

Kamarul Hawari bin Ghazali

Curriculum Vitae



PERSONAL IDENTITY

Name : Kamarul Hawari bin Ghazali
Sex : Male
Place/Date of Birth : Batang Kali/ September 9, 1973
Office Address : Faculty of Electrical and Electronics Engineering Technology,
Universiti Malaysia Pahang, Pekan, 26600, Pahang Malaysia
Phone : +6017 7712224
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EDUCATIONAL BACKGROUND

- **2005 - 2009** PHD in Electrical, Electronic and System,
Universiti Kebangsaan Malaysia (UKM)
- **2002- 2003** Master in Electrical and Electronic Engineering,
Universiti Teknologi Malaysia (UTM)
- **1991 - 1995** Bachelor in Electrical Engineering, Universiti Teknologi
Malaysia (UTM)

CAREER HISTORY

- 1995 - 1998: Engineer, Time Cel Sdn. Bhd (subsidiary of TIME Engineering)
- 1998 - 2001: Lecturer, Institut Teknologi Perindustrian, Kumpulan Pendidikan
Yayasan Pelajaran Johor

- 2001 - 2002: Lecturer, Politeknik Johor Bahru, Jalan Kongkong Masai, Johor
- 2002 - 2009: Lecturer at Faculty of Electrical and Electronics Engineering, Universiti Malaysia Pahang
- 2010 – 2012: Deputy Dean Research and Postgraduate Studies, Faculty of Electrical and Electronics Engineering, Universiti Malaysia Pahang
- Feb 2014 - April 2019:
Dean of Faculty of Electrical and Electronics Engineering, Universiti Malaysia Pahang
- 1 March 2017 till present:
Professor at Faculty of Electrical and Electronic Engineering Technology, Universiti Malaysia Pahang

FIELD OF SPECIALIZATION

- Machine Vision System, Image Processing, Signal Processing, Intelligent System, Vision Control, Thermal Imaging Analysis (in all related applications - Electrical, Medical, Environment), Deep Learning for Image and Signal Classification.

PROFESSIONAL MEMBERSHIP

- Professional Engineer (Ir), Board of Engineer Malaysia (PEng.)
- Member of Board of Engineer Malaysia

LIST OF JOURNAL PUBLICATIONS (Latest 5 Years)

1. **K. H. Ghazali**, M. S. Jadin, M. Jie, and R. Xiao, “Novel automatic eye detection and tracking algorithm,” *Optics and Lasers in Engineering*, vol. 67, pp. 49–56, Apr. 2015
2. N. Khamisan, **K. H. Ghazali** and W. L. Ching, “Detection of Indoor Air Pollution on Wet or Moist Walls Using Thermal Imaging Processing Technique”, *ARPJ Journal*

of Engineering and Applied Sciences, VOL. 10, NO. 3, FEBRUARY 2015, pp 1154-1160

3. Mohd Shafie Bakar, Nasrudin Abd Rahim, Hamdan Daniyal, **Kamarul Hawari Ghazali**, Experimental Study Of SBPWM For Z-Source Inverter Five Phase, 2015, International Journal of Power Electronics and Drive Systems (IJPEDS), vol 6 Issue 1
4. Badaruddin Muhammad; Zuwairie Ibrahim; **Kamarul Hawari Ghazali**; Mohd Riduwan Ghazali; Kian Sheng Lim; Sophan Wahyudi Nawawi; Muhammad Arif Abdul Rahim; Nor Azlina Ab Aziz; Marizan Mubin; Norrima Mokhtar, 'Performance evaluation of vector evaluated gravitational search algorithm', ICIC Express Letters. 2015;9(3):649-654
5. Hussain K., Khaleaf, **Kamarul Hawari, Ghazali**, Mithaq Na'ma, Raheema and Ahmed N, Abdalla (Volume 1, Issue 1, January-February - 2015), 'A New Approach in a Gray-Level Image Contrast Enhancement by using Fuzzy Logic Technique', International Journal of Scientific Research in Science, Engineering and Technology, 1 (1). pp. 19-23. ISSN 2395-1990
6. **Kamarul Hawari, Ghazali** and Zuwairie, Ibrahim and Faradila, Naim and Kian, Sheng Lim and Salinda, Buyamin and Anita, Ahmad and Sophan Wahyudi, Nawawi and Norrima, Mokhtar (2015), 'An Improved VEPSO Algorithm for Multi-objective Optimisation Problems', In: The Malaysia-Japan Model on Technology Partnership. Springer, Japan, pp. 253-263. ISBN 978-4-431-54438-8 (print); 978-4-431-54439-5 (online)
7. M. S., Jadin and Soib, Taib and **Kamarul Hawari, Ghazali** (2015), 'Finding Region of Interest in the Infrared Image of Electrical Installation', Infrared Physics & Technology, 71 . pp. 329-338. ISSN 1350-4495

8. Hussain K. Khleef, **Kamarul H. Bin Gazali**, Ahmed N Abdalla, Mithaq Na'ma Raheema, 'ECG Trace Digitization Using Image Processing Techniques', International Journal of Scientific & Engineering Research, Volume 6, Issue 4, April-2015, ISSN 2229-5518
9. F. I. Azman, **K. H. Ghazali** and Z. Mohamed and R. Hamid, 'Detection of Sputum Smear Cell Based on Image Processing Analysis', ARPN Journal of Engineering and Applied Sciences, VOL. 10, NO. 21, NOVEMBER 2015, ISSN 1819-6608
10. Norliana Khamisan, **Kamarul Hawari Ghazali** and Aufa Huda Muhammad Zin, 'A THERMOGRAPH IMAGE EXTRACTION BASED ON COLOR FEATURES FOR INDUCTION MOTOR BEARING FAULT DIAGNOSIS MONITORING', ARPN Journal of Engineering and Applied Sciences, VOL. 10, NO. 21, NOVEMBER 2015, ISSN 1819-6608
11. Mohd Nasrul Muhaimin Mohd Taib and **Kamarul Hawari Ghazali**, 'IR THERMOGRAPHY APPLICATION FOR VACUUM LEAK DETECTION OF ABSORPTION CHILLER IN PETROCHEMICAL PLANT', ARPN Journal of Engineering and Applied Sciences, VOL. 10, NO. 22, DECEMBER, 2015, ISSN 1819-6608, pp 10686 - 10690
12. Wan Nur Azhani W. Samsudin and **Kamarul Hawari Ghazali**, 'ABNORMALITY DETECTION AND LOCALIZATION USING MODIFIED SFM', ARPN Journal of Engineering and Applied Sciences, VOL. 10, NO. 22, DECEMBER, 2015, ISSN 1819-6608, pp 17127 - 17131
13. Badaruddin Muhammad , Zuwairie Ibrahim , **Kamarul Hawari Ghazali** , Kamil Zakwan Mohd Azmi , Nor Azlina Ab Aziz , Nor Hidayati Abd Aziz, and Mohd Saberi Mohamad, 'A NEW HYBRID SIMULATED KALMAN FILTER AND PARTICLE SWARM OPTIMIZATION FOR CONTINUOUS NUMERICAL OPTIMIZATION

PROBLEMS', ARPN Journal of Engineering and Applied Sciences, VOL. 10, NO. 22, DECEMBER, 2015, ISSN 1819-6608, pp 17171 - 17176

14. M. F. Rabbi and **Kamarul Hawari Bin Ghazali**, 'ON THE COOPERATIVE AND DOPPLER DIVERSITY FOR AMPLIFY-AND-FORWARD RELAY NETWORK', ARPN Journal of Engineering and Applied Sciences, VOL. 10, NO. 19, OCTOBER 2015, ISSN 1819-6608, pp 9048 - 9054
15. Ali Kareem Nahar, **Kamarul H Bin Gazali**, 'PAPR Reduction Based on Proposed Rotating Phase Shift Technique in MC-CDMA Using FPGA', International Journal of Communications, Network and System Sciences 8(7) (Jul 2015): 249-259.
16. Ali Kareem Nahar, and **Kamarul H. Bin Gazali**, 'LOCAL SEARCH PARTICLE SWARM OPTIMIZATION ALGORITHM CHANNEL ESTIMATION BASED ON MC-CDMA SYSTEM', ARPN Journal of Engineering and Applied Sciences, VOL. 10, NO 20, NOVEMBER, 2015, pp 9659-9667
17. Muhamad Faruqi Zahari, Thommy Anak Julius, Fathimah Abdul Halim, Muhammad Sharfi Najib, **Kamarul Hawari Ghazali**, and Abd. Aziz Mohd Azoddein, 'Intelligent Classification Hazardous Gas Using Sensors Array', Journal of Advance in Information Technology, Vol. 6, No. 4, pp. 233-237, November, 2015. doi: 10.12720/jait.6.4.233-237
18. Aufa Zin, **Kamarul Hawari** and Norliana Khamisan, "Early Detection of Spots High Water Saturation for Landslide Prediction Using Thermal Imaging Analysis", International Journal of Environmental Science and Development, Vol. 7, No. 1, January 2016, pp 41-45
19. M. Fazle Rabbi and **Kamarul Hawari Bin Ghazali**, CHANNEL ESTIMATION FOR AMPLIFY-AND-FORWARD RELAY, NETWORK IN HIGH DOPPLER SPREAD, ARPN Journal of Engineering and Applied Sciences, VOL. 11, NO. 7, APRIL 2016, pp 4847 - 4853

20. *Norulzahrah M. Zainudin, Suzaimah Ramli, **Kamarul H. Ghazali**, M. Lazim Talib, and Nor Asiakin Hasbullah*, 'A Study on Implementing Physiology-Based Approach and Optical Flow Algorithm to Thermal Screening System for Flu Detection', *IJIEE* 2015 Vol.5(1): 31-34 ISSN: 2010-3719, DOI: 10.7763/IJIEE.2015.V5.496
21. Muhamad Faruqi Zahari, Muhammad Sharfi Najib, **Kamarul Hawari Ghazali**, Mohd Razali Daud, Fathimah Abdul Halim, Abd. Aziz Mohd Azoddein, 'Classification of Ammonia in water for Oil and Gas Industry using Case Based Reasoning (CBR)', *JEECIE*, Vol. 1, No. 7. Jan 2016, pp 35-38
22. N. Sulaiman, A. F. Razali , M. S. Jadin, A. Abdul Hadi, M. Mustafa, and **K. H. Ghazali**, 'Development of Online Vehicle Plate Recognition System', *JEECIE*, Vol. 1, No. 6, Jan 2016, pp 30-34
23. Muhamad Faruqi Zahari, Muhammad Sharfi Najib, Wan Muhamad Azmi Mamat, **Kamarul Hawari Ghazali**, Fathimah Abdul Halim, Saiful Nizam Tajuddin, Erny Haslina Abd Latib, 'Gaharu Sensor: Classification Using Case Based Reasoning (CBR)', *JEECIE*, Vol. 1, No. 8, Jan 2016, pp 38-41
24. Fathimah Abdul Halim, Muhammad Sharfi Najib, **Kamarul Hawari Ghazali**, 'Classification of Ammonia Odor-profile Using k-NN Technique', *JEECIE*, Vol. 1, No. 9, Jan 2016, pp 42-46
25. Tasriva Sikandar and **Kamarul Hawari Ghazali**, 'A Review on Human Motion Detection Techniques for ATM-CCTV Surveillance System', *Int'l Journal of Computing, Communications & Instrumentation Engg. (IJCCIE)* Vol. 3, Issue 2 (2016) ISSN 2349-1469 EISSN 2349-1477

26. Ezrinda Mohd Zaihidee, **Kamarul Hawari Ghazali**, Mohd Zuki Saleh, 'Image enhancement using thermal-visible fusion for human detection', Journal of Physics: Conference Series, Vol. 890, Issue 1, IOP Publishing, September 2017, pp 012038
27. J YuanFa, T LianJie, S XiYan, YAN Suqing, **KH Ghazali**, S Khatuni, An improved Multipath Estimating Delay-Lock-Loop method based on Teager-Kaiser operator, Journal of Telecommunication, Electronic and Computer Engineering (JTEC), 2018, Vol. 10 No. 1-2
28. Ezrinda Mohd Zaihidee, Kamarul Hawari Ghazali, Jinchang Ren, Mohd Zuki Salleh, 'A Hybrid Thermal-Visible Fusion for Outdoor Human Detection', Journal of Telecommunication, Electronic and Computer Engineering (JTEC), 2018, vol. 10, No. 1-4, pp 79-83
29. Norliana Khamisan, **Kamarul Hawari Ghazali**, Ali Almisreb, Aufa Huda Muhammad Zin, 'Histogram-based of Healthy and Unhealthy Bearing Monitoring in Induction Motor by Using Thermal Camera', Journal of Telecommunication, Electronic and Computer Engineering (JTEC), 2018, Vol 10, No 1-9, pp 31-35
30. Mohammad Fazle Rabbi, **Kamarul Hawari Ghazali**, Omar Altwijri, Mahdi Alqahtani, Sam Matiur Rahman, Md Asraf Ali, Kenneth Sundaraj, Zahari Taha, Nizam Uddin Ahamed 'SIGNIFICANCE OF ELECTROMYOGRAPHY IN THE ASSESSMENT OF DIABETIC NEUROPATHY', 2018/11/23, Journal of Mechanics in Medicine and Biology, Pages 1930001
31. Tasriva Sikandar, Wan Nur Azhani W Samsudin, **Kamarul Hawari Ghazali**, Izzeldin I Mohd, Mohammad Fazle Rabbi, 'Sunglass detection method for automation of video surveillance system', 2018/4, Journal IOP Conference Series: Materials Science and Engineering, Volume 342, Issue 1, Pages 012040

32. Tasriva Sikandar, Kamarul Hawari Ghazali, Mohammad Fazle Rabbi, 'ATM crime detection using image processing integrated video surveillance: a systematic review', 2018, Journal Multimedia Systems, Pages 1-23
33. Mohammad Fazle Rabbi, Kamarul Hawari Ghazali, Izzeldin I Mohd, Mahdi Alqahtani, Omar Altwijri, Nizam Uddin Ahamed , 'Investigation of the EMG activity of erector spinae and trapezius muscles during Islamic prayer (Salat)', 2018, Journal of back and musculoskeletal rehabilitation, Pages 1-8
34. Wan Nur Azhani W Samsudin, Kamarul Hawari Ghazali, 'Crowd Behavior Monitoring using Self-Adaptive Social Force Model', 2019/1/31, Journal Mekatronika, Volume 1, Issue 1, Pages 64-72
35. Yue Zhao, Fengrong Han, Izzeldin Ibrahim Mohamed Abdelaziz, Xinni Liu, Kamarul Hawari Ghazali, Puranjan Mishra, 'Application of biosurfactant tea saponin in flotation separation for ternary plastic mixtures: Statistical optimization and mechanism analysis', Journal of Cleaner Production, pages 499-507, 2019/6/2

CONFERENCE PROCEEDING (Latest 5 Years)

1. Aufa Zin, **Kamarul Hawari**, and Norliana Khamisan, Universiti Malaysia Pahang, 'Early Detection of Spots High Water Saturation for Landslide Prediction Using Thermal Imaging Analysis', 2015 5th International Conference on Environment and Industrial Innovation (ICEII 2015), Seoul, South Korea, March 10-11, 2015, HANYANG UNIVERSITY
2. **Kamarul Hawari bin Ghazali**, Mohd Shawal Jadin, Muhammad Sharfi Najib, Saiyed Rasol Tuan Muda and Suzaimah Ramli, 'Improving Plant Safety on Gas Leakage Detection using Thermal Imaging System', International Conference on Knowledge Transfer (ICKT), Putrajaya, Malaysia, 1-3 December, 2015

3. Rabbi, M. F. and Yusnita, Rahayu and **Kamarul Hawari, Ghazali** (2015) 'Time Varying Channel Estimation for Amplify-and-Forward Relay Network' In: Proceedings of the 4th International Conference on Computer Science & Computational Mathematics (ICCSCM 2015), 7-8 May 2015 , Langkawi, Kedah. pp. 527-531
4. Tasriva Sikandar, Wan Nur Azhani W Samsudin, Kamarul Hawari Ghazali, Izzeldin I Mohd, Mohammad Fazle Rabbi, 'Sunglass detection method for automation of video surveillance system' IOP Conference Series: Materials Science and Engineering, vol 314, No.1, pp 12040
5. Yuanfa Ji, Zhuo Fan, Xiyan Sun, Shouhua Wang, Suqing Yan, Sunyong Wu, Qiang Fu, **Kamarul Hawari Ghazali**, 'Robust Multi-user Detection Based on Hybrid Grey Wolf Optimization', 2018/11/17, Conference International Symposium on Artificial Intelligence and Robotics, Pages 237-249
6. Tasriva Sikandar, Wan Nur Azhani, W Samsudin, **Kamarul Hawari Ghazali**, Mohammad Fazle Rabbi, 'Triangle and Trapezoid Area Features for Gait Authentication', 2018 9th IEEE Control and System Graduate Research Colloquium (ICSGRC), Pages1-6
7. Tasriva Sikandar, **Kamarul H Ghazali**, Izzeldin I Mohd, MF Rabbi, 'Skin Color Pixel Classification for Face Detection with Hijab and Niqab', 2017/7/26, Conference Proceedings of the International Conference on Imaging, Signal Processing and Communication, Pages 1-4
8. Mohammad Fazle Rabbi, **Kamarul Hawari Ghazali**, Nizam Uddin Ahamed, Tasriva Sikandar, 'Time and frequency domain features of EMG signal during Islamic prayer (Salat), 2017/3/10, Conference 2017 IEEE 13th International Colloquium on Signal Processing & its Applications (CSPA), Pages, 139-143

9. Mohammad Fazle Rabbi, Nizam Uddin Ahamed, Mahdi Alqahtani, Omar Altwijri, **Kamarul Hawari Ghazali**, K Sundaraj, 'Investigation of the EMG-angle relationship in the upper-limb muscles during isometric contraction', 2017, Publisher Biomedical Research
10. Norizam Sulaiman, **Kamarul Hawari Ghazali**, Mohd Shawal Jadin, Amran Abdul Hadi, Muhammad Sharfi Najib, Mohd Salmizan Mohd Zain, Fatimah Abdul Halim, Suhaimi Mohd Daud, Nurdiyana Zahed, Abdul Adam Abdullah, 'Development of comprehensive unattended child warning and feedback system in vehicle', 2017, MATEC Web of Conferences, Volume 90, Pages 01008
11. Mohammad Fazle Rabbi, Nurul Wahidah Arshad, **Kamarul H Ghazali**, Rohana Abdul Karim, Mohd Zamri Ibrahim, Tasriva Sikandar, 'EMG Activity of Leg Muscles with Knee Pain during Islamic Prayer (Salat)', 2019/4/25, Conference 2019 IEEE 15th International Colloquium on Signal Processing & Its Applications (CSPA), Pages 213-216
12. Nurul Fazira Abd Rahman, Sabira Khatun, **Kamarul Hawari Ghazali**, Md Moslemuddin Fakir, Mamunur Rashid, Bifta Sama Bari, 'Ionospheric Modeling and Precision Positioning Global Navigation Satellite System', 2019, Proceedings of the 10th National Technical Seminar on Underwater System Technology 2018, Pages 523-530
13. Xinni Liu, Fengrong Han, Kamarul Hawari Ghazali, Izzeldin Ibrahim Mohamed, Yue Zhao, 'A review of Convolutional Neural Networks in Remote Sensing Image', Proceedings of the 2019 8th International Conference on Software and Computer Applications, pages 263-267, 2019/2/19
14. Fengrong Han, Xinni Liu, Izzeldin Ibrahim Mohamed, Kamarul Hawari Ghazali, Yue Zhao, 'A Survey on Deployment and Coverage Strategies in Three-Dimensional

Wireless Sensor Networks', Proceedings of the 2019 8th International Conference on Software and Computer Applications, pages 544-549, 2019/2/19

BOOK

- **Kamarul Hawari Ghazali**, 'Advanced Technologies', Publisher Intech Web, 2010
- Wan Nur Azhani W. Samsudin, **Kamarul Hawari Ghazali**, Book Chapter, Computer Applications for Communication, Networking, and Digital Contents (ISBN 978-3-642-35594-3), 2012, Publisher Springer Berlin Heidelberg
- **Kamarul Hawari Ghazali**, 'Computer Vision System' (2016), ISBN 978-967-0691-99-2, Publisher Universiti Malaysia Pahang
-
- LSPSO Channel Estimation in OFDM MC-Communication System Based on FPGA Paperback – January 8, 2016, by Ali Kareem Nahar (Author), **Kamarul H. Bin Ghazali** (Author), Publisher LAMBERT Academic Publishing
- Ashish Kumar Luhach, **Kamarul Bin Ghazali Hawari**, Ioan Cosmin Mihai, Pao-Ann Hsiung, Ravi Bhushan Mishra, 'Smart Computational Strategies: Theoretical and Practical Aspects', Springer Nature Singapore Pte Ltd (2019), ISBN 978-981-13-6295-8

RESEARCH GRANT

1. Computer Vision Based Driver Assistance Systems-Development Of Drowsiness Detector - Project Leader, **UMP Short Grant**, RDU090352, 2009-2010, RM22965
2. Automatic Controller Design for SMI Production Station – Project Leader, **UMP Short Grant**, RDU050101, 2005 – 2006
3. Crowd Movement Detection for Automated Surveillance Camera System – Project Leader, **UMP Short Grant**, RDU 090331, 2009-2010, RM13387

4. Development of New Image Processing Alogorithm Based On Sosiology Social Force Model (Sfm) For Detecting Behavior In Crowd Video – Project Leader, **FRGS**, RDU 110101, 2011 – 2013, RM 81500
5. Ensemble Mobile Platform and Security Tools for Innovation Digital Economy Environment – Team Member, **LRGS, Kementerian Pengajian Tinggi**, RDU 110901, RM 192, 480. 27 Dec 2011 – 26 Dec 2014
6. Development of an Intelligent System for Biomedical Engineering – The Automatic Detection of Intestinal Parasites and Protozoan Infections Base on Fecal Sample – Project Leader, **UMP Short Grant** , RDU 120305, RM 30,800. 1 April 2012 – 31 Mac 2014
7. Formulation of a New Learning and Modification of Learning Algorithm Improve Weighted Kernel Regression (WKR) for the case of Regression Problem with Limited and Noisy Training Samples – Team Member, **RAGS**, RDU 131416. 17, RM 55000, September 2013 – 16 September 2015
8. New Fast Multiscale Algorithm Based on Power Law Approximation for Pedestrian Detection – Project Leader, **FRGS**, RDU 130118, RM 80400 1 December 2013 – 30 November 2015
9. Improving Plant Safety on Gas Leakage Detection Using Thermal Imaging System – Project Leader, **KTP**, RDU141003, RM 164896, 15 February 2014 – 14 February 2016
10. Early Detection of Spots High Water Saturation for Landslide Prediction using Thermal Imaging Analysis – Project Leader, **UMP Short Grant**, RDU140353, RM 25,000, 25 April 2014 – 24 April 2016
11. Detection and Quantification of Road Surface Cracks using Digital Image Processing based on Multiscale Approach and Artificial Intelligence - Project Leader, International Grant from Ministry of Education and Culture Indonesia, Universitas Muhamadiyah Yogyakarta, UIC 151502, IDR 30 Million, 1 Dec 2015 - 1 June 2016

12. 'A new parametric optimization model using UWB imaging through human breast for domestic and low-cost breast health check-up', Team Member, **FRGS**, RM149726, 1 July 2014 - 31 June 2017
13. 'A New Marker-less Upper Limbs Detection and Motion Tracking Algorithm Based on Kinects 3D Data', Team Member, **FRGS**, RM40295, 1 September 2013 - 31 August 2015
14. EARLY DETECTION MONITORING ON BEARING MOTOR FAULT USING INFRARED THERMOGRAPHY, Project Leader, **UMP Short Grant**, RM20000, 20/06/2017- 19/06/2019
15. DEVELOPMENT OF GNSS JOINT LAB AND BEIDOU SATELLITE PROMOTION IN SOUTH EAST ASIA COUNTRY, Project Leader, **International Grant from Guilin University of Electronics Technology**, RM20000, 01/04/2019 - 31/03/2021

POSTGRADUATE SUPERVISION

PHD

1. Ma Jie, 'Drowsiness Detection for Car Driver Assisted', March 2010 – March 2014, Main supervisor (**PhD, completed**)
2. Hussain Khalef, 'Imaging Analysis of ECG Printed to Detect Heart Disease', September 2012 – October 2015: Main supervisor (**PhD, completed**)
3. Ali Kareem Nahar, ' Enhanced PAPR Reduction And Channel Estimation In Multi-Carrier Wireless Communication System And Its Implemented In FPGA', September 2013 - September 2016: Main Supervisor (**Phd, completed**)
4. Siti Sofiah Mohd Radzi, 'H1N1 Detection Using Thermal Image', January 2011 – January 2017: Main supervisor (**Phd, completed**)

5. Wan Nur Azhani Binti Wan Samsudin, 'Crowd Detection Using Social Force Model', September 2011 – January 2017: Main supervisor (**PhD, completed**)
6. Ezrinda binti Mohd Zaihidee, 'Fusion of visible and thermal image using wavelet transformation', February 2014 – ongoing: Main Supervisor (PhD)
7. Norliana bin Khamisan, 'Motor Fault Prediction by Thermal Imaging Method', September 2014 – ongoing: Main Supervisor (PhD)
8. Ismail, 'Image Fusion for Multi focus', April 2019 - ongoing: Main Supervisor (PhD)
9. Liu Xinni, ' Oil Palm Tree Counting using Deep Learning', September 2018 - ongoing: Main Supervisor (PhD)
10. Wahyu Sapto Aji, ' Empty Socket Bunch Detection of FFB using Deep Learning Method', April 2019 - onging: Main Supervisor (PhD)
11. Son Ali Akbar, ' Signal Classification using Deep Learning' November 2019 - ongoing: Main Supervisor (PHD)

Master by Research

1. Raafat S. Hadi, 'Parasite Detection Using Image Analysis', January 2011 – September 2013, Main supervisor (**Master, completed**)
2. Xiao Rain, 'Development of Improved Technique for Road Lane Detection', Mac 2010 – April 2013 (Master, **completed**)
3. Raja Saravana, 'Design of Multiple Microcontroller Platform for Use in Academic Environment', December 2009 –2012: Main Supervisor (Master, **completed**)

4. Shuhairie Bin Mohammad, 'Automatic Grading of Pineapple Using Image Processing Technique', December 2009 – March 2013: Main Supervisor (**Master, completed**)
5. Sharmiza Binti Kamarudin, 'Development of Color Identification Method for Canned Pineapple Detection', 22 Mac 2010 – October 2016: Main Supervisor (Master, **completed**)
6. Nazriyah Binti Che Zan, 'Machine Vision System for Pineapple Sorting Index', December 2009 – October 2016: Main Supervisor (Master, **completed**)
7. Fatin Izwani, ' Sputum Smear Detection', September 2012 – October 2016: Main Supervisor (Master, **completed**)
8. Mohammad Fazle Rabbi, 'High Mobility Channel Estimation in Cooperative Network' , September 2015 - ongoing: Main Supervisor (Master, **Completed**)
9. Geoffrey O. Asiegbu, 'Maintenance System Using Thermal Imaging Analysis', December 2010 – July 2013: Co Supervisor (Master, **completed**)
10. Muhamad Faruqi bin Zahari, ' Intelligent Classification of Ammonia in Water for Oil and Gas Industry', September 2013 - ongoing: Co Supervisor (Master, **completed**)
11. Najmi Hafizi bin Zabawi, 'Robust Object Detection and Tracking', January 2012 – ongoing: Co Supervisor (Master, **completed**)
12. Afa Huda Hashim, ' Landslide monitoring using Thermal Camera', September 2014 – ongoing: Main Supervisor (Master)

13. Tasriva Sikandar, ' Surveillance Study for ATM CCTV Monitoring', February 2016 - January 2018: Main Supervisor (**Master, completed**)

Thesis Examiner

1. Aliyu Muhammad Abdu, 'Generic Optical Form Processing System For Multiple-Choice Answer Extraction', Sarjana Kejuruteraan (Elektrik), Fakulti Kejuruteraan Elektrik, UTM Johor Bahru 18.10.13
2. Azrul Mahfurdz, 'Turtle Identification and Exclude Device using Sound Technique', PhD (Electrical Engineering), Faculty of Electrical and Electronics, Universiti Malaysia Pahang: 12.6.2014
3. Sridathan, Chairmain of VIVA-VOCE, Doctor of Philosophy (Electronic Engineering), 29.12.2014
4. Ijaz Khan, ' A Hybrid Design for Driver's Fatigue Detection', Master (Electrical Engineering), Faculty of Information and Communication Technology, UTHM: 22.6.2014
5. Razieh Khanaki / GS29822, 'Maximum Power Point Tracking Using Artificial Neural Network for Photovoltaic Standalone System', Master of Science, School of Graduate Studies, Universiti Putra Malaysia (UPM): 2014
6. Ali Abd Almisreb / 2012281702, 'Consonants Recognition and Vowels Acoustic Analysis for Arabic Phonemes Based Malay Speakers', PhD in Electronics Engineering, Fakulti Kejuruteraan Elektrik, Universiti Teknologi Mara (UiTM): 8.10.2015
7. Muhamad Nazrol Zawawi, Member of Jury for PHD Thesis of Monsieur, Doctoral School (ED STIC), University of Nice Sophia Antipolis, 24.4.2015
8. Wan Syahirah binti Wan Samsudin, 'Initial Assessment of Facial Nerve Paralyse based on Motion Analysis using Optical Flow Method', Master of Science in Mechatronic Engineering, School of Mechatronic Engineering, UniMAP: 2015

9. Shaparas binti Daliman, ' Integrated Texture Analysis Techniques for Detection and Characterization of Oil Palm Tree Based on Remote Sensing Imagery', PhD, Faculty of Electrical Engineering, UTM, 1 June 2016
10. Nor Afiah Zainuddin, ' Adaptive Background Modelling of Street Scene for Intelligent Surveillance System', Master of Science (Mechatronics) Engineering, Kuliyyah of Engineering, IIUM, 25 July 2016
11. Ang Teong Ong, 'Computer Machine Vision Inspection on Printed Circuit Boards Flux Defect', Engineering Doctor, Fakulti Kejuruteraan Elektrik, UTEM, 26 August 2016
12. Sivadev A/L S. Nadarajah, 'THE GUIDELINES OF PARAMETERS IN THE IMPLEMENTATION OF LOCAL MONOCULAR VISION SYSTEM FOR ROBOT SOCCER USING THE MIROSOT PLATFORM', Doctor of Philosophy, School of Mechatronic Engineering, UNIVERSITI MALAYSIA PERLIS, 2016
13. Ahmad Puad bin Ismail, 'ABNORMAL GAIT ANALYSIS AND CLASSIFICATION USING MARKERLESS MODEL', Doctor of Philosophy, Faculty Electrical Engineering, Uitm, September 2017
14. Faris Izzuddin Nafiah, PULSED EDDY CURRENT NDT FOR QUANTITATIVE EVALUATION OF INCLINED CRACKS, Master of Science, Faculty of Engineering, IIUM, April 2018
15. Noor Aishah binti Khairuzzaman, WHITE ROOT DISEASE AUTOMATED CLASSIFIER USING NIR PROPERTY IN DRY RUBBER SHEET, Master of Science, Faculty of Electrical, UiTM, January 2017
16. Agung Triyadi, KAEDAH BARU HIRARKI CLUSTERING UNTUK ANALISIS CORAK TINGKAH LAKU DAN INTERPERSONALITAS PELAJAR DALAM PEMBELAJARAN TALIAN', PhD (ICT), Asia e University, Proposal Defense, Dec 2016
17. Fariz Izudin Nafiah, Pulsed Eddy Current NDT for Quantitative Evaluation of Incline Crack, Master of Science, Faculty of Engineering, IIUM, July 2018
18. M.S. Sangeetha, DEVELOPMENT OF AUTOMATIC CONDITION MONITORING SYSTEM BY OVERCOMING THE INHERENT LIMITATION IN

IMAGE ANALYSIS THROUGH THERMAL MODELLING TECHNIQUES, PhD,
 Sathyabama Institute Science and Technology Chennai India, April 2018
 19. HARIS AL QODRI, LANGUAGE PROCESSING UNIT FOR MALAYSIAN,
 Kulliyah of Engineering, IIUM, June 2019

AWARDS AND RECOGNITION

	Award	Type	Date
1	Bronze	18 th International Invention & Technology Exhibition ITEX, Kuala Lumpur	18 th – 20 th May 2007
2	Participation	The International Exposition of Research and Invention Institutions of Higher Learning, Kuala Lumpur	8-10 October 2009
3	Silver	21 st International Invention & Technology Exhibition ITEX, Kuala Lumpur	14 - 16 May 2010
4	Bronze	22 nd International Invention & Technology Exhibition ITEX, Kuala Lumpur	20 – 22 May 2011
5	Gold	Creation, Innovation, Technology and Research Exposition, UMP	13 – 14 April 2011
6	Bronze	The International Exposition of Research and Invention Institutions of Higher Learning, Kuala Lumpur	September 2011
8	Certificate of Participation	Pencipta 2011 Malaysia, 'Smart System for Power Defect Detection'	13-15 September 2011
7	Gold	Creation, Innovation, Technology and Research Exposition (CITREX 2012), 'Development of Breast Cancer Screening and Detection System using Mammogram and Thermal Image'	26-28 March 2012
8	Silver	Creation, Innovation, Technology and Research	26-28 March

		Exposition (CITREX 2012), 'The iECGHeart – An Intelligent System to Detect 5 Major Heart Disease'	2012
9	Gold	International Engineering Invention and Innovation Exhibition (i-ENVEX), 'Detection and Summation of PUS Cell for Sputum Quality Testing'	26 – 29 April 2012
10	Merit Award	Research Product Category, Cendekia Bitara Award	28 April 2012
11	Certificate of Appreciation	10 Year service at Faculty of Electrical and Electronics Engineering, UMP	16 February 2012
12	Certificate of Participation	BioInnovation Awards 2012	July 2012
13	Bronze	BioInnovation Awards 2012, 'Automated System for Diagnosis Intestinal Parasites by Computerized Image Analysis'	July 2012
14	Gold	2013 International Invention & Technology Exhibition ITEX, Kuala Lumpur. Sputum Smear Detection System	May 2013
15	Gold	British Invention Show, London. Sputum Smear Detection System	October 2013
16	Silver	CITREX, Ordure profile system	2016
	Bronze	CITREX, Image Blending Software For Thermal Camera Enhancement	

INTELECTUAL PROPERTY

1. Patent Application, 'A Method for Grading Fruits and the System Thereof', Patent Application No. PI 20093812, Date 14 September 2009

2. Patent Application, 'System for Power Fault Detection', Patent Application No. PI 2011002232, Date 19 May 2011
3. Title of Invention: A METHOD FOR DETECTING PARASITIC WORMS. Filing Date: 27-August-2013, Malaysian Certificate of Utility Innovation Application No: UI 2013701513

Consultation and Training

1. **Consultancy**, UMP Consultancy and Training Sdn. Bhd., conducting a training to Pusat Penyelidikan Teknologi Makanan Mardi, 'Hands-on Training on Creating Coding and User Interfacing for Intelligent System Application', 31 July – 1 August 2012
2. **Consultancy**, SUATECH Engineers, Energy Audit using Thermal Imaging Camera at Kemaman Center Point, Kemaman and Institut Perguruan Ilmu Khas Cheras, 21-22 May 2012
3. **Consultancy**, - Nibong Tebal Paper Mills Sdn. Bhd., FOL- Maintenance Department No.886, Jalan Bandar Baru, Sungai Kecil 14300 Nibong Tebal, SPS Pulau Pinang. Infrared Thermography Survey, 24 – 25 October 2011
4. **External Training (Instructor)**, 'Training on Machine Vision and Image Processing Using Matlab', 14 – 15 September 2011, Organized by Vision and Intelligent System Research Group (VisIS)
5. **External Training (Instructor)**, 'Training on Machine Vision and Image Processing Using Matlab', 20 October 2014, Organized by Vision and Intelligent System Research Group (VisIS)
6. **Consultancy** - Rental of Thermal Imaging Camera, Consultation, Services in Data Collection of Durian Quality Determination, August 2015, Consultation work for Institut Penyelidikan dan Kemajuan Pertanian Malaysia (MARDI), UCT150138

7. **External Training (Instructor)**, 'Training on Machine Vision for Technician'. Organized training for Diploma students Politeknik Sultan Haji Abdul Halim Mu'adzam Shah, Kulim Kedah. Registered under UMPH vot UCT 150316, 22 Nov 2015
8. **External Training (Instructor)**, 'Training on Machine Vision for Technician'. Organized training for Sijil Kemahiran Malaysia (SKM 3) of students Kolej IVC Seberang Jaya, Penang. Registered under UMPH vot UCT 150317, 28 Nov 2015

Other Activities

1. **Moderator and Speaker**, 'Proposal Research Grant Workshop', 17 November 2009, Organized by Universiti Pertahanan Nasional Malaysia
2. **Speaker**, 'Image Processing Application', 13 October 2010, Presentation at Universitas Muhammadiyah Yogyakarta, Yogyakarta Indonesia
3. **Speaker**, 'Grading Pineapple', 8 January 2010, Presentation at Lembaga Nenas Malaysia, Bandar Baru Uda, Johor
4. **Instructor**, 'Internal Training Image Processing' 16 October 2009, Organizes by Faculty of Electrical and Electronics Engineering
5. **Judge**, Creation, Innovation, Technology and Research Exposition, UMP, 2010
6. **Advisory Board**, International Conference on Advanced Science, Engineering and Information Technology (ICASEIT) 2011
7. **Panel** for Post Graduate Poster Competition 2011, Universiti Malaysia Pahang
8. **Editor**, Journal of Malaysian Technical University Network
9. **Chairman**, International Conference on Electrical, Control and Computer Engineering (InECCE) 2011
10. **Advisory Board**, 1st International Conference on Robotic Automation System 2011
11. **Committee**, National Conference on Postgraduate Research (NCON-PGR) 2012, Organized by Faculty of Electrical and Electronics Engineering, UMP

12. **Speaker**, 'Thermal Imaging in Military Application', 15 Mac 2012, Organized by Faculty of Science and Defense Technology, Universiti Pertahanan Nasional Malaysia
13. **Local Arrangement Chair**, Fourth International Conference on Computational Intelligence, Modeling and Simulation, CimSim2012, jointly organized by UK Simulation Society and Asia Modeling and Simulation Society, 25 -27 September 2012
14. **Parallel Session Chair**, , International Conference on Computational Intelligence, Modeling and Simulation, CimSim2012, jointly organized by UK Simulation Society and Asia Modeling and Simulation Society, 25-27 September 2012
15. **Parallel Session Chair**, 2nd International Conference on Emerging Trends in Computer and Image Processing (ICETCIP'2012), June 30 – July 1 2012, Bali
16. **Publication Chair**, 2nd International Conference on Electrical, Control and Computer Engineering 2013, 27 – 28 August 2013
17. **FRGS Evaluation Panel**, Appointed as a panel to evaluate grant proposal. August 2013
18. **MARA Academic Advisory Committee** 26-30 January 2014
19. **International Program Committee Chair (Malaysia)**, 2014, The 1st International Conference on Computational Intelligence, Communication and Signal Processing (CICSP2014), Hong Kong China, Nov. 1-2 2014
20. **International Committee**, The 1st International Conference on Computational Intelligence, Communication and Signal Processing (1st CICSP2014), Hong Kong, China October.19-20, 2014
21. **Programme Assessors (PA)** For Academic Session 2014 – 2016 (UNIKL MFI) for programme **Bachelor of Engineering Technology in Industrial Automation and Robotics**
22. **Programme Assessors (PA)** For Academic Session 2014 – 2016 (UNIKL MFI) for programme **Bachelor of Engineering Technology in Mechatronics**
23. **Expert Talk**, International Conference on Advances in Computer, Electronics and Electrical Technology (CEET-2014), 2-3 August 2014, Hotel G Tower, Kuala Lumpur. Organized by Institute of Research Engineers and Doctors (IRED)

24. **Technical Session Chair**, International Conference on Advances in Computer, Electronics and Electrical Technology (CEET-2014), 2-3 August 2014, Hotel G Tower, Kuala Lumpur. Organized by Institute of Research Engineers and Doctors (IRED)
25. **Guest Lecturer**, Faculty of Industrial Technology, Universitas Ahmad Dahlan, Yogyakarta, Indonesia. Giving talk on 'Thermal Imaging Research and Its Applications', 19 August 2014
26. **Guest Lecturer**, Seminar on 'Basic Computer Vision with Matlab' (trainer) Baishev University Aktobe, Kazakhstan, 4 December 2014 – 6 December 2014
27. **Technical Program Committee Members** The Second International Conference on Information, Communication and Computer Networks (ICI2CN 2015), London, United Kingdom, January 14-15, 2015
28. **Scientific Committee**, The 2015 International Conference on Science in Information Technology (ICSITech 2015), Yogyakarta
29. **International Scientific Committees**, 2015 International Conference on Computer Information Systems and Industrial Applications(CISIA2015), June 28-29, 2015, Bangkok, Thailand.
30. **Conference Committee**, IPN - IWNEST 2015 Conferences in Kota Kinabalu, Malaysia, JANUARY 9-10, 2015
31. **Deputy Chairman**, Industrial Advisory Panel Politeknik Sultan Ahmad Shah (POLISAS), 2015/2016
32. **Participant** as a coordinator of International Student Mobility Exchange Program FKEE UMP to FTI Universitas Ahmad Dahlan Yogyakarta Indonesia, 13 - 18 September 2015
33. **Technical Program Committee Member**, 2nd International Conference in Information, Communication, Computer Networks (ICI2CN 2015), London, UK, 14 - 15 January 2015
34. **CICSP 2014 International Committee**, International Conference on Computational Intelligence, Communication and Signal Processing, Hong Kong, China, 19 - 20 October 2014

35. **Program Chair**, 2nd International Conference on Electrical, Control and Computer Engineering (InECCE 2013), Kuantan, Pahang, 27 - 28 August 2013
36. **Programme Assessors (PA)** for Bachelor of Engineering Technology (Hons) in Mechatronics & Bachelor of Engineering Technology (Hons) in Industrial Automation and Robotics programme, Universiti Kuala Lumpur Malaysia France Institute (UniKL MFI), academic session 2014 - 2016
37. **Technical Committee IPN** - IWNEST 2015 Conferences Kota Kinabalu, 2015
38. **International Committee**, International Conference on Computer Information Systems and Industrial Applications, 2015
39. **Scientific Committee** ICSITech 2015
40. **ADVISOR**, International Conference on Electrical, Control and Computer Engineering, 2015
41. **DIRECTOR**, Corporate Social Innovation Project UMP, Taman Negara Gua Musang Kuala Koh, 2016
42. **Scientific Committee**, International Conference on Science in Information Technology, Balikpapan Indonesia, October 26-27, 2016
43. **International Program Committee Chair**, 2016 The 2nd International Conference on Computational Intelligence, Communication and Signal Processing Jeju Island, South Korea, March 19-20, 2016
44. **Programme Committee**, The PROGRAM of INTERNATIONAL SCIENTIFIC-PRACTICAL CONFERENCE "INTEGRATION OF EDUCATION, SCIENCE AND INDUSTRY" in the FRAMEWORK OF INTERNATIONAL EDUCATION FORUM in HONOR OF 20th ANNIVERSARY of S. BAISSHEV AKTOBE UNIVERSITY June 27-28, 2016
45. **Visiting Professor**, Hebei University China, 18 September 2017 - 13 October 2017
46. **Keynote Speaker**, 2018 International Conference on Health Science and Technology, Oct 10-11 2018, Universitas Aisyiyah Yogyakarta
47. **Keynote Speaker**, International Conference on Computational Strategies for Next Generation Technologies, Nov 25-26 2017, Punjab India
48. **Keynote Speaker**, ICITAS 2017, Feb 2-4, 2018, Surabaya

49. **ETAC New Panel Evaluators Workshop**, 14-15 Mei 2019. Oraganizer - Board of Engineer Malaysia
50. **Programme Assessors (PA)** for Bachelor of Engineering Technology (Hons) in Mechatronics & Bachelor of Engineering Technology (Hons) in Industrial Automation and Robotics programme, Universiti Kuala Lumpur Malaysia France Institute (UniKL MFI), academic session 2018 - 2020
51. **External Examiner**, Faculty of Engineering Technology UTEM, Academic Session 2017-2019
52. **Mock Audit Auditor** for ETAC Accreditation, Program Diploma Kejuruteraan Elektronik (Komputer), POLISAS, 12.9.2019
53. **External Examiner (EE)** for Bachelor of Engineering Technology (Hons.) in Industrial Automation and Robotics programme, Universiti Kuala Lumpur Malaysia France Institute (UniKL MFI), academic session 2019 - 2024