



Current position:

Assistant Vice Chancellor (Strategy),
Office of the Vice-Chancellor
University Transformation Division
Universiti Teknologi MARA, Level 6
Canseleri Tuanku Syed Sirajuddin,
40450 Shah Alam Selangor, Malaysia

Specialization & Research Interest:

Manufacturing Process and System; Micro-Nano Electromechanical System (MEMS/ NEMS); Man-Machine Interfaced Design; Manufacturing Processes/ Technology (Surface Engineering (Coating)); Ceramic Processes; Quality Management System (QMS); Tertiary/ Engineering Education; and Operation Management

D.o.B.: 3 Nov. 1975

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detailed
CV

ACADEMIC QUALIFICATION

- PhD (Mechanical & Manufacturing Engineering), University of Birmingham, UK (December, 2010)
- MSc (Operation Management & Manufacturing System), University of Nottingham, UK (December, 2000)
- Bachelor of Eng.(Hons) (Mechanical), Universiti Teknologi MARA, Shah Alam, Malaysia (1999)

WORKING EXPERIENCE

- Universiti Teknologi MARA, University Transformation Division, 1 Feb. – 14 Sep. 2021 (Director)
- Universiti Teknologi MARA, School of Mechanical Engineering, College of Engineering, Shah Alam Selangor: Feb 2001 – present
 - Mac 2016- January 2021 (Deputy Dean Academic)
 - Mac. 2014 – Feb. 2016 (Programme Chair, Bachelor of Mechanical Engineering (Manufacturing))
 - Jul 2013 – present (UiTM CDIO Coordinator (Conceive-Design-Implement-Operate) and Head of Master Trainer)
 - Jan. – Dec. 2011 (Head of Quality Management/ Assurance Unit)
 - 2011 – Feb. 2016 (Head Centre of Studies Manufacturing, Design & Innovation);
 - Feb. 2005 – Jan. 2006 (Head of Manufacturing System Division)
 - Oct. 2003 – Aug. 2006 (Document Officer, ISO 9001:2000 & Head of Quality Unit)
 - Nov. 2001 – Oct. 2003 (Final Year Project Coordinator)
- Sirim Berhad, June 2019 – June 2020 (Industrial Attachment/ Training (Part time))
- University of Birmingham, UK: 2006-2009: (Research Assistant and Part Time Tutor)
- Airod Sdn Bhd, Subang Selangor: July- Aug 1999 (Planning Engineer)
- Display Technology (Malaysia) Sdn. Bhd, Sungai Petani Kedah: May – Nov. 1996 (Engineering Assistant)

RESEARCH/ TEACHING AREAS

- **Taught Courses:** Research Methodology (Master programme), Total Quality and Process Control (Master Programme), Industrial Project I (Master), Project Management, Total Quality Management, Manufacturing Processes, Engineers in Society, Industrial Management, Manufacturing Technology, Production Technology, Automation and Dynamics of Machine.
- **Recent Conducted Research area/ topic (selected):** Synthesis of Graphene Oxide-Based Plasmonic Nanoparticles and Synthesis of 3D hydrogel-graphene quantum dots nanocomposites, Modelling of Rolling Stock Operation And Maintenance (Railway Industry), Precision Manufacturing Processes, Ergonomics Interventions in Spectrum Measurements in the Communications and Multimedia Industries; The Relationship Between Mental Workload And Driving Performance, ISO/TS 16949 and TPS integration in automotive industries.

PUBLICATION

- 2 Book Chapters; 70 Journals & more than 60 conference proceedings (International & National)

* https://bit.ly/NorHayatiSaad_detailedCV_2021 (pp. 11-24)

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FUNDED RESEARCH PROJECTS (Grants)

- **Completed:** 33 [RM 2,557,117]
- **On-going:** 7 research
*Detailed info: https://bit.ly/NorHayatiSaad_detailedCV_2021 (pp. 5-9)

POSTGRADUATE RESEARCH & UNDERGRADUATE SUPERVISION

- **Completed:** 17 (PhD & Master); 63- FYP (Bachelor Degree)
1. Khalissah Binti Muhammad Yusof (PhD) UiTM, "The Enhancement of Wear Properties of Alloyed Ductile Iron through Shot Blasting and Paste Boronizing Process" (Co-Supervisor), 2020.
 2. Noriah Binti Yusoff (PhD) UiTM, "Synthetization and Characterization of Nano Sensing Materials for MEMS Breath Sensor for Medical Application", 2019.
 3. Amrul Abd. Rashid (PhD) UiTM; "Nanostructured Tungsten Trioxide on Interdigitated Micro-Electro-Mechanical Platform for Ethylene Gas Sensor Applications", 2016.
 4. Mustapha Kamil Omran (Master) UiTM, "Feasibility Study And Conceptually Design of Cable Propelled Train for an Automated People Mover (APM) System At Kuala Lumpur International Airport (KLIA)", 2021.
 5. Norrul Hafizan Bt Ab Wahab (MSc.) UiTM, "Mould Process Analysis for Advanced Slip Rotary Moulding, CSRM In Producing Hollow Ceramic Product", 2020.
 6. Mohd Farid Sarudin (Master) UiTM, "Value Stream Mapping and Simulation in Improving of Ship Construction Process", 2020.
 7. Soffia Binti Salleh (Master) UiTM, "Design of Integrated Risk Management Model Framework for Medical Device Manufacturing Company", 2020.
 8. Johari Abu Kasim (Master) UiTM, "Project Analysis of Repair and Maintenance of SSGP", 2020.
 9. Norazne Bt Nasir (MSc.) UiTM, "Performance and Analysis of Ceramic Slip Rotary Moulding For Fine Bone China Product", 2019.
 10. Ahmad Firdaus B Zakaria (Master) UiTM, "Investigation and Analysis of Metal Casting Defects for SUS430 Material", 2019.
 11. Mohd Firdaus Mohamad Idris (Master) UiTM, "Mid-Life Refurbishment (MLR) Project for Rolling Stock Light Rail Transit (LRT) System", 2018.
 12. Rohidatun Binti Mahmood @ Wahab, (MSc.) UPM, "Design and Development of Virtual and Augmented Reality Systems to Enhance Learning and Training in Assembly Process" (co-supervisor), 2017.
 13. Noor Afendi Nordin, (Master) UiTM, "Cost Reduction: Contact Material by Parameter Study of Silver (Ag) Reduction in Relay", 2017.
 14. Mohd. Shahrudin Mohd. Alias (MSc.) UiTM "Analysis on the Factors and Effect of Engine Tapping Noise by Design of Experiment (DOE)", 2016.
 15. Kamarul Azlan Abd Hamid (Master) UiTM. "Process Improvement by reducing plating Peels-off issue in Semiconductor Hoopline Process", 2016.

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16. Nurul Hanna Binti Mas'aud (MSc.) UiTM, "Ergonomically Designed of Working Environment to Reduce the Effects of Hand-Arm Vibration Industry" (co-supervisor), 2015.
17. Muhamad Hafiz Abd. Malik (MSc.) UiTM, "Performance Analysis of Thermal Spray Aluminium Coating for Application as a Sacrificial Anode", 2015.

• **In-Progress: 8 (4-PhD & 4- Master)**

1. Noor Syahadah Binti Yusoff (PhD) UiTM, "Fabrication and characterization of Nickel Graphene Oxide Composite Coating for Tribological Application" (co-supervisor).
2. Siti Kristi Norizam (PhD) UiTM, "Framework for Organization Change in Industrial Revolution 4.0 Implementation".
3. Mohd Firdaus Mohamad Idris (PhD) UiTM, "Predictive Model of Maintenance Cost in Malaysia Rolling Stock: A Case Study within Urban Rail".
4. Eizuddin Bin Mohamad (PhD) UiTM, "Ergonomics Interventions in Spectrum Measurements in the Communications and Multimedia Industries in Malaysia".
5. Mohd Rafal Sahudin (MSc.), "Fabrication of Graphene Oxide Coated Gold Nano Particles for Fibre Optic Sensors Application in the Automotive Industry and Building Services" (co-supervisor).
6. Qhairunisha Binti Mohd Khalid (MSc.) UiTM, "Integration of ISO/ TS16949 Requirement with Lean Manufacturing System to Smooth Supply Chain Management in Automotive Industry".
7. Nur Aainaa Binti Zainal (MSc.) UiTM, "Design and Development of Visual Servo System for Humanoid Robot Head", (co-supervisor).
8. Norfathi Binti Suhimi (MSc.) UiTM, "Breathing Sensor Characterization in Disease Control Condition".

POSTGRADUATE THESIS EXAMINER

1. Analytic Hierarchy Process And Knowledge-Based System Integration For Web-Based Ergonomics Assessment Approach In Prioritizing Workplace Critical Risk Factors, Fazilah A.A (PhD, UMP Pahang 2021).
2. Accuracy Improvement of Rubber based Diaphragm Fibre Bragg Grating Pressure Sensors, Vorathin A/L E. (PhD, UMP Pahang 2021).
3. A Development of Optical Uric Acid Detection System in the Ultra Violet (UV) Region for Gout Diagnosis Application, Nor Mazlee N (PhD, UMP Pahang 2020).
4. New Product Development Process, Project and Performance of Malaysian Car Manufacturer. Hambali B (PhD, UTEM Melaka 2019).
5. Experimental Investigations on an Industrial Trolley. Wilson Kumar M., Karunya University (PhD, India 2018).
6. Development of a Multidisciplinary Approach to Compute Sustainability Indices for Semiconductor Manufacturing Plant -A Singapore Perspective. Narayanaswamy V. (PhD, OUM 2017).
7. Design and Development of Integrated Quality Management Model Based on TQM, LM, in Malaysian Automotive Companies. Noor Azlina M S, (PhD, UiTM 2014).
8. Development of Fibre Bragg Grating (FBG) Based Pressure Transducer With Temperature Compensation, Muhammad Aizzuddin A, (Master, UMP Pahang 2019).
9. Development of Static Standing Workstation Design Dimensions for Malaysian Workers, Siti Nurani H. (Master, UPM 2019)
10. Effect of Boron and Carbon – Added Titanium Filler on Microstructure and Mechanical Properties of Beta Titanium Alloy Weldments. Izzul Adli M A (Conversion to PhD, UiTM 2017).
11. Just in Time Production Implementation Through Lean Manufacturing Principles. Ahmad Naufal A. (Master, UiTM 2014).
12. The Impact of Jikotei Kanketsu on Manufacturing Defects in Automotive Interior Parts Assembly Line. Mohd Rahmad A J, (Master, UiTM 2014)

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RESEARCH & ACADEMIC INVITATION (Selected)

- Invited Speaker: Implementing OBE (Outcome-Based Education) to Curriculum and Syllabus Structures for Paradigm Shifting in Global Higher Education, Bakrie University Jakarta Indonesia (Online, 1 Dec 2020)
- Keynote Speaker/ Invited Workshop Speaker: Outcome-Based Education, BMS College of Engineering & BMS Institute of Technology and Management, Bangalore India (27-29 February 2020).
- Keynote Speaker in the 6th International Conference on Advanced in Mechanical Engineering (ICAME 2019), Kota Kinabalu Sabah (15-17 Aug 2019)
- Invited Speaker, Academic Workshop: Empowering Education in Promoting 21st Century Learning Skills and Needs, ICAME 2019, Kota Kinabalu Sabah (15-17 Aug 2019)
- Invited Lecturer, Erasmus+ Teaching Mobility, Hochschule Hannover, University of Applied Sciences and Arts Hannover Germany (29 October – 3 November 2018)
- Invited Trainer, "Training on Complex Problem Solving", KDU Univ. (3 May 2018)
- Invited Speaker/ Trainer, workshop on "CDIO Approach to Engineering Education", in 5th IEEE International Conference on MOOCs, Innovation and Technology in Education, Bangalore India (30 Oct 2017).
- Invited Speaker, "CDIO Experience- from UiTM to Polytechnic Malaysia", Politeknik Ungku Omar, Ipoh Perak (7-9 Nov 2016).
- Invited Trainer, "CDIO (Conceive-Design-Implement-Operate) in Capstone Project", Universiti Teknikal Malaysia, Melaka (17-18 Aug 2016).
- Invited Speaker in the 4th International Conference on Advanced in Mechanical Engineering (ICAME 2015), Bali, Indonesia (27 Aug 2015)
- Invited speaker in the Malaysian International Tribology Conference, MITC 2015, Penang (15-17 Nov 2015).
- Invited speaker in the CDIO Regional Meeting, Singapore (23-25 Mac 2015)
- Invited Member of Curriculum Review team: Advanced Diploma in Manufacturing Engineering Technology, Institut Teknikal Jepun Malaysia (16-19 Apr 2012).
- Editor/ Reviewer for Journal paper: Chief Editor, Jurnal Teknologi, Volume 76 Issue 6, Manufacturing Engineering and Management 2015; Journal of Mechanical Engineering (UiTM); International Journal of Advanced Robotic System.
- Reviewer for Conference Proceeding paper (more than 15 International/ National Conferences, 2011-present)
- Journal Reviewer, The Institution of Engineers Malaysia (IEM, 2006-2007)

SOCIETAL INVOLVEMENT (Selected)

- Professional Technologist, Malaysia Board of Technologist (MBOT) (PT19060013), (June 2019 – present).
- External Examiner for Academic Programme (Diploma in Mechanical Engineering), Kolej Kemahiran Tinggi Mara, Kemaman Terengganu Malaysia (20 Jan. 2021-present).
- External Examiner for Academic Programme (Diploma in Mechanical Engineering), City University, Petaling Jaya Malaysia (Mac 2019-present).
- Panel Evaluator for Engineering Technology Accreditation Council (ETAC), Board of Engineer Malaysia (Aug 2018 – present)
- Panel Assessor, Deemed Accredited Programme (Institute of Quality and Knowledge Advancement, COPPA 2.0 UiTM, Feb 2018-2020)

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- External Examiner for Academic Programme (Bachelor of Mechanical Engineering), Universiti Malaysia Pahang, Malaysia (June 2018-June 2020).
- External Examiner for Academic Programme (Bachelor of Mechanical Engineering with Honours), City University, Petaling Jaya Malaysia (April 2018-present).
- External Examiner for Academic Programme (Bachelor of Engineering (Hons) Mechanical), KDU University College, Glenmarie, Malaysia (2017-present).
- Advisor, Overseas Consumer Insights Project (UiTM- Singapore Polytechnic Business School- Seoul Garden HotPot – Zingrill Holdings Pte-Ltd 29 June-4 July 2018)
- Auditor, Society of Engineering Education Malaysia, (PO250; 2016-2018, 2021-2022); Life Member.
- Board of Engineers Malaysia, BEM (36598 A), Graduate Member (2001-present).
- Institution of Mechanical Engineers, United Kingdom (80091863), Associate Member (2008 – 2018).
- Malaysian Tribology Society, MyTRIBOS (L0913), Life member.
- Malaysian Invention and Design Society (2037), Life Member.
- Technical Advisory Committee, TAC- Machining Sector and Equipment for Manufacturing Technology Program, Manpower Department Ministry of Human Resource Malaysia (2012-2016).
- *Institut Teknikal Jepun Malaysia*: 16-19 April 2012 (Member of Curriculum Review team: Advanced Diploma in Manufacturing Engineering Technology).
- External Assessor, *Sistem Pentaksiran Pengajian Politeknik*, Ministry of Education Malaysia (2015 - 2018)
- Coordinator & Head of Master Trainer, Conceive-Design-Implement-Operate, UiTM (2013-present); UiTM as an International CDIO Collaborator (May 2015-present)
- National/University Research Grant Evaluator: Fundamental Research Grant Scheme (FRGS), Exploratory (ERGS), Transdisciplinary (TRGS), Prototype (PRGS), Synergized Industry-Experimenter Research Grant Initiative (SiNERGI) (2013-Jan 2021); Research Acculturation Grant Scheme (RAGS)(2014); Knowledge Transfer Program grant (KTP) (2012-2013).
- IMechE Malaysia, Student Chapter Liaison Officer for UiTM (2011- 2019). Advisor for National Competition of Speak Out For Engineering, 2011, IMechE-UiTM Student Chapter, Malaysia)
- The Institute of Electrical and Electronics Engineer IEEE (92198505) (2011-2012)

CONSULTANCY/ INDUSTRIAL BASED PROJECT (selected)

1. The Analysis of Reliability and Availability on Class 91 Electric Train Set (ETS) Operational at KTMB By Using RAMS, Keretapi Tanah Melayu Berhad (KTMB), FYP (Main Supervisor) [2020-2021]
2. Modelling of Rolling Stock Operation and Maintenance of Malaysia Railway Industry, Prasarana Malaysia Berhad, PhD Project (Main Supervisor) [2018-2021]
3. Upgrading the Manual Process to Automatic Machine System of Slip Casting Process for Hand Former Production, AM Ceramic Sdn. Bhd, Project Member [June 2019 – 2020]
4. Retrofitting of Injection Molding by Introduction of Robotic Arm and Mechanization Water Tap Assembly Line, Glasfil Polymer Sdn. Bhd., Project Member [June 2019 – 2020]
5. Finite Element Analysis For Flying Platform, *M-10 Builders Sdn Bhd*, Project Member [3-16 July 2018]
6. CDIO (Conceive - Design - Implement- Operate) - Capstone Project, *Universiti Teknikal Malaysia*, Training (Main Trainer), [17-18 Aug 2016]
7. Transferring expertise to automotive parts company in establishing lean manufacturing production system by minimizing waste and eliminating non-added value activities, *Recomtec Sdn Bhd*, Project Member [2014-2016].

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8. Investigation on Fire Behaviour in Basement Carpark, *Perunding KMN Sdn Bhd*, Final Year Project, FYP (Main Supervisor), [2014- 2015].
9. Engine Development and Testing, *Pusat Kejuruteraan Automotif, Universiti Malaysia Pahang*, Project Member, [11-17 Aug 2014]
10. Transfer of Expertise Engineering Automation Technology Into Rabbit Production Industry, *Mazzkhan Trading*, Project Member, Service to Industry]- Knowledge Transfer Program, [2013-2016]
11. Transferring to Asia green Recycle in Formulating and Testing Products of Recycled Tire: A generation of green factory and income, *Asia Green Recycle*, Project Leader, [2013-2016]
12. Ceramics Rotary Moulding, *SIRIM Berhad*, Structural Materials Programme, Advanced Materials Research Centre, [2013- 2020]
13. Seminar on Advanced Welding Technology and Manufacturing Simulation, *MCSB (Mastercatt Sdn. Bhd.)*, Project Member, [14 Mac 2012]
14. Analysis on the Factors and Effect on Engine Tapping Noise by Design of Experiment, DOE, *Perusahaan Otomobil Nasional Sdn. Bhd. (PROTON)*, MSc Project (Main Supervisor), [2012- 2015].
15. 1st Joint German-Malaysian Workshop: Symposium on System-Integrated Intelligence (New Challenges for product and production Engineering), *International Leibniz Universität Hannover Germany*, Project Member (Technical Committee), [27-29 June 2012]
16. MEMS/ NEMS: Gas Sensor, Breadth Sensor and Wireless Sensor Network, *MIMOS Berhad, Kuala Lumpur, Malaysia*, [2011- 2017]
17. Thermal Spray Coating as a Sacrificial Anode for cathodic protection, *Norimax Sdn. Bhd, Puchong, Malaysia*, MSc Project (Main supervisor) [2011-2013]

AWARDS AND RECOGNITION (Personal and Team Achievement)

- *Certified TTT Train The Trainer* (TTT166492-21 (NIOSH), 8774 (HRDF exempted)), 2021.
- *Gold Award*, for MOOC: Project Management from Basic to Industrial/ Business Project Management, *The Virtual International e-Content Development Competition* 2021.
- *Gold Award*, for MOOC: Industrial Management, *The Virtual International e-Content Development Competition* 2021.
- *Excellent Service Award (Anugerah Perkhidmatan Cemerlang 2018)*, UiTM, 2019.
- *Bronze Award*, for MOOC: Project Management, *National E-Content Development Competition* 2018.
- *Earned 5-year full programme accreditation for 2018-2022* (Bachelor of Engineering (Hons.) Mechanical), *Engineering Accreditation Council Malaysia*, 2018.
- *Certified LAB Profile Practitioner* (Language and Behaviour), *NLP Academy Malaysia and SS Canada*, ANMO201/18/19/05/007) 2018.
- *Certified Basic NLP Practitioner*, *NLP Academy Malaysia* (A001/NLPT-S1/14/3/17/016) 2017.
- *Certified NLP Coach*, *NLP Academy Malaysia*, (ANLPM 042016/00627) 2016.
- *Gold Award*, Excellent Academic Management, *UiTM* (Faculty category), 2017.
- *The Best Paper Award*, *International Conference on Advances in Mechanical Engineering*, ICAME 2015.

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- *Silver Medal Award, ITEX 2015, 26th International Invention and Innovation Exhibition* (the Invention of Hollow Shape Ceramic Products Produced by Advanced Method of Integrated Slip Rotary Moulding), 2015.
- *Gold Medal Award, Invention & Innovation Awards; Malaysia Technology Expo MTE 2015* (Fabrication of Hollow Ceramic product by advanced technique of Integrated slip Rotary Moulding), Malaysian Association of Research Scientists (MARS), 2015.
- *Silver Award, iideX, Invention, Innovation & Design Exposition, Universiti Teknologi MARA* (A Method for Producing an Ergonomic Customized Coil Assembly), 2015.
- *Silver Award, EUREKA Innovation Exhibition 2014, UniKL Malaysian Spanish Institute* (Innovation for Integrated Process for Hollow Ceramic Product by Using Ceramic Slip Rotating Technique), 2014.
- *Gold Award, iideX, Invention, Innovation & Design Exposition, Universiti Teknologi MARA* (An Apparatus for dispensing a Rolled material a method thereof), 2014.
- *The Best Paper Award; Teaching and Learning Method, Kolokium Pengajaran dan Pembelajaran Ke-2, Universiti Teknologi MARA*, Hotel Perdana Kota Bharu Kelantan (CDIO Framework in Strengthening the Student Centered Learning Approach), 2014.
- *Vice Chancellor Quality Award 2014, AKNC - Anugerah Kualiti Naib Canselor 2014, UiTM, 1st Place- Faculty Category*, 2014.
- *Strategic Planning Award, AKNC - Anugerah Kualiti Naib Canselor UiTM*, 2014.
- *Result Achievement Award, AKNC - Anugerah Kualiti Naib Canselor, UiTM*, 2014.
- *Earned 5-year full programme accreditation for 2014-2018* (Bachelor of Mechanical Engineering (Hons.) (Manufacturing)), *Engineering Accreditation Council Malaysia*, 2014.
- *Earned 5-year full programme accreditation for 2013-2017* (Bachelor of Engineering (Hons.) Mechanical), *Engineering Accreditation Council Malaysia*, 2013.
- *Excellent Service Award (Anugerah Perkhidmatan Cemerlang 2012)*, UiTM, 2013.
- *Silver Medal Award, Invention, Innovation & Design (IID), Universiti Teknologi MARA Johor* (Flawed Specimen for NDE Industry Using Vacuum Casting Technique), 2012.
- *Silver Medal Award, Invention, Innovation & Design (IID), Universiti Teknologi MARA Johor* (An interchangeable Turning Sprue Bushing in a Multi Cavity Family Injection Mode), 2012.
- *Special Award, UiTM IMechE Student Chapter, The Best IMechE Student Chapter 2011/2012*, Liaison Officer IMechE, 2012.
- *Vice Chancellor Quality Award, Faculty of Mechanical Engineering UiTM as Overall Champion for 2012, 2011, and 2010.*
- *British Training Scheme Scholarship, British Council UK, 2000*

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REFERENCES

1. Professor Ir Dr. Muhammad Azmi Ayub
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2. Professor Dr. Phil Prewett
Emeritus Professor of Nanotechnology, School of Mechanical
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