

# **2014 2nd International Conference on Electronic Design (ICED 2014)**

**Penang, Malaysia  
19-21 August 2014**



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Day 2 – 20<sup>th</sup> August 2014

Parallel Session 1				
Room	Merbah 1	Merbah 2	Mural 1	Mural 2
Session	CAN 1	EMS	CSE1	ETC 1
Chair	Dr. Azremi Abdullah Al Hadi	Dr. Muataz Hameed Salih	Dr. Shahrul Nizam Yaakob	Dr. Mohd Tafir Mustaffa
14:00 - 16:00	<i>UWB Selective Rake Receiver Using Multiple Comparators</i> '3	<i>The Effects of CPU Load &amp; Idle State on Embedded Processor Energy Usage</i> '52	<i>An Adaptive Replication Model for Heterogeneous Systems</i> '7;	<i>Optimized Surface Mount Structure for Multi-Gigabit Transmission</i> '1; 6
	<i>Beamforming Algorithms for Adaptive Array Antenna</i> '7	<i>On-Board Touch Screen Graphical Interface Design for SoC-Based Arrhythmia Detector</i> '58	<i>A Hybrid Chaos and Neural Network Cipher Encryption Algorithm for Compressed Video Signal Transmission Over Wireless Channel</i> '86	<i>Analytical Modeling of Gate Capacitance and Drain Current of Gate-all-around In<sub>0.5</sub>Ga<sub>0.5</sub>As Nanowire MOSFET</i> '1;
	<i>Performance Analysis of Multi-Carrier Code Division Multiple Access System Based on Multi-Wavelets Transform Over Wireless Channel</i> '32	<i>SoC-based Implementation of Arrhythmia Detector</i> '64	<i>Development of A Framework to Reduce Overhead on Database Engine Through Data Distribution</i> '8;	<i>A New Trimming Approach for Shunt Resistors Used in Metering Applications</i> '1; 6
	<i>David Fractal Antenna for Multiband Wireless Communication</i> '37	<i>The Effects of Membership Function of the Input and Output Fuzzy Logic Controller in a Mobile Robot's Straight Line Navigation</i> '69	<i>Robust Alignment of Saleint Facial Regions for Recognition of 3-D Partial Faces Scans</i> '95	<i>A Novel Emulator Design for Phase Change Memory Cell</i> '322
	<i>Design and Development of A Portable Visible-Light Communication Transceiver for Indoor Wireless Multimedia Broadcasting</i> '42	<i>Implementation of Index for Real-Time Monitoring Indoor Air Quality System</i> '75	<i>Developing Mobile E-Groceries System</i> 'P IC	<i>Electrical Characterization of USB2 Multiplexers/ BCL2 Power Switches/ Charging Modules fo Accurate Channel Simulation</i> '327
	<i>A Folded Miniaturized Microstrip Antenna Array Based Differential Phase Shift Keying for Wearable Bio-Sensing Applications</i> 'P IC			
16:00 – 16:20	Refreshment			

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Parallel Session 2				
Room	Merbah 1	Merbah 2	Mural 1	Mural 2
Session	CAN 2	ETC 2	SPR 1	SPR 2
Chair	Dr. Layth Abdulkareem Hassnawi	Dr. Mohammed Bait	Dr. M Murugappan	Dr. Syed Abdul Rahman
16:20 - 18:20	<i>An Implementation of Caesar Cipher and XOR Encryption Technique in a Secure Wireless Communication</i> "333	<i>Methodology of Power Integrity Analysis for High Speed PCB Design</i> "354	<i>Comparative Study for Bitumen Containment Strategy Using Different Radar Types for Level Detection</i> '383	<i>A Study on Microarray Image Gridding Techniques for DNA Analysis</i> "393
	<i>Investigating Security of Data Retrieval for Different Detection Techniques in SAC-OCDA Systems</i> "339	<i>Class-F Power Amplifier with High Power Added Efficiency for 900MHz</i> "359	<i>Analysis of EMG-based Muscles Activity for Stroke Rehabilitation</i> '389	<i>An Embedded Delta Modulator System for Coding Speech Signals</i> '398
	<i>Impact of Different Transceiver Design on the Performance of SAC-OCDA Systems</i> '344	<i>Two-Port Oscillators Based on Three Impedance</i> "365		<i>Automatic Target Detection in GPR Images Using Histogram of Oriented Gradients (HOG)</i> "3: 3
	<i>Behavior of Modified MVDR Beamformer Algorithm with Realistic Scenario</i> "349	<i>Application Specific Electronic Nose (ASEN) for Ganoderma Boninense Detection Using Artificial Neural Network</i> "36:		<i>Removal of High Density Salt and Pepper Noise From Image and Video Based on Optimal Decision Based Algorithm</i> "3: 9
		<i>Effect of Annealing and Drying Temperature on TiO<sub>2</sub> Nanostructured Film</i> "375		<i>Development of Microphone System for Low Cost Bioacoustic Device</i> "P IC
		<i>Effect of Time Deposition to the Optical Properties of ZnO Nanotetrapods for OLED Applications</i> "379		
20:30	Dinner			

**Day 3 – 21<sup>st</sup> August 2014**

Parallel Session 3				
Room	Merbah 1	Merbah 2	Mural 1	Mural 2
Session	CAN 3	ETC 3	VDF 1	SPR 3
Chair	Dr. Muzammil Bin Jusoh	Ir. Dr. Anuar Mat Safar	Prof. Dr. Sudhanshu S. Jamuar	Prof. Dr. Mohammod Abul Kashem
09:00 - 10:40	<i>Large Negative Dispersion with Residual Dispersion (Dr) Compensation Over E+S+C+L+U Wavelength Bands by Using Single Mode Hexagonal Photonic Crystal Fiber (H-PCF)"3; 4</i>	<i>Robust Image Zero-Watermarking Based on Complex Zernike Moment"43;</i>	<i>Analysis of FXP Adders and Multipliers for Speed and Area-Efficient LNS Arithmetic Unit"45;</i>	<i>Noninvasive Diagnosis of Carbon Monoxide Poisoning Using Extended Modified Lambert Beer Model '487</i>
	<i>Enhanced Uniform Linear Array Performance Using Modified Minimum Variance Distortionless Response Beamformer Algorithm "3; :</i>	<i>Fractional Order Oscillator with Independent Control of Phase and Frequency"446</i>	<i>One-bit Non-Volatile Memory Cell Using Memristor and Transmission Gates"466</i>	<i>Bio-Inspired Taste Assessment of Pure and Adulterated Honey Using Multi-sensing Technique"492</i>
	<i>Overview of Time Synchronization Protocols in Wireless Sensor Networks"426</i>	<i>Non-destructive Measurement of Fruit Quality Based on RGB LEDs System"452</i>	<i>Comparison on TiO<sub>2</sub> and TaO<sub>2</sub> Based Bipolar Resistive Switching Devices"46;</i>	
	<i>Network Traffic Classification - A Comparative Study of Two Common Decision Tree Methods: C4.5 and Random Forest"432</i>	<i>Fabrication of Platinum Decorated Zinc Oxide Nanorod Array-Based Ultraviolet Sensors and Their Responsivity Performance"456</i>	<i>Investigation and Design of the Efficient Hardware-based RNG for Cryptographic Applications"477</i>	
	<i>Multi-Directional Beam of Patch Antenna"437</i>		<i>Circuit Architectures Reviews for Portable ECG Signal Analyzer"483</i>	
10:40 - 11:00	Refreshment			

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Parallel Session 4				
Room	Merbah 1	Merbah 2	Mural 1	Mural 2
Session	CAN 4	ETC 4	VDF 2	SPR 4
Chair	Prof. Dr. Syed Alwee Aljunid	Dr. Mohd Najib Mohd Yasin	Dr. Halim Abdul Wahid	Dr. Audrey Huong
11:00 - 12:40	<i>Evaluation of Broadband PLC Technology Over Malaysia's Indoor Power Line Network"</i> 497	<i>Wearable Gas Sensor Utilising Dye-Functionalized Single-walled Carbon Nanotubes"</i> 523	<i>A Review of LNA Topologies for Wireless Sensor Network"</i> 542	<i>Aroma and Optical Absorption Spectroscopy for Quality Assessment of Vegetable Cooking Oils"</i> 55;
	<i>Optimization of Resource Allocation Using Taguchi's Method for LTE-Advanced Network"</i> 4; 3	<i>Potential of Urine Dielectric Properties in Classification of Stages of Breast Carcinomas"</i> 527	<i>Gm-C Based Band Pass Filter"</i> 547	<i>Water Quality Classification and Monitoring Using E-nose and E-tongue in Aquaculture Farming"</i> 566
	<i>Performance Analysis of a New 2-D EDW Code for Optical CDMA System"</i> 4; 9	<i>The New Method to Save Energy for OpenFlow Switch Based on Traffic Engineering"</i> 52;	<i>Three-Phase Multilevel Inverter with Reduced Number of Active Power Semiconductor Switches for Solar PV Modules"</i> 54;	<i>Investigation of Information Fusion in Face and Palmprint Multimodal Biometrics"</i> 569
	<i>Distributed Cognitive Radio Detection Using Waspnote Sensor for Windows Based PC/Laptop"</i> 4; 5	<i>Study of Temperature Sensor Readout Circuit"</i> 537	<i>Analysis of OTDM Data for High Speed All Optical Shift Register"</i> 557	<i>Multi Channel Ultrasonic Sensing System for Wall Features Extraction"</i> 573
	<i>L-band Single-Wavelength Brillouin Fiber Laser Utilizing Ring Cavity"</i> 4; 9			
12:40 - 14:00	Lunch and Zuhr Pray			

Parallel Session 5				
Room	Merbah 1	Merbah 2	Mural 1	Mural 2
Session	CAN 5	CSE 2	ETC 5	CAN 6
Chair	Dr. Mohd Faizal Jamlos	Dr. Rashidi Che Beson	Dr. Naser Mahmoud Ahmed	Dr. Nazrin Md Isa
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	<i>Efficiency Power Using A New Dual Diffuser Modulation Technique in Free Space Optical Communication</i> 362	<i>Investigation of Single-Wall Carbon Nanotubes At THz Antenna</i> "637	<i>An Efficient Processing Element Architecture for Pairwise Sequence Alignment</i> "683	<i>Six-Port Demodulator in Homodyne Direct Conversion Receiver</i> "6; ;
	<i>A Review and Survey of Routing Techniques in Transparent Core Optical Networks: Evolution, Perspectives and Frontiers</i> "58:	<i>GSM Remote Sensing for Copper Cable Transmission Line Monitoring System Using FPGA</i> "643	<i>A Study of Extensive Air Shower Characteristics by Estimating Depth of Shower Maximum Using Heitler Toy Model</i> "687	<i>Taxonomy and Overview on Cooperative MAC for Vehicular Ad Hoc Networks</i> "727
	<i>Electromagnetic Radiation Probe Using a Detector Circuit with a Dual-Band Antenna System</i> "596	<i>Impact of Multipath Interference and Change of Velocity on the Reliability and Precision of GPS</i> '649	<i>Fabrication of Dye-Sensitized Solar Cell Using Nanocomposited Aligned ZnO Nanorod/TiO<sub>2</sub></i> "68:	<i>UWB Channel Measurement and Development of Scatterer Identification Algorithm</i> "733
	<i>Intermodulation Distortion of Integrated Power Amplifier and Filter Using Single Stub Tuners for Green Communication</i> "59:	<i>Classification of Hand Movement Imagery Tasks for Brain Machine Interface Using Feed-Forward Network</i> "653	<i>Development of Microstrip Chebyshev Low Pass Filters Using Laser Micromachining</i> "695	<i>Comparison of Wideband LNA Designs for SDR Applications</i> '737
	<i>A Compact DMS Triple-Band Bandstop Filter with U-slots for Communication Systems</i> "5: 5	<i>Experimental Studies of the Correlation Between Fingers Bending Angle with Voltage Outputted From GloveMAP</i> "659	<i>Permittivity Measurement of Different Types of Soil for Ground Penetrating Radar Applications</i> "69;	<i>A Real-Time Greenhouse Monitoring System for Mango with Wireless Sensor Network</i> "743
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	<i>Triangular and Tapered Tip Effects Towards Circular Split Ring EM Field Response</i> "5; 5	<i>Oxygen-Sensing Characteristics of Nanostructured Al-Doped ZnO</i> "668	<i>Plant Bio - Absorber for Ammonia Gas Absorption Using I<sub>2</sub>C Interface Data Acquisition System</i> "6: :	<i>The Effect of Shorting Pin Locations on the Performance of a Pattern Reconfigurable Yagi-Uda Patch Antenna</i> "755
	<i>Modeling Indoor Propagation for WSN Deployment in Smart Building</i> "5; ;	<i>Enhanced Generalized Predictive Control with Disturbance Compensation</i> "672		<i>Simulation Study of WiMAX Base Station Deployment Using AMC Under Different Frequency Planning Techniques</i> "759
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17:20 - 17:40	Closing Ceremony and Refreshment			