

TENCON 2011 – 2011 IEEE Region 10 Conference

**Bali, Indonesia
21 – 24 November 2011**

Pages 1-751



**IEEE Catalog Number: CFP11TEN-PRT
ISBN: 978-1-4577-0256-3**

TABLE OF CONTENTS

SESSION 1: COMPUTATIONAL INTELLIGENCE, EVOLUTIONARY COMPUTING, FUZZY LOGIC

A Solution of Front-back Confusion within Binaural Processing by an Estimation Method of Sound Source Direction on Sagittal Coordinate	1
<i>Tsuyoshi Usagawa, Atsuya Saho, Kojiro Imamura, Yoshifumi Chisaki</i>	
A Comparative Study on Daubechies Wavelet Transformation, Kernel PCA and PCA as Feature Extractors for Arrhythmia Detection Using SVM	5
<i>Elly Matul Imah, Faris Al Afif, M. Ivan Fanany</i>	
A Face Recognition Scheme Based on Spectral Domain Cross-correlation Function	10
<i>Shaikh Anowarul Fattah, Mahmudur Rahman Khan, Anika Sharin</i>	

SESSION 2: COMPUTATIONAL INTELLIGENCE, EVOLUTIONARY COMPUTING, FUZZY LOGIC

A New Hybrid Technique for Solution of Economic Load Dispatch Problems Based on Biogeography Based Optimization	19
<i>Abhishek Rathi, Arjit Agarwal, Anurag Sharma, Prerna Jain</i>	
A Study on Face Recognition in Video Surveillance System Using Multi-Class Support Vector Machines	25
<i>Chuu Tian Yew, Shahrel Azmin Suandi</i>	
An Evolutionary Learning Model Based on FSS and Eigenspace Approaches for Distance-Alterable Face Recognition	30
<i>Hsin-Chun Tsai, Jhing-Fa Wang, Hung-Chieh Tai</i>	
An Optimal ILP Algorithm for Approaching Identifying Instruction Set Extension	34
<i>Jeong-Uk Chang, Chi-Ho Lin</i>	
Application of DWT and Fuzzy Logic Algorithm for Classifying Simultaneous Fault Types	44
<i>C. Pothisarn, A. Ngaopitakkul</i>	

SESSION 3: COMPUTATIONAL INTELLIGENCE, EVOLUTIONARY COMPUTING, FUZZY LOGIC

Artificial Bee Colony Algorithm with Self-Adaptive Mutation: A Novel Approach for Numeric Optimization	49
<i>Mohammad Shafiul Alam, Md. Monirul Islam</i>	
Automatic Loss Smoothness Determination for Large Geometric Margin Minimum Classification Error Training	54
<i>Tsukasa Ohashi, Hideyuki Watanabe, Shigeru Katagiri, Miho Ohsaki</i>	
Fault Tolerant Control Design for Simultaneous Actuator and Sensor Faults Using Multiple MPCs	59
<i>S. Kanthalakshmi, V. Manikandan, K. Ramakrishnan, N. Devarajan</i>	
Improved Coefficient Based Test for Diagnosing Parametric Faults of Analog Circuits	64
<i>A. Kavithamani, V. Manikandan, N. Devarajan, K. Ramakrishnan</i>	

SESSION 4: COMPUTATIONAL INTELLIGENCE, EVOLUTIONARY COMPUTING, FUZZY LOGIC

Automatic Loss Smoothness Determination for Minimum Classification Error Training	69
<i>Hideyuki Watanabe, Shigeru Katagiri, Tsukasa Ohashi</i>	
Controlling Voltage Collapse using ANFIS-based Composite Controller-SVC in Power Systems	74
<i>Adi Soeprijanto, Takashi Hiyama</i>	

Neural Network Based Maximum Power Point Tracking of Photovoltaic Arrays	79
<i>Md. Asiful Islam, Md. Ashfanoor Kabir</i>	

SESSION 5: COMPUTATIONAL INTELLIGENCE, EVOLUTIONARY COMPUTING, FUZZY LOGIC

Location Fingerprint Technique using Fuzzy C-Means Clustering Algorithm for Indoor Localization	88
<i>Dwi Joko Suroso, Panarat Cherntanomwong, Jun-ichi Takada</i>	
Memetic Algorithm Behavior on Timetabling Infeasibility	93
<i>Tri A. Budiono, Kok Wai Wong</i>	
Multi-observers of Particle Filter Approach for Estimating Indoor Mobile User Location	98
<i>Teddy Mantoro, Media Anugerah Ayu, Wendi Usino, Shakiratul Husna Raman, Nurul Hidayati Md Latiff</i>	
Organizing Balanced and Power-Efficient Clustered Architecture for Wireless Ad Hoc Networks	103
<i>Chih-Cheng Tseng, Yi-Fan Tsai, Li-Hsun Chang, Hwang-Cheng Wang, Kuo-Chang Ting, Fang-Chang Kuo</i>	

SESSION 6: COMPUTATIONAL INTELLIGENCE, EVOLUTIONARY COMPUTING, FUZZY LOGIC

Optimal Placement and Sizing of Distributed Generation using Quantum Genetic Algorithm for Reducing Losses and Improving Voltage Profile	108
<i>Ni Ketut Aryani, Muhammad Abdillah, I Made Yulistya Negara, Adi Soeprijanto</i>	
Optimal Power Flow Solution Using Evolutionary Computation Techniques	113
<i>M. N. Suharto, M. Y. Hassan, M. S. Majid, M. P. Abdullah, F. Hussin</i>	
Quality Classification of Uranium Dioxide Pellets for PWR Reactor Using ANFIS	118
<i>Dede Sutarya, Benyamin Kusumoputro</i>	

SESSION 7: COMPUTATIONAL INTELLIGENCE, EVOLUTIONARY COMPUTING, FUZZY LOGIC

Overlapping Cluster Control Mechanism for Particle Swarm Optimization-based Clustering Algorithm	124
<i>Amin Suharjono, G. Hendratoro Wirawan</i>	
Resource Selection Using Fuzzy Logic for Dynamic Service Placement and Replication	128
<i>Boon Yaik Ooi, Huah Yong Chan, Yu-N Cheah</i>	
Rumor Analysis Framework in Social Media	133
<i>Takako Hashimoto, Tetsuji Kuboyama, Yukari Shiota</i>	
Signal Segmentation of Fault Records based on Empirical Mode Decomposition	138
<i>Mustarum Musaruddin, Rastko Zivanovic</i>	

SESSION 8: COMPUTING ARCHITECTURES AND SYSTEMS, PARALLEL PROCESSOR ARCHITECTURES

A Framework for GPU-accelerated AES-XTS Encryption in Mobile Devices	144
<i>Mohammad Ahmed Alomari, Khairulmizam Samsudin</i>	
PBFS: A Technique to Select Forwarders in Opportunistic Routing	149
<i>Arka Prokash Mazumdar, Ashok Singh Sairam</i>	
Two Hardware Designs of BLAKE-256 Based on Final Round Tweak	154
<i>Muh Syaifiq Irsyadi, Shuichi Ichikawa</i>	
Replacement Policies for Scratch Pad Memory in Embedded Systems	159
<i>Shaily Mittal</i>	
Architecture and Emulator in Ad Hoc Network for Providing P2P Type SIP_VoIP Services	164
<i>Toshiaki Kagoshima, Daisuke Kasamatsu, Kazumasa Takami</i>	
Adding Gateway Mode for R-AODV Routing Protocol in Hybrid Ad Hoc Network	169
<i>Abdusy Syarif, Harris Simaremare, Sri Chusri Haryanti, Riri Fitri Sari</i>	

SESSION 9: COMPUTING ARCHITECTURES AND SYSTEMS, PARALLEL PROCESSOR ARCHITECTURES

A Sequential Modular Multiplication Algorithm Using Residue Signed-Digit Additons	174
<i>Shugang Wei</i>	
Dynamic Safe Transmit Power MAC protocol in Wireless Adhoc MAC Protocol	179
<i>Mihir Nyayate, Y. N. Singh</i>	
Effective Implementation of AES-XTS on FPGA	184
<i>Shakil Ahmed, Khairulmizam Samsudin, Abdul Rahman Ramli, Fakhrol Zaman Rokhani</i>	
An Evaluation of Routing Protocols with Probabilistic Relay in VANETs	187
<i>Radityo Anggoro, Ryoji Nakamura, Teruaki Kitasuka, Tsuyoshi Itokawa, Masayoshi Aritsugi</i>	
QoE Assessment of Group Synchronization in Networked Chorus with Voice and Video	192
<i>Yuji Miyashita, Yutaka Ishibashi, Norishige Fukushima, Shinji Sugawara, Kostas E. Psannis</i>	

SESSION 1: SOFTWARE AND DATABASE SYSTEMS MOBILE AND EMBEDDED SYSTEM SOFTWARE

A Hierarchical Tiling Algorithm for Tile Based Rendering with Global Scratch Counter under Multi Core Environment	197
<i>Jun-Seo Kim, Dong-Han Kim, Young-Su Kwon, Chanho Lee</i>	
A UML Metamodel for Smart Device Application Modeling based on Windows Phone 7 Platform	201
<i>Bup-Ki Min, Minhyuk Ko, Yongjin Seo, Seunghak Kuk, Hyeon Soo Kim</i>	
3D Mobile Navigation for Dynamic Users Interaction	206
<i>Teddy Mantoro, Adamu Abubakar, Media A. Ayu</i>	
E-mail Based Updates Delivery in Unidirectional Content Synchronization among Learning Management Systems Over Limited Bandwidth Environment	211
<i>Royyana M. Ijtihadie, Yoshifumi Chisaki, Tsuyoshi Usagawa, Bekti Cahyo Hidayanto, Achmad Affandi</i>	

SESSION 2: SOFTWARE AND DATABASE SYSTEMS MOBILE AND EMBEDDED SYSTEM SOFTWARE

TV Video Context Extraction	216
<i>T. Chattopadhyay, Aniruddha Sinha, Arpan Pal</i>	
Information Retrieval System Using Location and Transportation by GPS traces as Search Criteria	221
<i>Masahide Yuasa, Tomohiro Nishida, Minoru Ohyama, Tomohiro Sera</i>	
MDA and SOA Approach to Development of Web Application Interface	226
<i>Keiji Araki, Yoichi Omori</i>	

SESSION 1: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY

A Dot-overlap Compensation Scheme for Feature-preserving Multiscale Error Diffusion	232
<i>Lai-Yan Wong, Yuk-Hee Chan</i>	
A New Mathematical Analysis of the Cyclic Prefix Effect On Removing ISI and ICI in DMT Systems	237
<i>Saeed Ghazi-Maghrebi, Hossein Motahayeri, Karen Der Avanesian, Mojtaba Lotfizad</i>	
A Quick Search Method for Determining Corresponding Points From Vehicle-Vibration Data	242
<i>Tsubasa Morita, Hiroto Saito, Naoki Mukawa</i>	
Analysis and Comparison of a Set of ISI Free Waveforms for PAPR Reduction in OFDM Systems	246
<i>Regina Reine, Zhuquan Zang</i>	
Reversible Data Hiding Algorithm for High Quality Stego Images	251
<i>Dah Jung Chung, Hong Lin Jin, Yoon Sik Choe</i>	

SESSION 2: SIGNAL PROCESSING, BIO IMAGING PROCESSING, IMAGE AND VIDEO CODING

Acoustic Based Abnormal Event Detection Using Robust Feature Compensation	255
<i>Akira Sasou, Kouki Tanaka, Shinichi Tanaka, Masumi Tanimoto</i>	

An Approach for Human Identification Based on Time and Frequency Domain Features Extracted from ECG Signals	259
<i>Shaikh Anowarul Fattah, Abu Shafin Mohammad Mahdee Jameel, Rajib Goswami, Sudip Kumar Saha, Nitu Syed, Shakil Akter, Celia Shahnaz</i>	
Classification of Fruits using Probabilistic Neural Networks – Improvement using Color Features	264
<i>Nur Badariah Ahmad Mustafa, Kumutha Arumugam, Syed Khaleel Ahmed, Zainul Abidin Md Sharrif</i>	
Data Partition Analyses for MPEG-2 Decoders on A Dual Core Embedded Platform	270
<i>Li-Juo Lin, Kuei-Chun Liu, Tse-Min Chen, Wen-Shan Wang</i>	
Enhancing Selective ISMACryp Video Encryption for Real Time Applications in Handheld Devices	274
<i>Jay M. Joshi, Upena D. Dalal</i>	
A Simple Enhancement Technique for Shading in 2D Images by Retinex Model	279
<i>Shuichi Ojima</i>	

SESSION 3: SIGNAL PROCESSING, BIO IMAGING PROCESSING, IMAGE AND VIDEO CODING

An ECG Signal Denoising Method Based on Enhancement Algorithms in EMD and Wavelet Domains	284
<i>Ashfanoor Kabir, Celia Shahnaz</i>	
An Efficient Motion Adaptive De-interlacing Algorithm using Spatial and Temporal filter	288
<i>Byoung Hyun Yoo, Byung Sung Kim, Kwaehi Lee</i>	
Detection of Disgust in The EEG Sub-Gamma Band	293
<i>Syed Syahril, Khazaimatol S. Subari</i>	
A New Constellation in DMT for ADSL Systems	298
<i>Saeed Ghazi-Maghrebi, Mojtaba Lotfizad, Mohammad Ghanbari</i>	

SESSION 4: SIGNAL PROCESSING, BIO IMAGING PROCESSING, IMAGE AND VIDEO CODING

Design and Implementation of a Parameter-Based Voice Enhancement Device (VED) for Next-Generation Networking	302
<i>Macario O. Cordel, Rowena Cristina L. Guevara</i>	
Design of a Lab Model of a Digital Speech Processor for Cochlear Implant	307
<i>Preethi Mahadevan, B. Pavithra, S. Shri Ranjani, P. Vijayalakshmi, T. Nagarajan</i>	
Detection of Service Activity in a Badminton Game	312
<i>Sing Loong Teng, Raveendran Paramesran</i>	
Efficient Mode Selection with Extreme Value Detection Based Pre-processing Algorithm for H.264/AVC Fast Intra Mode Decision	316
<i>Chen-Hsien Miao, Chih-Peng Fan</i>	
Demons Based Tracking for Non-Rigid Transformed Region of Interest	321
<i>Abhinav Kumar, B. Madhusudan Rao, Rajesh Ghole, Amol Patil, Nilesh Ghatpande</i>	
Development of the Data Acquisition System for the 32-Channel Electrical Capacitance Volume Tomography	326
<i>Arba'i Yusuf, Wahyu Widada, W. Warsito</i>	

SESSION 5: SIGNAL PROCESSING, BIO IMAGING PROCESSING, IMAGE AND VIDEO CODING

Estimated lost LSFs: A New Method based on Intraframe CVQ Compensation & Interframe Interpolation	330
<i>Li Hong Ma, Hao Zheng, Shi Jiao Chen, Jing Tian</i>	
Face Detection Using Combination of Neural Network and Adaboost	335
<i>Zulhadi Zakaria, Shahrel A. Suandi</i>	
Feature Set for Philippine Gong Music Classification by Indigenous Group	339
<i>Nicanor Marco P. Valdez, Rowena Cristina L. Guevara</i>	
Performance Evaluation of Reconstruction with Fan-Beam Algorithm with no Backprojection Weight in Truncated Projection Completion using Linear Prediction	344
<i>K. Sumith, A. V. Narasimhadhan, Kasi Rajgopal</i>	
Geographic Information System (GIS)-Based Landslide Susceptible Area Detection using Geospatial and Satellite Data (Case Study of Banten, DKI Jakarta and Jawa Barat Provinces)	349
<i>Dodi Sudiana, Ardhi Adhary Arbain</i>	

SESSION 6: SIGNAL PROCESSING, BIO IMAGING PROCESSING, IMAGE AND VIDEO CODING

Fingerprint Reference Point Detection Using Triangle's Angle	354
<i>Chin Hoi Lai, Shahrel A. Suandi</i>	
Investigating Successive Interference Cancellation in MIMO Relay Network	359
<i>Apriana Toding, Yue Rong</i>	
LSB⁺⁺: An Improvement to LSB⁺ Steganography	364
<i>Kazem Ghazanfari, Shahrokh Ghaemmaghami, Saeed R. Khosravi</i>	

SESSION 7: SIGNAL PROCESSING, BIO IMAGING PROCESSING, IMAGE AND VIDEO CODING

Qualitative and Quantitative Comparisons of Haemorrhage Intracranial Segmentation in CT Brain Images	369
<i>W. Mimi Diyana W. Zaki, M. Faizal A. Fauzi I, R. Besar, W. S. H. Munirah W. Ahmad</i>	
Recovering Drawing Order from Static Handwritten Images Using Probabilistic Tabu Search	379
<i>Takayuki Nagoya, Hiroyuki Fujioka</i>	
Adaptive Multidirectional Edge Directed Interpolation for Selected Edge Regions	385
<i>Yujin Yun, Jonghyun Bae, Jaeseok Kim</i>	
Wavelet based Despeckling of Medical Ultrasound Images with Bilateral filter	389
<i>R. Vanithamani, G. Umamaheswari</i>	
Restoration of Clipped Audio Signal Using Recursive Vector Projection	394
<i>Shin Miura, Hirofumi Nakajima, Shigeki Miyabe, Shoji Makino, Takeshi Yamada, Kazuhiro Nakada</i>	

SESSION 8: SIGNAL PROCESSING, BIO IMAGING PROCESSING, IMAGE AND VIDEO CODING

Statistical Modeling of Error Resilient JPEG2000 Decoding	403
<i>M. Omidyeganeh, A. Javadtalab, S. Ghaemmaghami, S. Shirmohammadi</i>	
Underdetermined BSS with Multichannel Complex NMF Assuming W-Disjoint Orthogonality of Source	413
<i>Kazuma Takeda, Hirokazu Kameoka, Hiroshi Sawada, Shoko Araki, Shigeki Miyabe, Takeshi Yamada, Shoji Makino</i>	

SESSION 1: TELECOMMUNICATIONS, WIRELESS COMMUNICATIONS, TRAFFIC CONTROL, NETWORK SECURITY

60 GHz-Band RoF System Using Photonic Frequency Upconversion and Wavelength re-use Techniques	422
<i>Hyoungh-Jun Kim, Seung-Hun Lee, Woo-Keun Song, Jang-Soo Chun, Dong-Yu Kim, Jong-In Song</i>	
A Reliable Routing Scheme Based on Vehicle Moving Similarity for VANETS	426
<i>Min-Hsuan Wei, Kuochen Wang, Yi-Ling Hsieh</i>	
ABER of Dual Pre-detection EGC Receiver over Correlated Hoyt Fading Channels	431
<i>Rupaban Subadar, P. R. Sahu</i>	
Investigating Channel Bonding and TXOP in 802.11n Wireless Networks	435
<i>Timothy Hiatt, Ante Prodan</i>	
Root Cause Detection of Call drops in Live GSM Network	440
<i>K. R. Sudhindra, V. Sridhar</i>	

SESSION 2: TELECOMMUNICATIONS, WIRELESS COMMUNICATIONS, TRAFFIC CONTROL, NETWORK SECURITY

A Resource Allocation Algorithm for Maximizing Packet Transmissions in Downlink LTE Cellular Systems	445
<i>Jeng-Ji Huang, Wei-Keng Lin, Hung-Hsiang Ko</i>	
Adaptation of the QoE-Based Video Output Scheme SCS to Time-Varying Traffic in IP Networks	450
<i>Tomohiro Yokoi, Shuji Tasaka, Toshiro Nunome</i>	
Analysis of Energy Consumption in Heterogeneous Sensor Networks with Mobile Sink	455
<i>R. Sudarmani, K. R. Shankar Kumar</i>	

Performance Analysis of MB-OFDM UWB Modulation Through Modified Saleh-Valenzuela Channel Model	460
<i>Suthami Ariessaputra, Risanuri Hidayat, Adhi Susanto</i>	

SESSION 3: TELECOMMUNICATIONS, WIRELESS COMMUNICATIONS, TRAFFIC CONTROL, NETWORK SECURITY

Blind Channel Estimation with Periodicity for OFDM Systems without Cyclic Prefix	470
<i>Shih-Hao Fang, Ju-Ya Chen, Jing-Shiun Lin, Ming-Der Shieh</i>	
Complexity Reduction Method with Low Granularity Block Selection for TFI-MUDiv/OFDMA	474
<i>Yuta Ida, Chang-Jun Ahn, Takeshi Kamio, Hisato Fujisaka, Kazuhisa Haeiwa</i>	
Efficient Re-use of CRs under Deep Fading for Improving Cooperative Sensing Performance	479
<i>Dinh Thi Thai Mai, Nguyen Quoc Tuan, Dinh-Thong Nguyen</i>	
Architecture Design of a Fast Feed-forward Blind Equalizer with Joint Generalized Multilevel Modulus and Low-Cost Soft Decision Directed Scheme for Cable Modem Receiver	484
<i>Hao-Jun Hu, Wan-Ning Hsu, Chih-Peng Fan</i>	
Design of Dielectric Resonators Oscillator for Mobile WiMAX at 2,3 GHz with Additional Coupling $\lambda/4$	489
<i>Gunawan Wibisono, Teguh Firmansyah</i>	
Optical CDMA System Using Optical Hard-Limiter and 2-D RLL Code	494
<i>Maw-Yang Liu, Chien-Ming Wang, Chih-Cheng Tseng, Wan-Ping Chuang, Chien-Hsien Chiang</i>	

SESSION 4: TELECOMMUNICATIONS, WIRELESS COMMUNICATIONS, TRAFFIC CONTROL, NETWORK SECURITY

Determining a User's Location in Underground Malls Using Opportunistic Advertisement Delivery Systems	498
<i>Takahiro Yamaguchi, Kazumi Takami</i>	
Factor Graph Based CRSC Turbo Code and Iterative Receiver Design	503
<i>Debasish Bera, S. S. Pathak, I. Chakrabarti</i>	
Hardware Efficient Design for Narrow Band Power Line Communication Modem	508
<i>Yin-Tsung Hwang, Shin-Wen Chen</i>	
On the Relation between Two Slot-Based Contention Resolution Algorithms	513
<i>Warakorn Srichavengsup</i>	
Performance Improvement of Rateless Code by Non-uniform Selection of Messages in Encoding	517
<i>Hyung Taek Lim, Eon Kyeong Joo</i>	

SESSION 5: TELECOMMUNICATIONS, WIRELESS COMMUNICATIONS, TRAFFIC CONTROL, NETWORK SECURITY

Fiber Material Dependent QoS Analysis and OVPN Connection Setup Over WDM/DWDM Network	521
<i>Santos Kumar Das, Suraj Kumar Naik, Sarat Kumar Patra</i>	
Innovative WiMAX Broadband Internet Access for Rural Areas of Vietnam using TV Broadcasting Ultra-High Frequency (UHF) Bands	526
<i>Tan T. Duc, Tuyen T. Duc, Dung D. Do, Hoang V. Nguyen</i>	
Maximum Rectangle-Based Down-Link Burst Allocation Algorithm for WiMAX Systems	530
<i>Tsern-Huei Lee, Chi-Hsien Liu, Jimmy Yau, Yaw-Wen Kuo</i>	
Node Localization Methods with Improved Accuracy for Wireless Sensor Networks	535
<i>Prima Kristalina, Gamantyo Hendrantoro</i>	
Non-linear Channel Compensation Method for OFDM under Fast Fading Channel	540
<i>Shogo Soejima, Yuta Ida, Chang-Jun Ahn, Tatsuya Omori, Kenya Hashimoto</i>	

SESSION 6: TELECOMMUNICATIONS, WIRELESS COMMUNICATIONS, TRAFFIC CONTROL, NETWORK SECURITY

Heuristic Routing for Reducing Congestion in Presence of Link Fault in de Bruijn WDM Networks	544
<i>Monish Chatterjee, Uma Bhattacharya</i>	

Path-Selection Based Adaptive Guard Interval for TFI-OFDM System	549
<i>Tomoki Yoshimura, Chang-Jun Ahn, Tatsuya Omori, Ken-ya Hashimoto</i>	
Performance Analysis of Random Slot Multiple Access Algorithms for DOCSIS Protocol	554
<i>Thanyawarat Pawasopon, Suvepon Sittichivapak</i>	

SESSION 7: TELECOMMUNICATIONS, WIRELESS COMMUNICATIONS, TRAFFIC CONTROL, NETWORK SECURITY TECHNOLOGY

Performance of Cooperative Diversity on Correlated Dual-Hop Channels with an Amplify-and-Forward Relay over Rayleigh Fading Environments	563
<i>Yawgeng A. Chau, Karl Yung-Ta Huang</i>	
Preliminary Study on Cuckoo Search Parameters for Symmetric Linear Array Geometry Synthesis	568
<i>K. N. Abdul Rani, F. Malek</i>	
Proposal of MU-MIMO System with Block Diagonalization in Multi-Site Communication System	573
<i>Koki Ezo, Keisuke Fukada, Takeshi Hattori, Ikuko Eguchi Yairi, Yusuke Fukushima</i>	

SESSION 8: TELECOMMUNICATIONS, WIRELESS COMMUNICATIONS, TRAFFIC CONTROL, NETWORK SECURITY

Survey of Mobile Phone Radio Waves Condition in Rural Area for Two-way Communications in Disaster	583
<i>Ashida Nobuyuki, Fukui Makoto, Nasu Yasuhiro, Higashi Terumasa</i>	
The Optimal Number of Sub-carriers for Three Randomly Interfering OFDM Systems	587
<i>Jeehoon Lee, Kiseon Kim</i>	
Uplink Resource Allocation Algorithms with Fractional Power Control as Power Constraints for OFDMA System	592
<i>Arfianto Fahmi, Muhamad Asvial, Dadang Gunawan</i>	
WiFi-Based Indoor Positioning for Multi-Floor Environment	597
<i>Hung-Huan Liu, Yu-Non Yang</i>	
W/T SPR Codes Offer Higher Throughput in OCDMA Networks	602
<i>E. S. Shivaleela, Shrikant S. Tangade</i>	

SESSION 2: CIRCUITS AND SYSTEMS, SYSTEMS ON CHIP, OPTOELECTRONIC CIRCUITS

A 6-10.6 GHz CMOS PA with Common-Gate as an Input Stage for UWB Transmitters	607
<i>S. A. Z Murad, M. M. Shahimim, R. K. Pokharel, H. Kanaya, K. Yoshida</i>	
A Direct Conversion WiMAX RF Receiver Front-End in GaAs 0.5 μ m ED-Mode pHEMT Technology	616
<i>Shao-Wei Lin, Po-Yu Ke, Chao-Hung Chen, Hsien-Chin Chiu, Jeffrey S. Fu</i>	

SESSION 3: CIRCUITS AND SYSTEMS, SYSTEMS ON CHIP, OPTOELECTRONIC CIRCUITS

A 3.5 GHz Packaged Medium Power Amplifier using GaAs PHEMT	622
<i>Amiza Rasmi, I. M. Azmi, M. Rafie Che Rose, Arjuna Marzuki</i>	
A Sub-μW, 1.0V CMOS Temperature Sensor Circuit Insensitive to Device Parameters	626
<i>Ryota Sakamoto, Koichi Tanno, Hiroki Tamura, Zainul Abidin</i>	
A CMOS Log-Antilog Current Multiplier/Divider Circuit Using DDCC	634
<i>Usa Torateanchai, Montree Kumngern, Kobchai Dejhan</i>	
Characterization of Dispersion Properties of Silicon Nanowire Considering Different Core Geometry	638
<i>Shama Naz Islam, M. Shah Alam</i>	

SESSION 4: CIRCUITS AND SYSTEMS, SYSTEMS ON CHIP, OPTOELECTRONIC CIRCUITS

Circuit of an EEPROM Sense Amplifier in 0.18 μm CMOS Technology	642
<i>Labonnah F. Rahman, Md. Syedul Amin, M. B. I. Reaz, M. A. M. Ali</i>	
Design of Pipelined Parallel Turbo Decoder Using Contention Free Interleaver	646
<i>S. M. Karim, Indrajit Chakrabarti</i>	

Comparison of Optimized Multi-Stage Clock Gating with Structural Gating Approach	651
<i>Xin Man, Shinji Kimura</i>	
Pulse-Triggered Flip-Flop Design with PTL Style Control Scheme	657
<i>Jin-Fa Lin, Ming-Hua Sheu, Peng-Siang Wang</i>	

SESSION 5: CIRCUITS AND SYSTEMS, SYSTEMS ON CHIP, OPTOELECTRONIC CIRCUITS

Effect of Field Dependent Mobility and Simultaneous Consideration of Both SRH and Auger Recombination on the Analytical Modeling of Internal Quantum Efficiency of a Si-Solar Cell	662
<i>Sujoy Kumer Saha, Syeda Israt Ferdous, Shahajadee Islam Reba, Md. Iqbal Bahar Chowdhury</i>	
Electrical Characteristics of the Novel BiCMOS ESD Protection Circuit with Low Trigger Voltage, Low Leakage and Fast Turn-on	667
<i>Byung-Seok Lee, Jin-Woo Jung, Dong-Su Kim, Yil-Suk Yang, Yong-Seo Koo</i>	
FPGA based DC Servo motor Control for Remote Replication of Movements of a Surgical Arm	671
<i>Vivek Ramakrishnan, Nalamwar Sanchit Gopal, Rahul Ashok, S. Moorthi</i>	
Higher Radix Sparse-2 Adders with Improved Grouping Technique	676
<i>V. Chetan Kumar, P. Sai Phaneendra, S. Ershad Ahmed, V. Sreehari, N. Moorthy Muthukrishnan, M. B. Srinivas</i>	
High-Linear Four-Quadrant Multiplier Based on MOS Weak-Inversion Region Translinear Principle with Adaptive Bias Technique	680
<i>Koichi Tanno, Yuki Sugahara, Hiroki Tamura</i>	

SESSION 6: CIRCUITS AND SYSTEMS, SYSTEMS ON CHIP, OPTOELECTRONIC CIRCUITS

Log-Domain Quadrature Sinusoidal Oscillator based on Lossless Integrator and All-pass Filter	685
<i>Pipat Prommee, Montri Somdunyanok, Krit Angkeaw</i>	
A USB 2.0 Controller for an ARM7TDM-S Processor Implemented in FPGA	689
<i>John Keithley L. Difuntorum, Kristine Mari U. Matutina, Al Jerome Mervyn Z. Tong, Joy Alinda Reyes Madamba</i>	
Multi-TAP Architecture for IP Core Testing and Debugging on Network-On-Chip	697
<i>R.S. Rajagopal, M. Nadi, Y. Ooiz, M. N. Marsono</i>	
Parallel CORDIC-like Architecture: For Fast Rotation Implementation	701
<i>B. Lakshmi, A. S. Dhar</i>	

SESSION 7: CIRCUITS AND SYSTEMS, SYSTEMS ON CHIP, OPTOELECTRONIC CIRCUITS

Resource Minimization in a Real-time Depth-map Processing System on FPGA	706
<i>Ngo Huy Tan, Nor Hisham Hamid, Patrick Sebastian, Yap Vooi Voon</i>	
The Impact of Channel-Width on Threshold Voltage for Short Channel Devices	715
<i>Kiran Agarwal Gupta, Dinesh Anvekar, V. Venkateswarlu</i>	
Universal Biquadratic Digital Filter with Tunable Capability	720
<i>Sorawat Chivapreecha</i>	

SESSION 7: MICROELECTRONICS AND MEMS, NANOTECHNOLOGY

A Study of Radiation Heating during the Curing Process of Head Gimbal Assembly	725
<i>Suttipan Aksornnum, Orrathai Watcharakitchakorn, Rardchawadee Silapunt</i>	
Analytical Modelling of Base Transit Time Considering Recombination in the Non-uniformly Doped Base under Base Pushout Condition	729
<i>Syeda Israt Ferdous, Sujoy Kumer Saha, Mohammad Yeazul, Kabir Hossain, Md. Forhad Hossain</i>	
Current Developments in Contactless Measurements of High Quality Materials for Microelectronics and Nanotechnology Employing Dielectric Resonator Techniques	739
<i>Jerzy Krupka, Janina Mazierska</i>	

SESSION 8: MICROELECTRONICS AND MEMS, NANOTECHNOLOGY

Design of MOEM Vibration Sensor Using Optical MicroRing Resonator and MicroCantilever Beam	747
<i>R. Rekha, S. M. Sudarshan, M. R. Shushma, C. Rashmi, S. Malathi, T. Srinivas</i>	

Design of Multiple RESURF LDMOS with P-top Rings and STI Regions in 65nm CMOS Technology	752
<i>Yuan-Min Lee, Gene Sheu, Shao-Ming Yang, Jung-Ruey Tsai</i>	
Simulation of Mini-Band Formation In Triple Si Quantum Wells Based Resonant Tunneling Diode	756
<i>Sri Purwiyanti, Ratno Nuryadi, Djoko Hartanto</i>	
Development of ESD Robustness Enhancement of a Novel 800V LDMOS Multiple RESURF with Linear P-top Rings	760
<i>Jung-Ruey Tsai, Yuan-Min Lee, Min-Chin Tsai, Gene Sheu, Shao-Ming Yang</i>	

SESSION 9: MICROELECTRONICS AND MEMS, NANOTECHNOLOGY

Efficient Design Of Memory Based On Quantum-Dot Cellular Automata	768
<i>Bibhash Sen, Anshu S. Anand, Biplab K Sikdar</i>	
Empirical Study of Post-Envelope Detection Receive Diversity Combining for Passive UHF RFID Tags	773
<i>Leonard Bryan B. Paet, Joel Joseph S. Marciano</i>	
Influence of Catalyst Thickness and Temperature Gradient on MWCNT Growth and Morphology in TCVD Process	783
<i>M. H. Kara, A. Awang Teh, R. Ahmad, M. Rusop, Z. Awang</i>	
Low Power, Low Group Delay MB-OFDM UWB CMOS Power Amplifier Using Current-Reused Technique	788
<i>R. Sapawi, R. K. Pokharel, S. A. Z. Murad, D. A. A. Mat, H. Kanaya, K. Yoshida</i>	

SESSION 10: MICROELECTRONICS AND MEMS, NANOTECHNOLOGY

Pulsed Laser Ablation in Pressurized CO₂ for Nanoparticles Fabrication	792
<i>Siti Machmudah, Yutaka Kuwahara, Mitsuru Sasaki, Motonobu Goto</i>	
Speed Enhancement of npn SiGe HBT on Thin Film SOI and Thin BOX Using Substrate Bias in (0V-3V) Range	797
<i>Prasanna Kumar Misra, S. Qureshi</i>	
Surface Reconstruction of Nano-structured Solar Cell	802
<i>Bassam G. Rasheed, Mohammed A. Ibrahim, Mayasa A. Shanon, M. Z. MatJafri</i>	
Synthesis of Reversible Universal QCA Gate Structure for Energy Efficient Digital Design	806
<i>Bibhash Sen, Tanumoy Adak, Anshu S. Anand, Biplab K. Sikdar</i>	

SESSION 1: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY

A High Power Factor ZCS-PWM Transformer-Isolated Voltage-Double Boost Rectifier	811
<i>Chien-Ming Wang, Chang-Hua Lin, Yu-Hao Lai</i>	
A NIOS II Base Wide Output Range Power Factor Corrector	817
<i>Chung-Wen Hung, Tsun-Hsi Chang, Chen-Yo Lin, Jhih-Han Chen</i>	
Neural Network Method Based on PMU data for Voltage Stability Assessment and Visualization	822
<i>Herbert Innah, Takashi Hiyama</i>	
Defining and Measuring AC Quantities Based on Symmetry Principles	828
<i>Kempei Seki</i>	

SESSION 2: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES

A Novel Analog MPPT Technique for Low Power Photovoltaic Systems	833
<i>Yi-Hua Liu, Zong-Zhen Yang, Shun-Chung Wang, Jia-Wei Huang</i>	
A Novel Inverter Scheme for Photovoltaic Applications with Reduced DC-Link Capacitor	838
<i>C. Poongothai, Krishna Vasudevan</i>	
A Novel Single-Phase Soft-Switching Unipolar PWM Rectifier	843
<i>Maoh-Chin Jiang, Shyh-Shing Perng, Huang-Kai Fu, Ya-Chi Chien, Kuei Wu-Chang</i>	

An Attempt to Identify Voltage Related Non-Linearities of Transformer Insulation from Dielectric Response Measurements	848
<i>S. K. Ojha, P. Purkait, B. Chatterjee, S. Chakravorti</i>	

SESSION 3: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY

Implementation of an Interleaved ZVS/ZCS DC/DC Converter	853
<i>Bor-Ren Lin, Jian-Yo Jhong</i>	
Battery Management System with Dual-Balancing Mechanism for LiFePO₄ Battery Module	863
<i>Chang-Hua Lin, Hsuan-Yi Chao, Chien-Ming Wang, Min-Hsuan Hung</i>	
Charging/Discharging Monitoring and Simulation Platform for Li-Ion Batteries	868
<i>Shang-Wen Luan, Jen-Hao Teng, Dong-Jing Lee, Yong-Qing Huang, Chen-Lin Sung</i>	

SESSION 4: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY

Series Resonant Converter with Series-Parallel Transformers for High Input Voltage Applications	873
<i>Chang-Hung Chien, Yeong-Her Wang, Bor-Ren Lin</i>	
Creative Design of Mei-Nong Electrical Vehicle Using STEM Based Concept and Petri-Nets Intelligent Control	878
<i>Jian-Long Kuo, Chun-Jae Chang</i>	
Design and Analysis of Multiple Input Power Conditioner for SolarPV/Wind Hybrid Energy System	883
<i>S. Kumaravel, S. Ashok</i>	
Disturbance Analysis in Conversion of Double Three-Phase to Six-Phase Transmission Network.....	888
<i>R. Shariatinasab, M. Akbari, M. A. Golkar, O. Shariati</i>	
Impacts of Distributed Generation's Locations, Sizes, Operation Modes and Transformer Connections on Voltage Sag Assessment	893
<i>Saowalak Surisunthon, Thavatchai Tayjasananant</i>	
High Voltage Pulse Power Supply for Driving Tubular Field Emission Lamp Based on Flyback Topology	898
<i>Chang-Hua Lin, Min-Hsuan Hung, Chien-Yeh Ho, Chien-Ming Wang</i>	

SESSION 5: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY

Design and Implementation of a FLC-Based MPPT Technique for Photovoltaic Systems	903
<i>Jia-Wei Huang, Chun-Liang Liu, Rong Ceng Leou, Yi-Hua Liu</i>	
Dynamic Stability Enhancement using an Adaptive Unified Power Flow Controller	908
<i>Jose. P. Therattil, P. C. Panda</i>	
Experimental Studies of Excitation System Ceiling Voltage Ratio on Transient Stability of Power Systems	913
<i>Kangyi Yang, Yuan Zeng, Jie Zeng, Qun Gao, Wei Wei, Jinli Zhao</i>	
FACTS Devices Allocation for Preventive/Corrective Control Against Voltage Collapse Under Deregulated Power System	918
<i>Rony Seto Wibowo, Ardyono Priyadi, Adi Soeprijanto, Naoto Yorino</i>	

SESSION 6: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY

Feasibility and Impact of Using Six-Phase Line in a Specific Distribution and Sub-Transmission System.....	923
<i>M. Akbari, R. Shariatinasab, M. A. Golkar, O. Shariati</i>	
Improving Dynamic Stability of a Power System using Adaptive Static Synchronous Series Compensator	928
<i>Jose. P. Therattil, P. C. Panda</i>	
Relating Stator Current Concordia Patterns to Induction Motor Operational Abnormalities	933
<i>Santanu Das, P. Purkait, S. Chakravorti</i>	

Investigations on Modern Self-Defined Controller for Hybrid HVDC Systems	938
<i>M. Ashfaq Thahir, M. Venkata Kirthiga</i>	

SESSION 7: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES

Implementation of Incremental Conductance Method with Direct Control	944
<i>A. Safari, S. Mekhilef</i>	
Marginal Loss Surplus Redistribution through Aumann-Shapley Joint Transmission Loss Cost Allocation in Electricity Markets	949
<i>Allan C. Nerves, Saliw C. Cleto</i>	
Measurement of Partial Discharges in Vegetable Oil-Impregnated Insulating System	954
<i>W. G. Ariastina, B. T. Phung, T. R. Blackburn</i>	
Minimum Load Shedding Calculation Based on Static Voltage Security Region in Load Injection Space	959
<i>Dong Zeyin, Miao Weiwei, Jia Hongjie</i>	
Analysis of the Effect of Nickel Electroplating Layer Addition on Receiver Coil of Wireless Power Transfer System	964
<i>Eko Adhi Setiawan, Arriyadhul Qolbi, Fajar Kawolu, Ichsan Jotaro</i>	

SESSION 8: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY

Induced Voltage on Objects under Six-Phase Transmission Line	968
<i>M.A.B Sidik, H. Ahmad, Z. A. Malek, Z. Buntat, N. Bashir, M. I. A. Zarin, M. A. B Sidik, Z. Nawawi, M. I. Jambak</i>	
New Three-Phase Multilevel Voltage Source Inverter with Low Switching Frequency	971
<i>Jafferi Jamaludin, Nasrudin Abd. Rahim, Hew Wooi Ping</i>	
Performance Comparison of PWM and Phase-Shifted PWM Inverter Fed High-Voltage High-Frequency Ozone Generator	976
<i>Prasopchok Hothongkham, Somkiat Kongkachat, Narongchai Thodsaporn</i>	

SESSION 9: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY ARCHITECTURE

Reliability Cost of Battery with Wind Farm	981
<i>Wook-Won Kim, Jin-O Kim</i>	
Reaction of Pyrrole Induced Pulsed Discharge Plasma over a Water Surface and Supercritical Water	986
<i>Tsuyoshi Kiyari, Mitsuru Sasaki, Motonobu Goto, Hidenori Akiyama</i>	
Reconfiguration of Radial Electrical Distribution Network through Neighbor-Chain Updating Method	991
<i>Ali K. Ferdavani, Abdullah Asuhaimi Mohd Zin, Azhar Khairuddin</i>	
Sensitivity Analysis of Impedance Measurement Algorithms Used in Distance Protection	995
<i>Nanang Rohadi, Rastko Zivanovic</i>	
Zero-Current-Transition Current-Fed Full-Bridge PWM Converter	999
<i>Chien-Ming Wang, Chang-Hua Lin, Yu-Hao Lai, Chien-Yeh Ho</i>	

SESSION 10: POWER AND ENERGY, POWER ELECTRONICS, RENEWABLE ENERGY SOURCES AND TECHNOLOGY ARCHITECTURE

Impact of Fixed-Speed Wind Turbine Farm on Radial Distribution Network	1005
<i>M. H. Ashourian, A. A. Mohd Zin, Ali K. Ferdavani, A. S. Mokhtar, M. Fathi</i>	
Relay Sensitivity Approach for Maximizing Distributed Generation	1010
<i>Dao Van Tu, S. Chaitusaney</i>	
Small Signal Stability Analysis Of Rectifier-Inverter fed Induction Motor Drive for Microgrid Applications	1015
<i>Alireza Khadem Abbasi, Mohd Wazir B.Muatafa, Safawi B. Mokhtar</i>	

Synthesis and Design of Three-Phase PWM AC-AC Matrix Converter	1020
<i>Prasopchok Hothongkham, Somkiat Kongkachat, Narongchai Thodsaporn</i>	

SESSION 1: ROBOTICS CONTROLS AND AUTONOMOUS NAVIGATION, PERCEPTION, ACTION AND COGNITION

Development of a Convenient Wireless Control of an Autonomous Vehicle Using Apple iOS SDK	1025
<i>Chandra Fernandes, Kok Yew Ng, Boon How Khoo</i>	
IMC-Based PID Controllers Design for a Two-Links SCARA Robot	1030
<i>Sipaseuth Suvilath, Khamphong Khongsomboun, Taworn Benjanarasuth, Noriyuki Komine</i>	
Factor-Space Dimension Reduction for Sensitivity Analysis of Intelligent Electronic Devices	1035
<i>Mohammad Nizam Ibrahim, Rastko Zivanovic</i>	

SESSION 2: ROBOTICS CONTROLS AND AUTONOMOUS NAVIGATION, PERCEPTION

Improving Real-Time Voice Activity Detection for Perceptual Robotic Control in Noisy Environment	1040
<i>Po-Yi Shih, Po-Chuan Lin, Jhing-Fa Wang, You-Zen Chen</i>	
Modeling of Cognition using EEG: A Review and a New Approach	1045
<i>Nabaraj Dahal, Nanda Nandagopal, Andrew Nafalski, Zorica Nedic</i>	
Implementation of Landmark-based Localization on Wall-based Environment for Mobile Robot with Limited Sensor Resources	1050
<i>Abdul Muis, Rizky Prasetya</i>	

SESSION 8: CONTROLS AND SYSTEMS, DISTRIBUTED AND NETWORKED CONTROL, SYSTEM ARCHITECTURE

Bit-Stream Based Model Predictive Controller for a Magnetic Levitation System	1055
<i>Claudio A. Camasca, Akshya K. Swain, Nitish D. Patel</i>	

SESSION 9: CONTROLS AND SYSTEMS, DISTRIBUTED AND NETWORKED CONTROL, SYSTEM

Automatic Design of Robust PSS for Multimachine Power System using PSO	1065
<i>Chanchai Ussawapustigul, Somyot Kaitwanidvilai</i>	
Eigenvalue Analysis Based Control Scheme for Interconnected Autonomous Systems	1070
<i>B. B. Sharma, I. N. Kar</i>	
Implementation of Generalized Predictive Controller for Linear Systems using Bit-Streams	1075
<i>Claudio A. Camasca, Nitish D. Patel, Akshya K. Swain</i>	

SESSION 10: CONTROLS AND SYSTEMS, DISTRIBUTED AND NETWORKED CONTROL, SYSTEM ARCHITECTURE

Parameters Tuning Effects in the Model Predictive Control of an Inverted Pendulum	1080
<i>Pongtorn Chunhacha, Taworn Benjanarasuth</i>	
QoE Enhancement in Audiovisual and Haptic Interactive IP Communications by Media Adaptive Intra-Stream Synchronization	1085
<i>Eiichi Isomura, Shuji Tasaka, Toshiro Nunome</i>	
Sensor Fault Detection and Isolation for a Class of Nonlinear Systems Using Sliding Mode Observer	1090
<i>Jian Zhang, Akshya Kumar Swain, Sing Kiong Nguang</i>	
Stabilization and Synchronization of MLS Chaotic System Using PI Based Sliding Mode Control	1095
<i>Himesh Handa, B. B. Sharma</i>	

SESSION 3: MICROWAVE THEORY TECHNIQUE, ANTENNA AND PROPAGATION

Characterization of 50–5000MHz UWB Printed Antennas with Different Number of Arms	1100
<i>Achmad Munir, Ahmad Izzuddin</i>	
Nondestructive Method for Measuring Dielectric Constant of Sheet Materials	1105
<i>Dhirendra Mathur, S. K. Bhatnagar, Vineet Sahula</i>	
Single Layer Coconut Shell-Based Microwave Absorbers	1110
<i>M. K. M. Salleh, M. Yahya, Z. Awang, W. N. W. Muhamad, A. M. Mozi, N. Yaacob</i>	

SESSION 4: MICROWAVE THEORY TECHNIQUE, ANTENNA AND PROPAGATION

Investigation of Photonic Frequency Upconversion Schemes Utilizing FWM in Soas for RoF Applications	1114
<i>Hyoung-Jun Kim, Seung-Hun Lee, Woo-Keun Song, Jang-Soo Chun, Dong-Yu Kim, Jong-In Song</i>	
Low-loss 60 GHz Patterned Ground Shield CPW Transmission Line	1118
<i>D. A. A. Mat, R. K. Pokharel, R. Sapawi, H. Kanaya</i>	
Modeling and Analyzing the Dielectric Properties of <i>Rhizophora dominica</i> (F.)	1122
<i>Manjur Ahmed, Fareq Malek, R. Badlishah Ahmad, M. Z. A. Abd Aziz</i>	
Field Characterization of an Iris Excited 10GHz Slot Radiator	1127
<i>S. Chatterjee, D. R. Poddar, R. Ghatak</i>	

SESSION 4: WOMEN IN ENGINEERING (SPECIAL TRACK)

A Comprehensive Analytical Approach for the Evaluation of the P, R and C Noise Coefficients of InAlAs/InGaAs DG-HEMT	1131
<i>Monika Bhattacharya, Jyotika Jogi, R. S. Gupta, Mridula Gupta</i>	
An Approach for Noisy Speech Enhancement by Employing the Teager Energy Operation on Wavelet Packet	1135
<i>Tahsina Farah Sanam, Celia Shahnaz</i>	
Classification of Email using BeKS: Behavior and Keyword Stemming	1139
<i>Veena H. Bhat, Vandana R. Malkani, L. M. Patnaik</i>	
Computational Framework for Subjective Preference based Route Selection in Pedestrian Navigation System	1144
<i>Basabi Chakraborty, Takako Hashimoto</i>	
FKP Biometrics for Human Authentication Using Gabor Wavelets	1149
<i>Chetana Hegde, P. Deepa Shenoy, L. M. Patnaik</i>	
Computationally Efficient Routing for Large Scale Wireless Sensor Networks	1154
<i>Lillykutty Jacob, P. M. Ameer</i>	

SESSION 5: WOMEN IN ENGINEERING (SPECIAL TRACK)

QRS-complex of ECG-based Biometrics in a Two-Level Classifier	1159
<i>Loh Sik Hou, Khazaimatol S. Subari, Syed Syahril</i>	
On-line Multiplication on Signed Flexible Interval Representation System	1164
<i>Pakawadee Taweepanyayote, Athasit Surarerks</i>	
Green Image Segmentation Analysis of Google Earth Image to Rank World Universities	1170
<i>Riri Fitri Sari, Muhammad Sulaiman, Muhammad Nur Fajar</i>	
Ultra Low-Power and Noise Tolerant CMOS Dynamic Circuit Technique	1175
<i>Preetisudha Meher, K. K. Mahapatra</i>	

SESSION 6: WOMEN IN ENGINEERING (SPECIAL TRACK)

Simple and Robust Correlation based Visual Compass using Omnidirectional View	1180
<i>Leena Vachhani, Anupa Sabnis</i>	

The Repeatability and Discrimination Study of Electronic Nose Features	1185
<i>Mazlina Mamat, Salina Abdul Samad</i>	

SESSION 3: ENGINEERING EDUCATION, LEARNING AND TEACHING METHOD (SPECIAL TRACK)

A Model for Mainstreaming Gender Perspective in Engineering Education in Bangladesh: Some Recommendations	1189
<i>Ruba Rummana, Syeda Israt Ferdous, Rumana Rashid, Md. Iqbal Bahar Chowdhury</i>	
Experimental Evaluation of Distributed e-Learning Management System	1193
<i>Thongchai Kaewkiriya, Nattavee Utakrit, Hiroshi Tsuji</i>	
The Design of Embedded Web Server for Remote Laboratories Microcontroller System Experiment	1198
<i>F. Yudi Limpraptono, Harry Sudibyo, Anak Agung Putri Ratna, Ajib Setyo Arifin</i>	

SESSION 1: BIOMEDICAL ENGINEERING SYSTEMS, TELEMEDICINE & E-HEALTH

Basic Study of Occurrence Frequency of Bowel Sounds after Food Ingestion	1203
<i>Osamu Sakata, Kenichi Matsuda, Yutaka Suzuki, Takaaki Satake</i>	
Categorized Level Management Agent with Forest-based Data Structures for Accessing Personal Health Records	1207
<i>Ssu-Wei Wu, Po-Hsun Cheng, Wen-Cheng Chiang, Jia-Kuan Lin, Jin-Shin Lai</i>	
Measurement of Cerebral Blood Oxygenation during a Verbal Memory Task by Means of fNIRS	1212
<i>Kenji Mishima, Kiyoshi Matsuyama, Tadashi Suetsugu, Shigeto Aramaki, Yasuki Higaki, Soichi Ando, Keiichi Irie</i>	
Mobile Nursing Cart Service with Radio Frequency Identification Technology for Use in Measuring Disabled Body Temperature	1216
<i>Yu-Pao Lin, Po-Hsun Cheng</i>	
Mobile Nursing Cart with Software Defined Radio for Healthcare Enterprises	1221
<i>Chi-Hang Hsu, Sung-Huai Hsieh, Jun-Teng Hsu, Po-Hsun Cheng, Sao-Jie Chen, Fei-pei Lai</i>	
Voice-Pulse Conversion Method Based on the Response of the Primary Auditory Cortex - For Auditory Input-Type BMI by using Electric Micro-stimulation of the Primary Auditory Cortex	1225
<i>Yutaka Suzuki, Osamu Sakata, Ling Qin, Yu Sato</i>	

POSTER SESSION 1:

Characterization of PZT and PNZT Thin Films for Monolithic Microwave Integrated Circuit Applications	1235
<i>Suhana Sulaiman, Hanisah Mohamed Nadzar, Zaiki Awang</i>	
High Performance 0.15 μm Gate pHEMT V-band Tripler Using Compact Microstrip Resonant Cell (CMRC) Technique	1240
<i>Shao-Wei Lin, Po-Yu Ke, Hsien-Chin Chiu, Jeffrey S. Fu</i>	
Virtual Set Design Using Synthetic Camera Method in News Studio	1242
<i>Qurrotul Aini, H. Eko Syamsuddin, Siti Fatimah</i>	
Wireless Network Deployment for Intelligent Fault Indicators – A Case Study with ZigBee	1246
<i>Shang-Wen Luan, Jen-Hao Teng, Lain-Chyr Hwang, Chao-Shun Chen</i>	
Adaptive Traffic Signal Control System Using Camera Sensor and Embedded System	1261
<i>M. Febrian Rachmadi, Faris Al Afif, Adi Wibowo, Wisnu Jatmiko, Petrus Mursanto</i>	
Image Steganalysis based on SVD and Noise Estimation: Improve Sensitivity to Spatial LSB Embedding Families	1266
<i>Abolfazl Diyanat, Farshid Farhat, Shahrokh Ghaemmaghami</i>	
High Dynamic Range Display Using Multiple Projectors	1271
<i>Mie Sato, Michimi Inoue, Masao Kasuga, Naoki Hashimoto</i>	
Code Generation of Fractional Filters for dsPIC Microcontrollers	1275
<i>Sungwan Boksuan, Taworn Benjanarasuth</i>	
Backhaul-aware Scheduling for WiMAX Femtocell with Limited Backhaul Capacity	1280
<i>Hadi Hariyanto, Karina W. Noviyanti, A. K. Widiawan</i>	
How to Find a Fixed Point in a Mix System	1285
<i>Mikako Kageshima, Manabu Okamoto</i>	
Mobile TV Streaming over the Mobile WiMAX Network for High-Speed Rail Reception	1289
<i>Hsin-Ta Chiao, Kuan-Ming Li, Jih-Wei Jiang, Yi-Ting Kuo, Ming-Chien Tseng</i>	

Link Performance Analysis of Experimental LED based Free Space Optics	1298
<i>Mazlaini Yahya, M. Kamarulzamin Salleh, Zaiki Awang</i>	
Design of Electrostatic Discharge Event Detector	1303
<i>C. Jettanasen</i>	
Three-Input Single-Output Current-Mode Multifunction Filter Using CCCIs	1308
<i>Montree Kumngern, Montri Somdunyanok</i>	
Development of FYP Online System for Outcome Based Education	1312
<i>Abdul Mutholib, Teddy Surya Gunawan, Mira Kartivi</i>	
Temperature Effect on the Vibration-Based Electrostatic Energy Harvester	1317
<i>Sehwan Kim, Kukjin Chun, Sungil Bang</i>	
Design and Analysis for Backlight Inverter with Four-phase PWM Dimming Control	1321
<i>Chien-Yeh Ho, Chang-Hua Lin, Chien-Ming Wang</i>	
Terrestrial Wave Mobile DMB Receiver based on Cooperative Reception Diversity	1326
<i>Dal-Hwan Yoon, Hyo-Jin Kim, Hyun-Sik Lyu, Dong-Sik Choi, Sung-Il Hong, Chi-Ho Lin</i>	
A Development of LED-IT-Sensor Integration Streetlight Management System on Ad-hoc	1331
<i>Sung-Il Hong, Chi-Gook In, Hyun-Sik Ryu, Ji-Chul Park, Dal-Hwan Yoon, Chi-Ho Lin</i>	
Energy Efficient Scheduling for Multithreaded Programs on a Database Server Workload	1341
<i>Xin Fan, Shigeru Kusakabe</i>	
Network Losses Reduction by Replacing Conventional Generation with Dispersed Generators on MV Side	1346
<i>H. A. Mahmoud Pesaran, Omid Shariati, A. A. Mod. Zin, A. Khairuddin</i>	
Assessment of Off-shore Wind Farms in Malaysia	1351
<i>S. Mekhilef, D. Chandrasegaran</i>	
Self-Consistent Electro-Thermo-Mechanical Analysis of AlN Passivation Effect on AlGaIn/GaN HEMTs	1356
<i>Briliant Adhi Prabowo, Abijith Prakash Anumeha, Raunak Kumar, Gene Sheu</i>	
Indoor Propagation Characteristics at 2.4 GHz for IEEE802.11n Wireless Local Area Network	1361
<i>Hirokazu Takeno, Yuto Nakatsu, Tomotsugu Hasegawa, Manabu Omiya</i>	
Floating-Capacitance Multiplier based on CCDDCCs and its Application	1367
<i>Montri Somdunyanok, Krit Angkeaw, Pipat Prommee</i>	
Application of DWT for Identifying Type of Fault Occurred in Wind Turbine System	1371
<i>A. Ngaopitakkul, A. Yodkhuang</i>	
Study of Characteristics for Simultaneous Faults in Distribution Underground Cable using DWT	1375
<i>A. Ngaopitakkul, C. Pothisarn, M. Leelajindakrairerk</i>	
DWT and RBF Neural Networks Algorithm for Identifying the Fault Types in Underground Cable	1379
<i>A. Ngaopitakkul, C. Pothisarn, S. Bunjongjit, B. Suechoey</i>	
Econometric Modeling and Forecasting of Natural Gas Demand for Power Sector in Bangladesh	1383
<i>Himadri Shekhar Dey, Md. Ashfanoor Kabir, Zia Wadud, Shahidul Islam Khan, Md. Abul Kalam Azad</i>	
Ubiquitous Mobile Personal Health System Based on Cloud Computing	1387
<i>Jun-Teng Hsu, Sung-Huai Hsieh, Po-Hsun Cheng, Chun-Chi Lo, Chi-Hang Hsu, Sao-Jei Chen, Fei-Pei Lai</i>	
Effects of Rat Skin on the Resonance Frequency: An Experiment with a Commercial Antenna for an Implanted Telemetry System	1391
<i>Shahidul M. Islam, Karu P. Esselle, David Bull, Paul M. Pilowsky</i>	
Performance Analysis of Parallel Computing in a Distributed Overlay Network	1404
<i>Jay W. Y. Lim, Poo Kuan Hoong, Eng-Thiam Yeoh, Ian K. T. Tan</i>	
SCARM: A Memory Simulator with a Compiler-Assembler for the 32 bit ARM7 Microprocessor	1409
<i>Nicole John A. Barahan, John Jerico M. Custodio, Joy Alinda R. Madamba, Christian Raymund K. Roque</i>	
Simple Hardware Verification Platform using SystemVerilog	1414
<i>Young-Jin Oh, Gi-Yong Song</i>	
RTiK: Real-Time implant Kernel on Microsoft Windows	1418
<i>Min-Gyu Ju, Seung-Hoon Lee, Cheol-Hoon Lee</i>	
An Empirical Investigation of the Relationship Between Blogger's Ethical Intensity and Decision Making	1422
<i>Wei-Pang Wu, Hui-Ling Yang</i>	
Teacher Tool for Visualization and Management of a Technology-Enhanced Learning Environment	1426
<i>Ralph Jayson E. Dagdag, Ricardo V. Mariano</i>	
Human-Robot Interaction Based on Cloud Computing Infrastructure for Senior Companion	1431
<i>Yan-You Chen, Jhing-Fa Wang, Po-Chuan Lin, Po-Yi Shih, Hsin-Chun Tsai, Da-Yu Kwan</i>	
Adaptive Tone-Mapping Operator for HDR Images Based on Image Statistics	1435
<i>Jonghyun Bae, Kyungman Kim, Yu-Jin Yun, Jaeseok Kim</i>	
Author Index	