

Selected Readings in
**COMPUTING AND
TELECOMMUNICATIONS**

Editors
Mira Kartiwi
Teddy Surya Gunawan
Aisha Hassan Abdalla Hashim



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TABLE OF CONTENT

PREFACE	X
1. MANUSCRIPT PROCESSES MONITORING SYSTEM FOR RESEARCH MANAGEMENT CENTER	
Aznan Zuhid bin Saidin, Mira Kartiwi and Husam bin Latih @ Abdullatif ..	1
2. IIUM STUDENTS FORUM SYSTEM	
Mira Kartiwi and Waleed Mohamed Ibrahim	9
3. SABA DECORATION FACTORY (SDF) SYSTEM	
Mira Kartiwi and Abdulaziz Omar	17
4. TAKAFUL AGENCY WEB PORTAL	
Mira Kartiwi and Mohd. Hafiz Zairin bin Ayop	27
5. HUMAN CAPITAL BUSINESS PARTNER INFORMATION TECHNOLOGY & NETWORK TECHNOLOGY MAN POWER MODEL	
Akram M. Z. Khedher and Siti Sarah binti Abdul Halim	39
6. DEVELOPMENT OF ENERGY ASSESSMENT TOOLS FOR SINGLE PHASE APPLIANCES	
Musse Mohamud Ahmed and Siti Nor Amiza bt Massere.....	52
7. FINGERPRINT AUTHENTICATION SYSTEM USING MATLAB	
Teddy Surya Gunawan and Mohd. Hanis bin Jenalis	66
8. PERFORMANCE EVALUATION OF LOSSLESS SPEECH AND AUDIO COMPRESSION ALGORITHMS	

9. DESIGN AND IMPLEMENTATION OF VOICE SECURITY SYSTEM IN MATLAB AND JAVA	
Teddy Surya Gunawan and Siti Ruqayah bt. Mohd Akahsah.....	91
10. DESIGN AND DEVELOPMENT OF RFID SECURITY MODEL	
Ahmed Wathik Naji and Fatema-Tuz-Zohra	112
11. RADIO PROPAGATION MEASUREMENT AND CHANNEL MODELLING FOR WIRELESS BODY AREA NETWORK	
Mimi Aminah bt. Wan Nordin and Norsyaidatul Fairuz bt. Fauziz	125
12. FEATURE EXTRACTION FOR AUTOMATIC FETUS AGE ESTIMATION FOR ULTRASOUND IMAGES USING ELLIPSE MODEL	
Teddy Surya Gunawan and Norakmal Abdullah	143
13. NOISE REDUCTION USING KALMAN FILTER	
Teddy Surya Gunawan and Ismail Haji Hassan Dualeh.....	168
14. PARALLEL ALGORITHMS FOR EDGE DETECTION ON CLUSTER COMPUTER	
Teddy Surya Gunawan and Elkabir Ansoya Bacar.....	189
15. PREDICTION OF PROBABILITY OF BIT ERROR RATE IN DIGITAL COMMUNICATION SYSTEM	
Saad Osman Bashir, Abdallah Mohammed Tawfeeq Zyoud and Besir Salah Eldin Mahmoud Sid Ahmed	209
16. COMPARATIVE ANALYSIS OF LOW POWER VLSI CIRCUITS TECHNIQUES	
Anis Nurashikin Nordin and Fatin Alea bt. Talib	219

17. SPHERICAL POV LED DISPLAY USING PIC 16F628	
Teddy Surya Gunawan and Muhammad bin Ahmad	235
18. IMPLEMENTATION OF CAPACITANCE OF VOLTAGE CONVERTER FOR CAPACITIVE TRANSDUCERS	
A.H.M. Zahirul Alam and Nur Fadhila bt. Che Halim	255
19. PROTEIN CODING IDENTIFICATION OF HUMAN DNA SEQUENCE USING WAVELET	
Teddy Surya Gunawan and Norashikin Abdul Wahab	274
20. OPTIMIZATION OF ZAKAT MANAGEMENT SYSTEM IN INDONESIA USING GEOGRAPHIC INFORMATION SYSTEM (GIS)	
Muharman Lubis	292
21. IIUM CAR STICKER RECOGNITION USING PHASE BASED TEMPLATE MATCHING ALGORITHM	
Teddy Surya Gunawan and Siti Aisyah bt. Mohamad	308

6. DEVELOPMENT OF ENERGY ASSESSMENT TOOLS FOR SINGLE PHASE APPLIANCES

Musse Mohamud Ahmed and Siti Nor Amiza bt Massere

ABSTRACT

In detail, we proposed Energy Saving software and Energy Assessment Spreadsheet that can manage energy consumption and calculate the power consumption. The simulations were done with real data with an efficient model developed to save energy without compromising the performance constraints of the single phase. The introduction of user friendly Energy Assessment Tools is believed to improve energy assessment system by providing effective services to enhance energy efficiency and offer initial support of cost reduction alternative. A model of energy assessment tools has been developed by analyzing the initial energy consumption, identifying the general energy efficiency calculation, process and procedures. Then an algorithm has been developed to determine the performance of single-phase equipment, and identify the energy efficiency criteria by using Energy Saving Software, Energy Assessment Spreadsheet and Matlab simulation. The potentials of other assessment tools are also discussed.

6.1 INTRODUCTION

Energy is the essence of human life. Without sufficient energy, the rotation of human's normal life will be distorted and energy shortage might cause chaos in the industry. The main focus here nowadays is not only the limited energy and the cost of energy consumption, but the major concern is also on the environmental impact that is happening globally. Without proper attention and action to be conducted, this could cause more major problems