

CURRICULUM VITAE



Dr. Nor Mohd Haziq Bin Norsahperi

Senior Lecturer

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Education

1. 2021, Ph.D in Electrical Engineering, Universiti Teknologi Malaysia
2. 2017, M.Sc in Mechatronics Engineering, International Islamic University Malaysia
3. 2015, B.Eng (Hons) in Mechatronics Engineering, International Islamic University Malaysia

Areas of Interest

1. Control System
2. Nonlinear Control System
3. Robotics
4. Artificial Intelligence

Professional Qualification/ Membership/ Affiliation

1. Professional Technologist, Malaysia Board of Technologists (MBOT)
2. Graduate Member, Board of Engineers Malaysia (BEM)

Appointment

Position	Duration
1. Development Coordinator, Department of Electrical & Electronic Engineering, Faculty of Engineering, UPM	2022-current
2. Simulation & Modeling Lab Coordinator, Department of Electrical & Electronic Engineering, Faculty of Engineering, UPM	2021-2022
3. Senior Lecturer, Department of Electrical & Electronic Engineering, Faculty of Engineering, UPM	2021-current
4. Academic Fellow (TAM), Department of Electrical & Electronic Engineering, Faculty of Engineering, UPM	2017-2021
5. Research Assistant, Department of Mechatronics Engineering, Kuliyah of Engineering, IIUM	2015-2017

Publication

Journal

ISI Indexed Journals:

1. Hafidz, M. H. A., Faudzi, A. A. M., **Norsahperi, N. M. H.**, Jamaludin, M. N., Hamid, D. T. A., & Mohamaddan, S. (2022). Simple Neural Network Compact Form Model-Free Adaptive Controller for Thin McKibben Muscle System. *IEEE Access*. **(Q2, IF:3.476)**
2. Mahmood, O. T., Wan Hasan, W. Z., Ismail, L. I., Shafie, S., Azis, N., & **Norsahperi, N. M. H.** (2022). Optimization Approaches and Techniques for Automotive Alternators: Review Study. *Machines*, 10(6), 478. **(Q2, IF:2.899)**
3. **Norsahperi, N. M. H.**, Ahmad, S., Toha, S. F., & Mahmood, I. A. (2021). Analysis and Practical Validation on a Multi-Linkage Scissor Platform's Drive System for the Satellite Test Facilities. *International Journal of Heavy Vehicle Systems*, Vol. 28, No. 1, 1-14. **(Q4, IF:0.838)**
4. **Norsahperi, N. M. H.** & Danapalasingam, K. A. (2020). Particle Swarm-Based and Neuro-Based FOPID Controllers for a Twin Rotor System with Improved Tracking Performance and Energy Reduction. *ISA Transactions*, Vol. 102, 230-244. **(Q1, IF: 5.468)**
5. **Norsahperi, N. M. H.** & Danapalasingam, K. A. (2020). An Improved Optimal Integral Sliding Mode Control for Uncertain Robotic Manipulators with Reduced Tracking Error, Chattering, and Energy Consumption. *Mechanical Systems and Signal Processing*, Vol. 142, 106747. **(Q1, IF: 6.823)**
6. **Norsahperi, N. M. H.**, Ahmad, S., Toha, S. F., & Mahmood, I. A. (2018). Robustness Analysis of

Scopus Journals:

1. **Norsahperi, N. M. H.**, Ahmad, S., Toha, S. F., & Mutalib, M. A. A. (2022). Design, simulation and experiment of PSO-FOPID controller for height position control of a scissor mechanism platform. *FME Transactions*, 50(1), 46-54.
2. Hafidz, M. H. A., **Norsahperi, N. M. H.**, Soon, H. W., Jamaludin, M. N., & Faudzi, A. A. M. (2022). Control of Thin McKibben Muscles in an Antagonistic Pair Configuration. In *Computational Intelligence in Machine Learning* (pp. 155-163). Springer, Singapore.
3. **Norsahperi, N. M. H.** & Danapalasingam, K. A. (2019). A comparative study of LQR and Integral Sliding Mode Control Strategies for Position Tracking Control of Robotic Manipulators. *International Journal of Electrical and Computer Engineering Systems*, Vol. 10, No.2, 73-83.
4. **Norsahperi, N. M. H.** & Danapalasingam, K. A. (2019). Neurocontrol Design for an Aerodynamics System: Simple Backpropagation Approach. In *Lecture Notes in Electrical Engineering* (Vol. 547, p. 3-9). Springer.
5. **Norsahperi, N. M. H.**, Ahmad, S., Fuad, A. F. M., Mahmood, I. A., Toha, S. F., Akmeliawati, R., & Darsivan, F. J. (2017, March). Modelling and control of Base Plate Loading subsystem for The Motorized Adjustable Vertical Platform. In *IOP Conference Series: Materials Science and Engineering* (Vol. 184, No. 1, p. 012049). IOP Publishing.
6. Fuad, A. F. M., Mahmood, I. A., Ahmad, S., **Norsahperi, N. M. H.**, Toha, S. F., Akmeliawati, R., & Darsivan, F. J. (2017, March). Modeling and simulation for heavy-duty mecanum wheel platform using model predictive control. In *IOP Conference Series: Materials Science and Engineering* (Vol. 184, No. 1, p. 012050). IOP Publishing.
7. **Norsahperi, N. M. H.**, Abdullah, M. A., Ahmad, S., Toha, S. F., & Mahmood, I. A. (2015). Modelling and Investigation on Bouncing Mechanism of a Sphere Robot. *Procedia Computer Science*, Vol. 76, 296-301

Conference Proceeding

1. Hafidz, M. H. A., Faudzi, A. A. M., Jamaludin, M. N., & **Norsahperi, N. M. H.** (2022). Neural Network Self Tuning PI Control for Thin McKibben Muscles in an Antagonistic Pair Configuration. In *International Conference on Robot Intelligence Technology and Applications* (pp. 91-103). Springer, Cham.

Intellectual Property

1. 2020, Spherical Mobile Robot (**MY-180789-A**)

Research Grant

No.	Project Title	Amount (RM)	Year	Source of Fund
1.	Optimal Position Control of an Uncertain Robotic Manipulator with Energy-Saving Feature for Pick & Place Application (Project Leader)	30,000	2022-2024	UPM-IPM

Industrial Collaboration

No.	Project Title	Company	Year	Source of Fund
1.	Design & Development of the Motorised Adjustable Vertical Platform for Satellite Assembly, Integration & Test Facility at National Space Agency, Malaysia (Task: Design & Develop the Electrical & Control System)	SIRIM Berhad & MYSA	2015-2017	MOSTI

Article Reviewer

No.	Name of Journal	Publisher	Year
1.	IEEE Transactions on Systems, Man, & Cybernetics: Systems	IEEE	2022
2.	Journal of Vibration & Control	SAGE Publishing	2022
3.	Measurement & Control	SAGE Publishing	2021
4.	IEEE Access	IEEE	2021
5.	International Journal of Integrated Engineering	Penerbit UTHM	2021

Award/Recognition

No.	Name of Award	Award Authority	Award Type	Year
1.	Best Paper Award at Hybrid International Conference: Current Trends in Islamic Technology	UNISSA, Brunei	Certificate	2022
2.	Top 20 Best Paper Award at Hybrid International Conference: Current Trends in Islamic Technology	UNISSA, Brunei	Certificate	2022
3.	Gold Medal in Engineering Category at Graduate Research Exhibition Competition 2021 (GREx 2021)	Universiti Teknologi Malaysia	Medal & Certificate	2021
4.	Ph.D Merit Thesis Award	Universiti Teknologi Malaysia	Certificate	2021
5.	Excellence Achievement in the Ph.D Thesis	Universiti Teknologi Malaysia	Certificate	2021
6.	The Best Paper Award at Symposium on Control System & Signal Processing 2019 (SymCSSP2019)	Universiti Putra Malaysia	Certificate	2019

Student Supervision

PhD (Co-Supervisor)

No.	Name	Title	Status
1.	Balbir Shah @ Mohd Faddullah (GS62881)	Digital Twin Modelling for Power Plant Early Anomaly Detection & Performance Prediction Based on Machine Learning Method	On going
2.	Mahmood Omar Talal Mahmood (GS60480)	Power Consumption & Optimization in UGV for Oil Palm Plantation	On going

PhD (Co-Supervisor)

No.	Name	Title	Status
1.	AbdulRahman Hajjo (GS64421)	Lithium-Ion Battery Ageing Modelling & Prediction With Deep Learning Algorithm	On going

Bachelor Final Year Project (Main Supervisor)

No.	Name	Title	Status
1.	Mas Athirah Mohd Hisban (202780)	Manhole Detection using Artificial Intelligent Techniques	On going
2.	Nurul Faqihah Hambali (202739)	Development of Robotic Manipulator for the Pick & Place Application	On going

3.	Syara Haziqa Mohd Helmen (196015)	Design And Development of a Vision-Guided Robotic Arm System for Pick & Place Operation	Completed
4.	Mohammed Salem Al-Shabebi (195534)	IoT Based Plant Monitoring System for Indoor Hydroponic System	Completed

Thesis Examination Committee

No.	Year	Name of Student (Institution)	Degree	Designation
1.	2022	Sabo Aliyu (UPM)	Ph.D	Chairman Assistant
2.	2022	Ali Mohsen Mohsen Al-Sabari (UPM)	Ph.D	Chairman Assistant
3.	2022	Neda Mahmod Mohammad Altwallbah (UPM)	Ph.D	Chairman Assistant

External Assessor

No.	Name of Program	Institution	Year
1.	Final Year Project Exhibition	Universiti Kebangsaan Malaysia	2022
2.	National Innovation & Invention Competition 2022 (NIICe2022)	Universiti Tun Hussein Onn Malaysia	2022

Invited Talk

No.	Talk Title	Event	Year
1.	Application of C/C++ in Robotics & Artificial Intelligence	IEEE Student Branch Universiti Putra Malaysia	2022

Student Activity

Competitions – National Level

No.	Name of Activity	Involvement	Year
1.	Intel Industry-University Challenge 2022 (3 rd Prize)	Advisor	2022
2.	NI Autonomous Robotic Competition 2022 (Quarter Final)	Advisor	2022
3.	University Robot Competition Kingdom of Champions (UROCK) (1 st Runner-Up & Innovation Presentation Award)	Advisor	2022

Community Engagement

No.	Name of Activity	Involvement	Year
1.	Tun Fatimah I-Challenge, Sekolah Tun Fatimah Technical & Vocational Education Training	Judge	2019
2.	(TVET) IPT for Society @ Keluarga Malaysia (UNITY) at Parit Sulong, Johor	Member	2022