

2012 IEEE Conference on Sustainable Utilization and Development in Engineering and Technology

(STUDENT 2012)

**Kuala Lumpur, Malaysia
6 – 9 October 2012**



**IEEE Catalog Number: CFP1219K-PRT
ISBN: 978-1-4673-1649-1**

Table of Content

No	Paper Title Author and Affiliations	Page Number
1	STU104: Driver Inattention Detection Methods : A Review <i>Arun S, Kenneth Sundaraj and Murugappan M</i> <i>Universiti Malaysia Perlis, Malaysia</i>	1 - 6
2	STU105: Modeling Financial Ratios of Malaysian Plantation Stocks using Bayesian Networks <i>Chon Sern Tan, Chin Khian Yong and Yong Haur Tay</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	7 - 12
3	STU106: Load Parameter Optimization for SRBC Circuit <i>Nor Zaihar Yahaya and Nur Fatin Izzati Ahmad</i> <i>Universiti Teknologi Petronas , Malaysia</i>	13 - 17
4	STU110: Power System Oscillations Damping by Optimal Coordinated Design between multiple Damping Stabilizers Based on STATCOM Device <i>Ali Nasser Hussain, Mohd. Fareq Bin Abd. Malek, Mohd Abdur Rashid and Md. Abdullah Al Humayun</i> <i>School of Electrical Systems Engineering, University Malaysia Perlis, Perlis, Malaysia</i>	18 - 23
5	STU113: Variability in surface electromyography of right arm biceps brachii muscles between male adolescent, vicenarian and tricenarian with distinct electrode placement <i>Nizam Uddin Ahamed, Kenneth Sundaraj, R. Badlishah Ahmad, S.A.M Matiur Rahaman, Md. Anamul Islam and Md. Asraf Ali</i> <i>Universiti Malaysia Perlis, Malaysia</i>	24 - 28
6	STU114: Thermodynamic Analysis of Ideal Adsorption Cooling System using Activated Carbon/N-Butane Pair <i>Khairul Habib and Helder Sitoi</i> <i>Universiti Teknologi Petronas, Malaysia</i>	29 - 32
7	STU117: Wireless Communication In Robot Soccer: A Case Study Of Existing Technologies <i>Sivadev Nadarajah and Prof. Dr. Kenneth Sundaraj</i> <i>Universiti Malaysia Perlis, Malaysia</i>	33 - 38
8	STU119: A Parameter-Varying Universal Portfolio Using Cyclic Constrained-Search Algorithm <i>Choon Peng Tan and Sook Theng Pang</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	39 - 45

No	Paper Title Author and Affiliations	Page Number
9	STU121: Investigating the Impacts of Budget Airlines towards the Mode Choice Decision of Business Travellers: A Case Study of Klang Valley, Malaysia <i>Lay Eng Teoh and Hooi Ling Khoo</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	46 - 51
10	STU128: A Study of Arc Fault Current in Low Voltage Switchboard <i>Chai Sim Por, Kuan Lee Choo and Lim You Jian</i> <i>Multimedia University, Malaysia</i>	52 - 56
11	STU129: A Single Phase Inverter Based System to Utilize Distributed Sources for Storage and Grid Integration <i>Ashok Krishnan, Janakiraman Shyam, Mahesh Venugopal and Vishnu Vijayakumar</i> <i>Amrita University, Amrita Vishwa Vidyapeetham, Malaysia</i>	57 - 62
12	STU133: Energy Performance Analysis Of A Hydro-Turbine Test Lab: An Architectural Approach <i>Aanchal Sharma, Arun M. Dondardive, P.S. Chani and H.K. Verma</i> <i>Indian Institute of Technology, India</i>	63 - 67
13	STU134: Smarter and Safer Road Traffic Using Advanced VANET & Wireless Augmented Reality <i>Bahnisikha Dutta, Abhishek Sreedhar and Sandeep Chitoor</i> <i>SRM University, India</i>	68 - 71
14	STU135: Review of Third Harmonic Current Characteristic Based Diagnostic Method Medium Voltage Power Cable Insulation <i>Noor Hussain, Nursyarizal Bin Mohd Nor, Mohd Faris Bin Abdullah, Khalid Ashraf and Muhammad Usman Baloch</i> <i>University Technology Petronas, Balochistan University of Engineering & Technology, khuzdar, Pakistan</i>	72 - 76
15	STU136: A Study on Mental Arithmetic Task based Human Stress Level Classification Using Discrete Wavelet Transform <i>P Karthikeyan, M Murugappan and S Yaacob</i> <i>Universiti Malaysia Perlis, Malaysia</i>	77 - 81
16	STU138: Emotion Recognition from Electrocardiogram Signals using Hilbert Huang Transform <i>Jerritta S, M Murugappan, Khairunizam Wan and Sazali Yaacob</i> <i>Universiti Malaysia Perlis, Malaysia</i>	82 - 86

No	Paper Title Author and Affiliations	Page Number
17	STU140: Toxic Gas Sensor Using Resonant Frequency Variation in Micro-Cantilever <i>Leong Subhashini Sahayadhas and Vimala Juliet</i> <i>Sathyabama University, SRM University, India</i>	87 - 91
18	STU141: Particle Swarm Optimization with Time Varying Acceleration Coefficients for Congestion Management <i>Muneender Erukulla and Vinodkumar D.M</i> <i>KU College of Engineering & Technology, Warangal, National Institute of Technology Warangal, India</i>	92 - 96
19	STU142: Optimizing Job Scheduling for Computational Grid based on Firefly Algorithm <i>Adil Yousif, Abdul Hanan Abdullallah, Sulaiman Mohd Nor and Mohammed Bakri Bashir</i> <i>Universiti Teknologi Malaysia, Malaysia</i>	97 - 101
20	STU143: Design of Phasor Data Concentrator for Phasor Monitoring System <i>Suttinan Buttayak, Apichai Wornpuen, Nattasit Promparn, Noppadol Charbkaew and Teratam Bunyagul</i> <i>King Mongkut's University of Technology North Bangkok (KMUTNB), Thailand</i>	102 - 107
21	STU144: Constructing Communicative Interaction on Identifiable Canine Behaviors <i>Xingjuan Li, Xu Lin and Shusong Xing</i> <i>Nankai University, China</i>	108 - 110
22	STU146: Breakdown Characteristics and Optically Visible Discharge Paths of Surface Flashover <i>Chandima Gomes, Vernon Cooray and Mahbubur Rahman</i> <i>CELP, Universiti Putra Malaysia, Uppsala University, Malaysia</i>	111 - 116
23	STU147: Comparison of Boiler Plant Model and Real Plant Responses Based on Proportional Integral Controller <i>Abdulrahman A.A.Emhemed, Rosbi Bin Mamat and Dirman Hanafi</i> <i>College of Electronics Technology, Libya; Universiti Teknologi Malaysia; Universiti Tun Hussein Onn Malaysia</i>	117 - 122
24	STU149: SVM Direct Torque Control of Induction Machine <i>Tey Chin Soon, Hew Wooi Ping and Nasrudin Abd. Rahim</i> <i>UMPEDAC, Universiti Malaya, Malaysia</i>	123 - 128

No	Paper Title Author and Affiliations	Page Number
25	STU151: A Novel PAPR Reduction in MC-CDMA System Using Single Carrier FDMA Technique <i>Mayada Faris Ghanim and Mohammad Faiz Liew</i> <i>University of Tun Hussein Onn Malaysia (UTHM)</i>	129 - 134
26	STU152: Development CT-based Three-Dimensional Complex Skull Model for Finite Element Analysis <i>Yee Wa Choy, Ying Pio Lim, Xin Wang and Kuan Phang Chan</i> <i>Universiti Tunku Abdul Rahman, Monash University Sunway Campus, Malaysia</i>	135 - 139
27	STU153: Temperature Effects on the Performance of Dense Array Concentrator Photovoltaic System <i>Fei Lu Siaw and Kok Keong Chong</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	140 – 144
28	STU154: A New Hybrid Fuzzy Dynamic Velocity Feedback PSO for Non-Convex Economic Dispatch Problem <i>Muneender Erukulla and Vinodkumar D.M</i> <i>KU College of Engineering & Technology, Warangal, National Institute of Technology Warangal, India</i>	145 - 150
29	STU155: Constructing Confounded Factorial Conjoint Choice Experiment Using Visual <i>Chin Khian Yong and Song Lin Ng</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	151 - 154
30	STU156: Feasibility Study of Performance Evaluation Using National Instruments based Neurophysiology Device (NIROD) <i>Chingseong Tan, Wooi Sin Lee, Chan Ten Stanley Oh, Jou Phing Ng and Hin-Yong Wong</i> <i>Faculty of Engineering, Multimedia University, Malaysia</i>	155 - 159
31	STU157: Spoken Arabic Digits Recognition Using MFCC Based on GMM <i>Nacereddine Hammami, Bedda Mouldi and Nadir Farah</i> <i>Computer Sciences Dept, college of engineering aljouf university, Labged Laboratory Annaba University</i>	160- 163
32	STU163: A Nash-based Power Control Game for Green Communications via Cognitive Radio Networks <i>Aik Jin Luah and Chee Keong Tan</i> <i>Faculty of Engineering, Multimedia University, Malaysia</i>	164 - 169

No	Paper Title Author and Affiliations	Page Number
33	STU167: Web-based Remote Navigational Robot for Multiclass Human-Robot Interaction <i>Kenny Ju Ming Yeoh and Hwee Ling Wong</i> <i>Multimedia University, Malaysia</i>	170 - 175
34	STU168: A stem weight maximization scheme for RNA pseudoknot prediction <i>Yean Ling Leo and Yong Kheng Goh</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	176 - 181
35	STU169: Electric Vehicle Intelligent Control System-Communication Protocol Between Hardware and Software Modules <i>Gan Yu Han, Leong Chee Ken and Dr. Chew Kuew Wai</i> <i>Universiti Teknologi Petronas , Malaysia</i>	182 - 186
36	STU171:Electric Vehicle Intelligent Control System-Hardware Modules Configurations <i>Gan Yu Han, Leong Chee Ken and Dr. Chew Kuew Wai</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	187 - 191
37	STU172: Improved Combined Mutation Clonal Selection Algorithm <i>Wai Yan Koo, Sue Ann Yong, Siaw Paw Johnny Koh and Kok Hen Chong</i> <i>University Tenaga Nasional, Malaysia</i>	192 - 196
38	STU174: Effect of Palindromic Occurrence in Genomes on Clustering of DNA <i>Feei Shien Chin and Yong Kheng Goh</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	197 - 202
39	STU175: Improved Hierarchical Structure Poly-particle Particle Swarm Optimization <i>Sue Ann Yong, Kok Hen Chong, Wai Yan Koo and Siaw Paw Johnny Ko</i> <i>University Tenaga Nasional, Malaysia</i>	203 - 206
40	STU179: On the Security of Pairing-Based Non-Interactive Designated Verifier Proofs of Undeniable Signature Schemes <i>Rouzbeh Behnia, Swee-Huay Heng and Che-Sheng Gan</i> <i>Multimedia University, Malaysia</i>	207 - 212

No	Paper Title Author and Affiliations	Page Number
41	STU181: Contour Positioning System - Methods of Data Extraction For Contour Positioning <i>Leong Chee Ken, Gan Yu Han and Dr. Chew Kuew Wai</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	213 - 216
42	STU183: Measurement of Binding and Torsional Vibration Modes of Optical Tabletop Using Optical Interferometry Technique <i>Yong Hong Lee and Thian Khok Yong</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	217 - 221
43	STU184: Holographic Watermarking based on Off-Axis Hologram and DWT <i>Hao Qiang Tan, Thian-Khok Yong and Bok-Min Goi</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	222 – 226
44	STU186: Intelligent Corporate Sustainability Report Scoring Solution Using Machine Learning Approach to Text Categorization <i>Amir Mohammad Shahi, Biju Issac and Jashua Rajesh Modapothala</i> <i>Swinburne University of Technology (Sarawak Campus), Malaysia</i>	227 - 232
45	STU189: Multiobjective Quantum-Inspired Evolutionary Programming for Optimal Location and Sizing of Distributed Generation <i>Zuhaila Mat Yasin, Titik Khawa Abdul Rahman and Zuhaina Zakaria</i> <i>Universiti Teknologi Mara, Universiti Pertahanan Nasional Malaysia</i>	233 - 238
46	STU191: Design of Short-Length Message Fountain Code for Erasure Channel Transmission <i>Zan-Kai Chong, Bok-Min Goi, Hiroyuki Ohsaki, Cheng-Kuan Bryan Ng and Hong-Tat Ewe</i> <i>Universiti Tunku Abdul Rahman, Osaka University, Japan</i>	239 - 241
47	STU192: Development of White LED Down Light for Indoor Lighting <i>Engr. Rajendran So Sinnadurai, M.K.A. Ahamed Khan, Mohaamed Azri and Vikneswaran Vikneswaran</i> <i>University Selangor, Bestari Jaya Campus, Malaysia</i>	242 - 247
48	STU194: 2-D Location Pointing System for Individual Component on Device under Test by using LabView <i>Ch'ng Khai Chiah, Chung Ka Siew, Cheng Xuan Teng and See Yuen Chark</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	248 - 252

No	Paper Title Author and Affiliations	Page Number
49	STU195: Design and Development of an Emotional Stress Indicator (ESI) Kit <i>Azian Azamimi Abdullah and Umida Hafsan Hassan</i> <i>Universiti Malaysia Perlis (UniMAP), Malaysia</i>	253 - 257
50	STU197: Non-Invasive blood glucose measurement. (Application on Near-Infrared Optical Measurement) <i>Anas Mohd Noor, Syafirah Azahari, Ahmad Nasrul Norali, Normahira</i> <i>Universiti Malaysia Perlis, Malaysia</i>	258 - 261
51	STU198: Speaker Accent Recognition through Statistical Descriptors of Mel-bands Spectral Energy and Neural Network Model <i>Yusnita Mohd Ali, Pm. Dr. Paulraj Mp, Prof. Sazali Yaacob, Dr. Shahriman Abu Bakar and Satheesh Kumar Nataraj</i> <i>Universiti Teknologi MARA (UiTM), Universiti Malaysia Perlis (UniMAP), Malaysia</i>	262 - 267
52	STU202: EEG Based Hearing Threshold Determination Using Artificial Neural Networks <i>Paulraj M P, Sazali Bin Yacob, Abdul Hamid Bin Adom, Kamalraj Subramaniam and Hema C R</i> <i>Universiti Malaysia Perlis, Malaysia, Karpagam University, India</i>	268 - 270
53	STU203: Development of an Automated Multiple Power Sources Switching and Monitoring System <i>Chuah Yea Dat, Tan Kock Li, Kenny Chieng Tze Hing, Chai Chin Tin, Alvey Hau Lee Cheun and Tan Rong Wei</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	271 - 276
54	STU204: Development of Integrated Safety and Security Modules in Home Monitoring System <i>Chuah Yeadat, Kenny Chieng Tze Hing, Chai Chin Tin, Tan Kock Li, Alvey Hau Lee Cheun and Tan Rong Wei</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	277 - 282
55	STU205: Design of a Easy to Fly, Low-Cost Generic Unmanned Aerial Vehicle (UAV) for Civilian Aerial-Imaging Application <i>Julian Tan Kok Ping, Chua Yea Dat, Tan Jun Quan and Ang Eng Ling</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	283 - 288
56	STU206: Generic Unmanned Aerial Vehicle (UAV) for civilian application-A feasibility assessment and market survey on civilian application for aerial imaging <i>Julian Tan Kok Ping, Ang Eng Ling, Tan Jun Quan and Chua Yea Da</i> <i>Universiti Tunku Abdul Rahman, Malaysia</i>	289 - 294

No	Paper Title Author and Affiliations	Page Number
57	<p>STU207: Electrical Power Consumption Monitoring using a Real-time System</p> <p><i>I. Elamvazuthi, M. K. A. Ahamed Khan, Syafiq Basri Bin Shaari, Rajendran Sinnadurai and M.Amudha</i></p> <p><i>Universiti Teknologi PETRONAS, Univesiti Industri Selangor, Malaysia</i></p>	295 - 298
58	<p>STU208: Building Automation Through Web Interface</p> <p><i>Cheah Jun Hong, Lew Kim Luong and See Yuen Chark</i></p> <p><i>Universiti Tunku Abdul Rahman, Malaysia</i></p>	299 - 304
59	<p>STU209: Machine Design for Gauge Repeatability and Reproducibility Measurement of Vision Modules</p> <p><i>Tan Jonwen and Chuah Yea Dat</i></p> <p><i>Universiti Tunku Abdul Rahman , Malaysia</i></p>	305 - 309
60	<p>STU210: Development of In-pipe Inspection Robot: a Review</p> <p><i>Iszmir Nazmi Ismail, Adzly Anuar, Khairul Salleh Mohamed Sahari, Mohd Zafri Baharuddin, Muhammad Fairuz Abd Jalal and Juniza Md Saad</i></p> <p><i>Universiti Tenaga Nasional, Malaysia</i></p>	310 - 315