



CURRICULUM VITAE

PERSONAL DETAILS

Name : PROF. IR. DR. RUBITA BINTI SUDIRMAN
Correspondent : Faculty of Electrical Engineering, Universiti Teknologi Malaysia, 81310 UTM Johor Bahru, Johor

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 E-mail : rubita@utm.my; rubita@fke.utm.my Website : <http://rubita.fke.utm.my>

Expertise : Biomedical Signal Processing, Speech and Auditory,
 Electrooculography; Rehabilitation Engineering; Electronics/ Medical Electronics
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ACADEMIC QUALIFICATIONS

2007 : Ph.D. in Electrical Engineering, Universiti Teknologi Malaysia
 1997 : M.Sc. in Electrical Engineering, University of Tulsa, USA
 1994 : B. Sc. in Electrical Engineering, University of Tulsa, USA

AWARD AND HONORS RECEIVED

- 1) 2019 – Finalist - Women in Engineering, IET Award 2019
- 2) 2019 – Staff Excellence Award 2018, Faculty of Engineering Award 2019
- 3) 2019 – Best Research Group 2018, Faculty of Engineering Award 2019
- 4) 2017 – Professional Engineer, Board of Engineer Malaysia
- 5) 2016 – National Innovation and Invention Competition, Gold Medal, Ministry of Higher Education
- 6) 2016 – Recognition on Community Service, FKE
- 7) 2015 – Staff Excellence Award 2014, Citra Karisma
- 8) 2011 – Staff Excellence Award 2010, Citra Karisma
- 9) 2011 – Anugerah Buku Karya Asli 2010, Citra Karisma
- 10) 2014 – Academic Manager Excellence Award, UTMSPACE
- 11) 2013 – Bronze, International Engineering Invention and Innovation Exhibition, KPT & UniMAP
- 12) 2014 – Chartered Engineer, Institute of Engineering & Technology, UK
- 13) 2014 – MIMOS Most Prestigious Award, Excellent PhD Student, MOSTI
- 14) 2011 – Gold Medal – Color Coded Heart rate Monitoring System, INATEX
- 15) 2011 – Best Invention Award - Color Coded Heart rate Monitoring System, INATEX
- 16) 2010 – Bronze - Acquisition Method of Electroencephalography Signals Auditory Response from a Patient, INATEX
- 17) 2010 – Marquis Who's Who in the World, Who's Who in America Publication
- 18) 1993 – Eta Kappa Nu Association (Complimentary for Outstanding Achievement), University of Tulsa
- 19) 1994 – Ralph L. Langeinhem Award in Electrical Engineering, University of Tulsa

PROFESSIONAL MEMBERSHIP / QUALIFICATIONS / RECOGNITION

- 1) Professional Engineer (P. Eng), Board of Engineers Malaysia (Registration : 18089) (2017)
- 2) Chartered Engineer (C. Eng) , IET UK (Registration : 616443) (2014)
- 3) Member IET, Membership No.: 1100277459 (2011)
- 4) Senior Member of IEEE, Membership No.: 41454081
- 5) Member, IEEE Engineering in Medicine and Biology Society Malaysia Chapter
- 6) Member, IEEE Women in Engineering, Membership No.: 41454081
- 7) Malaysian Society for Engineering & Technology (MySET), Membership No. 0486

ADMINISTRATIVE EXPERIENCE

Faculty/School Level

- 1) 2020-2022 : Advisor, SKE HTGYE Committee
- 2) Sep 2017 – Aug 2019 : Laboratory Academic Coordinator (Electrophysiology Lab)
- 3) 2008 – 2012 : Chairman of First Year Experience Committee

- 4) Jan 2014 – Dec 2017 : Member of FKE Examination Committee
- 5) Jan 2014 – Dec 2017 : Member of FKE Academic Committee
- 6) Jan 2014 – Dec 2017 : Member of Administration Committee
- 7) Jan 2014 – Dec 2017 : Member of Undergraduate Study Committee
- 8) 2015 – 2017 : Member of FKE Alumni Committee
- 9) Jan 2014 – Dec 2017 : Member of FKE Quality Committee
- 10) Jan 2014 – Dec 2017 : Member of FKE Time-table Committee
- 11) Sep 2010–Aug 2012 : Course Coordinator (SEE 2063 Electronic Devices)
- 12) 2016 – current : Course Coordinator (MKEL 1253 Speech Processing)
- 13) Sep 2011– current : Academic Coordinator (Electrophysiology Laboratory)
- 14) 2010 – 2011 : Member of FKE HTGYE Committee
- 15) 2010 – 2011 : Member of FKE Practical Training Committee
- 16) 2019-2021 : JK Buku Panduan Akademik Fakulti Kejuruteraan
- 17) 2020-2022 : Advisor, STEM RBTK
- 18) 2019-2020 : Chairman – Projek Ehsan Mahasiswa, SKE

University Level

- 1) Dec 2019 – Nov 2022 : Director (Electronic & Computer Engineering)
- 2) Oct - Nov 2019 : Acting Director (Electronic & Computer Engineering)
- 3) 2019 : Task-Force: JK Siasatan Pengesahan Jawatan Staf Keselamatan, UTM
- 4) Jan 2014-Dec 2015 : Academic Manager (Off-Campus Program)
- 5) Jan 2016-Dec 2017 : Academic Manager (Off-Campus Program)
- 6) Jan – Dec 2017 : Task-Force: Jawatankuasa Polisi Bayaran Beban Pengajaran Staf Akademik UTM
- 7) 2011-2013 : Head of Research Group (bMIE)
- 8) May-Aug 2008 : Acting Head of Department, ECE
- 9) 2008 – 2013; 2018 : Program Coordinator - SPACE
- 10) 9 March 2020 : Committee – Bengkel Robotic (SpeED Program) – Pengakap Malaysia

OTHER EXPERIENCE

University/National Appointment/ Committee

- 1) Academic Program Evaluation
 - a. ETAC Evaluator - Diploma Kejuruteraan Elektronik & Komputer, Manipal International University, Nilai, Negeri Sembilan, 2023
 - b. ETAC Evaluator - Diploma Kejuruteraan Elektronik, Politeknik Ibrahim Sultan, Johor Bahru, 2019
 - c. ETAC Evaluator - Diploma Kejuruteraan Elektronik, Politeknik Merlimau, Melaka, 2021
 - d. External Examiner/Evaluator – Sarjana Kejuruteraan Rekabentuk Sistem Elektronik, Universiti Sains Malaysia, 2022
 - e. External Examiner/Evaluator – Sarjana Muda Kejuruteraan Elektronik, Universiti Malaysia Sarawak, 2015, 2016
 - f. External Examiner/Evaluator – Sarjana Muda Kejuruteraan Elektronik dan Perubatan, Universiti Kuala Lumpur, 2015, 2016
 - g. External Examiner/Evaluator – Pengiktirafan Program Diploma Lanjutan kepada Ijazah Am Politeknik, Kementerian Pengajian Tinggi Malaysia, Politeknik Shah Alam, 2011.
 - h. External Evaluator – Diploma Kejuruteraan Elektronik, Institut Kemahiran MARA, Johor Bahru, 2023.
 - i. Panel Penilai – Diploma Kejuruteraan Elektronik, UTMSPACE Kuala Lumpur, 2019
 - j. Panel penilai – Diploma Kejuruteraan Elektrik, UTMSPACE Kuala Lumpur, 2019
- 2) Panel Evaluator on Promotion
 - a. Permohonan kenaikan pangkat Prof Madya – IIUM, 2015
 - b. Permohonan kenaikan pangkat Prof Madya – UiTM, 2019
 - c. Permohonan kenaikan pangkat Prof Madya – UniMAS, 2022
 - d. Permohonan kenaikan pangkat Prof Madya – UKM, 2023
- 3) Grants Panel of Evaluator
 - a. Fundamental Research Grant Scheme, Kementerian Pengajian Tinggi Malaysia, 2020 - current
 - b. University level - Research University Grant Tier 1 & Tier 2, 2010-current
 - c. National - EScience Fund, FRGS, ERGS, PRGS, Sport Science Grant, Institutional grant, 2010-current
- 4) Technical Committee, Standards Research and Management Centre SIRIM BERHAD
 - a. Committee TC/R/11 - Development of the Malaysian Standard code of practice for Medical Lasers, 2016-2017
 - b. Committee TC/R/11 - Development of the Malaysian Standard code of practice for Site Planning and Installation of Magnetic Resonance Imaging (MRI) System, 2015-2016
 - c. Committee TC/R/11 - Diagnostic & Therapeutic Radiation Code of Practice, 2013-2014
- 5) Speaker

- a. Postgraduate Student Society Workshop: Characteristic of Good Literature Review (FKE/SKE), February 2017, November 2017, November 2018, February 2020
 - b. Speaker – How to Become a Professional Engineer Via Route 3 (FKE), December 2017
 - c. Supervisory Development Program (AS102) – *Publication for Graduation*
 - d. Taklimat Keperluan Latihan Ikhtisas dan Laluan Kelayakan Profesional (SKBSK & SKE) – 13 Julai 2020.
- 6) Panel Evaluator/ Judge
- a. Tunas Saintis MRSM Se-Malaysia ke-21, 2012
 - b. INATEX 2018
 - c. INATEX 2019
 - d. Edited Book, UTM Press, 2019-current
 - e. Program Kompetensi Juruteknik (FKE)
- 7) Supervisor/ Mentor
- a. Program Kompetensi Juruteknik (FKE), 2012
 - b. Mentoring for Excellence (M4E) - Mentees (i) Dr Nor Aini Zakaria, (ii) Dr Nor Asniza Murad
- 8) Editor
- a. Chief Editor, Jurnal Teknologi Special Edition, May 2015
 - b. Chief Editor, Jurnal Teknologi Special Edition, July 2016
 - c. Section Editor, Jurnal ElektriKA 2013-2015
 - d. International Journal of Human and Technology Interaction
 - e. Chief Editor - International Journal of Integrated Engineering (Special Edition), 2020-2021
 - f. Editor, Book Chapter - Recent Development on Electrical Signal Measurement around the Head, ISBN 978-983-52-0649-8, 2008. Penerbit UTM
 - g. Editor, Book Chapter - Speech: Current Features & Extraction Methods, ISBN 978-983-52-0650-4, 2008. Penerbit UTM
 - h. Editor, Book Chapter - Biomedical Research and Development in Signal, Image and Sensors, ISBN 978-983-52-0826-3, 2012. Penerbit UTM.
 - i. Editor, Book Chapter - Advances in Biomedical Image and Signal Processing, Series 1 (2014) Penerbit UTM
 - j. Editor, Book Chapter - Advances in Biomedical Image and Signal Processing, Series 2 (2015) Penerbit UTM
 - k. Editor, Edited Volume - Advances in Biomedical Image and Signal Processing-Current Trend (2019). ISBN 978-983-52-1678-7, Penerbit UTM
 - l. Editor, Journal of Medical Devices and Biological Engineering
- 9) Journal Reviewer
- a. Journal of Electrical & Electronic Systems Research (JEESR)
 - b. Journal of Engineering Science & Technology (JECTEC)
 - c. Jurnal ElektriKA
 - d. Jurnal Teknologi
 - e. International Journal of Human Interaction and Technology

International Appointment/Committee

- 1) IET Mentor - Mentoring towards Professional Registration - mentee - Girish Bhola, India (2019-2020)
- 2) Technical Program Committee (TPC)/ Advisory committee –
 - a. TPC, 1st IEEE International Conference on Artificial Intelligence & Modern Assistive Technology (ICAEMAT 2020)
 - b. Program Chair, 6th International Conference on Computing, Engineering and Design (ICCED 2020)
 - c. TPC, International Research Conference on Engineering & Science (IRCES2018).
 - d. TPC, Third International Symposium on Intelligent Informatics, Delhi, India, 2014.
 - e. TPC, International Research Conference on Engineering & Science (IRCES2018).
 - f. TPC, 2nd International Conference on Material Science and Engineering Technology (ICMSET 2013).
 - g. TPC, 3rd International Conference on Telecommunication Computing Electronics and Control (ICW Telkomnika 2019)
 - h. TPC, International Conference on Biomedical Engineering, 2015, 2017
 - i. Observer, formation of “Medical Devices Act ” for ASEAN, 2012
- 3) Journal Reviewer –
 - a. IEEE Access
 - b. Journal of King Saud University - Computer and Information Sciences, Elsevier
 - c. Journal of Neuroscience Methods, Elsevier
 - d. International Journal of Applied Soft Computing, Elsevier
 - e. IEEE Transactions on Neural Systems and Rehabilitation Engineering
 - f. British Journal of Mathematics & Computer Science, ISI
 - g. Journal of Applied Science & Technology
 - h. Biomedical Engineering/Biomedizinische Technik

- i. International Journal of Advanced Technology and Engineering Exploration (IJATEE)
 - j. Computers in Biology and Medicine
 - k. Journal of Computing and Digital System
 - l. Asian Journal of Probability and Statistics
- 4) Editor/Editorial Board -
- a. Journal of Communications and Information Sciences (2017) – renewing (2020)
 - b. International Journal of Advanced Technology and Engineering Exploration (IJATEE) – 2020
 - c. International Journal of Biomedical Science and Engineering – 2020
 - d. Chief Editor - International Journal of Integrated Engineering (Special Edition), 2020-2021
- 5) Committee – International Conferences
- a. 5th International Conference on Computing, Engineering and Design (ICCED 2020) – Program Chair
 - b. 2nd International Medical Device and Technology Conference (IMEDITEC 2021) – Publication Committee
 - c. 3rd International Medical Device and Technology Conference (IMEDITEC 2023) – Publication Committee
 - d. 1st International Conference on Electronics and Computer Engineering (ECE2023) – Conference Advisor
 - e. 7th International Conference on Computing, Engineering and Design (ICCED 2023) – Conference Advisor

RESEARCH ACTIVITIES

Project Leader - Active:

- 1) A Study of Multimodal Adaptive Technique Based on Fuzzy Logic and Case-Based Reasoning for Stress Symptoms in Children with Autism Spectrum Disorder. FRGS R.J130000.7851.5F123 RM74,000, 01/09/2019 - 31/05/2022
- 2) Brain Features Extraction Using Wavelet Transform Approach For Detection Of Visual Memory Improvement And Stress Reduction. Professional Development Research University - Q.J130000.21A2.05E52, RM138,460, 1 July 2021 – 30 June 2023.

Project Leader - Completed:

- 1) ASEAN Language Speech Translation project, ASEAN IVO, NICT Japan. USD90000, 1 July 2016 – 30 June 2019.
- 2) Stress Management by Sound Stimulation for Memorizing and Studying Purposes. GUP Tier 1 - Q.J130000.2523.13H25, RM50,000. 1 July 2016 – 30 June 2018.
- 3) The Effect of Eye Massaging Device to Electrooculograph Signal Based on Wavelet Approach to Reduce Stress Level. GUP Tier 1 - Q.J130000.2523.05H37, RM77, 000. 1 April 2014-31 March 2016.
- 4) Biosignal Potential Identification of the Working Memory and Sensory Using Electroencephalograph Signal for Children. EScience Fund R.J130000.7923.4S094, RM166, 600. 1 April 2014 – 31 March 2016.
- 5) Formulation of Brain Phantom Model for Tumor Detection Based On Microwave Imaging and Radar Signal Processing. FRGS R.J130000.7823.4F558, RM58, 000. Jun 2014-Dec 2015.
- 6) Biosignal Potential Identification of the Working Memory and Sensory Using Electroencephalograph Signal for Children. RUG Tier 2 - Q.J130000.2623.09J28, RM50,000. 1 Dec 2012 - 30 Nov. 2013
- 7) Human Monitoring and Authentication System Using Neuropsychosocial Factors and Biodynamic Indicators. RUG Tier 1 - Q.J130000.2523.00H44, RM122,000. 1 April 2011-31 Mar. 2013.
- 8) Formulation of the Eye Movement Behaviour based on Electro-oculograph Signal. Vot 78578. Funding FRGS R.J130000.7823.3F511, RM48,000, 1 April 2010 – 31 March 2012
- 9) Development of Medium Vocabulary Malay Continuous Speech Recognition System. Escience Fund Vot R.J130000.7923.3S022 - RM 136,200.000. Nov. 2006 – May 2008.
- 10) Development of Brainwaves EEG Recognition System for Speech Disability Person. EScience Fund Vot R.J130000.7923.3S187, Funding RM 236,200, Sept. 07 – Feb. 09.
- 11) Pembangunan Litar Simulasi Interaktif Berasaskan Multisim bagi Matapelajaran Litar Elektronik. 1.4.2008 – 31.5.2009. DPP 76559. RM5000.
- 12) Development of Intelligent Arabic Phonemes Pronunciation Evaluation System. EScience Fund R.J130000.7923.3S364, RM100,400, 1 April 2009 – 30 Sep 2010
- 13) Development of a PC Based Electropalatograph System for Speech Therapy. Vot 71746 - RM17,000. 1.1.2001-31.12.2001.
- 14) Computer Based Diagnostic Aids for Detection of Heart Problems. Vot 71216 - RM20,000. Dec. 97-Oct 98.

Member of Project

- 1) Morphological study on RBC for determination of anemia disease severity level, FRGS: R.J130000.7851.5F078, RM51,000, 1/1/2019-31/12/2020. Head: Mohd Azhar Abdul Razak

- 2) Intelligence Badminton Movement Classification System (IBADMOV). UTMPR: 00L33, RM62500, 1/1/2020-30/6/2021. Head: Muhammad Amir Bin As`Ari
- 3) Correlation Basis Of Two Modes Reflected Waves Based On Pulse Echo Ultrasound Technique For Bone Porosity Estimation. UTMFR: 21H49, RM60,000, 1/1/2020-30/6/2021. Head: Nasrul Humaimi Mahmood
- 4) Dry Electrode for Human Heart Monitoring Based By Graphene Ink On Fabric, UTM Tier 2: 17J08, RM20k, 1/8/2019-31/7/2021, Head: Nurul Ashikin Abdul Kadir
- 5) Reference Indicators For Social Anxiety Disorder Using Physiological Signals Among College Students, UTM ER: Q.J130000.2651.17J69, RM30,000. 1/11/2019-30/10/2021. Head: Camallil Omar
- 6) Quantitative study of fall risk assessment using multimodal sensor. RUG Tier 2: RM20000, 01/10/2016 – 31/12/17. Head: Noraini Zakaria
- 7) Profiling of Effective Study based on Mental Task Electroencephalography towards Sound Stimulation Environment. RUG Tier 2: RM20000, 01/10/2016 – 30/09/17, Head: Camallil Omar
- 8) Development of Head Monitoring System Using Array Transceiver for Microwave Imaging Application. R.J130000.7923.4S056 (EScience Fund – RM145,800), 2013-2015. Head: PM Dr Muhammad Ramlee Kamaruddin
- 9) Fetal Activity Recognition Using 3-Axis Accelerometer Sensor. RUG Tier 1: 1/05/15 – 31/10/16, Head: Malarvilli Balakrishnan.
- 10) Novel Imaging Technique For Accurate Reconstruction Of Prostheses / Orthoses. Esience-fund, RM283200. 1 Apr 2012-30 Oct 2014. Head: N.H. Mahmood
- 11) Identification of Situation Based Environment Towards Noise Reduction in EEG And ECG Acquisition. RUG Tier 2, RM40,000. 1 Mei 2011 – 30 April 2012. Head: N.H. Mahmood
- 12) Identification of an Automated System for Screening Children with Handwriting Difficulties in Early Stages of Academic Life RUG Tier 2, RM40,000, 1 Mei 2011 – 30 April 2012. Head: Ismail Ariffin.
- 13) Guiding Method of the Wheelchair Using Electro-Oculograph Signals. RUG Tier 2, RM40,000, 1 Mei 2011 – 30 April 2012. Head: Camallil Omar
- 14) Early Identification Of Working Memory Impairments In Children Using Event- Related Potentials Based On Wavelet Algorithm RUG Tier 2, RM40,000, 1 Mei 2011 – 30 April 2012. Head: A.H. Ahmad
- 15) Information Network of Motor Control in Human Brain with Non-Motor Distracter Stimuli. RUG Tier 2, RM40,000, 1 Mei 2011 – 30 April 2012. Head: Norlaili Mat Safri
- 16) Virtual Reality System for Microsurgery Learning and Assessment. RUG Tier 2, RM40,000, 1 Mei 2011 – 30 April 2012. Head: Eileen Su Li Ming
- 17) Application of Fuzzy Logic and Neural Network Algorithm in the Development of Intelligent Training System using Telecommunication and Multimedia Infrastructure. Esience-fund Vot 72180 - RM103,550, 2000-2003.
- 18) Dynamic Characteristics Identification of Poor Writers Children, Vot 77916 – RM10,000, 16hb Mac 2009 - 15 Mac 2010
- 19) Wireless Body Area Network in Medical Application Environment, Esience-fund Vot 79314 RM149,800.00, 1.1.2009-30.6.2010

Consultation

- 1) Kajian Pengurusan Maklumat Bersepadu di Lembaga Lebuhraya Malaysia.
Contract amount: RM250,435.39 (October 1999 – March 2000). Vot 63616.

INTERNATIONAL CONTRACT RESEARCH PROJECT AWARDED

ASEAN Language Speech Translation project, ASEAN IVO, NICT Japan. USD90000, 1 July 2016 – 30 June 2019.

MEMORANDUM OF UNDERSTANDING

- 1) Universal Speech Translation Advanced Research (U-STAR) Consortium, 1 April 2016 – 31 Mac 2019.
- 2) MEMORANDUM OF UNDERSTANDING for Universal Speech Translation Advanced Research (U-STAR) Consortium, 1 April 2019 – 31 March 2024.
- 3) MEMORANDUM OF UNDERSTANDING between UTM and Universiti Islam Indonesia, 1 April 2021 – 31 March 2026.

PATENT FILED/DISCLOSURE/COPYRIGHTS

Patent Granted

- 1) PI 2010003094 MY-173620-A: " Method to Acquire EEG Based Sound Frequency Response
11 Februari 2020-29 Jun 2030
- 2) PI 2010000909 MY-155283 - A Method for Use in Analyzing A Patient Based On Electroencephalography (EEG) Signals

Copyrights

- 1) Copyright 2014 - Source Code: Children Sensory Response and its Extraction Features through Discrete Wavelet Transform
- 2) Copyright 2014 - Source Code: Working Memory Impairments using Event Related Potentials based on Wavelet Algorithm

- 3) Copyright 2014 - Source Code: Biosignal Extractions of Brain Cognitive and Oculography through Dynamical Visualization Task

Patent Filed

- 1) PI2010 000298 - Acquisition Circuit for Auditory Brainstem Response System
- 2) PI2009 2526 - Automated Auditory System and Method
- 3) PI2008 4250 - Speech Recognition Method using Neural Network
- 4) PI2016 700538 - A Method for Classifying Human Motion Using Human Scalable Physiology Model
- 5) PI2019 004290 - Method for Automated Abnormal Behaviour Detection

SUPERVISION

PhD Students

	Name (Main SV unless stated)	Research Title	Status
1	Dr. Narges Tabatabaey	Identification of Handwriting Difficulties among Children using Support Vector Machines	Graduated 2014
2	Dr. Yong Ching Yee	Human Monitoring and Authentication using Neuropsychosocial Factors and Biodynamic Indicators	Graduated 2014
3	Dr. Chew Kim Mey	Microwave Imaging for Brain Tumor Detection using Radar Signal Processing and Image Reconstruction Algorithm	Graduated 2015
4	Dr. Nasser Omar Bakkret (Co-SV)	Classification of EEG for Epilepsy using Particle Swarm Optimization	Graduated 2016
5	Dr. Mohsen Bazyar	Data Embedding in Mpeg-1 Layer III Compressed Domain using Least Significant Bit Method	Graduated 2017
6	Dr. Siti Zubaidah Tumari	Early Identification of Working Memory Impairments in Children using Event- Related Potentials Based on Wavelet Algorithm	Graduated 2017
7	Ahlam Al-Damiri	Advanced Human Monitoring and Authentication using Neuropsychosocial Factors and Biodynamic Indicators	examination
8	Muhamad Amin Abd Wahab	Study of Bone Porosity Based on Ultrasound Signal	Graduated
9	Awais Gul Airij	Stress Management through EEG Brain Response	Graduated
10	Hajara Abdul Karim (Co-SV)	Blood Cell Counting Image Processing	Graduated 2020
11	Tengku Nur Shuhada Tengku Zawawi (Co-SV UTeM)	Electromyography Signal Analysis using time and frequency domain for Health Screening System Task	Ongoing
12	Syarifah Noor Syakiyila Syed Mohd Daud (Co-SV)	Poly(ether ether ketone) based Anion Exchange Membrane for Solid Alkaline Fuel Cell	Graduated
13	Fatima Abdullahi Muhammad	Classification And Characterization Of Red Blood Cell Disease Severity Using Artificial Intelligence	Ongoing
14	Alwaleed Mohamed Waheeb Ibrahim	Synthetic Neural Network	Ongoing

Masters Students

	Name (Main SV unless stated)	Research Title	Status
1	Alice Koh Chee	Classification of Sound Frequency based on EEG Signal	Graduated
2	Wan Mohd Bukhari Wan Daud	Identification of Eye Movement from EOG Signal using Wavelet Analysis	Graduated
3	Nurul Ashikin Abdul Kadir	Development of Arabic Phoneme Recognition System	Graduated
4	Anwar Ahmed Al-Haddad	Wheelchair Motion Control using Eye Movement Potential	Graduated
5	Noraini Abdul Samad	Identification of Situation Based Environment Against Noise Reduction of ECG Acquisition	Graduated
6	Anith Adibah Haseim	Comparison of Method for Extraction of Handwriting Features	Graduated
7	Siti Erlyane Rosli (Co-SV)	Identification of Voltage and Current Characteristics of Charged Surface Modifying Macromolecules as an Advanced Material for Membrane Separation Processes	Graduated
8	Syarifah Noor Syakiyila Syed Mohd Daud	Mental Task Electroencephalography Pattern According to Different Environments of Stimulation	Graduated
9	Fatin Afiqa Mansor	The Effects of Eye Massage Device on Electro-oculography Signals	Graduated
10	Nurfathin Atika Binti Nawawi		Ongoing

Phd External Examiner

	Name of candidate	Title	Institution	Year
1	Aisyah Hartini Jahidin	EEG Based ANN Modelling for IQ Classification and a Cross-Relation Study with Brain Asymmetry and Learning Style	UiTM	2012
2	Roshakimah binti Mohd Isa	The Assessment of Human Brainwave Signals Due to Mobile Phone RF Exposure using ANN	UiTM	3/17
3	Raheel Zafar	Decoding of Visual Information from Human Brain using EEG	UTP	11/17
4	Wan Rosemehah Wan Omar	ANN Classification of Ischemic Stroke Severity using EEG Signal	UiTM	1/18
5	Nasereddin Ibrahim Sherksi	Leak Size Detection and Location in a Water Distribution System by using KNN	UiTM	3/18
6	Mohamed Shakir	Development of a Wearable Electroencephalography (EEG) – Based System for Epileptic Seizure Prediction	UTP	8/18
7	Haryanti Norhazman	Characteristic of Binaural Beats Entrained Mental States of Stressed Subjects using EEG Frontal Energy Ration and k-NN	UiTM	10/19
8	Ahmad Rauf Subhani	The Assessment of Workplace Stress Levels using the Resting-State EEG Microstate Sequence	UTP	1/20
9	B. Sasikala	Multi-Attribute, Multi-Factor and Sub Solution based Job Shop Scheduling using Ant Colony	Tamil Nadu, India	12/19
10	Jawad Hussain	Electromyographic Fatigue Analysis In The Three Heads Of Triceps Branchii During Isometric And Isotonic Contractions	UTeM	4/20
11	Abdulahakim Abdullah Alezzi Mohammed	Colonic Polyp Detection via Artificial Intelligence Approaches	UTP	2021
12	Mohammed Isam Naji Al-Hiyali	Principal Subspace of Dynamic Functional Connectivity for Diagnosis of Autism Spectrum Disorder	UTP	2023

Msc External Examiner

	Name of candidate	Title	Institution	Year
1	Janaatul Naeem	An Investigation into Functional Electrical Stimulation (FES)-Induced Fatigue Phenomena Using Short Duration Pulses	IIUM	2014
2	Muhammad Kamil Abdullah	Development of an EEG Biometric System using a Yule-Walker Approach	MMU	2014
3	Mohammad Rubaiyat Hassan	Advanced Techniques for Classification of Multi-Channel EEG Signals for Brain Computer Interface	IIUM	2012
4	Tengku Nor Shuhada Tengku Zawawi	EMG Signal Analysis of Manual Lifting using Time Frequency Distribution	UTeM	4/16
5	Noor Hayatee Abdul Hamid	Alpha and Beta Band Characteristics in Differentiating Human Stress Level using Non-Parametric Technique	UiTM	6/16

PhD Internal Examiner (UTM/MJIIT/RAZAK School)

	Name of candidate	Title	Year
1	Norliza Mohd Nor	Lung Disease Classification using Transductive Transfer Learning and Biosignal Computer-Aided Diagnosis for Depression	2012
2	Hang See Pheng	Massive Training Artificial Immune Recognition System for Lung Nodules Detection	2014
3	Lau Chee Yong	Malay Trainable Speech Synthesis with Intelligibility Improvement using Artificial Intelligence	2014
4	Seyed Mojtaba Mousavi	Robust Watermarking for Medical Images with Automatic Region of Interest Detection	2015
5	Norhashimah Mohd Saad	Diffusion-Weighted Image Analysis Techniques for Detecting and Classifying Brain Lesions	2015
6	Gan Hong Seng	Knee cartilage segmentation using multi-purpose interactive approach	8/15
7	Nadia	Grounding of Abstract Words In Cognitive Robot Through Symbolic Approach	2/16
8	Maziyar Molavi	Effect of Islamic Fasting on Visual Attention by ERP Analysis	3/16
9	Babak Vazifeh-khakghaffari	Theoretical Analysis of Voltage Dependent Ion Channel Mechanisms in Subthreshold Level Activities of Neurons	3/16

10	Feri Chandra	Hyperspectral Imaging for Starfruit Quality Inspection	5/16
11	Adel Ameer Ahmed H. Hafeez Allah	Multiscale Discrete Curvelet Transform in Background Independent Crowd Estimation for Al-Masjid Al-Nabawi	5/16
12	Siti Nor Zawani Ahmmad	Parameters for Computer-Based Assessment for Surgical Skill	7/17
13	Nurul Ain Mohamad Ishak	Determination of Onset Muscle Fatigue based on Joint Analysis of Surface Electromyography Spectrum and Amplitude	9/16
14	Natasha Zulaziz	A Novel Animal Model for Subcutaneous Soft Tissue Infection using Temporally Neutropenic LYS-EGFP Mice	3/17
15	Ng Chuen Rue	3D Calcium Volume Quantification in Internal Carotid Artery for Computed Tomography Images	11/16
16	Hossein Abbasi	New Outdoor Image Segmentation Scheme Utilizing Color Cluster Elimination and Texture Sewn Response	2/17
17	AlZaidi Ali Ilham Abdullah	Self-Regulated Thermal Control of Bipolar Electrosurgical Device	10/19
18	Roer Eka Pawinanto	Design , Fabrication And Characterisation Of Active Electromagnetic Microfluidic Mixer For Biomedical Application	10/19
19	Jafar Shayan	Fully Deep Learning Technique in Classification of Pornographic Images	12/19
20	Heng Wei Wei	Short-Term Prediction Of Malignant Ventricular Arrhythmia Using Phase Space Reconstruction And Heart Rate Variability From Electrocardiogram	3/2020
21	Tariq Ibrahim Abdel Latif Alshwaheen	A Robust Framework For Prediction Of Patient Deterioration Based On Deep Learning	2020
22	Indra Hardian Mulyadi	Smart Shirt For Electrocardiography Measurement	2020
23	Yashar Javadianasl	An Efficient And Secure Technique For Tampering Detection On Digital Videos Using Watermarking	2020
24	Ali Abdurraheem Alwan Al-Khafaji	Tamper Detection For Arabic Text Watermarking Methods Based On Vowel Letters	2020
25	Nik Noor Nabilah Binti Md Ibrahim	Fabrication Of Si Micropore And Graphene Nanohole Structures By Focused Ion Beam For Dna Sequencing Application	2020
26	Hannah binti Sofian	Calcification Detection in Coronary Artery Disease Using Deep Learning Directed Acyclic Graph Network-27	2022
27	Sinan S. Mohammed Sheet	Diabetic And Vascular Diseases Classification Using Transfer Convolution Neural Network For Fundoscopy Image	2022
28	Fahad Taha Naji Naji	Detection and Classification of Laryngeal Cancer Using Recursive Online Sequential Extreme Learning Machine	2023
29	Najeeb Ur Rehman Malik	Cascading Pose Features with for Multi View Human Action Recognition	2023

Masters Internal Examiner (UTM/MJIT/RAZAK School)

	Name of candidate	Title	Year
1	Indra Hardian Mulyadi	Hybrid Zigbee-Bluetooth Communication Protocol and Adaptive Bandwidth Allocation Algorithm for Telemedicine Application	2012
2	Siti Madihah Mazlan	A New Framework for Blood Cell Counting using Circular Hough Transform	2014
3	Norfariza Abd Rahman	Implementation of Viterbi Algorithm for Unit Selection Speech Synthesis System	2014
4	Nurul Fazrena Kamal	Modelling Neural Correlates during Mental Calculation between Addition, Subtraction, Multiplication and Division using fMRI	2015
5	Nurul Asyikin Kamaruddin	Sensitivity of Muscle Fatigue Assessment Based on Surface Electromyography of Temporal Spectral Characteristics	10/15
6	Nor Syazreen Hashim	Cognitive Function Assessment in Young Adult based on Mental Arithmetic, Trail Making and Stroop Tasks	6/16
7	Mohamad Amin Hashim	Real-Time Smart Arrhythmia Classifier Design using Hermite Polynomial and Multilayer Perceptron Neural Networks	5/16
8	Ruhaizan Ismail	Early Screening of Luekemia using Near Infrared Spectroscopy	10/16
9	Nurul Amalina Aisyah Muhamad Azmi	The Dynamics of Neutrophils in Photodynamic Therapy as Anti Tumor	8/18
10	Siti Munirah Zulkapli	Classification of Breast Tissue based on RBF Neural Network	10/18
11	Kardokh Hama Najib Kaka Bra	Smart Nutrition Management System And Multi-Layer Neural Network In The Prediction Of Coronary Heart Diseases	2/2020
12	Mohd Azahar Che Abdullah	Integrated Control of Electrical Discharge Machining System	6/2020

13	Muhammad Haziq Bin Rusli	Feature Extraction Representation with Euclidean Distance and Facenet for Face Recognition	2023
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1. Syakiylla Sayed Daud, S. N., Sudirman, R., & Wee Shing, T. (2023). Safe-level SMOTE method for handling the class imbalanced problem in electroencephalography dataset of adult anxious state. *Biomedical Signal Processing and Control*, 83 doi:10.1016/j.bspc.2023.104649 (IF 3.88)
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9. Muhamad Amin Abd Wahab, Rubita Sudirman, Mohd Azhar Abdul Razak, Nasrul Humaimi Mahmood (2020). Comparison between incident and reflected of two modes waves correlation with various porosities and thicknesses of bone Phantom. *Malaysian Journal of Fundamental and Applied Science*.16(5): 571-575.
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12. Daud, S.S., Norrdin, M.A., Jaafar, J., Sudirman, R. (2020). High degree sulfonated poly(ether ether ketone) blend with polyvinylidene fluoride as a potential proton-conducting membrane fuel cell. *High Performance Polymers*, 32(1): 103-115. (IF 1.584)
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24. N.A.A. Kadir, R. Sudirman (2011). Frontal Arabic Fricative Consonants Characteristics among Primary School Children: Spectral Density Function Approach. *Journal of Computer Science* 7 (10): 1590-1595, 2011, ISSN 1549-3636 © Science Publications, Elsevier
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1. Daud, S.S., Norrdin, M.A., Jaafar, J., Sudirman, R. (2020). The effect of material on bipolar membrane fuel cell performance: A review. IOP Conference Series: Materials Science and Engineering, 736(3),032003
2. Daud, S.S., Norrdin, M.A., Jaafar, J., Sudirman, R. (2020). Incorporation of poly(vinylidene fluoride) in sulfonated poly(ether ether ketone) matrix for membrane mechanical stiffness. IOP Conference Series: Materials Science and Engineering, 736(5),052003
3. M. A. Abd Wahab, R. Sudirman, M. A. Abdul Razak, F.K.C. Harun, N. A. A. Kadir and N. H. Mahmood (2020). Incident and Reflected Two Waves Correlation with Cancellous Bone Structure. *Telkomnika* (in press).
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17. Syarifah Noor Syakiylla Sayed Daud, Rubita Sudirman. Artifact Removal and Brain Rhythm Decomposition for EEG Signal Using Wavelet Approach. *Jurnal Teknologi*, 78:7–5 (2016) 135-143. eISSN 2180–3722.

18. Siti Zubaidah Mohd Tumari, Rubita Sudirman. Performance Prediction of Working Memory Retention Using Event-Related Potential Signal Towards Children. *Jurnal Teknologi*, 78:7–5 (2016) 153-160. eISSN 2180–3722.
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22. Syarifah Noor Syakiylla Sayed Daud, Rubita Sudirman. Effect of White Noise Stimulation and Visual Working Memory Task on Brain Signal. *ARNP Journal of Engineering and Applied Sciences*. 10(18): 8491-8499.
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24. Fatin Afiqa, Rubita Sudirman, Mohd Azmi Alwi. Effects of an Eye Massage Device towards Electroencephalography Signals. *Australian Journal on Basic and Applied Science (Scopus)*. 9(28) Special 2015: 189-195.
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36. Siti Suraya Hussin, R. Sudirman. EEG Interpretation through Short Time Fourier Transform for Sensory Response Among Children. *Australian Journal of Basic and Applied Sciences*, 8(5): 417-422, 2014. ISBN 1991-8178.
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24. A. Wahab, M. A. Sudirman, R. A. Razak, M. A. Reflection of backscattered fast and slow waves on bone porosity using 2D simulation, *the 9th International Conference on Information and Communication Systems (ICICS 2018)*, April 3-5, 2018, Jordan.
25. K.M. Chew, R. Sudirman, C.Y. Yong. Bio-Signal Processing and 2D Representation for Brain Tumor Detection Using Microwave Signal Analysis. *IEEE Symposium on Computer Applications & Industrial Electronics (ISCAIE 2018)*. Penang, Malaysia, 28-29 April 2018, Page(s): 1-7.
26. K.M. Chew, R. Sudirman, C.Y. Yong. Human Brain Modeling Tumor Detection in 2D and 3D Representation Using Microwave Signal Analysis. *IEEE Symposium on Computer Applications & Industrial Electronics (ISCAIE 2018)*. Penang, Malaysia, 28-29 April 2018, Page(s): 1-7.
27. Abdul Rahim Abdullah, Tengku Nor Shuhada Tengku Zawawi, Rubita Sudirman, Norhashimah Mohd Saad, Jing Wei Too. Electromyography Signal Analysis using time and frequency domain for Health Screening System Task. *2018 International Conference on Engineering and Natural Science*. January 30, 2018, Sapporo, Japan.
28. S.S. Daud & R. Sudirman. Discovering Sound Effect on Visual Memory Performance based on Electroencephalography. *2016 IEEE-EMBS Conference on Biomedical Engineering and Sciences (IECBES)*. Kuala Lumpur.
29. S.S. Daud & R. Sudirman. Brain signal analysis to investigate sound effect on memorization. *2016 International Conference on Computational Science and Engineering (ICCSE2016)*, Kota Kinabalu
30. Rubita Sudirman, Muhamad Amin Abdul Wahab, Camallil Omar and Ismail Ariffin. Study on Bone Porosity based on A-Mode Ultrasound. *2016 IEEE International Symposium on Electronics and Smart Devices (ISESD)*, Bandung
31. M-N-Anam Mohd-Norddin, S-Syakiyilla S-Daud, S-Erylane Rosli, Juhana Jaafar and Rubita Sudirman. CATALYST Loading in Electrode of SPEEK/CSMM Electrolyte for DMFC. *2016 IEEE International Symposium on Electronics and Smart Devices (ISESD)*, Bandung.
32. S. Z. Mohd Tumari, R. Sudirman. Working Memory Impairments Limitations of Normal Children's in Visual Stimuli using Event-Related Potentials. *2015 6th International Conference on Intelligent Systems, Modelling and Simulation*, 96-101, February 2015, Kuala Lumpur.
33. Fatin Afiqa Mansor, Rubita Sudirman. Effects of an Eye Massage Device towards Electrooculography Signals. *2015 6th International Conference on Intelligent Systems, Modelling and Simulation*, 118-122, February 2015, Kuala Lumpur.

34. S. S. Daud, R. Sudirman. Butterworth Bandpass and Stationary Wavelet Transform Filter Comparison for Electroencephalography Signal. 2015 6th International Conference on Intelligent Systems, Modelling and Simulation, 123-126, February 2015, Kuala Lumpur.
35. E. M. A. E. Alwi, R. Sudirman. Analysis on Electrooculography Based on the Effect of Eye Massaging Device. 10th Asian Control Conference 2015. May 2015, Melaka.
36. S. N. S. Daud, R. Sudirman. 'Effective Environment for Memorizing Process Based on Electroencephalography. 10th Asian Control Conference. May 2015, Melaka.
37. Siti Zubaidah Mohd Tumari, Rubita Sudirman. Logistic Regression of Working Memory Impairments in Children Based on Single-Trial ERP Features. 2nd International Conference on Technology, Informatics, Management, Engineering & Environment, 264-269. 978-1-4799-4805-5/14/\$31.00 ©2014 IEEE. Bandung, Indonesia, August 19-21, 2014.
38. Amirah Hazimah Abdul Majid, Rubita Sudirman, Siti Zubaidah Mohd Tumari. EEG Alpha Oscillation: Handwriting Behavior towards Working Memory Performance of Normal Children Using Correlation Analysis. 2nd International Conference on Technology, Informatics, Management, Engineering & Environment, 309-314. 978-1-4799-4805-5/14/\$31.00 ©2014 IEEE. Bandung, Indonesia, August 19-21, 2014.
39. Siti Suraya Hussin, R. Sudirman. EEG Interpretation through Short Time Fourier Transform for Sensory Response Among Children. International Conference on Business, Science and Technology 2014 27-28 April 2014, Hatyai.
40. C.Y. Yong, R. Sudirman, N.H. Mahmood, K.M. Chew. Path Mapping of Shape Drawings using Double Integration Technique. International Conference on Future Information Engineering (FIE 2014). 10(2014): 51-56, IERI Procedia (ISSN: 2212-6678), Elsevier
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43. Anwar Al-Haddad, R. Sudirman, S.Z. M. Tumari, C. Omar (2012). Bug Algorithms to Guide Wheelchair Motion Based on Only Electrooculography Signals. 2012 IEEE EMBS International Conference on Biomedical Engineering and Sciences
44. S.Z.M. Tumari, R. Sudirman, A.H. Ahmad, A. Al-Haddad (2012). Study of Normal Children Electroencephalography Signals Using Wavelet Transformation. 2012 IEEE EMBS International Conference on Biomedical Engineering and Sciences
45. K.M. Chew, R. Sudirman, N. Seman, C.Y. Yong (2012). Relaxation Frequency and Relaxation Time Estimation for Phantom Modeling by Proposed Fitting Linear Models. 2012 IEEE EMBS International Conference on Biomedical Engineering and Sciences
46. K.M. Chew, C.Y. Yong, R. Sudirman, N.H. Mahmood (2012). Left and Right Hand Gesture Classification Using Scatter Diagram and Principle Component Analysis. 2012 IEEE EMBS International Conference on Biomedical Engineering and Sciences
47. Sudirman, R., Ashenayi, K., Golbaba, M. Comparison of methods used for forecasting solar radiation. 2012 IEEE Green Technologies Conference, art. no. 6200996, Tulsa.
48. Siti Zubaidah Tumari, R. Sudirman, A.H. Ahmad. Identification of Working Memory Impairments in Normal Children Using Wavelet Approach. Accepted to ISIEA 2012, Bandung.
49. Anwar Al-Haddad, R. Sudirman, Camallil Omar. Wheelchair Motion Control Guide using Eye Gaze and Blinks Based on Bug 2 Algorithm. ICIS2012, Korea
50. Nurul-Ashikin Abdul-Kadir, R. Sudirman, N.H. Mahmood, A.H. Ahmad. Applications of Cascade-Forward Neural Networks for Nasal, Lateral and Trill Arabic Phonemes. IDCTA2012, Korea.
51. Chew Kim Mey, R. Sudirman, N. Seman, Yong Ching Yee. Human Brain Phantom Modeling Based on Relative Permittivity Dielectric Properties. ICBE2012 Macau
52. C.Y. Yong, R. Sudirman, N.H. Mahmood, K.M. Chew, Ahmad Hazwan Ab Rahim, Muhammad NurHafizuddin Zainudin. Time-Frequency Domain and Spectrogram Distribution for Human Motion and Movement Behaviour Analysis. ICBE2012 (Macau)
53. Anwar Al-Haddad, R. Sudirman, Camallil Omar. Wheelchair Motion Control Guide Using Eye Gaze and Blinks Based on PointBug Algorithm. International Conference on Modelling and Simulation. ISSN 978-0-7695- 4618-6, pp 126-131 (Kota Kinabalu).
54. W.Y. Wong, R. Sudirman, N.H. Mahmood, S.Z. Tumari, N. Samad. Study of Environment based Condition of Electromagnetic Interference during ECG Acquisition. IEEE International Conference on Biomedical Engineering (ICoBE), 978-4577-1991-2 (Penang)
55. S.Z.M. Tumari, R. Sudirman, A.H. Ahmad. Identification of Retina Image Size in Relation to Electrooculography Signal. IEEE International Conference on Biomedical Engineering (ICoBE), 978-4577-1991-2 (Penang)

56. Yong, C.Y., Chew, K.M., Mahmood, N.H., Sudirman, R., Omar, C. Development and measurement properties of prosthetics users' survey. 2011 IEEE Symposium on Business, Engineering and Industrial Applications (ISBEIA 2011), pp. 533-538.
57. R. Sudirman, Narges Tabatabaey-Mashadi, Ismail Ariffin. Aspects of a Standardized Automated System for Screening Children's Handwriting. 1st International Conference on Informatics and Computational Intelligence (ICI2011), ISSN 978-0-7695- 4618-6, pp 49-54.
58. Anwar Al-Haddad, R. Sudirman, Camallil Omar. Gaze at Desired Destination, and Wheelchair Will Navigate towards It. New Technique to Guide Wheelchair Motion Based on EOG Signals. 1st International Conference on Informatics and Computational Intelligence (ICI2011), ISSN 978-0-7695- 4618-6, pp 126-131.
59. S.N. Ramli, N.M. Safri, R. Sudirman, N.H. Mahmood, M.A. Othman, J. Yunus, "Cortical Connectivity during Isometric Contraction with Concurrent Visual Processing by Partial Directed Coherence". 5th Kuala Lumpur International Conference on Biomedical Engineering 2011, (Biomed 2011) in conjunction with 8th Asian Pacific Conference on Medical and Biological Engineering. 20-23 June 2011. IFMBE Proceedings, Vol. 35, pp. 496-499.
60. Y.C.Yee, R. Sudirman, C.K. Mey. Motion Detection and Analysis with Four Different Detectors. 2011 Third International Conference on Computational Intelligence, Modelling and Simulation (CIMSIM). September 2011, Langkawi.
61. A. Al-Haddad, R. Sudirman, C. Omar. Guiding Wheelchair Motion Based on EOG Signals using Tangent Bug Algorithm. 2011 Third International Conference on Computational Intelligence, Modelling and Simulation (CIMSIM), September 2011, Langkawi.
62. Y.C.Yee, R. Sudirman, C.K. Mey. Facial Expression Monitoring System. 2011 International Conference on Future Computer Sciences and Application (ICFCSA 2011), pp 192-196. ISSN 978-0-7695-4422-9/11. June, Hong Kong. DOI 10.1 109/ICFCSA.2011.50
63. C.K. Mei, R. Sudirman Y.C.Yee, N. Salim. Comparison of Ontology Learning Techniques for Qur'anic Text. 2011 International Conference on Future Computer Sciences and Application (ICFCSA 2011), 187-191. ISSN 978-0-7695-4422-9/11 June, Hong Kong. DOI 10.1 109/ICFCSA.2011.49
64. W.M. Bukhari W. Daud, R. Sudirman. Wavelet Time Frequency Analysis of Electrooculograph (EOG) Signal of Eye Movement Potentials based on Wavelets Energy Distribution. 5th Asia International Conference on Modelling and Computer Simulation. 23 May 2011, Kuala Lumpur.
65. R. Sudirman and N. A. Abdul-Kadir. Vowel Effects towards Dental Arabic Consonants based on Spectrogram. 2nd International Conference on Intelligent System, Modelling and Simulation (ISMS2011). KL & Phnom Penh, 25-28 January 2011
66. N.H. Mahmood, N.A. Zakaria, R. Sudirman, N. Mat Safri, F.K. Che Harun, N.F. Kamal, " Identification of resting state and calming mind during reciting Quran using Electroencephalogram". 2011 Proceeding of International Conference on Medical Information and Bioengineering (ICMIB 2011). Chengdu, China, 14-15 January 2011.
67. N.H. Mahmood, Che Ku Mohd Salahuddin Che Ku Long, Ismawati Abd Ghani, R. Sudirman. Low Cost Electronic Chess Set for Chess Tournament. 2011 Proceedings of IEEE 7th International Colloquium on Signal Processing and its Applications, pp. 123-126.
68. R. Sudirman, T. M. Kuan, C.Y. Yong, E. Supriyanto. Effective Support System for Language Assessment and Training of Special Children. 2010 IEEE EMBS Conference on Biomedical Engineering & Sciences (IECBES 2010).
69. R. Sudirman, S. Saidin, N. Mat Safri. Study of Electroencephalography Signal of Autism and Down Syndrome Children using FFT. IEEE Symposium on Industrial Electronics and Application, 3-6 October 2010, Penang.
70. W.M. Bukhari W. Daud, R. Sudirman. A Wavelet Approach on Energy Distribution of Eye Movement Potential towards Direction. ISIEA 2010 - 2010 IEEE Symposium on Industrial Electronics and Applications, art. no. 5679474, pp. 181-185
71. N. A. Abdul-Kadir, R. Sudirman, N. M. Safri. Modelling of the Arabic Plosive Consonants Characteristics based on Spectrogram. AMS2010: Asia Modelling Symposium 2010 - 4th International Conference on Mathematical Modelling and Computer Simulation, art. no. 5489201, pp. 282-285
72. M.A. Othman, N.M. Safri, R. Sudirman. Characterization of Ventricular Arrhythmias In Electrocardiogram Signal Using Semantic Mining Algorithm. AMS2010: Asia Modelling Symposium 2010 - 4th International Conference on Mathematical Modelling and Computer Simulation, art. no. 5489190, pp. 307-311
73. R. Sudirman, A. C. Koh, W.B. Daud. Modeling Of EEG Signal Sound Frequency Characteristic Using Time Frequency Analysis. AMS2010: Asia Modelling Symposium 2010 - 4th International Conference on Mathematical Modelling and Computer Simulation, art. no. 5489225, pp. 221-226.

Proceedings/ Conference – Non-Indexed

- 1) Hussin, S. S. And Sudirman, R., Autism Profile Indicator through Biosignal Potential on Computer-Based Assessment. International Conference on Engineering Education: with Engineering and Technology Education, 2015.
- 2) A.C. Koh, R. Sudirman, N.M. Safri, W.B. Daud, N.H. Mahmood. EEG Different Frequency Sound Response Identification using Neural Network and Fuzzy Techniques. Proceedings - CSPA 2010: 2010 6th International Colloquium on Signal Processing and Its Applications, art. no. 5545237
- 3) ICEE Madinah 2009

THESIS

- 1) Rubita Sudirman, Dynamic Time Warping Fixed-Frame Coefficient with Pitch Feature for Speech Recognition System with Neural Network, Ph.D. Thesis, Universiti Teknologi Malaysia (2007).
- 2) Rubita Sudirman, Forecasting Solar Radiation using Back-Propagation Neural Network, Masters Thesis, University of Tulsa, USA (1996).

ORIGINAL BOOK

- 1) R. Sudirman, P.I. Khalid, Siti Hawa Ruslan. Peranti Elektronik. Pearson Education, Malaysia, 2007. ISBN 978-983-3927-289
- 2) R. Sudirman, P.I. Khalid, Siti Hawa Ruslan. Electronic Devices. Penerbit UTM, 2010. ISBN 978-983-52-0756
- 3) R. Sudirman, P.I. Khalid, Siti Hawa Ruslan. Elektronik 1 Edisi ke-1. Modul Pengajaran, Muapakat Jaya, tahun 1999.
- 4) R. Sudirman, P.I. Khalid, Siti Hawa Ruslan. Elektronik 1 Edisi ke-2. Modul Pengajaran, Muapakat Jaya, 2001.
- 5) R. Sudirman, P.I. Khalid, Siti Hawa Ruslan. Elektronik 1 Edisi ke-3. Modul Pengajaran, Muapakat Jaya, 2002.
- 6) R. Sudirman, P.I. Khalid, Norlaili Mat Safri Elektronik 1 Modul Pengajaran Program Jarak Jauh, Muapakat Jaya, 2001.

RESEARCH MONOGRAPH

- 1) R. Sudirman (2007). Development of A PC-Based Electropalatograph for Speech Therapy, ISBN 978-967-353-775-4
- 2) R. Sudirman (2007). Hybrid Method for Feature Extraction of Speech Recognition System with Neural Network. ISBN 978-967-353-738-9

BOOK CHAPTER

1. Handbook of Research on Solar Energy Systems and Technologies. Editors: Sohail Anwar, Harry Efstathiadis, Salahuddin Qazi, ISBN: 978-1-4666-1996-8 (hbk.) -- ISBN 978-1-4666-1997-5 (ebook), 2012. IGI Global Publication, USA. Chapter 16: Methods of Forecasting Solar Radiation, R. Sudirman and Muhammad Noorul Anam Mohd Norddin, pp 437-461.
2. Recent Development on Electrical Signal Measurement around the Head, ISBN 978-983-52-0649-8, 2008. Penerbit UTM.
 - 1.1 Introductory to Auditory Brainstem Response, R. Sudirman, Mastura Shafinaz Zainal Abidin
 - 1.2 Overview of Auditory Brainstem Response Acquisition System, R. Sudirman, Nurhanim Abu Sama, Mastura Shafinaz Zainal Abidin
 - 1.3 Auditory Brainstem Response Hardware System, R. Sudirman, Nurhanim Abu Sama
 - 1.4 Auditory Brainstem Response Acquisition Software, Mastura Shafinaz Zainal Abidin, R. Sudirman
3. Speech: Current Features & Extraction Methods, ISBN 978-983-52-0650-4, 2008. Penerbit UTM.
 - 1.1 Linear Predictive Coding, R. Sudirman, Ting Chee Ming
 - 1.2 Hidden Markov Model, R. Sudirman, Ting Chee Ming, Hong Kai Sze
 - 1.3 Dynamic Time Warping, R. Sudirman, Khairul Nadiah Khalid
 - 1.4 Dynamic Time Warping Fixed Frame, R. Sudirman, Sh-Hussain Salleh
 - 1.5 Pitch Scale Harmonic Filter, R. Sudirman, Muhd Noorul Anam Mohd Norddin
 - 1.6 The Model System Of Electropalatograph, R. Sudirman, Chau Sheau Wei, Muhd Noorul Anam Mohd Norddin
 - 1.7 The Electropalatograph Software, R. Sudirman, Chiang Yok Peng
 - 1.8 A Model Of Electroglossograph System, R. Sudirman, Ching Jian Haur, Khairul Nadiah Khalid
 - 1.9 Nasal Airflow System, Chiang Yok Peng, R. Sudirman, Khairul Nadiah Khalid
4. Biomedical Research and Development in Signal, Image and Sensors, ISBN 978-983-52-0826-3, 2012. Penerbit UTM.
 - 1.1 Classification of EOG Signals of Eye Movement Potentials, R. Sudirman, Wan Mohd. Bukhari Wan Daud
 - 1.2 GUI for Classification of EOG Signals of Eye Movement Potential, R. Sudirman, Wan Mohd Bukhari Wan Daud
 - 1.3 Sound Frequency Classification based on EEG Signal, R. Sudirman, Siow Syee Chin, Muhd. Noorul Anam M. Norddin
 - 1.4 Sound Frequency Classification Graphic User Interface, R. Sudirman, Siow Syee Chin
5. Advances in Biomedical Image and Signal Processing – Series 1, ISBN 978-983-52-0975-8, 2015, Penerbit UTM
Chapter 3: Wheelchair Navigation based on Electrooculograph Signal.
Anwar Al-Haddad, Rubita Sudirman, Muhd-Noorul Anam Mohd-Norddin
6. Advances in Biomedical Image and Signal Processing – Series II, ISBN 978-983-52-1044-0, 2015, Penerbit UTM
Chapter 3: Performance of a Kalman Filter to Estimate EEG Signal, Rubita Sudirman, Amalina Idayu Ismail, Siti Suraya Hussin, Muhd-Noorul Anam Mohd-Norddin
7. **Advances in Biomedical Image and Signal Processing-Current Trend/** Editors: Rubita Sudirman, Mohd. Azhar Abdul Razak, ISBN 978-983-52-1678-7, Penerbit UTM, 2019.
Chapter 1 Introduction, Rubita Sudirman, and Mohd Azhar Abdul Razak

Chapter 6 Effect of Music Tempos to Heart Rate During Treadmill Exercise, Norhaslina Musa, Rubita Sudirman, and Norhafizah Ramli

Chapter 11 Automatic Real-Time Alarm for Fall Detection among Elderly Based on IOT System, Zahirah Ismail, Rubita Sudirman, Puspa Inayat Khalid, and Eileen Su Lee Ming

ENCYCLOPEDIA

- 1) Separa pengalir. EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.
- 2) Pengapit, EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.
- 3) Pengetip, EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.
- 4) Penguat Kebezaan, EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.
- 5) Penguat Kendalian, EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.
- 6) Pemasa, EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.
- 7) Penukar Isyarat Digit Analog, EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.
- 8) Penukar Isyarat Analog Digit, EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.
- 9) Pembawa Cas EnsaiKlopedia Sains dan Teknologi, UTM & DBP, 2006.

EXPERT REPORT

- 1) Rubita Sudirman et al., Kajian Pengurusan Maklumat Bersepadu di Lembaga Lebuhraya Malaysia, 2002.
- 2) Rubita Sudirman et al., Final Report, Biosignal Potential Identification of the Working Memory and Sensory Using Electroencephalograph Signal for Children. EScience Fund, 2016.
- 3) Rubita Sudirman et al., Final Report, Formulation of Brain Phantom Model for Tumor Detection Based On Microwave Imaging and Radar Signal Processing. FRGS, 2016.
- 4) Rubita Sudirman et al., Final Report, Formulation of the Eye Movement Behaviour based on Electro-oculograph Signal. FRGS, 2012.
- 5) Rubita Sudirman et al., Final Report, Development of Intelligent Arabic Phonemes Pronunciation Evaluation System. EScience Fund, 2010.
- 6) Rubita Sudirman et al., Final Report, Development of Brainwaves EEG Recognition System for Speech Disability Person. EScience Fund, 2009.
- 7) Rubita Sudirman et al., Final Report, Development of Medium Vocabulary Malay Continuous Speech Recognition System. EScience Fund, 2008.

SHORT COURSES/ WORKSHOP (Resource Person/Facilitator)

1. Bengkel Semakan dan Pemurnian Laporan Penilaian Kendiri (Self Assessment Report (SAR) untuk Permohonan Pengiktirafan Program Diploma Kejuruteraan UTM oleh Majlis Akreditasi Teknologi Kejuruteraan (ETAC)), 21-22 Januari 2020, UTM Kuala Lumpur.
2. Robotic Workshop (SpeED Program), UTM, 9 March 2020.
3. PGSS Workshop: Characteristic of Good Literature Review, SKE, 2020.
4. Workshop: Laser regulation & Standards, Hotel Istana, 1 October 2019,
5. AS102: Supervisory Development Program (Publication for Graduation), FKE, 2018.
6. PGSS Workshop: Characteristic of Good Literature Review, FKE, 2018.
7. How to Become a Professional Engineer Via Route 3 (FKE), FKE, December 2017.
8. PGSS Workshop: Characteristic of Good Literature Review, 2017.
9. Kursus Cathma, Fundamental to Microprocessor, Kelana Hotel, 2007.
10. Kursus Cathma, Introduction to Healthcare Engineering, Kelana Hotel, 2007.

INVITED SPEAKER

- 1) Rubita Sudirman et al, 2018. 2nd International Conference on BioSignal Analysis, Processing and Systems (ICBAPS), *Profile Indicator for Autistic Children using EEG Biosignal Potential of Sensory Taks*. 25 July 2018, Hilton Kuching, Sarawak.
- 2) Rubita Sudirman et al, 2019. FEIC-International Conference on Engineering Education and Research 2019 (FICEER2019), *Investigation of Atypical Autonomic Nervous System Response of Children with Special Needs*. 4 November 2019, Fairmont Makkah Clock Royal Tower, Saudi Arabia.
- 3) Rubita Sudirman et al, 2019. *Safety on Laser Application (Guideline & Healthcare Industry)*, International Conference of Non-ionising Radiation (ICNIR 2019). 1st October 2019. Hotel Istana, Kuala Lumpur.
- 4) Rubita Sudirman et al, 2019. *Laser Regulation & Standard*, International Conference of Non-ionising Radiation (ICNIR 2019). 2nd October 2019. Hotel Istana, Kuala Lumpur

CONTRIBUTION TO SOCIETY

- 1) UTM Community Committee:
 - a. Advisor & Activist – STEM RBTK SKE, 2020
 - b. Penolong Setiausaha, PKA UTM 2015-2016, 2017-2018, 2019-2021
 - c. Treasurer – Kelab Kebajikan Staf FKE 2008-2015, 2016-2018
 - d. Head – Program First Year Experience, Mersing, 2010, 2011.
 - e. Head – JK Program Khatam Al-Quran Peringkat Negeri Johor (Masjid Sri Pulai Perdana), 2017

- 2) Academic Advisor:
 - a. Global Outreach Program, Bandung 2009
 - b. Global Outreach Program, Korea 2010
 - c. Global Outreach Program, Hong Kong 2012
 - d. UTM Student Exchange Program, Feb. 2007
- 3) Software Development for Taman Sinar Harapan Tampoi, Jabatan Kebajikan Masyarakat, 2003.
 - a. Perisian Pembelajaran Kemahiran Hidup
 - b. Penilaian Tahap Kerencatan Akal
- 4) Course Facilitator for student improvement:
 - a. Intensive Class SEE 2253, Sem II 08/09.
 - b. Brain Booster program (SEE 2063), Sem I 09/10.
 - c. Research advisor - Sekolah Menengah Sains Mersing, 2012.
 - d. Research advisor - MRSM Pontian, 2012.
- 5) Community Committee:
 - a. Biro Hal Ehwal Wanita – Badan Kebajikan Penduduk Islam Perdana Terraces (BAKES), Taman Sri Pulai Perdana, 2010, 2017.
 - b. Ketua HELWA – Masjid Taman Sri Pulai Perdana 2015-2016, 2017-2018, 2019-2020, 2020-2021
 - c. AJK – Dana Pembangunan Sekolah Islam Hidayah 2013-2015

COURSES ATTENDED (SELECTED) Related to:

1. Teaching & Learning:
 - o How to Get Online Students Actively Engaged, 16 June 2020
 - o Blackboard for E-Learning, UTM TTC, 2019.
 - o ALC203 – Negotiation Skills & Strategic Decision Making
 - o Remote Supervision, 2018
 - o Bengkel Active Learning, 14-15 Januari 2020
 - o Bengkel Semakan Kurikulum Pasca Siswazah, 31 October 2019
 - o Bengkel Semakan Syarat Kemasukan Program, 9-10 October 2019
 - o Kursus Advanced e-Learning, 6 Februari 2018.
2. Profesional Development:
 - o Webminar – EAC Standard 2020, 17 June 2020
 - o Webminar – ETAC Standard 2020, 16 June 2020
 - o ALP 104 – Presentation Skill, UTMLead, 2020
 - o Workshop on Accreditation Assessment Workshop, 12 Nov 2017
 - o International Conference on Leaders and Professionals - Shaping the Future of OSH Excellence, 23-24 March 2016, Kuantan.
 - o Workshop on Strategic Planning – FKE (2015, 2018)
 - o Seminar Pembelajaran Sepanjang Hayat, PWTC, 2014
 - o Advanced Senior Management Program, UTMKL, 2014
 - o BEM Mandatory Course - Code of Ethics / Regulations, IEM Training Centre Sdn. Bhd., 12-13 September 2013.
 - o BEM Mandatory Course - Safety & Health at work, IEM Training Centre Sdn. Bhd., 14-15 Mei 2013.
 - o BEM Mandatory Course - Engineering Management Practice, IEM Training Centre Sdn. Bhd., 22-23 April 2013.
 - o Industrial Training @ Advance Pact Sdn Bhd, Hospital Sultanah Aminah, JB, Hospital Hjh Enche Kalsom, Kluang (Aug 2012- Aug 2013)
 - o CDIO Workshop - Introduction CDIO Teaching and Learning Framework, 2013
3. Research and Development:
 - o Bengkel Latihan Panel Penilai Di Bawah Program Dana Penyelidikan Kementerian Pendidikan Malaysia (Dp Kpm) Siri 1 Tahun 2020
 - o Bengkel Penulisan Jurnal Berimpak Tinggi – Fakulti Kejuruteraan, 2019
 - o How to Win FRGS & PRGS Grant Proposal, 2017
 - o Biomedical Equipment Technical Training (Module 1), BETA, 13-15 March 2013.
4. Bengkel APEL C dan Peraturan Akademik Program Diploma Eksekutif, 15-16 Feb 2017
5. Leadership Talk:
 - o Pemupukan Integriti dalam kepimpinan, 19 Februari 2020
 - o Strategic and Conceptual Leadership, 21 Ogos 2019
 - o Qalbu-Guided Leadership, 11 Dec 2017, UTM
6. Bengkel Penulisan Al-Quran 30 Juzuk:
 - o Siri 1- 16 Mar 2017
 - o Siri 2 - 3 Mei 2017