

A. PERSONAL DETAILS	
Full Name	Hafiz Rashidi b Harun @ Ramli
University Address	Department of Electrical and Electronics Engineering, Faculty of Engineering, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor.
Designation	Ir. Dr.
Contact	Email: hrhr@upm.edu.my Phone No: 012-6743835

B. ACADEMIC QUALIFICATIONS		
B.Eng	Name of Institution	Universiti Putra Malaysia
	Area of Specialization	Electrical and Electronic Engineering
MSc.	Name of Institution	Universiti Putra Malaysia
	Area of Specialization	Control and Automation Engineering
PhD	Name of Institution	Imperial College London
	Area of Specialization	Biomedical Engineering

C. RESEARCH INTERESTS

Artificial Intelligence, Computer Vision, Robotics and Automation, Biomedical Engineering, Smart Agriculture

D. CURRENT PROFESSIONAL MEMBERSHIP

IEEE, BEM

E. TEACHING EXPERIENCE (2021 – 2026)

No	Course Code	Course Name	Level
1.	EEE3935	Control Engineering Lab I	Undergraduate
3.	ECC3012	Engineering Mathematics II	Undergraduate
8.	ECC3404	Multimedia Systems	Undergraduate
4.	EEE3134	Instrumentations and Measurements	Undergraduate
5.	EEE3881	Control System	Undergraduate
6.	EEE4949A & EEE4949B	Final Year Project	Undergraduate

7.	EEE5400	Project Management for Control Engineers	Postgraduate

F. STUDENT SUPERVISION (2021 – 2026)

No	Programme	Role	Matric No	Name	Status
1.	PhD	Supervisor	GS30747	Hazwani bt Harun	Graduated
2.	PhD	Supervisor	GS74364	Stephanie Cheong May Ling	Ongoing
3.	Doctor of Engineering	Supervisor	GS77275	Zulkifli b Baharuddin	Ongoing
4,	Doctor of Engineering	Supervisor	GS77424	Shanmuga Sundraraj	Ongoing
5.	Master	Supervisor	GS59417	Ahmad Fareed b Japar	Graduated
6.	Master	Supervisor	GS60399	Lai Jin Wern	Graduated
7.	Master	Supervisor	GS76728	Miskat Hossain	Ongoing
8.	Bachelor	Supervisor	207667	Hairulnizam b Hashim	Graduated
9.	Bachelor	Supervisor	211358	Nishen Prakash a/l Sevakumar	Graduated
10.	Bachelor	Supervisor	203708	Sutehsan a/l Gunaseran	Graduated
11.	Bachelor	Supervisor	201044	Muhd. Afnan b Mohd. Anderil	Graduated
12.	Bachelor	Supervisor	201072	Muhd. Ikhwan Affan b Rohaimi	Graduated
13.	Bachelor	Supervisor	218655	Li Zekun	Ongoing
14.	Bachelor	Supervisor	223628	Wan Noor Najeeha bt Wan Norazam	Ongoing
15.	PhD	Co-Supervisor	GS69825	Wang Bingzhen	Graduated
16.	PhD	Co-Supervisor	GS56498	Vahideh Ghobadi	Graduated
17.	PhD	Co-Supervisor	GS67727	Zhu Yingjie	Ongoing
18.	PhD	Co-Supervisor	GS68033	Rozilawati bt Mohd Nor	Ongoing
19.	PhD	Co-Supervisor	GS72383	Mohd Khairul Akmal b Amran	Ongoing
20.	PhD	Co-Supervisor	GS67676	Yao Yiduo	Ongoing

G. CURRENT ADMINISTRATIVE RESPONSIBILITIES

2023 - Now	Department Academic Coordinator

H. PREVIOUS EMPLOYMENT

Positions held	Employer	Years of Service (Start and End)

I. LIST OF PUBLICATIONS (2021 – 2026)		
Journals	1. B. Wang, W. Z. W. Hasan, X. Zhang, Z. Wang, Z. Cao, T. Liu, **H. R. R. Harun**, H. H. Harith, and X. Dong, "Multiscale sparse cross-attention fusion network for PET/CT-based prognosis prediction in head and neck cancer," *Health and Technology*, pp. 1–12, 2026. 2. B. Wang, J. Liu, X. Zhang, Z. Wang, Z. Cao, T. Liu, **H. R. R. Harun**, H. H. Harith, and W. Z. W. Hasan, "Residual conditional variational autoencoder for multi-center PET/CT radiomic feature harmonization with integrated modeling of batch effects and clinical covariates," *Journal of Imaging Informatics in Medicine*, pp. 1–19, 2026. 3. H. Harun, **H. R. Ramli**, M. I. Saripan, L. S. Safri, and H. Harunarashid, "Single-camera guidewire movement tracking system in a concentrically occluded configuration for an endovascular interventions simulator interface," *International Journal of Integrated Engineering*, vol. 18, no. 3, pp. 300–310, 2026. 4. H. Ma, A. As'arry, N. Jing, M. I. S. Ismail, **H. R. Ramli**, M. Y. M. Zuhri, and A. Delgoshaei, "Adaptive force-position-speed collaborative process planning and roughness prediction for robotic polishing," *PLOS ONE*, vol. 20, no. 9, Art. no. e0330979, 2025. 5. Y. Zhu, W. Z. Wan Hasan, H. R. Ramli, N. M. H. Norsahperi, M. S. M. Kassim, Y. Yao, "Deep reinforcement learning of mobile robot navigation in dynamic environment: A review," *Sensors*, vol. 25, no. 11, Art. no. 3394, 2025. 6. B. Wang, J. Liu, X. Zhang, J. Lin, S. Li, Z. Wang, Z. Cao, D. Wen, T. Liu, **H. R. R. Harun**, "A stacking ensemble framework integrating radiomics and deep learning for prognostic prediction in head and neck cancer," *Radiation Oncology*, vol. 20, no. 1, Art. no. 127, 2025. 7. H. M. Ma, A. As'arry, C. Li, M. I. S. Ismail, **H. R. Ramli**, A. Delgoshaei, and M. Y. M. Zuhri, "Improved DBO algorithm tunes fuzzy-PD controller for robot manipulator trajectory tracking," *Journal of Algorithms & Computational Technology*, vol. 19, Art. no. 17483026251331506, 2025. 8. H. Faizi Hairulnizam, N. Misron, N. A. Ibrahim, **H. R. Ramli**, and C. A. Vaithilingam, "Evaluation of the performance of new type of segmented stator permanent magnet synchronous motor," *IEEE Access*, vol. 13, pp. 75563–75575, 2025. 9. H. Harun, H. Hashim, **H. R. Ramli**, N. M. H. Norsahperi, R. Mahmud, and W. Z. W. Hasan, "YOLOv12-based detection for early breast cancer screening with a portable ultrasound system," *Mekatronika*, vol. 7, no. 1, pp. 78–88, 2025.	

10. V. Ghobadi, L. I. Ismail, W. Z. W. Hasan, H. Ahmad, **H. R. Ramli**, N. M. H. Norsahperi, A. Tharek, and F. A. Hanapiah, "Challenges and solutions of deep learning-based automated liver segmentation: A systematic review," *Computers in Biology and Medicine*, vol. 185, Art. no. 109459, 2025.
11. H. Ma, A. As'arry, X. Wu, M. I. S. Ismail, and **H. R. Ramli**, "Improved dung beetle optimization algorithm and finite element analysis for spindle optimization," *Indonesian Journal of Electrical Engineering and Computer Science*, vol. 36, no. 1, pp. 559–569, 2024.
12. H. Ma, A. As'arry, Y. Feng, L. Cheng, A. Delgoshaei, M. I. S. Ismail, and **H. R. Ramli**, "Improved black-winged kite algorithm and finite element analysis for robot parallel gripper design," *Advances in Mechanical Engineering*, vol. 16, no. 10, Art. no. 16878132241288402, 2024.
13. B. Wang, J. Liu, J. Xie, X. Zhang, Z. Wang, Z. Cao, D. Wen, W. Z. W. Hasan, **H. R. Harun**, and X. Dong, "Systematic review and meta-analysis of the prognostic value of 18F-fluorodeoxyglucose (18F-FDG) positron emission tomography (PET) and/or computed tomography (CT)-based radiomics in head and neck cancer," *Clinical Radiology*, vol. 79, no. 10, pp. 757–772, 2024.
14. Y. Yao, W. Z. W. Hasan, W. Jiao, X. Dong, **H. R. Ramli**, N. M. H. Norsahperi, and D. Wen, "ChatGPT and BCI-VR: A new integrated diagnostic and therapeutic perspective for the accurate diagnosis and personalized treatment of mild cognitive impairment," *Frontiers in Human Neuroscience*, vol. 18, Art. no. 1426055, 2024.
15. A. F. Japar, **H. R. Ramli**, N. M. H. Norsahperi, and W. Z. W. Hasan, "Oil palm loose fruit detection using YOLOv4 for an autonomous mobile robot collector," *IEEE Access*, vol. 12, pp. 138582–138593, 2024.
16. V. Ghobadi, L. I. Ismail, W. Z. W. Hasan, H. Ahmad, **H. R. Ramli**, N. M. H. Norsahperi, A. Tharek, and F. A. Hanapiah, "Real-time robust liver and gallbladder segmentation during laparoscopic cholecystectomy using convolutional neural networks: An analysis," *Artificial Intelligence Surgery*, vol. 4, no. 4, pp. 278–287, 2024.
17. O. T. Mahmood, W. Z. W. Hasan, L. I. Ismail, **H. R. Harun**, N. Azis, and N. M. H. Norsahperi, "Sliding mode controller optimization-based three-phase rectifier: Review study," *IEEE Access*, vol. 12, pp. 101457–101483, 2024.
18. H. Ma, A. As'arry, H. Zhang, M. I. S. Ismail, **H. R. Ramli**, M. Y. M. Zuhri, and A. Delgoshaei, "Inverse kinematics of six degrees of freedom robot manipulator based on improved dung beetle optimizer algorithm," *IAES International Journal of Robotics and Automation*, vol. 13, no. 3, pp. 272–282, 2024.
19. M. A. A. Shahrim, C. C. Chia, **H. R. Ramli**, M. Y. Harmin, and J.-R. Lee, "Adaptive mode filter for Lamb wavefield in the

	wavenumber-time domain based on wavenumber response function," *Aerospace*, vol. 10, no. 4, Art. no. 347, 2023. 20. J. W. Lai, **H. R. Ramli**, L. I. Ismail, and W. Z. W. Hasan, "Oil palm fresh fruit bunch ripeness detection methods: A systematic review," *Agriculture*, vol. 13, no. 1, Art. no. 156, 2023. 21. Q. Y. Hamid, W. Z. W. Hasan, M. A. A. Hanim, A. A. Nuraini, M. N. Hamidon, and **H. R. Ramli**, "Shape memory alloys actuated upper limb devices: A review," *Sensors and Actuators Reports*, vol. 5, Art. no. 100160, 2023. 22. H. M. Qassim, W. Z. W. Hasan, **H. R. Ramli**, H. H. Harith, L. N. I. Mat, and M. S. F. Salim, "Prediction of elbow joint motion of stroke patients by analyzing biceps and triceps electromyography signals," in *Proc. 2023 IEEE 5th Eurasia Conference on Biomedical Engineering, Healthcare and Sustainability (ECBIOS)*, pp. 54–57, 2023. 23. N. F. Hambali, N. M. H. Norsahperi, M. A. M. H. Hisban, M. K. Hassan, W. Z. W. Hasan, L. I. Ismail, and **H. R. Ramli**, "Tuning of FOPID controller for robotic manipulator using genetic and multiple-objective genetic algorithms," in *Innovative Manufacturing, Mechatronics & Materials Forum*, pp. 557–574, 2023. 24. J. W. Lai, **H. R. Ramli**, L. I. Ismail, and W. Z. W. Hasan, "Real-time detection of ripe oil palm fresh fruit bunch based on YOLOv4," *IEEE Access*, vol. 10, pp. 95763–95770, 2022. 25. H. M. Qassim, W. Z. W. Hasan, **H. R. Ramli**, H. H. Harith, L. N. I. Mat, and L. I. Ismail, "Proposed fatigue index for the objective detection of muscle fatigue using surface electromyography and a double-step binary classifier," *Sensors*, vol. 22, no. 5, Art. no. 1900, 2022. 26. S. N. S. Selamat, R. Che Me, H. A. Ainuddin, M. S. F. Salim, **H. R. Ramli**, and M. H. Romli, "The application of technological intervention for stroke rehabilitation in Southeast Asia: A scoping review with stakeholders' consultation," *Frontiers in Public Health*, vol. 9, Art. no. 783565, 2022. 27. A. Alsayed, R. Kamil, V. Rowe, M. S. F. Salim, **H. R. Ramli**, and A. As'arry, "Quantification of the therapist's gentle pull for pinch strength testing based on FMA and MMT: An experimental study with healthy subjects," *Diagnostics*, vol. 11, no. 2, Art. no. 225, 2021. 28. H. Ma, A. As'arry, M. Cong, A. Delgoshaei, M. I. S. Ismail, **H. R. Ramli**, and X. Wu, "Robot manipulator minimum jerk trajectory planning based on the improved dung beetle optimizer algorithm," *Journal of Circuits, Systems and Computers*, vol. 34, no. 1, Art. no. 2550028, 2025.
Proceedings	1. M. T. M. Zahar, N. M. H. Norsahperi, M. Y. Elshishini, M. H. Azami, W. Z. W. Hasan, and **H. R. Ramli**, "Real-time integrated circuit defect classification and automated sorting using YOLOv11 and robotic manipulation: An experimental and simulation study," in *Proc. 2026*

	IEEE 2nd International Conference on Robotics and Technologies for Industrial Automation (ROBOTHIA), pp. 1–6, 2026. 2. R. M. Nor, W. Z. W. Hasan, **H. R. Ramli**, M. S. M. Kassim, N. bin Mat Nawi, and N. M. H. Norsahperi, "Evaluating YOLOv8-Pose model variants for accurate pose estimation in oil palm ripe fresh fruit bunches (FFB) detection," in *Proc. 2025 IEEE International Circuit and System Symposium (ICSyS)*, pp. 142–146, 2025. 3. Y. Zhu, W. Z. W. Hasan, **H. R. Ramli**, N. M. H. Norsahperi, and M. S. M. Kassim, "Dynamic experience management for mobile robot navigation in dynamic environments," in *Proc. 2025 IEEE International Circuit and System Symposium (ICSyS)*, pp. 147–150, 2025. 4. V. Ghobadighadikalaei, L. I. Ismail, W. Z. W. Hasan, H. Ahmad, **H. R. Ramli**, N. M. H. Norsahperi, A. Tharek, and F. A. Hanapiah, "Use of deep learning for liver segmentation during laparoscopic cholecystectomy," in *Proc. 2024 IEEE 15th Control and System Graduate Research Colloquium (ICSGRC)*, pp. 82–86, 2024. 5. H. M. Qassim, W. Z. W. Hasan, **H. R. Ramli**, H. H. Harith, L. N. I. Mat, and M. S. F. Salim, "Prediction of elbow joint motion of stroke patients by analyzing biceps and triceps electromyography signals," in *Proc. 2023 IEEE 5th Eurasia Conference on Biomedical Engineering, Healthcare and Sustainability (ECBIOS)*, pp. 54–57, 2023. 6. J. W. Lai, **H. R. Ramli**, L. I. Ismail, and W. Z. W. Hasan, "Study of oil palm stalk detection based on YOLOv4," *IEICE Proceedings Series*, vol. 69, Art. no. SS2-2, 2022. 7. H. Qassim, W. Z. W. Hasan, **H. R. Ramli**, H. Harith, and L. N. I. Mat, "Biceps and triceps electrical activity analysis based on using low-cost sensor: Case study," *IEICE Proceedings Series*, vol. 69, Art. no. SS1-4, 2022. 8. K. G. Pei, Y. H. Han, Y. L. Zi, O. H. Zhu, Q. N. Ee, and **H. R. Ramli**, "Pothole detection system (PoDS) with computer vision and Internet of Things (IoT)," in *Proc. Asia Pacific Conference on Robot IoT System Development and Platform*, pp. 1–6, 2022.
Book	
Copyright	1. Hassan, Wan Zuha Wan, **Hafiz Rashidi Ramli,** *Early Detection of Insidious Fruit Rot In Harumanis Mango via Hyperspectral Imaging Analysis*, 2026. 2. Hassan, Wan Zuha Wan, **Hafiz Rashidi Ramli,** *YOLOv4-Ros: Oil Palm Loose Fruit Detection and Communication with Autonomous Robot Collector* Software, LY2025W13588 , , 2025 ,

	3. Hafiz Rashidi Ramli, *Object Detection: From Matlab Image Processing to Yolo with Roboflow* Software, LY2025W13589 , , 2025 , 4. Hassan, Wan Zuha Wan, Ismail, L. I., **Hafiz Rashidi Ramli,** *Stalk Position Estimation for Ripe Fresh Fruit Bunch Using Image processing Technique (Flowchart)* Literary Work, LY2024W08369 , , 2024 , 5. Hassan, Wan Zuha Wan, Ismail, L. I., **Hafiz Rashidi Ramli,** *Stalk Position Estimation for Ripe Fresh Fruit Bunch Using Image processing Technique (Source code)* Software, LY2024W08368 , , 2024 ,
Editors	

J. RESEARCH GRANT (2021 – 2026)

No	Role	Project Title	Source of Fund	Year	Status
1.	*Leader*	*Muscle Activity Detection Algorithm for End Effector Rehabilitation Robot at Elbow Joint Stroke Rehabilitation*	*UPM (GPB)*	*2021-2023*	*Ended*
2.	*Leader*	*Tuai Pintar: Pendedahan Teknologi Kecerdasan Buatan untuk Sistem Penggredan Automatik Harumanis di Kampung Baru Panggas, Chuping, Perlis*	*UPM (KTGS)*	*2025 - 2026*	*Ended*
3.	Leader	Investigation of Insidious Fruit Rot Disease Detection for Mangifera Indica L. via Short Wave Infrared (SWIR) Reflectance Analysis	MOHE (FRGS)	2025-2027	*Ongoing*
4.	Leader	A Natural Language-Enabled Multimodal Supervisory Control Architecture for Smart Wheelchair Users with Upper Limb Disabilities	UPM (GPI Khas)	2027-2028	*Ongoing*

K. LIST OF TRAINING / WORKSHOP (2021 – 2026)

No	Role	Title	Authority	Year
1.				
2.				

L. CONSULTANCY (2021 – 2026)

No	Role	Project Title	Amount (RM)	Year	Authority

M. PROFESSIONAL, COMMUNITY AND SOCIETY SERVICES (2021 – 2026)

No	Activity / Title	Role	Authority
1.	Kursus Pemerkasaan Komuniti Desa: Modul Alam Sekitar dan Pertanian	Speaker	Kementerian Kemajuan Desa dan Wilayah
2.	Explore AI and Intelligent Systems Program for UPM Asasi Students	Facilitator	IFAC & UPM
3.	Knowledge Transfer Program with Harumanis Farmers in Chuping, Perlis	Speaker	UCTC UPM

N. PATENT/COMMERCIALIZATION (2021 – 2026)

No	Title	Reference
1.	A Multi-Port Haptic Interface Simulator (patent filed)	WO2017030435A1

O. AWARD / RECOGNITION (2021 – 2026)

No	Name of Award	Title	Award Authority	Award Type	Year
1.	APC	Anugerah Perkhidmatan Cemerlang (Excellent Service Award)	UPM	Academia	2023