2011 IEEE Student Conference on Research and Development

(SCOReD 2011)

Cyberjaya, Malaysia 19-20 December 2011



IEEE Catalog Number: CFP11526-PRT ISBN:

978-1-4673-0099-5

Table of Contents

1.	Testing Static Single Cell Faults Using Static and Dynamic Data Background	1
2.	Study on Electrical and Optical Properties of Nanocomposited MEH-PPV:TiO2 Thin Film for Hybrid Solar Cells	7
3.	Effect of Thickness on the Transparency of Nanocomposited MEH-PPV:CNTs:TiO2 Thin Film	12
4.	Influence of Heat Treatment on the Properties of MgO Thin Films as Dielectric Layer	16
5.	Preparation and Nanostructured Properties of Amorphous Carbon Prepared by Aerosol-Assisted CVD (AACVD)	20
6.	Optical Properties of Amorphous Carbon Thin Films Deposited by Thermal CVD Using Camphor Oil	25
7.	Heuristic Methods for Solution of FACTS Optimization Problem in Power Systems	30
8.	Fuzzy Logic Based Pitch Angle Controller for Variable Speed Wind Turbine	36
9.	Z-Source Inverter Based Indirect Field Oriented Control with Synchronous Current Injection and Feed-Forward Cemf Compensation for an Induction Motor Drive	40
10.	A Complete Model of Stand-alone Photovoltaic Array in MATLAB-Simulink Environment	46
11.	Torque Characteristics of Small Size Single and Double Stator Brushless Permanent Magnet Motor	52
12.	Multi-User McCDMA Using WALSH Code for RAYLEIGH and GAUSSIAN Channel	58
13.	Multi-Layer Network Selection Function for Downlink Handover Scheme in LTE and LTE-Advanced	64
14.	A Study of GI-less in Parallel Transmission for OFDM System	70
15.	Development of Protection and Restoration Module in PON Distribution Section	73
16.	Secure Partial Secret Key Issuing in Certificateless Public Key Infrastructure	79
17.	Effectiveness of Central Pattern Generator Model on Developed One Legged Hopping Robot	85
18.	Roll Sensing and Control Unit	89
19.	Contriving a Turning Gait for an Anthropomorphous System	95
20.	Robotic System for Cleaning Manholes (RSCM)	101
21.	Moving Vehicle Noise Classification Using Multiple Classifiers	105
22.	A Phoneme Based Sign Language Recognition System Using 2D Moment Invariant Interleaving Feature and Neural Network	111
23.	An Intelligent Vision System for Object Localization and Obstacle Avoidance for an Indoor Service Robot	117
24.	Applications of Visually Evoked Potentials in Ocular Diseases:A Guided Tour	123
25.	Experimental Evaluation of Multiple Transmitters/Receivers on Free Space Optics (FSO) Link	128
26.	Transmission of Real-Time Clinical Diagnostic Signals Over the GSM Network	134
27.	Multi Input Single Output Closed Loop Identification of Two Wheel Inverted Pendulum Mobile Robot	138
28.	Performance Analysis of Power Split Hybrid Electric Vehicles Using Autonomie	144
29.	Point-to-Point Trajectory Tracking with Discrete Sliding Mode Control of an Electro-	148

	hydraulic Actuator System	
30.	Dynamic Traffic-Light Phase Plan Protocol (DT3P)	154
31.	A Binary Vector Evaluated Particle Swarm Optimization Based Method for DNA Sequence Design Problem	160
32.	Classification of Colour Imagination Tasks Using Spectral Energy Entropy	165
33.	A Modified Computational Model of Ant Colony System in DNA Sequence Design	169
34.	UPM Prosthetic Hand System Design - Preliminary Results	174
35.	Broadside Radiation Synthesis of Concentric Circular Antenna Array Using Improved Particle Swarm Optimization	178
36.	Phase Distribution Analysis of Reflectarrays Based on Variable Material Properties	183
37.	Wide Nulls Control of Linear Antenna Arrays Using Craziness Based Particle Swarm Optimization	189
38.	Thinned Concentric Circular Array Antennas Synthesis Using Genetic Algorithm	194
39.	Modeling of Secondary Voltage Regulation for 24-Hour Load Flow and Dynamic Simulation for Coordinated Voltage Control Application	199
40.	Study of Six Phase Transmission Line Using the Autotransformer Conversion	205
41.	Preliminary Study of Ohmic Heated Hydro Distillation for Essential Oil's Plant Extraction	211
42.	Hypothesis Testing for Fault Analysis and the Propagation of Faulted Voltage Through Transformer Connections	215
43.	Development of Generator Aggregation Technique for Power System	221
44.	Optical Behavior of Transmission Oil Lubricant for Degradation Monitoring	225
45.	The Effect of Parallel Projection Towards Image Performance	229
46.	Analysis of the Effects of Environment on the Performance of Free Space Earth-to- Satellite Optical Link in Malaysia	235
47.	Broad Multiwavelength Source Using Spectral Slicing Technique	241
48.	Characterization on Fiber Optic Angle Sensor Based on Real Object: Aluminum and Brass	244
49.	Case Study of Filter Design in Embedded Systems	247
50.	Classification of Vehicle Noise Comfort Level Using Probabilistic Neural Network	253
51.	A Comparison Between Binary and Continuous Genetic Algorithm for Collaborative Spectrum Optimization in Cognitive Radio Network	259
52.	A Study on the Challenges and Importance of Vehicular Network in the Context of Bangladesh	265
53.	Economical and Technical Evaluation of Implementation of Mandatory Demand Response Programs on Iranian Power System	271
54.	Signal Analysis to Detect Water Tree Location in Polymeric Underground Cables	277
55.	Introduction to the Pico Hydro Power and the Status of Implementation in Malaysia	283
56.	Adaptive Sliding Mode for Indirect Field Oriented Controlled of Induction Motor	289
57.	Double-Rotor Switched Reluctance Machine (DRSRM): Fundamentals and Magnetic Circuit Analysis	294
58.	Reduction of Cogging Torque of Single Phase Brushless DC Motor Using Flux Barrier	300
59.	An Intelligent Arbiter for Fair Bandwidth Allocation	304
60.	Energizing ICT Infrastructure for Malaysia's SME Competitiveness During Economic Turbulence	310
61.	An Improved Approach for Web Page Quality Assessment	315
62.	Modeling and Optimization of Kanban Controlled Manufacturing System Using Improved-Group Method of Data Handling	321

63.	Construction of Myanmar WordNet Lexical Database	327
64.	The Optimal Fuzzy C-Regression Models (OFCRM) in Miles Per Gallon of Cars	333
	Prediction	
65.	Growth of Sprayed Nanostructured Copper (I) Iodide (CuI) Thin Films At Different	339
	Precursor Solution Concentration	
66.	Designing a Low Voltage Energy Harvesting Circuits for Rectified Storage Voltage	343
	Using Vibrating Piezoelectric	
67.	Transient Analysis for On-Chip High Speed VLSI RLCG Global Interconnect for Unit	347
	Impulse Input	252
68.	Swarm Intelligence Based Optimal Linear FIR High Pass Filter Design Using Particle Swarm Optimization with Constriction Factor and Inertia Weight Approach	352
69.	Linear Phase Low Pass FIR Filter Design Using Improved Particle Swarm	358
09.	Optimization	336
70.	Power Efficient High Performance Modular Hardware Accelerator Architecture	364
71.	Low Power VLSI Circuit Implementation Using Mixed Static CMOS and Domino Logic	370
/1.	with Delay Elements	370
72.	Transient Stability Enhancement Via Hybrid Technical Approach	375
73.	Vector Controlled Drives of Permanent Magnet Synchronous Motor Using PI Speed	381
/5.	Controller for Long Cable Application	361
74.	Improving Dynamic Response of Wind Turbine Driven DFIG with Novel Approach	386
75.	Investigation of Useful Ambient Vibration Sources for the Application of Energy	391
, , ,	Harvesting	331
76.	Location Based Information System Using OpenStreetMap	397
77.	Design and Development of a Water Bath Control System: A Virtual Laboratory	403
	Environment	
78.	Arabic Text-To-Speech Synthesizer	409
79.	Toward a Customizable Effective Patient Management System for Ensuring Quality	415
	Medical Service	
80.	Combined Bilateral and Anisotropic-Diffusion Filters for Medical Image De-noising	420
81.	Golden Ratio, the Phi, and Its Geometrical Substantiation	425
82.	Harnessing Creativity in Teaching and Learning Introductory Programming	431
83.	Research of Efficiency Evaluation of U-turn Lanes At Signalized Intersections	436
84.	Reliable Project Scheduling with Combination of Risk Management and Critical	442
0	Chain Schedule	
85.	New Secure and Low-Cost Design for Defense in Depth Implementation Using Open	448
	Source Software	
86.	Rate Adaptive MAC Protocol for Wireless Ad Hoc Networks	454
87.	Comparison of VoIP and PSTN Services by Statistical Analysis	459
88.	Design Challenges and Scope for Cognitve Radio Wireless Networks in Bangladesh	462
89.	LEDs as Energy Efficient Lighting Systems: A Detail Review	468
90.	Measuring and Evaluation of Reusable Quality and Extensible Quality for XML	473
	Schema Documents	
91.	An Investigation of User Participation in the Architectural Design Process in	479
	Palestine	
92.	Toward a Mobile Phone Based Solution for Microcredit in Rural Bangladesh	485
	Authors' Index	
	Publishers' Information	<u> </u>
L		