i>Vishal Singh ; Gorish Aggarwal ; B V S Ujwal</i>	
NON INTRUSIVE LOAD IDENTIFICATION FOR SMART ENERGY MANAGEMENT SYSTEMS	931
<i>G. Chelli ; L. Ciabattini ; J. M. Flores-Arias ; G. Foresi ; A. Monteriù ; D. Proietti Pagnotta</i>	
DEEP LEARNING FOR HAND SEGMENTATION IN COMPLEX BACKGROUNDS.....	933
<i>Adrian-Stefan Ungureanu ; Shabab Bazrafkan ; Peter Corcoran</i>	
DESIGN OF THE INTUITIVE TOUCH SÈREEN AND THE CAMERA CONTROL OF A REMOTE VIDEO CONFERENCE SYSTEM.....	935
<i>Ying-Wen Bai ; Fu-Hua Kao</i>	
LEARNING DATA AUGMENTATION FOR CONSUMER DEVICES AND SERVICES.....	938
<i>Joseph Lemley ; Shabab Bazrafkan ; Peter Corcoran</i>	
THE APPLICATION OF DEEP LEARNING ON DEPTH FROM MULTI-ARRAY CAMERA	941
<i>Hossein Javidnia ; Shabab Bazrafkan ; Peter Corcoran</i>	
HETEROGENEOUS DATA BASED DANGER DETECTION FOR PUBLIC SAFETY	943
<i>Hyunho Park ; Eunjung Kwon ; Eui-Suk Jung ; Hyun-Woo Lee ; Yong-Tae Lee</i>	
SECURE CUSTOMER DATA OVER CLOUD FORENSIC RECONSTRUCTION	945
<i>Jayachander Surbiryala ; Chunming Rong</i>	

PRIVACY-PRESERVING CONTEXT-AWARE FRIEND DISCOVERY BASED ON MOBILE SENSING	949
<i>Gaoqiang Zhuo ; Huihui Yang</i>	
ENERGY-RECOVERY BASED HARDWARE SECURITY PRIMITIVES FOR LOW-POWER EMBEDDED DEVICES	954
<i>Himanshu Thapliyal ; S. Dinesh Kumar</i>	
RANDOM JITTER ELIMINATION FROM HIGH SPEED LINKS USING KALMAN FILTERING	960
<i>Ali Ayub ; Aldo Morales ; Sedig Agili</i>	
MULTIPLE FEATURE INSTANCE DETECTION WITH DENSITY BASED CLUSTERING	963
<i>Onalenna J. Makhura ; John C. Woods</i>	
IEEE CE SOCIETY FUTURE DIRECTIONS SESSION	969
<i>Soumya Kanti Datta ; Tom Coughlin ; Lee Stogner</i>	
ADAPTIVE NOISE CANCELLER WITH TWO SNR ESTIMATES FOR STEPSIZE CONTROL	970
<i>Akihiko Sugiyama</i>	
NEW CALIBRATION METHOD OF PLENOPTIC CAMERA USING CCD CAMERA MODEL	972
<i>Song-Ran Kim ; Min-Chang Jeong ; Hyun-Soo Kang</i>	
AN EFFICIENT FPGA IMPLEMENTATION OF HEVC INTRA PREDICTION	976
<i>Hasan Azgin ; Ahmet Can Mert ; Ercan Kalali ; Ilker Hamzaoglu</i>	
PORTABLE TOR ROUTER: EASILY ENABLING WEB PRIVACY FOR CONSUMERS.....	981
<i>Adrian Barberis ; Danny Radosevich ; Wyatt Emery ; Mike Borowczak</i>	
CMD: A CONVINCING MECHANISM FOR MITM DETECTION IN SDN.....	987
<i>Kai Zhang ; Xiaofeng Qiu</i>	
MARKERLESS AUGMENTED REALITY TECHNOLOGY FOR REAL-SPACE BASKETBALL SIMULATION	993
<i>Markus Santoso</i>	
PORTABLE INTELLIGENT HOME SERVICE SYSTEM BASED ON SSVP	996
<i>Ruijie Zhao ; Liya Huang ; Tian Zhou ; Qing Wang ; Yu Wang ; Wentao Hua</i>	
FLYING ANIMALS AND THE ART OF PRESENTATION	1001
<i>Shingo Yamaguchi</i>	
FOG COMPUTING AND NETWORKING — WHAT'S NEXT?.....	1003
<i>Tao Zhang ; Douglas N. Zuckerman</i>	
PROGRESSIVE AND SECURE PERFORMANCE UNLOCKING FOR DIGITAL INTEGRATED CIRCUITS.....	1004
<i>Renuka Lokare ; Ranga Vemuri</i>	
A SECURE TUNABLE-PRECISION ARCHITECTURE FOR IMAGE PROCESSING APPLICATIONS	1010
<i>Ankita Manjunath Nayak ; Ranga Vemuri</i>	
DYNAMIC AUTONOMOUS FREQUENCY REUSE FOR UPLINK CELLULAR NETWORKS	1015
<i>Mohamed Elwekeil ; Masoud Alghoniemy ; Osamu Muta</i>	
BRAIN DATA BANK (BDB) VISUALIZATION, ANALYTICS AND BEYOND	1020
<i>N. Nan Chu</i>	
WEARABLE SENSORS FOR BRAIN EEG SIGNAL ORIENTED APPLICATIONS	1021
<i>Narisa Nan Chu</i>	
I-HELMET: AN INTELLIGENT MOTORCYCLE HELMET FOR REAR BIG TRUCK/BUS INTIMATION AND COLLISION AVOIDANCE	1022
<i>Liang-Bi Chen ; Wan-Jung Chang ; Jian-Ping Su ; Yu-Ren Chen</i>	
TECHNOLOGY TREND IN 38 LIVE ENTERTAINMENT SHOWS ON THE LAS VEGAS STRIP	1024
<i>Si Jung Kim ; Sandra Perez ; Catlene Smith ; Edison Smith ; Hyeonjin Lee ; Kyungkoo Jun</i>	
UNMANNED AERIAL AND GROUND VEHICLE (UAV-UGV) SYSTEM PROTOTYPE FOR CIVIL INFRASTRUCTURE MISSIONS	1027
<i>Blake Hament ; Paul Oh</i>	
A CONTAINERIZED MEDIA CLOUD FOR VIDEO TRANSCODING SERVICE	1031
<i>Yu Dong ; Xusheng Zhang ; Yanan Zhao ; Li Song</i>	
PHYSIOLOGICAL CHARACTERIZATION OF NEED FOR ASSISTANCE IN RESCUE MISSIONS WITH DRONES	1035
<i>Fabio Dell'Agnola ; Leila Cammoun ; David Atienza</i>	
A COMPARISON OF AMAZON WEB SERVICES AND MICROSOFT AZURE CLOUD PLATFORMS FOR HIGH PERFORMANCE COMPUTING	1041
<i>Charlotte Kotas ; Thomas Naughton ; Neena Imam</i>	
LIGHT-WEIGHT ACCOUNTABLE PRIVACY PRESERVING (LAPP) PROTOCOL TO DETERMINE DISHONEST ROLE OF THIRD PARTY AUDITOR IN CLOUD AUDITING	1045
<i>Mohamed Ben Haj Frej ; Julius Dichter ; Navarun Gupta</i>	

A SCALABLE PURCHASE INTENTION PREDICTION SYSTEM USING EXTREME GRADIENT BOOSTING MACHINES WITH BROWSING CONTENT ENTROPY	1051
<i>Bichen Zheng ; Bingwei Liu</i>	
A BAND-PASS IR LIGHT PHOTODETECTOR FOR WEARABLE INTELLIGENT GLASSES IN A DROWSINESS-FATIGUE-DETECTION SYSTEM	1055
<i>Liang-Bi Chen ; Wan-Jung Chang ; Wei-Wen Hu ; Chun-Kai Wang ; Da-Huei Lee ; Yu-Zung Chiou</i>	
EFFICIENT CLOUD TRACING: FROM VERY HIGH LEVEL TO VERY LOW LEVEL	1057
<i>Yves J. Bationo ; Naser Ezzati-Jivan ; Michel R. Dagenais</i>	
MULTI-VR SYSTEM OF ASIA WORLD UNESCO BUDDHIST HERITAGE.....	1063
<i>Jin Ho Park ; Sangheon Kim</i>	
PERSONAL TRACKED VEHICLE AUTONOMY PLATFORM	1065
<i>Santiago Ricoy ; Leonardo Georgescu ; Paul Oh</i>	
IMMERSIVE FUTURE WITH NEW AND EMERGING INNOVATIONS AND PREDICTIONS: A MINI-TECHNOLOGY TIME MACHINE PANEL SESSION ICCE 2018	1067
<i>Tom Coughlin ; Kathy Grise ; Nicholas Napp ; Conor Russomanno ; Joe Sullivan ; Tao Zhang</i>	
Author Index	