

CURRICULUM VITAE



Personal Information

Name: Ahmad Zhafran Ahmad Mazlan
Ph.D., JSME, MIET, Grad BEM, Grad IEM, SVAM, Certified TTT

Gender: Male

Current Position: Program Chairman – Quality & Corporate Unit / Senior Lecturer

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Status: Married

Language: Malay, English and Japanese

Education Background

| College/University | Qualification | Year Awarded |
|--------------------------------------|--|--------------|
| Kolej Poly-Tech MARA Bangi, Malaysia | Diploma Japanese Associate Degree | 2005 |
| Waseda University, Japan | Bachelor of Engineering (Mechanical Engineering) | 2008 |
| Universiti Sains Malaysia | Master of Science (Mechanical Engineering) | 2012 |
| Universiti Sains Malaysia | Doctor of Philosophy (Sound and Vibration) | 2016 |

Working Experience

| Position | Organisation/Department | Year of Working |
|---------------------------------|---|------------------------|
| Design and Development Engineer | Engineering Design (Body), Proton Holdings Berhad, Malaysia | 2008 - 2010 |
| Design Engineer | Development and Design, Bosch Automotive Steering Sdn. Bhd., Malaysia | 2010 |
| Research Fellow | School of Mechanical Engineering, Universiti Sains Malaysia (USM), Malaysia | 2010 - 2016 |
| Senior Lecturer | School of Mechanical Engineering, Universiti Sains Malaysia (USM), Malaysia | 2016 - Present |

Teaching Experience

Teaching Courses: Engineering Mechanics (EMM 101), Engineering Laboratory I and II (EML 211, EML 331), Manufacturing Laboratory I (EPL 322), Manufacturing Technology II (EPP 331), Conceptual Design and CAD (EMD 112), Noise and Vibration (EMM 352), Mechanical Engineering Integrated Design (EMD 431), Automatic Control (EMC 322), Mechatronic (EMC 311) and Final Year Project (EMD 452)

Field of Research

Sound and Vibration, Active Vibration Control, Active Force Control, Piezoelectric Sensor and Actuator, Structural Dynamic Modification, Hand-arm Vibration, System Dynamic Modelling and Simulation, Intelligent Control, Condition Based Monitoring

List of Research Grants, Projects, and Consultation

| No. | Project Title | Roles | Source / Customer | Duration | Amount RM: Ringgit Malaysia |
|------------|---|----------------|---------------------------------|---------------------|------------------------------------|
| 1 | Analysis of the Coupled Active Suspended Handle-Die Grinder using PID-AFCCA and PID-AFCFL Control Methods with Consideration to the Piezoelectric Actuator Non-linear Effects | Project Leader | USM Short-Term Grant (Internal) | Dec 2016 – May 2019 | RM 39,370.40 |
| 2 | Novel Piezoelectric Material Characterization with Hysteresis, Creep, Vibration | Project Leader | KPT FRGS Grant (External) | Aug 2017 – Feb 2020 | RM 79,712.00 |

| No. | Project Title | Roles | Source / Customer | Duration | Amount RM: Ringgit Malaysia |
|------------|---|----------------|--------------------------------|-----------------------|------------------------------------|
| | and Saturation Non-linearity Effects | | | | |
| 3 | A Comprehensive Correction Model for the Piezoelectric Material with Hysteresis, Creep, Vibration and Saturation Non-linearity Effects | Project Leader | KPT FRGS Grant (External) | Sep 2021 – Sep 2024 | RM 128,120.00 |
| 4 | Attenuation of Transmitted Hand-arm Vibration from the Small-scale Fishing Boat Engine Handle using Structural Dynamic Modification Method | Project Leader | USM RUI Grant (Internal) | Feb 2020 – Jan 2023 | RM 65,000.00 |
| 5 | Universal Suspended Handle Adaptor for Petrol Engine Grass Trimmer to reduce the Hand-Arm Vibration Among RISDA Smallholders and Workers | Project Leader | MOSTI MySI Grant (External) | Oct 2020 – Mar 2022 | RM 115,350.00 |
| 6 | Universal Suspended Handle Adaptor for Petrol Engine Grass Trimmer to Reduce the Hand-Arm Vibration Among RISDA Smallholders in Perlis Malaysia | Project Leader | USM BJIM Grant (Internal) | Oct 2020 – Mar 2022 | RM 10,000.00 |
| 7 | Smart Plug and Play System Based Vibration Toggle Latch and PCB Connection | Project Leader | KPT PPRN Grant (External) | May 2017 – Dec 2017 | RM 35,285.00 |
| 8 | Active Vibration Control using PID-AFC Controller of the Piezo Stack Actuator with Consideration to Hysteresis and Saturation Effects | Project Leader | USM TPLN Fund (Internal) | July 2017 – July 2017 | RM 12,482.50 |
| 9 | Active Vibration Control to Attenuate Hand-arm Vibration from Orbital Sander: A Mathematical Model Approach | Project Leader | USM IPS Fund (Internal) | May 2015 – May 2015 | RM 1,027.00 |
| 10 | Technique to Overcome Piezo Stack Actuator Saturation Using Parallel Stiffness Combination for an Active | Project Leader | KPT Conference Fund (External) | Sep 2015 – Sep 2015 | RM 6,640.00 |

| No. | Project Title | Roles | Source / Customer | Duration | Amount RM: Ringgit Malaysia |
|------------|--|-----------------|------------------------------------|-----------------------|------------------------------------|
| | Suspended Handle | | | | |
| 11 | Noise Reduction of the Proton Exora Air Conditional System using Structural Dynamic Modification Method | Main Consultant | Proton Holdings Berhad (External) | May 2017 – Apr 2019 | RM 25,180.00 + In kinds |
| 12 | Vibration Analysis and Seismic Monitoring of Dam Structure for TNB Chenderoh Hydropower Station | Main Consultant | Uniten R&D (External) | Dec 2017 – Nov 2018 | RM 224,720.00 |
| 13 | Energy Dissipater Design, Vibration and Fluid-Structure-Interaction Study of the TNB Kenyir Dam Spillway | Main Consultant | Uniten R&D (External) | Jul 2019 – Nov 2019 | RM 234,951.12 |
| 14 | Comparison of Deflection (Vibration) between Different Type of Vehicles using Shaker, High Speed Camera and Laser Displacement Sensor Method | Main Consultant | Personal Vehicle (External) | Jul 2018 – Oct 2018 | RM 3,500.00 |
| 15 | Ground Vibration Measurement of UWC Batu Kawan Plant | Main Consultant | UWC Holdings (External) | Dec 2017 – Jan 2018 | RM 5,035.00 |
| 16 | Expert Witness | Main Consultant | Personal Vehicle (External) | Mar 2019 – Mar 2019 | RM 1,500.00 |
| 17 | Vibration Measurement of the Current Aluminium and New Box of Penang Cable Car | Main Consultant | Penang Hill Corporation (External) | Dec 2019 – Dec 2019 | RM 5,000.00 |
| 18 | Rubber Durability Testing | Main Consultant | JEBSCO (External) | June 2022 – June 2022 | RM 1,500.00 |
| 19 | Material Testing using Injection Moulding | Main Consultant | UTP (External) | July 2022 – Sep 2022 | RM 2,460.00 |
| 20 | Machining services using CNC | Main Consultant | HRF Dinamik Sdn Bhd (External) | Nov 2022 – Dec 2022 | RM 600.00 |

| No. | Project Title | Roles | Source / Customer | Duration | Amount RM: Ringgit Malaysia |
|------------|--|-----------------|---|----------------------|------------------------------------|
| 21 | Sound Measurement and Analysis of Automotive Part | Main Consultant | Continental Automotive Components Malaysia Sdn Bhd (External) | Mar 2023 – Apr 2023 | RM 3,500.00 |
| 22 | Vibration and Acoustic Testing of Semiconductor Parts | Main Consultant | Inari Technology Sdn Bhd (External) | July 2023 – Aug 2023 | RM 7,500.00 |
| 23 | Mold Design | Main Consultant | UPM (External) | Jan 2024 – Feb 2024 | RM 600.00 |
| 24 | Vibration Testing for Staircase | Main Consultant | Lendlease Projects (M) Sdn Bhd (External) | Oct 2023 – Mac 2024 | RM 39,000.00 |
| 25 | Workshop on Human Engineering Addressing Back Pain at Workplace: Measurement and Intervention | Main Trainer | Public Course (External) | Dec 2022 – Dec 2022 | RM 4,560.00 |
| 26 | Professional Diploma in Mechanical Structure Integrity and Inspection with Lean Management | Main Trainer | Penang Port Sdn Bhd (External) | Jan 2023 – Dec 2023 | RM 288,000.00 |
| 27 | Analysis of Micro-perforated Cylindrical Panel | Co-Researcher | CREST Grant (External) | Jan 2018 – Jan 2021 | RM 894,061.22 |
| 28 | An Active Force Control Option for the Control Moment Gyro (CMG) Based Attitude Control System | Co-Researcher | USM RUI Grant (Internal) | Sep 2018 – Aug 2020 | RM 67,590.00 |
| 29 | Boundary Layer Flow Control Over a Bluff Body | Co-Researcher | USM Short-Term Grant (Internal) | Oct 2021 – Sep 2023 | RM 28,000.00 |
| 30 | Development of Universal Suspended Vibration Absorber for Grass Trimmer | Co-Researcher | KPT PPRN 2.0 Grant (External) | Jan 2020 – June 2020 | RM 44,000.00 |

| No. | Project Title | Roles | Source / Customer | Duration | Amount RM: Ringgit Malaysia |
|-----|--|---------------|--|----------------------|-------------------------------|
| 31 | Vibration Energy Harvesting Characteristics for Wide-Band Frequency of Automotive Suspension | Co-Researcher | UniKL-MSI Grant (External) | Dec 2021 – Dec 2024 | RM 25,000.00 |
| 32 | Impact Testing of the Composite Cantilever Beam | Co-Consultant | UTM (External) | Aug 2014 – Aug 2014 | RM 1,000.00 |
| 33 | Bump and Spectral Test of Lexus NX 200T | Co-Consultant | Personal Vehicle (External) | May 2016 – May 2016 | RM 1,855.00 |
| 34 | Infrared (IR) lights penetration testing on flexible packaging material (doypack material) | Co-Consultant | Colgate-Palmolive (M) Sdn Bhd (External) | May 2022 – June 2022 | RM 1,750.00 |
| 35 | Heat Transfer and Heat Sink Development | Co-Trainer | Dream Cather Consulting Sdn Bhd (External) | Sep 2022 – Oct 2022 | RM 8,000.00 |
| 36 | Course on CFD Training for Livestock Housing Ventilation System | Co-Trainer | ACGO CSI Sdn Bhd (External) | Sep 2022 – Oct 2022 | RM 10,600.00 |
| 37 | Professional Diploma in Electronics & Automation with Equipment Handling for Manufacturing | Co-Trainer | Analog Device (External) | June 2022 – Dec 2022 | RM 6,000.00 |
| 38 | Professional Certificate in Equipment Handling for Manufacturing and Automation | Co-Trainer | Western Digital (External) | June 2022 – Dec 2022 | RM 6,000.00 |
| 39 | Sakura Science Exchange Program (The University of Tokyo) | Co-Member | Japan Science and Technology Agency (External) | Dec 2023 – Dec 2023 | ~RM 63,728.00 (2,018,885 JPY) |

Publications, Awards, and IPs

Journals, Book Chapters and Conference Proceedings

- 1) Usamah, N. M., Rahman, M. R. A., **Mazlan, A. Z. A.*** (2024). Characterization and selection of testing beam material for active vibration cancellation studies. *AIP Conference Proceedings*, 3014: No. 1.
- 2) Hassan, N. H., Zawawi, M. H.* , **Mazlan, A. Z. A.**, Arbain, A., Abas, M. A. (2024). Vibration Effect to Kenyir Dam Intake Section During a Spill Event. *Lecture Notes in Civil Engineering*, 3: 545-552.
- 3) Hassan, N. H., Zawawi, M. H.* , **Mazlan, A. Z. A.**, Abas, M. A., Zainol, M. R. R. M. A., Radzi, M. R. M., Kamaruddin, M. A. (2024). Experimental Modal Analysis and Operational Deflection Shape Analysis for Kenyir Dam Spillway Physical Model. *Lecture Notes in Civil Engineering*, 3: 653-663.
- 4) Bashar, N. A. M., Zainol, M. R. R. M. A.* , Aziz, M. S. A., Zawawi, M. H., **Mazlan, A. Z. A.** (2024). Hydraulic Properties of Flow Over Different Types of Spillways: A Review. *Lecture Notes in Civil Engineering*, 3: 683-696.
- 5) Bashar, N. A. M., Zainol, M. R. R. M. A.* , Aziz, M. S. A., **Mazlan, A. Z. A.**, Zawawi, M. H. (2023). Dam Safety: Highlighted Issues and Reliable Assessment for the Sustainable Dam Infrastructure. *Proceedings of International Conference on Dam Safety Management and Engineering*, pp 871-880, Singapore: Springer Nature Singapore.
- 6) Hassan, N. H., Kamarulbahrin, S. Z. A. S., Zawawi*, M. H., **Mazlan, A. Z. A.**, Abas, M. A., Zainol, M. R. R. M. A., & Kamaruddin, M. A. (2024). Computational Fluid Dynamic Analysis at Dam Spillway Due to Different Upstream Water Levels. *Lecture Notes in Civil Engineering*, 3: 539-544.
- 7) Abdulwahab A. H., **Mazlan A. Z. A.***, Hawary A. F., Hadi N. H. (2023), Quadruped Robots Mechanism, Structural Design, Energy, Gait, Stability, and Actuators: A Review Study, *International Journal of Mechanical Engineering and Robotics Research*, 12: 385-395
- 8) Usamah N. M, Satmi M. S., Rahman M. R. A., **Mazlan, A. Z. A.*** (2023), Correction Modelling of Piezoelectric Material Non-Linear Behaviors as an Actuators. *AIP Conference Proceedings*, 2959: No. 1
- 9) Saad F., Hamid M. N. A.* , **Mazlan, A. Z. A.** (2023), Wide Band Frequency Dynamic Vibration Absorber Application for Minimizing Vibration Level. *AIP Conference Proceedings*, 2959: No. 1
- 10) Radzi M. R. M., Zawawi M. H.* , Abas M. A., **Mazlan A. Z. A.**, Mohd Arif Zainol M. R. R., Hassan N. H., Che Wan Zainal W. N, Dullah H., Kamaruddin M. A. (2023), Structure Integrity Analysis Using Fluid–Structure Interaction at Hydropower Bottom Outlet Discharge, *Water*, 15; 1039.
- 11) Aziz M. S. A, **Mazlan, A. Z. A.*** (2023), AC Pipe Structural Dynamic Characterization in On–Off Vehicle Conditions, *Advances in Material Science and Engineering*, 377-383.
- 12) Ghazali M. H. M., **Mazlan, A. Z. A.***, Azman M. A., Zawawi M. H. (2022), Numerical Vibration Analysis of the Dam Sector Gate Structure with Consideration to Material Degradation Characteristics, *Journal of Engineering Science and Technology*, 17: 2461-2475.
- 13) Aziz M. S. A, **Mazlan, A. Z. A.***, Satar M. H. A., Paiman M. A. R., Abd Ghapar M. Z. (2022), Attenuation of Humming Type Noise and Vibration in Vehicle HVAC System Using a Tuneable Dynamic Vibration Absorber, *Archives of Acoustics*, 47: 331-342.
- 14) Usamah N. M., **Mazlan, A. Z. A.***, Ripin Z. M. (2022), Investigation of Motorcycle Handle Vibration Attenuation Using a Suspended Handlebar with Different Rubber Mount Characteristics, *International Journal of Acoustics and Vibration*, 27: 276-284.

- 15) Satar M. H. A, Murad A. F., **Mazlan, A. Z. A.*** (2022), Characterization of Piezoelectric Patch Material with Hysteresis, Saturation, Creep and Vibration Non-Linearity Effects and its Application to the Active Vibration Suppression for Cantilever Beam, *Journal of Vibration and Control*, 28: 476-489.
- 16) Chew, C. S., Md Isa M. S., **Mazlan, A. Z. A.***. (2022), AFCGA as Preferable Intelligent Tuning Method to Reduce the Vibration of Suspended Handle-Power Tool. *Lecture Notes in Electrical Engineering*, 228-233.
- 17) Chong, Z. C., Ali, W. M. A., **Mazlan, A. Z. A.*** (2021), Structural Vibration Study of a New Concept Intelligent Rubber Tapping Machine. *Lecture Notes in Mechanical Engineering*, 305-312.
- 18) Choo K., **Mazlan, A. Z. A.*** (2021), Vibration Attenuation of Suspended Handle Model using Intelligent Tuning Method of AFC-PSO, *ASM Science Journal*, 16; 130.
- 19) Satar M. H. A, **Mazlan, A. Z. A.***, Hamdan M. H., Md Isa M. S., Paiman M. A. R., Abd Ghapar M. Z. (2021), Validation of Clicking-type Noise and Vibration in Automotive HVAC System, *International Journal of Automotive and Mechanical Engineering*, 18: 8489-8497.
- 20) Satar M. H. A., Wong J. N., **Mazlan, A. Z. A.*** (2021), Numerical Approach on Hybrid PID-AFC Controller using Different Intelligent Tuning Methods to Reduce the Vibration of the Suspended Handle, *International Journal of Acoustics and Vibration*, 26: 28-40.
- 21) Satar M. H. A, **Mazlan, A. Z. A.***, Tan S. J. (2021), Effect of Different Inertia-Type Piezoelectric Actuator Masses to Reduce the Vibration of an Active Suspended Handle, *Ferroelectrics*, 570: 188-205.
- 22) Satar M. H. A, **Mazlan, A. Z. A.***, Hamdan M. H, Md Isa M. S., Paiman M. A. R., Abd Ghapar M. Z. (2021), A Lab-Scale HVAC Hissing-Type Noise Characterization with Vehicle System Validation, *Archives of Acoustics*, 46: 365-373.
- 23) Satar M. H. A, **Mazlan, A. Z. A.***, Hamdan M. H, Md Isa M. S., Paiman M. A. R., Abd Ghapar M. Z. (2021), Experimental Validation of the HVAC Humming-Type Noise and Vibration in Model and Vehicle System Levels, *Archives of Acoustics*, 46: 375-385.
- 24) Arbain, A., Zawawi, M. H., Radzi, M. R. M., Hassan, N. H., **Mazlan, A. Z. A.*** (2021), Natural Frequencies Comparison Between the Pure Granite and Bonded Granite-Concrete. *AIP Conference Proceedings*, 2339: No. 1.
- 25) **Mazlan A. Z. A.***, Md Isa M. S., Paiman M. A. R., Abd Ghapar M. Z, (2021), Air-Rush Noise Measurement of Vehicle HVAC System with Different Vent Louver Conditions, *The 1st UNITED – Southeast Asia Automotive Interest Group (SAIG) International Conference*, 1: 49-50.
- 26) Md. Isa, M. S., **Mazlan, A. Z. A.*** (2021). Hand-Arm Vibration Transmissibility Measurement from The Petrol Driven Motorboat Engine. *Journal of Physics: Conference Series*, 1896: No. 1, p. 012006.
- 27) Hassan, N. H., Zawawi, M. H.*, Zainol, M. R. R. M. A., **Mazlan, A. Z. A.**, Abas, M. A., Azman, M. A. (2020). Physical modelling analysis of Chenderoh spillway. *AIP Conference Proceedings*, 2291: No. 1
- 28) Theik, C. C., **Mazlan, A. Z. A.*** (2020). Active Vibration Control of An Inertia-Type Piezoelectric Actuator Based Suspended Handle Using PID-AFC Controller. *2020 IEEE Symposium on Industrial Electronics & Applications*, pp. 1-5. IEEE.
- 29) Arbain, A., Zawawi, M. H., **Mazlan, A. Z. A.***, Abas, M. A., Radzi, M. R. M., Hassani, A. (2020). Structural Dynamic Behavior Study of The Kenyir Hydropower Station Ungated-Type Spillway. *AIP Conference Proceedings*, 2291: No. 1.

- 30) Arbain, A., **Mazlan, A. Z. A.***, Zawawi, M. H. and Radzi, M. R. M. (2020). Modal and Harmonic Response Analyses of the Kenyir Dam Intake Section. *Lecture Notes in Civil Engineering*, 53: 1-9.
- 31) Radzi, M. R. M., Zawawi, M. H., Yusairah, W. N.*, **Mazlan, A. Z. A.**, Abas, M. A. and Zainol, M. R. R. (2020). Natural Frequency Analysis for Hydropower Structure. *Water Resources Development and Management*. 408-416.
- 32) Zaki, S. A. A., Hassan, N. H.*, Zawawi, M. H., Abas, M. A., **Mazlan, A. Z. A.**, Zainol, M. R. R. and Radzi, M. R. M. (2020). Numerical and Physical Model Analysis Comparison for Velocity of Water at Spillway. *Water Resources Development and Management*. 511-519.
- 33) Jafar, N. A., Ooi, L. E.*, **Mazlan, A. Z. A.**, Seng, K. H. C., Tan, J. M. (2020). The Evaluation of Deviation in Sound Absorption Coefficient for Micro-perforated Panel. *IOP Conference Series: Materials Science and Engineering*, 815: No. 1, p. 012009.
- 34) Arbain, A., Zawawi, M. H., Ganesan, R., Ghazali, M. H. M., Radzi, M. R. M., Hassan, N. H., **Mazlan, A. Z. A.***, (2020). Vibration Analysis of Chenderoh Dam Physical Model Spillway Structure due to the Effect of Water Spilling: Numerical and Experimental Validation. *IOP Conference Series: Materials Science and Engineering*, 815: No. 1, p. 012020.
- 35) **Mazlan, A. Z. A.***, Zawawi, M. H., Arbain, A., Ghazali, M. H. M., Satar, M. H. A., Abas, M. A., Radzi, M. R. M. (2020). Numerical Study of the Flow-Induced Vibration During Tunnel Surging at the Intake Section of Chenderoh Dam. *IOP Conference Series: Materials Science and Engineering*, Vol. 815: No. 1, p. 012019.
- 36) Ng, F. C., Azman, A., Abas*, A., Zawawi, M. H., **Mazlan, A. Z. A.**, Zahari, N. M., Rozainy, Z. M. R., (2020). Fluid/structure Interaction Numerical Study on the Mechanical Integrity of Water Dam Reservoir Banks. *IOP Conference Series: Materials Science and Engineering*, 815: No. 1, p. 012021.
- 37) Arbain, A., **Mazlan, A. Z. A.***, Zawawi, M. H. and Radzi, M. R. M. (2019). Vibration Analysis of Kenyir Dam Power Station Structure using a Real Scale 3D Model. *Civil and Environmental Engineering Reports*, 30: 48-59.
- 38) Radzi, M. R. M.*, Zawawi, M. H., Sidek, L. M., Ghazali, M. H. M. and **Mazlan, A. Z. A.** (2019). Vibration Analysis due to Frequent Spilling over Hollow Buttress Chenderoh Dam Sector Gate Spillway. *Proceedings of 87th International Commission on Large Dams (ICOLD)*, pp 2763-2768. 9-14 June, Ottawa, Canada.
- 39) Satar, M. H. A., **Mazlan, A. Z. A.***, Hamdan, M. H., Md. Isa, M. S., Man, S., Paiman, M. A. R., Abd. Ghapar, M. Z., Sulaiman, M. S. A. and Miyashita, T. (2019). Characterisation of the Humming-type Noise and Vibration of the Automotive HVAC System. *International Journal of Automotive and Mechanical Engineering*, 16: 6634-6648.
- 40) Satar, M. H. A. and **Mazlan, A. Z. A.*** (2019). Piezoelectric Material Non-Linear Characteristics, Compensation Methods and Application. *Evolutions in Mechanical Engineering*, 2: 1-5.
- 41) Ghazali, M. H. M., **Mazlan, A. Z. A.***, Azman, M. A., Zawawi, M. H. and Radzi, M. R. M. (2019). Flow-Induced Vibration Response of the Chenderoh Dam Bottom Outlet Section Due to the Effects of Water Spilling. *IOP Conference Series: Materials Science and Engineering*, 652: No. 1, p. 012052.
- 42) Ghazali, M. H. M., **Mazlan, A. Z. A.***, Wei, L. M., Tying, C. T., Sze, T. S., and Jamil, N. I. M. (2019). Effect of Machining Parameters on the Surface Roughness for Different Type of Materials. *IOP Conference Series: Materials Science and Engineering*, 530: 012008.

- 43) Satar, M. H. A., **Mazlan, A. Z. A.***, Hamdan, M. H., Md. Isa, M. S., Man, S., Paiman, M. A. R., Abd. Ghapar, M. Z. and Sulaiman, M. S. A. (2019). Application of the Structural Dynamic Modification Method to Reduce the Vibration of the Vehicle HVAC system. *Journal of Physics: Conference Series* 1262: 012034.
- 44) Wong, J. N., Satar, M. H. A. and **Mazlan, A. Z. A.*** (2018). Simulation of Active Force Control using Intelligent Methods to Reduce Vibration of Suspended Handle. *Proceedings of 9th TSME International Conference on Mechanical Engineering (ICoME)*, pp 1. 11-14 December, Phuket, Thailand.
- 45) Firdaus, S. M.*, Abdullah, M. Z., Abdullah, M. K., **Mazlan, A. Z. A.**, Ripin, Z. M., Amri, W. M. and Yusuf, H. (2018). Synthetic Jet Study on Resonance Driving Frequency for Electronic Cooling. *Regional Conference on Science, Technology and Social Science (RCSTSS)*, 42, 435-443.
- 46) Paiman, M. A. R., **Mazlan, A. Z. A.***, Hamdan, M. H., Md. Isa, M. S., Man, S., Abd. Ghapar, M. Z., Sulaiman, M. S. A. and Miyashita, T. (2018). Measurement of the Hissing-type Noise and Vibration of the Automotive HVAC System. *MATEC Web of Conferences*, 217, 03002.
- 47) Ghazali, M. H. M., Zawawi, M. H., Hassan, N. H., Radzi, M. R. M., **Mazlan, A. Z. A.***, Abas, M. A. and Zainol, M. R. R. (2018). Structural Dynamic Analysis of the Chenderoh Dam Sector Gate Section. *MATEC Web of Conferences*, 217, 02002.
- 48) Satar, M. H. A. and **Mazlan, A. Z. A.*** (2018). Modelling of the Coupled Beam-piezoelectric Material with Hysteresis Non-linear Effect. *MATEC Web of Conferences*, 217, 02001.
- 49) Ghazali, M. H. M., Zawawi, M. H., Hassan, N. H., Radzi, M. R. M., **Mazlan, A. Z. A.***, Abas, M. A. and Zainol, M. R. R. (2018). Prediction of the Flow-induced Vibration Response of the Chenderoh Dam Left Bank Section. *MATEC Web of Conferences*, 217, 01001.
- 50) Azman, A., Zawawi, M. H., Hassan, N. H., Abas, M. A.*, Razak, N. A., **Mazlan, A. Z. A.** and Zainol, M. R. R. (2018). Effect of Step Height on the Aeration Efficiency of Cascade Aerator System using Particle Image Velocimetry. *MATEC Web of Conferences*, 217, 04005.
- 51) Zulkefli, Z. F., Zawawi, M. H., Hassan, N. H., Zainol, M. R. R.*, Abas, M. A. and **Mazlan, A. Z. A.** (2018). Calculating the Moduli Elasticity for Reinforced Concrete using New Rule of Mixtures Approach for the Dam Structure. *MATEC Web of Conferences*, 217, 04003.
- 52) **Mazlan, A. Z. A.*** and Jamaludin, H. (2018). Performance Comparison of the PID-AFCCA and PID-AFCFL Controllers in Reducing the Vibration of the Suspended Handle. *Proceedings of 6th International Conference on Control, Mechatronics and Automation (ICCMA)*, pp 105-110. 12-14 October, Tokyo, Japan.
- 53) **Mazlan, A. Z. A.*** and Ripin, Z. M. (2017). The Effective Frequency Range of an Active Suspended Handle based on the Saturation Effects of a Piezo Stack Actuator. *Journal of Vibration and Control*, 23: 752-769.
- 54) Rogaizat, F. N. and **Mazlan, A. Z. A.*** (2017). Application of the Active Force Control Method to Reduce the Vibration of the Suspended Handle: Experimental Investigation. *Proceedings of International Conference on Vibration, Sound and System Dynamics (ICVSSD)*, pp 92-95. 2 August, Penang, Malaysia.
- 55) Jaafar, N. A. A. and **Mazlan, A. Z. A.*** (2017). Characterization of Sandwich-type Beam with Double Piezoelectric Patch Materials using ANSYS Software. *Proceedings of International Conference on Vibration, Sound and System Dynamics (ICVSSD)*, pp 70-74. 2 August, Penang, Malaysia.

- 56) **Mazlan, A. Z. A.***, Ripin, Z. M. and Ali, W. M. (2017). Active Vibration Control using PID-AFC Controller of the Piezo Stack Actuator with Consideration to Hysteresis and Saturation Effects. *Proceedings of 24th International Congress on Sound and Vibration (ICSV)*, pp 1-8. 23-27 July, London, United Kingdom.
- 57) **Mazlan, A. Z. A.***, Ripin, Z. M. and Ali, W. M. (2016). Piezo Stack Actuator Saturation Control of the Coupled Active Suspended Handle-Die Grinder using Various PID-Anti-Windup Control Scheme. *Proceedings of 6th IEEE International Conference on Control System, Computing and Engineering (ICCSCE)*, pp 27-32. 25-27 November, Penang, Malaysia.
- 58) **Mazlan, A. Z. A.*** and Ripin, Z. M. (2016). Structural Dynamic Modifications of an Active Suspended Handle with Parallel Coupled Piezo Stack Actuator. *Journal of System and Control Engineering*, 230: 130-144.
- 59) **Mazlan, A. Z. A.*** and Ripin, Z. M. (2015). Active Vibration Control to Attenuate Hand-arm Vibration from Orbital Sander: A Mathematical Model Approach. *Indian Journal of Science and Technology*, 8: 30.
- 60) **Mazlan, A. Z. A.*** and Ripin, Z. M. (2015). Technique to Overcome Piezo Stack Actuator Saturation using Parallel Stiffness Combination for an Active Suspended Handle. *Proceedings of International Conference on Engineering Vibration (ICoEV)*, pp 592-600. 7-10 September, Ljubljana, Slovenia.
- 61) **Mazlan, A. Z. A.*** and Ripin, Z. M. (2015). Frequency Dependent Vibration Attenuation of a Suspended Handle using Piezo Stack Actuator. *Applied Mechanics and Materials*, 761: 211-215.
- 62) Ripin, Z. M.* and **Mazlan, A. Z. A.** (2011). Development of Active Vibration Cancellation Pad for Orbital Sander. *Proceedings of 4th International Conference on Product Design and Development (IPDD)*, pp 1-7. 9-10 November, Yogyakarta, Indonesia.

Books Editors

- 1) **Mazlan, A. Z. A.***, Hamid, M. N. A., and Ko, Y. H. (2023). *Book of Proceedings, 2022 International Conference on Vibration, Sound and System Dynamics (ICVSSD)*, 7 December, Penang, Malaysia. (DOI: 10.1063/12.0021249)
- 2) **Mazlan, A. Z. A.*** and Endan H. (2021). *Book of Abstracts, 1st Seminar on Vibration, Sound and System Dynamics (SVSSD)*, TheVibrationLab, USM
- 3) **Mazlan, A. Z. A.***, Alisah, M. I, and Endan, H. (2019). *Book of Proceedings, 2019 International Conference on Vibration, Sound and System Dynamics (ICVSSD)*, 2 December, Penang, Malaysia. (ISBN: 978-976-394-342-5)
- 4) **Mazlan, A. Z. A.*** and Endan H. (2018). *Book of Proceedings, 2018 International Conference on Vibration, Sound and System Dynamics (ICVSSD)*, 20 August, Penang, Malaysia. (ISBN: 978-967-394-326-5)
- 5) **Mazlan, A. Z. A.*** and Endan H. (2017). *Book of Proceedings, 2017 International Conference on Vibration, Sound and System Dynamics (ICVSSD)*, 2 August, Penang, Malaysia. (ISBN: 978-967-0167-24-4)

Competitions and Awards

International and National

- 1) Bashar, N. A. M.*, Zainol, M. R. R., **Mazlan, A. Z. A.**, Aziz, M. S. A., Zawawi, M. H. (2024) SaSDAM: Hybrid Monitoring Model for Critical Infrastructure, *Bangkok International Intellectual Property, Invention, Innovation and Technology Exposition (IPITEx 2024)*, 2-6 February, Bangkok, Thailand. **(GOLD & Special Award)**
- 2) **Mazlan, A. Z. A.***, Rosli, M. A. M., Gilok, A. A. (2023) Development of IoT-Based Remote Monitoring Vibration Analyzer (REM-VIAN), *2nd International Invention, Innovation and Design Expo (INoDEX)*, September, Penang, Malaysia. **(SILVER Award)**
- 3) Bashar, N. A. M.*, Zainol, M. R. R., **Mazlan, A. Z. A.**, Aziz, M. S. A., Zawawi, M. H. (2023) SASDAM: Robust Hybrid Monitoring Model for the Structural Integrity of Critical Infrastructures, *Arau International Creativity Exhibition (ACE)*, August, Perlis, Malaysia. **(GOLD Award)**
- 4) Bashar, N. A. M.*, Zainol, M. R. R., **Mazlan, A. Z. A.**, Aziz, M. S. A., Zawawi, M. H. (2023) SASDAM: Robust Hybrid Monitoring Model for the Structural Integrity of Critical Infrastructures, *International Invention Innovation Competition in Canada (iCAN)*, August, Toronto, Canada **(GOLD Award)**
- 5) **Mazlan, A. Z. A.***, (2022) Universal Suspended Handle Adaptor for Petrol Engine Grass Trimmer to Reduce the Hand-arm Vibration among RISDA Smallholders in Perlis, Malaysia, *RISDA Negeri Perlis, Community Engagement Project (3 Stars Award)*
- 6) Md. Isa M. S., Ali, W. M. **Mazlan, A. Z. A.***, (2021) Multi-frequency Dynamic Vibration Absorber (DVA) to Reduce the Vibration of Motorboat Engine Handle, *International Invention Innovation Competition in Canada (iCAN)*, August, Toronto, Canada. **(GOLD Award)**
- 7) Hassan, N. H.*, Zawawi, M. H., Abas, M. A., **Mazlan, A. Z. A.**, Zainol, M. R. R. and Radzi, M. R. M (2021) Hydropower Structure Risk Assessment System (HYDRIAS), Korea Invention Promotion Association, *2021 Seoul International Invention Fair (GOLD Award)*
- 8) Cheah C. C., Ali, W. M. **Mazlan, A. Z. A** (2020) Inertia Piezoelectric Actuator Based Active Suspended Handle for Power Tools Application, *UniMAP, Virtual Research and Innovation Exhibition eREKA 2020 (GOLD Award)*
- 9) Hassan, N. H.*, Zawawi, M. H., Abas, M. A., **Mazlan, A. Z. A.**, Zainol, M. R. R. and Radzi, M. R. M. (2020). Hydropower Structure Risk Assessment System (HYD-RIAS). *Bangkok International Intellectual Property, Invention, Innovation and Technology Exposition (IPITEx 2020)*, 2-6 February, Bangkok, Thailand. **(GOLD Award)**
- 10) Radzi, M. R. M.*, Zawawi, M. H., Sidek, L. M., Ghazali, M. H. M. and **Mazlan, A. Z. A.** (2019). Vibration Analysis due to Frequent Spilling over Hollow Buttress Chenderoh Dam Sector Gate Spillway. *87th International Commission on Large Dams (ICOLD)*, 9-14 June, Ottawa, Canada. **(BEST Poster Awards)**
- 11) **Mazlan, A. Z. A.***, Tan, S. J. and Ali, W. M. (2019). Inertia Piezoelectric Actuator Based Suspended Handle for Power Tools Application. *International Invention Innovation Competition in Canada (iCAN)*, 24 August, Toronto, Canada. **(GOLD Award)**
- 12) Hassan, N. H.*, Zawawi, M. H., Abas, M. A., **Mazlan, A. Z. A.**, Zainol, M. R. R. and Radzi, M. R. M. (2019). Hydropower Structure Risk Assessment System (HYD-RIAS). *International Invention Innovation Competition in Canada (iCAN)*, 24 August, Toronto, Canada. **(GOLD Award)**
- 13) Hassan, N. H.*, Zawawi, M. H., Abas, M. A., **Mazlan, A. Z. A.**, Zainol, M. R. R. and Radzi, M. R. M. (2019). Hydropower Structure Risk Assessment System (HYD-RIAS).

- Invention, Innovation Competition and Exhibition Terengganu (ICTex)*, 4-5 July, Terengganu, Malaysia. **(GOLD Award)**
- 14) **Mazlan, A. Z. A.***, Ripin, Z. M. and Ali, W. M. **(2018)**. A Novel Hybrid Piezoelectric Actuator-based Active Suspended Handle for Power Tools. *International Invention Innovation Competition in Canada (iCAN)*, 1 September, Toronto, Canada. **(GOLD Award)**
 - 15) Abas, M. A.*, Usamah, N. M. Yahya, N., Jaafar, M. F., Zakaria, N. and **Mazlan, A. Z. A. (2018)**. Jawi Automated Attendance Recording System. *International Engineering Invention and Innovation Exhibition (i-ENVEX)*, 13-15 April, Perlis, Malaysia. **(SILVER Award)**
 - 16) **Mazlan, A. Z. A.***, Hamid, M. N. A., Ripin, Z. M. and Ali, W. M. **(2016)**. A Novel Hybrid Piezoelectric-Based Suspended Handle for an Electric Die Grinder. *International Eureka Innovation Exhibition (i-EIE)*, 16-18 August, Kedah, Malaysia. **(SILVER Award)**
 - 17) Abas, M.A.*, **Mazlan, A. Z. A.**, Usamah, N. M., Alisah, M. I., Yahya, N., Jaafar, M. F. and Zakaria, N. **(2016)**. Smart Drawer Locking System. *International Eureka Innovation Exhibition (i-EIE)*, 16-18 August, Kedah, Malaysia. **(BRONZE Award)**
 - 18) Yahya, N.*, Abas, M.A., **Mazlan, A. Z. A.**, Usamah, N. M., Alisah, M. I., Jaafar, M. F. and Zakaria, N. **(2016)**. Smart Drawer Locking System. *Karnival Pendidikan Sains & Teknologi*, 20-21 July, Penang, Malaysia. **(BRONZE Award)**
 - 19) Yiauw, D. S., Wee, H. S., Ripin, Z. M.*, **Mazlan, A. Z. A.** and Ali, W. M. **(2015)**. Development of Add-on Active Vibration Control (AVC) for Power Tools. *Innovate Malaysia Design Competition*, 17-18 August, Kuala Lumpur, Malaysia. **(FIRST in Category, BEST Video and BEST Paper Awards)**
 - 20) Hamid, M. N. A.*, Seman, M. T A., Soid, S. N. M., Ahmad, M. N., Omar, M. S., Baba, S. N. N., Rahim, M. Z. A. and **Mazlan, A. Z. A. (2015)**. Rallador De Coco. *Eureka Innovation Exhibition (EIE)*, 29-30 July, Kedah, Malaysia **(BRONZE Award)**
 - 21) Ripin, Z. M.*, **Mazlan, A. Z. A.**, Awang, B. and Ali, W. M. **(2013)**. Universal Suspended Handle Adaptor for Petrol Engine Grass Trimmer. *The 24th International Invention, Innovation and Technology Exhibition (ITEX)*, 9-11 May, Kuala Lumpur, Malaysia. **(GOLD Award)**

University

- 1) Recognition Award in Innovation in Teaching & Learning Competition (INTELEC), Universiti Sains Malaysia, **2023**
- 2) Staff Recognition Award (Excellent in Teaching), Universiti Sains Malaysia, **2021**
- 3) Staff Recognition Award (Social Innovation Award), Universiti Sains Malaysia, **2020**
- 4) Commendation Prize Award (Journal Publication), Universiti Sains Malaysia, **2020**
- 5) Outstanding Employee Award (APC), Universiti Sains Malaysia, **2020**
- 6) Staff Recognition Award (Volunteerism & Leadership), Universiti Sains Malaysia, **2019**
- 7) APEX Young Scholar Program, Universiti Sains Malaysia, **2019**

Intellectual Property / Commercialization

- 1) **Mazlan, A. Z. A.***, Usamah, N. M., The Measurement of Active Vibration Cancellation Efficacy on a Metal Plate Using Vibration Synthesis Index, Copyright: LY2023P05401, **2023**

- 2) **Mazlan, A. Z. A.***, Module 1: Structure Vibration, Inspection, Case Study & Reporting Method, Copyright: LY2023P05402, **2023**
- 3) Idroas M. Y.*, **Mazlan, A. Z. A.**, Abdullah J., Development of Livestock Slaughter Machine, Industrial Design: 23-E1785-0101, **2023**
- 4) Idroas M. Y.*, **Mazlan, A. Z. A.**, Abdullah J., Development of Livestock Slaughter Machine, Copyright: AR2022P02031, **2022**
- 5) **Mazlan, A. Z. A.***, Module 5: Electro-Pneumatic Actuator With PLC, Copyright: LY2021P02048, **2021**
- 6) **Mazlan, A. Z. A.***, Vibration Analysis of The Dam Structure (Experimental and Simulation Method), Copyright: LY2020001935, **2020**
- 7) **Mazlan, A. Z. A.***, EMM342 Lecture 9 (Revision on Vibration and Research Opportunity), Copyright: FM2020001937, **2020**
- 8) **Mazlan, A. Z. A.***, Modal Analysis of Cantilever Beam (Theoretical and Experimental Method), Copyright: LY2020001934, **2020**

Postgraduate and Undergraduate Supervision

Graduated

| No. | Student Name | Completed Year | Level | Thesis Title |
|-----|---|----------------|--|---|
| 1 | Muhammad Safwan Bin Abdul Aziz (Main SV) | 2023 | M. Sc. (Mechanical Eng.) – Full Research | Attenuation of Humming Type Noise and Vibration in Vehicle HVAC System using a Tuneable Dynamic Vibration Absorber |
| 2 | Mohamad Syazwan Bin Md Isa (Main SV) | 2022 | M. Sc. (Mechanical Eng.) – Full Research | Vibration Attenuation of the Small-Scale Boat Engine Handle Using Dynamic Vibration Absorber |
| 3 | Azizi Bin Arbain (Main SV) | 2021 | M. Sc. (Mechanical Eng.) – Full Research | Vibration Analysis of Kenyir Dam Ungated Spillway with Consideration to Energy Dissipater Effect Using Numerical Simulation |
| 4 | Nur Arafah Binti Jafar (Co SV) | 2020 | M. Sc. (Mechanical Eng.) – Full Research | Empirical End Correction Factor for 3D Printed Micro Perforated Panel |
| 5 | Mohamad Hazwan Bin Mohd Ghazali (Main SV) | 2019 | M. Sc. (Mechanical Eng.) – Full Research | Vibration Analysis of the Chenderoh Dam Structure Due to the Effects of Water Spilling and Surging |
| 6 | Mohd Hafiz Bin Abdul Satar (Main SV) | 2019 | M. Sc. (Mechanical Eng.) – Full Research | Characterization of the Piezoelectric Patch and its Application to the Active Vibration Suppression for Cantilever Beam |
| 7 | Amirul Azhajzul Bin Gilok (Main SV) | 2023 | B. Eng. (Mechanical Eng.) – FYP | Condition-Based Monitoring of Vibrating Beam Structure |

| | | | | |
|----|---|------|---------------------------------------|--|
| | | | | Using IOT with Cloud Data Analysis |
| 8 | Chin Jun Hong (Main SV) | 2023 | B. Eng. (Mechanical Eng.) – FYP | Effect Of Pressure, Temperature and Orifice Sizing on The Vibration and Actuation Speed of The Transfer Valve Under Different Operating Conditions |
| 9 | Chang Yan Yee (Main SV) | 2023 | B. Eng. (Mechanical Eng.) – FYP | Correction Modelling of Piezoelectric Material Non-Linear Behaviours In Actuator |
| 10 | Chin Jiun How (Main SV) | 2022 | B. Eng. (Mechanical Eng.) – FYP | Study on Different Intelligent Tuning Methods for AFC Scheme in Reducing the Vibration of Suspended Handle Model |
| 11 | Mohamad Noorhazim Bin Abdul Razak (Main SV) | 2022 | B. Eng. (Mechanical Eng.) – FYP | Study on Different Parameters of an Inertia Type Piezoelectric Actuator in Reducing the Vibration of Suspended Handle Model |
| 12 | Muhammad Syaffi Bin Shatmi (Main SV) | 2022 | B. Eng. (Mechanical Eng.) – FYP | Correction Modelling of Piezoelectric Material Nonlinear Behaviours in Sensor and Actuator |
| 13 | Ahmad Syafiq Nazri Bin Sha'Ari (Main SV) | 2021 | B. Eng. (Mechanical Eng.) – FYP | Design of Dynamic Vibration Absorber to Reduce the Transmitted Hand-Arm Vibration from the Motorboat Engine |
| 14 | Chong Zhi Chien (Main SV) | 2021 | B. Eng. (Mechanical Eng.) – FYP | Design and Development of Rubber Tapping Machine |
| 15 | Choo Kinn (Main SV) | 2021 | B. Eng. (Mechanical Eng.) – FYP | Performance Comparison between AFC-GA and AFC-PSO Schemes in Attenuating the Vibration of the Suspended Handle Model |
| 16 | Cheah Cheng Theik (Main SV) | 2020 | B. Eng. (Mechanical Eng.) – FYP | Active Vibration Control of the Suspended Handle using Inertia Type Piezoelectric Actuator |
| 17 | Chew Chin Siang (Main SV) | 2020 | B. Eng. (Mechanical Eng.) – FYP | Intelligent Tuning Methods of Active Force Control (AFC) Scheme to Reduce the Vibration of the Suspended Handle |

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|----|--|------|---------------------------------------|--|
| 18 | Tan Sak Jie (Main SV) | 2019 | B. Eng. (Mechanical Eng.) – FYP | Active Vibration Control of the Suspended Handle using Inertia-type Piezoelectric Actuator |
| 19 | Muhammad Safwan Bin Abdul Aziz (Main SV) | 2019 | B. Eng. (Mechanical Eng.) – FYP | Application of the Dynamic Vibration Absorber to Reduce the Noise and Vibration of the Automotive HVAC System |
| 20 | Raguvaran A/I Ganesan (Main SV) | 2019 | B. Eng. (Mechanical Eng.) – FYP | Vibration Analysis of the Dam Physical Model due to the Effect of Water Spilling and Surging |
| 21 | Mohamad Syazwan Bin Md Isa (Main SV) | 2018 | B. Eng. (Mechanical Eng.) – FYP | Application of the Structural Dynamic Modification (SDM) Method to Reduce the Noise and Vibration of the Vehicle HVAC System |
| 22 | Muhammad Hidayat Bin Hamdan (Main SV) | 2018 | B. Eng. (Mechanical Eng.) – FYP | Characterization of Noise and Vibration Patterns of the Vehicle HVAC System under Various Operating Conditions |
| 23 | Wong Jen Nyap (Main SV) | 2018 | B. Eng. (Mechanical Eng.) – FYP | Active Force Control using Intelligent Methods of Iterative Learning Method (ILM) and Fuzzy Logic (FL) to Reduce the Vibration of the Suspended Handle |
| 24 | Farah Naimah Binti Rogaiizat (Main SV) | 2017 | B. Eng. (Mechanical Eng.) – FYP | Application of the Active Force Control Method to Reduce the Vibration of the Suspended Handle |
| 25 | Haziq Bin Jamaludin (Main SV) | 2017 | B. Eng. (Mechanical Eng.) – FYP | Performance Comparison of the AFC-Crude Approximation and AFC-Fuzzy Logic Controllers in Reducing the Vibration of the Suspended Handle |
| 26 | Nur Azima Binti Aziz Jaafar (Main SV) | 2017 | B. Eng. (Mechanical Eng.) – FYP | Characterization of the Sandwich-Type Beam with Double Piezoelectric Materials using ANSYS Software |
| 27 | Ahmad Firdaus Bin Murad (Main SV) | 2017 | B. Eng. (Mechanical Eng.) – FYP | Characterization of the Piezoelectric Patch Sensor and Actuator |

On-going

| No. | Student Name | Level | Thesis Title |
|-----|--------------|-------|--------------|
|-----|--------------|-------|--------------|

| | | | |
|---|--|--|--|
| 1 | Alarazah Hussein Abdulwahab Abdulruda (Main SV) | Ph. D. (Mechanical Eng.) – Full Research | Dynamic Modelling, Control and Stability Analysis of Legged Walking Robot |
| 2 | Yang Ping (Main SV) | Ph. D. (Mechanical Eng.) – Full Research | A Study of Multi-Objective Lightweight Optimization and Design for Automobile Body's Front-End Structure. |
| 3 | Nabil Bin Mohamad Usamah (Main SV) | Ph. D. (Mechanical Eng.) – Full Research | Characterization and Correction of Piezoelectric Material Non-Linearities with The Application to The Active Vibration Control |
| 4 | Fazidah Binti Saad (Co SV) | Ph. D. (Mechanical Eng.) – Full Research | Development Of Electromagnetic Vibration Energy Harvester for Automotive Suspension |
| 5 | Nurul Husna Binti Hassan (Co SV) | Ph. D. (Mechanical Eng.) – Full Research | Development Of Chute Spillway Flow-Induced Vibration Empirical Equation for Kenyir Dam Using Fluid-Structure Interaction And Hydraulic Physical Model Analysis |
| 6 | Mohd Affan Bin Mohd Rosli (Main SV) | M. Sc. (Mechanical Eng.) – Full Research | Attenuation of Transmitted Hand-Arm Vibration from The Small-Scale Fishing Boat Engine Handle Using Structural Dynamic Modification Method and Remote Monitoring |

Thesis Examiner

| No. | Student Name | Year | Level | Thesis Title |
|-----|---------------------------------|------|---|---|
| 1 | Arif Izzudin Bin Muhammad | 2023 | M. Sc. (Mechanical Engineering), USM | Analysis of Tribological Characteristics and Performance of Palm Olein-Based Grease Containing Copper Nanoparticles |
| 2 | Mohd Safarul Izmi Bin Saidin | 2020 | M. Sc. (Mechanical Engineering), USM | Investigation of Hydraulic Performance on Unsymmetrical Smooth Spillway |
| 3 | Muhammad Zaki Bin Abdul Rahim | 2018 | Master of Eng. Tech. (Mechanical) UniKL | Experimental and Numerical Analyses of Low Frequency Vibration Energy Harvester with Dual-moving Mechanical System |
| 4 | Wong Zie Jen | 2022 | B. Eng. (Mechanical Engineering), USM | Vibration-Fatigue Assessment on Electronics Interconnections |
| 5 | Mohamad Dzul Asyraf Bin Mokhtar | 2022 | B. Eng. (Mechanical Engineering), USM | Development of Omnidirectional Drive System using Mecanum Wheels for |

| | | | | |
|----|---------------------------------------|------|---------------------------------------|--|
| | | | | Intelligent Patient Transfer Device |
| 6 | Koh Wei Tong | 2022 | B. Eng. (Mechanical Engineering), USM | Air-drill with Accelerometer and Microphone for Composite Drilling Application |
| 7 | Yew Jia Jing | 2021 | B. Eng. (Mechanical Engineering), USM | Application of Micro Perforated Panel on the Safety Earmuff |
| 8 | Mohd Luqman Hakim Bin Md Aziz | 2021 | B. Eng. (Mechanical Engineering), USM | Study on Vibration Level of Agriculture Machinery |
| 9 | Mohammad Ikhmal Fitri Bin Mohd Hayzir | 2021 | B. Eng. (Mechanical Engineering), USM | Development and Analysis of Rotor Dynamics System |
| 10 | Ooi Thian Pien | 2020 | B. Eng. (Mechanical Engineering), USM | Evaluation of Rubber Mount Hysteresis Under Pre-Loading Condition |
| 11 | Low Zi Xian | 2020 | B. Eng. (Mechanical Engineering), USM | Development of Condition Indicator for Machine Conditioning System |
| 12 | Oon Bee Mun | 2019 | B. Eng. (Mechanical Eng.), USM | Design and Study of Spinning Sea Wave Point Absorber |
| 13 | Muhammad Asyraf Bin Wan Chek | 2019 | B. Eng. (Mechanical Eng.), USM | Structural and Reliability Analysis of Solder Joint under Vibration Loading |
| 14 | Yeoh Sze Chee | 2018 | B. Eng. (Mechanical Eng.), USM | Vibration Attenuation on Vacuum Cleaner by Rubber Mount |
| 15 | Siew Mun Hong | 2017 | B. Eng. (Mechanical Eng.), USM | Noise and Vibration Characterization of the Conveyor System |
| 16 | Nadirah Binti Mustaffa | 2017 | B. Eng. (Mechanical Eng.), USM | Structural Analysis of Stretchable Electronics Joint Under Tensile and Vibration Loading |

Professional Membership

| Professional Membership | Registration Date | Type of Membership / Certificate |
|--|-------------------|----------------------------------|
| 1. Institution of Engineering and Technology (IET), UK | 2018 | Member (1100728459) |

| | | |
|--|------|----------------------------------|
| 2. Society of Vibration and Acoustic Malaysia (SVAM) | 2018 | Member (OM0008) |
| 3. Board of Engineer Malaysia (BEM) | 2013 | Graduate Member (G182977A) |
| 4. Institution of Engineer Malaysia (IEM) | 2018 | Graduate Member (59952) |
| 5. Japan Society of Mechanical Engineer (JSME) | 2023 | Member (2319749) |
| 6. JSPS Alumni Association Malaysia (JAAM) | 2020 | Member |
| 7. Train The Trainer – NIOSH & HRD Corp. | 2021 | Certified Trainer (TTT186666-21) |
| 8. ISO 17025-2017 | 2022 | Training Completion |
| 9. Sakura Science Club (JST) | 2023 | Member (23102135) |
| 10. Lean Six Sigma Yellow Belt | 2023 | Training Completion (2023-0027) |

Contribution to Academic and Society

External Assessor/Examiner (International and National)

- 1) **External Assessor**, ROBOCON **2023** at KPT
- 2) **External Assessor**, Virtual Asia Innovation Show (VAIS) **2023** at UiTM
- 3) **External Assessor**, ROBOCON **2022** at KPT
- 4) **External Assessor**, International Eureka Innovation Exhibition (i-EIE) **2022** at UniKL-MSI, Kedah
- 5) **External Assessor**, International Eureka Innovation Exhibition (i-EIE) **2021** at UniKL-MSI, Kedah
- 6) **External Assessor**, 3rd International Innovation Invention and Design Competition 2020 (IID) **2020** at UiTM
- 7) **External Assessor**, 1st Biennial International Conference on Acoustics and Vibration (ANV 2020) **2020** at Institut Teknologi Sepuluh Nopember, Indonesia
- 8) **External Assessor**, International Eureka Innovation Exhibition (i-EIE) **2019** at UniKL-MSI, Kedah
- 9) **External Assessor**, National Innovation and Invention Competition (iComplex) **2019** at Polimas, Kedah
- 10) **External Assessor**, Session A1 Chairperson (Acoustic) **2019** at USM
- 11) **External Assessor**, National Innovation and Invention Competition (iComplex) **2018** at Polimas, Kedah
- 12) **External Examiner**, FYP Projects **2017** of B.Eng (Tech.) in Mechatronics, UniKL-MSI, Kedah
- 13) **External Assessor**, Edufest **2016** at Politeknik Seberang Perai, Penang.

Scientific Reviewer (International and National)

- 1) **International Reviewer (Article)**, Measurement and Control **2023**, *A vibration condition monitoring method based on acceleration signals for milling processes*
- 2) **International Reviewer (Article)**, Journal of Vibration and Control **2023**, *Experimental Studies on Dynamic Response of Piezoelectric Based Hemispherical Resonator Gyroscope*
- 3) **International Reviewer (Article)**, KSCE Journal of Civil Engineering **2023**, *Seismic Control of High-Rise Building by the Combination of Fuzzy Logic and Fractional Order Controllers*
- 4) **International Reviewer (Article)**, Journal of Mechanical Engineering **2023**, *Design of Two-Stage Force Amplification Frame for Piezoelectric Energy Harvester*
- 5) **International Reviewer (Article)**, Measurement and Control **2023**, *Quantized control of switched systems with partly unstabilizable subsystems and actuator saturation*
- 6) **International Reviewer (Article)**, Journal of Science and Technology **2022**, *Evaluation of Acoustical Performance for Atrium Design with respect to Skylight Geometry and Material*
- 7) **International Reviewer (Article)**, Journal of Vibration and Control **2022**, *A novel topological piezoelectric structure with both vibration damping and actuation functions*
- 8) **International Reviewer (Article)**, Journal of Science and Technology **2022**, *Blade Fault Localization with The Use of Vibration Signals Through Artificial Neural Network: A Data-Driven Approach*
- 9) **International Reviewer (Article)**, Journal of Engineering Science **2022**, *A Novel Structure for Electromagnetic Micro Power Harvester*
- 10) **International Reviewer (Article)**, Journal of Vibration and Control **2022**, *Viscoelastic behavior and damping characteristics of a three-phase shunted piezoelectric composite*
- 11) **International Reviewer (Article)**, International Journal of Acoustics and Vibration **2022**, *Efficiency of Negative Stiffness Structure Embedded into Semi-Active Seat Suspension on Ride Comfort of a Soil Compactor*
- 12) **International Reviewer (Article)**, Scientific Reports **2022**, *Field Test Study on Evaluation for Mass Concrete Layer's Micro-Vibration Controlling Capacity*
- 13) **International Reviewer (Article)**, Measurement and Control **2021**, *Smart laminates with an auxetic ply -Pasternak medium: Active control of system oscillation, 2021, Measurement and Control*
- 14) **International Reviewer (Article)**, Smart Materials and Structures **2021**, *Optimal placement of piezoelectric actuators on electromechanically coupled systems*
- 15) **International Reviewer (Article)**, Journal of Science and Technology **2021**, *Noise Engineering Control Study on Gas Turbines at Offshore Facilities*
- 16) **International Reviewer (Article)**, Measurement and Control **2021**, *Design of the electromechanical brake control strategy for the mine hoist*
- 17) **International Reviewer (Article)**, Symposium on Intelligent Manufacturing and Mechatronics **2021**, *Vibration Signal Monitoring for Performance Degradation of a Dried Vacuum Pump using Statistical Time Domain Parameters and STFT*
- 18) **International Reviewer (Article)**, Journal of Engineering Science **2021**, *Chaos Control in a Poldine Cam with an Offset Flat-Faced Follower Mechanism Using Multi Shocks Absorbers Systems*
- 19) **International Reviewer (Article)**, IEEE International Conference on Sensors and Nanotechnology **2021**, *Comparative analysis of optimization algorithm on DSAE model for bearing fault diagnosis*

- 20) **International Reviewer (Article)**, International Conference on Computer Science and Application Engineering **2021**, *A MD-TDOF-PID Controller with Manual/Automatic Switching Without Disturbance*
- 21) **International Reviewer (Article)**, Measurement and Control **2021**, *Stereovision-based method for vibration measurement of moving mine hoisting rope*
- 22) **International Reviewer (Article)**, Journal of Engineering Science **2021**, *Numerical Simulation and Optimization of Die Casting Process of A356 Aluminum Alloy Motorcycle Brake Handle*
- 23) **International Reviewer (Article)**, Journal of Science and Technology **2021**, *Electromechanical Characteristics of Core Free Folded Dielectric Electro-Active Polymer Soft Actuator*
- 24) **International Reviewer (Article)**, Measurement and Control **2021**, *Ecological Driving on Multi-phase Trajectories for Autonomous Electric Vehicle Platoon*
- 25) **International Reviewer (Article)**, Journal of Science and Technology **2021**, *Analytical and Numerical Investigation of Free Vibration Behavior for Sandwich Plate with Functionally Graded Porous Metal Core*
- 26) **International Reviewer (Article)**, Journal of Science and Technology **2021**, *Modelling and Analysis of Constant Thrust Characteristic for Linear Electric Actuator*
- 27) **International Reviewer (Article)**, ICoCD **2021**, *The self-repairing control of Quadrotor UAV based on ILO and control compensation*
- 28) **International Reviewer (Article)**, 5th International Conference on Civil Engineering and Materials Science **2020**, *Research and Application of a New Wave-eliminating Interceptor in the Tunnel Engineering*
- 29) **International Reviewer (Article)**, 2020 International Conference on Control and Decision **2020**, *Satellite Disturbance Detection and Rejection with Control Moment Gyros*
- 30) **International Reviewer (Article)**, The 3rd International Workshop on Materials Science and Mechanical Engineering **2020**, *Pole Assignment PID Controller Based on Parameter Identification and Its Application*
- 31) **International Reviewer (Article)**, Measurement and Control **2020**, *Harmonic Vibration Annihilation by Minimal Design*
- 32) **International Reviewer (Article)**, Measurement and Control **2020**, *Adaptive iterative working state prediction based on the double unscented transformation and dynamic functioning for unmanned aerial vehicle lithium*
- 33) **International Reviewer (Article)**, The Third International Conference on Mechanical, Electric and Industrial Engineering **2020**, *MEIE36554*
- 34) **International Reviewer (Article)**, Journal of Systems and Control Engineering **2020**, *The Parameter Identification of Induction Machine Driven by Vector Control System - An Improved Cuckoo Search Algorithm*
- 35) **International Reviewer (Article)**, Measurement and Control **2020**, *Reduction of aerodynamic noise of single inlet centrifugal fan with inclined volute tongue*
- 36) **International Reviewer (Article)**, 2019 International Conference of Global Network for Innovative Technology **2020**, *The Impact of Vortex Formation Due to The Operational Dam Condition: A Review*
- 37) **International Reviewer (Article)**, 2019 International Conference of Global Network for Innovative Technology **2020**, *Numerical Study of Droplet Behavior on an Oscillating Plate using OpenFOAM*
- 38) **International Reviewer (Article)**, 2019 International Conference of Global Network for Innovative Technology **2020**, *Assessment of Seismic Scenario- Structure Based Limit State Criteria for a 23-Storey Reinforced Concrete HighRise Building*

- 39) **International Reviewer (Article)**, Measurement and Control **2020**, *Implementation of Control Algorithms in Small Embedded Systems*
- 40) **International Reviewer (Article)**, Journal of Engineering Science **2020**, *Blood Flow Phenomena in Cerebral Artery with Aneurysm: A Computational Fluid Dynamics Simulation*
- 41) **International Reviewer (Article)**, Journal of Vibration and Control **2020**, *Vibration control of sandwich plate reinforced nano-composite face sheet and porous core integrated with sensor and actuator layers using perturbation method*
- 42) **International Reviewer (Article)**, Measurement and Control **2020**, *Vibration Transmission Characteristic Analysis of the Metro Turnout Area by Constant-Q Nonstationary Gabor Transform*
- 43) **International Reviewer (Article)**, Journal of Vibration and Control **2020**, *High voltage synthetic inductor for vibration damping in resonant piezoelectric shunt*
- 44) **International Reviewer (Article)**, Measurement and Control **2020**, *Simulation analysis and test study of the generation mechanism of high-frequency friction noise of automotive Ribbed belts*
- 45) **International Reviewer (Article)**, The 8th International Conference on Control, Mechatronics and Automation **2020**, *Paper M030*
- 46) **International Reviewer (Article)**, The 8th International Conference on Control, Mechatronics and Automation **2020**, *Paper M035*
- 47) **International Reviewer (Article)**, The 8th International Conference on Control, Mechatronics and Automation **2020**, *Paper M036*
- 48) **International Reviewer (Article)**, International Journal of Automotive and Mechanical Engineering **2020**, *Sound Analysis for Vehicle Type Recognition*
- 49) **International Reviewer (Article)**, KSCE Journal of Civil Engineering **2020**, *An Experimental Study on the Dynamic Responses of the Remaining Structure under Impact Loading in Condition of the Column Removed*
- 50) **International Reviewer (Article)**, Measurement and Control **2020**, *Atmospheric PM2.5 Concentration Prediction and Noise Estimation Based on Adaptive Unscented Kalman Filtering*
- 51) **International Reviewer (Article)**, Measurement and Control **2020**, *Research on Predictive Sliding Mode Control Strategy for Horizontal Vibration of Ultra-high-speed Elevator Car System Based on Adaptive Fuzzy, 2020, Measurement and Control*
- 52) **International Reviewer (Article)**, Journal of Mechanical Engineering **2019**, *Joining Strategy Analysis of Structural Dynamic in Top Hat Plate of Dissimilar Materials*
- 53) **International Reviewer (Article)**, Journal of Mechanical Engineering **2019**, *Review of Wearable Sensor Systems for Hand-Transmitted Vibration Applications*
- 54) **International Reviewer (Article)**, The Second International Conference on Mechanical, Electric and Industrial Engineering (MEIE) **2019**, *Paper MEIE27681*
- 55) **International Reviewer (Article)**, International Conference on Vibration, Sound and System Dynamics (ICVSSD) **2019**, *Numerical Analysis on Vibro-acoustic Characterization of Hybrid Honeycomb Structure with Flow Permeability.*
- 56) **International Reviewer (Article)**, International Conference of Global Network for Innovative Technology (IGNITE) **2019**, *Characterization of Environmental Noise Pollution Based on Noise Measurement and Noise Mapping at USM Engineering Campus.*
- 57) **International Reviewer (Article)**, International Conference of Global Network for Innovative Technology (IGNITE) **2019**, *Vibration Control and Smart Integrated Transportation Strategy of Crane Systems*

- 58) **International Reviewer (Article)**, International Conference of Global Network for Innovative Technology (IGNITE) **2019**, *Breath sound analysis of sleep apnea syndrome using cluster model*
- 59) **International Reviewer (Article)**, 11th International Conference on Mechanical and Electrical Technology (ICMET) **2019**, *Paper NI-005*
- 60) **International Reviewer (Article)**, 11th International Conference on Mechanical and Electrical Technology (ICMET) **2019**, *Paper NI-1003*
- 61) **International Reviewer (Article)**, 4th International Conference on Civil Engineering and Materials Science (ICCEMS) **2019**, *Research on Wire-Broken Monitoring of Bridge cable based on Acoustic Emission technique.*
- 62) **International Reviewer (Article)**, 4th International Conference on Civil Engineering and Materials Science (ICCEMS) **2019**, *Structural and Seismic Performance of RC Columns with L-shaped Hoop Details.*
- 63) **International Reviewer (Article)**, ESTEEM ACADEMIC Journal **2019**. *Effectiveness of Virtual Reality Training System for Safety Hazard Identification Training In Engineering Education Programs.*
- 64) **International Reviewer (Article)**, IOP Journal of Physics **2019**. *A Review on the Vibration Perception Threshold to Early Detect Diabetes Mellitus*
- 65) **National Reviewer (Article)**, Aerospace Engineering Postgraduate Colloquium **2019**, *Paper 19006*
- 66) **National Reviewer (Article)**, Aerospace Engineering Postgraduate Colloquium **2019**, *Paper 19012*
- 67) **International Reviewer (Article)**, International Conference on Recent Advances in Industrial Engineering and Manufacturing (ICRAIEM) **2018**, *Numerical investigation of continuous damping of the semi-active suspension system for passenger car.*
- 68) **International Reviewer (Article)**, International Conference on Recent Advances in Industrial Engineering and Manufacturing (ICRAIEM) **2018**, *Effect of Machining Parameters on Surface Quality during Edge Trimming of Multi- Directional CFRP Material: Taguchi Method.*
- 69) **International Reviewer (Article)**, 6th International Conference on Control, Mechatronics and Automation (ICCMA) **2018**, *Experimental study on the effect of rubber isolator on the vibration of piston pump.*
- 70) **International Reviewer (Article)**, 6th International Conference on Control, Mechatronics and Automation (ICCMA) **2018**, *Developing a Real-Time Multi-Axis Servo Motion Control System.*
- 71) **International Reviewer (Article)**, 6th International Conference on Control, Mechatronics and Automation (ICCMA) **2018**, *Analysis of Implementation Control Device in Hybrid Mass Damper System.*
- 72) **International Reviewer (Article)**, Evolutions in Mechanical Engineering **2018**. *Challenge in Structural Behaviors of Corroded Prestressed Concrete Beam.*
- 73) **International Reviewer (Article)**, International Journal of Acoustic and Vibration **2018**, *Analysis and Human Walking Field-tests on Vibration Reduction with TMDs for Guangzhou Asian Games Comprehensive Museum.*
- 74) **International Reviewer (Article)**, Sound and Vibration **2018**, *An analytical model for a pneumatic vibration isolator with stiffness effect of the elastomeric diaphragm*
- 75) **International Reviewer (Article)**, Journal of Systems and Control Engineering **2018**, *Power Optimized Motion Planning of Reconfigured Redundant Space Robot*
- 76) **National Reviewer (Article)**, iComplex **2018**, *Analysis of Internal Combustion Engine Behaviour Thru Knocking and Firing Condition*

- 77) **International Reviewer (Article)**, ARPN Journal of Engineering and Applied Sciences **2017**, *Effects of Parameters of Helmholtz Resonator on Transmission Loss of Hybrid Muffler*
- 78) **International Reviewer (Article)**, International Journal of Acoustic and Vibration **2017**, *The experiment study of effect of lumbar support of automobile seat and whole-body vibration time on vibration transmission of human body-seat system*
- 79) **International Reviewer (Article)**, Journal of Vibration and Control **2017**, *Impact of TCPS, SMES and DFIG on multiarea power system using multi-verse optimizer hybrid fuzzy-PID with derivative filter controller*
- 80) **International Reviewer (Article)**, Journal of Vibration and Control **2016**, *Comparative studies of global and targeted control of walkway bridge resonant frequencies*
- 81) **International Reviewer (Article)**, Journal of Vibration and Control **2015**, *Influence of Model Reduction Methods on the Stability of a Vibration Control System*

Organization/Technical Committee (International and National)

- 1) **Technical Committee (Reviewer)**, 7th International Conference on Civil Engineering and Materials Science (ICCEMS), 15-18 April **2022**, Chiba, Japan
- 2) **Technical Committee (Reviewer)**, Multimedia University Engineering Conference (MECON 2022), 25-27 July **2022**, Melaka, Malaysia
- 3) **Technical Committee (Reviewer)**, 6th International Conference on Civil Engineering and Materials Science (ICCEMS), 15-18 May **2021**, Shanghai, China
- 4) **Technical Committee (Reviewer)**, 12th International Conference on Mechanical and Electrical Technology (ICMET), 2-4 April **2021**, Tokyo, Japan
- 5) **Technical Committee (Reviewer)**, International Conference on Mechanical Engineering and Intelligent Manufacturing (ICMEIM 2021), 27-29 October **2021**, Sapporo, Japan
- 6) **Technical Committee (Reviewer)**, International Conference on Manufacturing Technology, Materials and Chemical Engineering (MTMCE 2021), 14-16 May **2021**, Hangzhou, China
- 7) **Technical Committee (Reviewer)**, International Artificial Intelligence Conference (IAICON), 8-10 September **2020**, Jaipur, India
- 8) **Technical Committee (Reviewer)**, International Conference on Control and Decision (ICoCD 2020), 17-19 February **2020**, Sydney, Australia
- 9) **Technical Committee (Reviewer)**, 8th International Conference on Control, Mechatronics and Automation (ICCMA), 6-8 November **2020**, Moscow, Russia
- 10) **Technical Committee (Reviewer)**, 11th International Conference on Mechanical and Electrical Technology (ICMET), 24-27 June **2019**, Edinburgh, United Kingdom
- 11) **Editor in Chief (Scientific Articles)**, 2019 International Conference on Vibration, Sound and System Dynamics (ICVSSD)
- 12) **Technical Committee (Reviewer)**, International Conference on Frontiers of Systems, Process and Control (FSPC), 25-27 November **2019**, Prague, Czech Republic
- 13) **Technical Committee (Reviewer)**, 11th International Conference on Mechanical and Electrical Technology (ICMET), 27-29 June **2019**, Nanjing, China
- 14) **Technical Committee (Reviewer)**, 4th International Conference on Civil Engineering and Materials Science (ICCEMS), 17-19 May **2019**, Bangkok, Thailand
- 15) **Organizing Committee (International)**, 3rd World Congress on Wind & Renewable Energy (WRE), 10-11 June **2019**, Barcelona, Spain

- 16) **Organizing Committee (Publicity)**, International Conference on Vibration, Sound and System Dynamics (ICVSSD), 2 December **2019**, Penang, Malaysia
- 17) **Technical Committee (Reviewer)**, International Conference of Global Network for Innovative Technology (IGNITE), 2 December **2019**, Penang, Malaysia
- 18) **Technical Committee (Reviewer)**, 7th International Conference on Control, Mechatronics and Automation (ICCMA), 6-8 November **2019**, Delft, Netherlands
- 19) **Editor (Scientific Articles)**, **2019** The Open Mechanical Engineering Journal.
- 20) **Technical Committee (Reviewer)**, **2019** International Conference on Robotic Systems and Vehicle Technology (RSVT), 11-14 March **2019**, Wuhan, China
- 21) **Technical Committee (Reviewer)**, 6th International Conference on Control, Mechatronics and Automation (ICCMA), **2018**, Tokyo, Japan
- 22) **Editor in Chief (Scientific Articles)**, **2018** International Conference on Vibration, Sound and System Dynamics (ICVSSD).
- 23) **Organizing Committee (Publication)**, International Conference on Vibration, Sound and System Dynamics (ICVSSD), 20 August **2018**, Penang, Malaysia
- 24) **Editor in Chief (Scientific Articles)**, **2017** International Conference on Vibration, Sound and System Dynamics (ICVSSD).
- 25) **Organizing Committee (Publication)**, International Conference on Vibration, Sound and System Dynamics (ICVSSD), 2 August **2017**, Penang, Malaysia.
- 26) **Organizing Committee (Publication)**, 3rd Mechanical and Aerospace Engineering Research Colloquium (MAERC), 26-27 September **2012**, Penang, Malaysia.

Invited Speaker/Visiting Lecturer (International and National)

- 1) **Visiting Lecturer**, The University of Tokyo, Japan, 3-10 December **2023**
- 2) **Session Chairperson**, International Conference on Artificial Intelligence and Power Engineering (AIPE), 20-22 October **2023**, Tokyo, Japan
- 3) **Invited Speaker**, Research Workshop, Penang, School of Mechanical Engineering, **2023**
- 4) **Invited Speaker**, 2nd UNITED-SAIG Conference, Putrajaya, SAIG **2022**
- 5) **Invited Speaker**, Webinar i4.0 Talk Series on System Integration, Online **2021**
- 6) **Invited Speaker**, Proton R&D Knowledge Sharing Session for the “Noise Reduction of Proton Exora HVAC System using SDM Method” Project **2019**
- 7) **Invited Speaker**, Knowledge Sharing Session for the “Vibration Analysis of Dam Structure” for TNB Kenyir Hydropower Station Project **2019**
- 8) **Session Chairperson**, International Conference on Vibration, Sound and System Dynamics (ICVSSD), 2 December **2019**, Penang, Malaysia
- 9) **Visiting Lecturer**, Sophia University, Japan, 4-5 September **2018**
- 10) **Visiting Lecturer**, Kyoto University, Japan, 2-3 September **2018**
- 11) **Invited Speaker**, Transfer of Technology Workshop for the “Vibration Analysis of Dam Structure for TNB Chenderoh Hydropower Station” Project **2018**
- 12) **Invited Speaker**, Program Lestari Pra-Universiti, USM **2018**
- 13) **Invited Speaker**, USM Global Future Leaders Summer Programme, IMCC **2018**
- 14) **Invited Speaker**, Session 4 (System Dynamics), 2nd International Conference on Vibration, Sound and System Dynamics (ICVSSD), Penang, Malaysia, USM **2018**
- 15) **Session Chairperson**, International Conference on Vibration, Sound and System Dynamics (ICVSSD), 20 August **2018**, Penang, Malaysia
- 16) **Session Chairperson**, Session 2 (Human Vibration), 6th International Conference on Noise, Vibration and Comfort (NVC), 5 - 7 March **2018**, Putrajaya, Malaysia

- 17) **Invited Speaker, 2017 Speed Dating Session with USM of 2017 Youth Industry Bootcamp, CREST**

Mentor/Advisor

- 1) **Mentor, 2018** Innovation Project for Jawi Automated Attendance Recording System
- 2) **Mentor, 2016** Science and Engineering Innovation Competition, Penang Education Director's Cup (SMK Jawi, Penang)

Academic and Management Positions

- 1) **Program Chairman, Quality and Corporate Unit, School of Mechanical Engineering (2022 – 2024)**
- 2) **University Committee (Technical Quotation) for Universiti Sains Malaysia (2022 – 2024)**
- 3) **Manager, Robotic Lab, School of Mechanical Engineering (2022 – 2024)**
- 4) **Chairman (Technical Quotation) for School of Mechanical Engineering (2022 – 2024)**
- 5) **Advisor (ISO 17025-2017 Lab Accreditation) for School of Mechanical Engineering (2022-2024)**
- 6) **Advisor (School Promotion) for School of Mechanical Engineering (2022-2024)**
- 7) **Advisor (School Website) for School of Mechanical Engineering (2022-2024)**
- 8) **School Committee for KPI Data Verification (2022-2024)**
- 9) **School Committee (Recycle and Sustainability) Mechanical Welfare Club 2018**
- 10) **Leader Group - Laboratory for BPK Review 2019**
- 11) **Leader Group - Applied Mechanic for CQI Review 2018**
- 12) **Chairman for Vehicle Safety Awareness Talk, Display and Test Drive Program 2017**
- 13) **School Committee for SAR Report 2017, 2023**
- 14) **School Committee for Showcase & Open Day Carnival 2019**
- 15) **Chairman (School Promotion) for School of Mechanical Engineering (2016-2018, 2019-2021)**
- 16) **Chairman (School Timetable) for School of Mechanical Engineering (2019-2021)**
- 17) **Course Manager of Subject EML 331, EPP 331, EMD 112, EMC 311, EMM 352**