

BRIEF CV



PROF IR DR AHMAD RAZLAN YUSOFF PEng CEng MIMechE ACPE REM

Principle Research Fellow

Centre for Advanced Industrial Technology (AIT)

Professor

Faculty of Manufacturing and Mechatronic Engineering

Technology, Universiti Malaysia Pahang Al-Sultan Abdullah

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Academic Qualifications

1. PhD (Mechanical Engineering)-University of Sheffield, United Kingdom, 2010
2. M.Sc in Mechanical Engineering-Applied Mechanics, Universiti Sains Malaysia, 2003
3. B.Eng (Hons) Mechanical Engineering, Universiti Sains Malaysia, 2000
4. Certificate of Education Training, Northern Illinois University, United State of America, 2011

Brief Profile

Prof Ir Dr Ahmad Razlan Yusoff holds a PhD in Mechanical Engineering from the University of Sheffield, United Kingdom in 2010. Before that, he was studied B.Eng (Hons) and MSc in the same area from Universiti Sains Malaysia, Malaysia in 2000 and 2013. He had experience as deputy dean for academic and research, deputy dean for Institute of post graduate, Universiti Malaysia Pahang senate member, and graduated 7 PhD students, 10 master students and currently supervised 4 PhD students. He also appointed as external examiners and advisors for 12 technical institutions and universities in Malaysia. In the national level, as FRGS panel appointed by Ministry of Higher Education (MOHE) and Ministry of Science and Technology (MOSTI) for research grant evaluation, Malaysia Qualification Agency (MQA), Engineering Accreditation Council (EAC) and Engineering Technology Accreditation Council (ETAC) panels under Board of Engineers, Malaysia (BEM) for academic program accreditation and I-TEX & MTE research product exhibition panel. He also served internationally as Guest and Visiting Professor at several universities in Türkiye, Indonesia and Japan, including expert panel for Kazakhstan ministry of science. At industry, he appointed as Research Fellow in several national and international companies such as MIMOS, Penmedic, Sapura Machining, TT Electronics, VAC and Prasarana for consultation jobs.

Working Experiences / Appointment

Working Experiences

1. Professor, Universiti Malaysia Pahang, 2019-Now
2. Associate Professor, Universiti Malaysia Pahang, 2015-2019
3. Senior Lecturer, Universiti Malaysia Pahang, 2010-2014
4. Lecturer, Universiti Malaysia Pahang, 2004-2010
5. Lecturer, Kolej Linton, Ipoh, Perak 2003
6. Visiting Professor, Akdeniz University, Turkey, 2019.
7. Visiting Professor, Institut Teknologi Surabaya, Indonesia, 2024
8. Visiting Researcher, Badan Riset dan Inovasi Nasional (BRIN) | Indonesia, 2024
9. Guest Professor Universitas Trisakti | Indonesia, 2024
10. Guest Professor Universitas Semporna | Indonesia, 2024
11. Guest Professor Universitas Al-Azhar Indonesia| Indonesia, 2024
12. Guest Professor Universitas Mercu Buana| Indonesia, 2024
13. Guest Examiner Universitas Pembangunan Veteran Jakarta| Indonesia, 2024

14. Guest Professor Batagas State University| Philippines, 2024
15. Guest Professor, Institut Teknologi Bandung, Indonesia, 2021
16. Guest Professor, Universitas Serambi Mekah, Indonesia, 2018
17. Guest Professor, Universitas Batam, Indonesia, 2017
18. Guest Professor, Iwate University, Japan, 2016, 2018, 2023
19. Guest Professor, Universitas Teknologi Yogyakarta, Indonesia, 2015
20. 4x EAC Accreditation Panel Taylor Uni, IIUM, Monash Uni, UTM.
21. 6x ETAC Accreditation Panel UNIKL-MIAT, UNKL-MSI, KKTM(masjid tanah), KKTM(Kemaman), Poli SAS
22. 6x MQA Accreditation Panel UNIMAP, KV Muar, KV Kemaman, KV Setapak, KV Miri, KV Leboh Cator

Appointment

1. External Assessor for Academic Program at USM, IIUM, UNITEN, UTeM, UTHM, UNIMAP, LUC, DHAUM, PoliSAS, PMS, PSMZA, KKTM(Kuantan), KKTM(Dungun) and JMTI.
2. Chief-in-Editor, Journal of Modern Manufacturing Systems and Technology, UMP Press
3. UMP Professor Senate Member, 2021-2023
4. Principal Research Fellow, Centre of Advanced Industrial Technology, 2022-2024
5. Deputy Dean, Institute of Postgraduate Studies, 2019-2021
6. Deputy Dean of Academic and Student Affairs, FKP, 2014-2019
7. Deputy Dean of Research and Post Graduate, FKP, 2012- 2014
8. Deputy Dean of Academic and Post Graduate, FKP 2011-2012
9. Head of Diploma Program, FKM, 2010-2011
10. Head of Service, FKM, 2005-2006.

Expert Area & Research Interest

- Machine Tools Design: Milling, Turning, Drilling and Dicing Cutting Tools
- Smart Manufacturing: Manufacturing Process Conditions, Predictive Maintenance
- Advanced Machining Technology: Machinability, Tool Wear, Lubrication
- Tool, Die and Mold: Hot press forming, direct recycling process, nano cooling process
- Vibration Applications: Signal processing, energy harvester, passive & active absorber

Professional Certificate / Professional Membership. (If have)

1. Professional Engineer (P.Eng)(18383)
2. Chartered Engineer (C.Eng) (80294108)
3. ASEAN Chartered Professional Engineer (ACPE)(ACPE-07597/MY)
4. Member of Institute of Mechanical Engineers (MIMechE)
5. Registered Electrical Energy Manager (REEM) (PTE-0097-2022), Energy Security
6. Certified Energy Manager (CEM), MAESCO
7. Member of International Association Engineers (IAENG) (111896)

List of Journal/Publications/Patent (Selected & High Impact)

1. MSM Mokhtar, AR Yusoff (2024) Effect of micro-milling parameters on burr formation and surface roughness in aluminum microchannels puncher, Jurnal Tribologi 41, 129-143.
2. P Addepalli, W Sawangsri, SAC Ghani, AR Yusoff (2024) Integrating a novel ZrO₂ based end mill insert to evaluate thermal necrosis and bone surface roughness, Emergent Materials, 1-16.

3. Arif Wahjudi, Ahmad R. Yusoff, Sabil Sabil, Bobby O. P. Soepangkat, Suhardjono Suhardjono (2024) A study of end milling process parameter's effect on thin wall aluminum-7075 surface roughness under minimum quantity lubrication, *Jurnal Tribologi*, 43,185-196.
4. LS Kai, AR Yusoff (2023) Effects of Hybrid Nanocooling-Lubricants MQCL on Machining Temperature and Tool Wear Mechanisms under Turning Process of Titanium Alloy, *Tribology Online* 18 (6), 385-395
5. MAH Shahrudin, ARM Yusoff (2023) Using Finite Element simulation to investigate the effect of cutting edge radius on burr formation for inclined dimple milling operation, *Jurnal Tribologi* 38, 49-68.
6. Mokhtar, M.S.M., Yusoff, A.R. (2023). Effect of Machining Parameters on Surface Quality of Aluminium Puncher for Microchannel Fabrication Using Micro Cutting Process. *Lecture Notes in Mechanical Engineering*. pp. 11-20.
7. Safiei, W., Rahman, M.M., Yusoff, A.R., Ali, M.Y. (2023). Wear Behaviour of Tungsten Carbide in End Milling Process of Aluminium Alloy 6061-T6 with Minimal Quantity of Tri-hybrid Nanofluids. *Lecture Notes in Mechanical Engineering*. pp. 21-32.
8. Shahrudin, M.A.H., Yusoff, A.R. (2023). Experimental and Simulation Approach; Investigation Effect of Axial Feed Rate to the Cutting Force in Dimple Milling Using Ball End Mill Tool. *Lecture Notes in Mechanical Engineering*. pp. 33-50.
9. LS Kai, AR Yusoff (2023) Effects of Hybrid Nanocooling-Lubricants MQCL on Machining Temperature and Tool Wear Mechanisms under Turning Process of Titanium Alloy, *Tribology Online* 18 (6), 385-395
10. MAH Shahrudin, ARM Yusoff (2023) Using Finite Element simulation to investigate the effect of cutting edge radius on burr formation for inclined dimple milling operation, *Jurnal Tribologi* 38, 49-68
11. SK Lim, WH Azmi, AS Jamaludin, AR Yusoff (2022), Characteristics of Hybrid Nanolubricants for MQL Cooling Lubrication Machining Application, *Lubricants* 10 (12), 350
12. Meng Lip Lim, Mohd Naqib Derani, Mani Maran Ratnam and Ahmad Razlan Yusoff (2022) Tool wear prediction in turning using workpiece surface profile images and deep learning neural networks, *The International Journal of Advanced Manufacturing Technology*, Accepted, IF=2.209 Q2, WOS journal.
13. MF Zamri, AR Yusoff (2022) Effect of rake angle and feed rate on tool wear and surface topography for different chip size in machining carbon steels *Jurnal Tribologi*, 34, 1-11. WOS journal.
14. W Safiei, MM Rahman, AR Yusoff, W Tasnim, Setty Akhtar Abd Malek (2021) Effects of SiO₂-Al₂O₃-ZrO₂ Tri-hybrid Nanofluids on Surface Roughness and Cutting Temperature in End Milling Process of Aluminum Alloy 6061-T6 Using Uncoated and Coated, *Arabian Journal for Science and Engineering*, 1-20.
15. MF Akhbar, AR Yusoff (2020) Fast & Injuriuos: Reducing thermal osteonecrosis regions in the drilling of human bone with multi-objective optimization, *Measurement*, 152, 1-15, Q1, WOS Journal.
16. MFA Akhbar, AR Yusoff (2019) Drilling of bone: Thermal osteonecrosis regions induced by drilling parameters, *Biomedical Physics & Engineering Express*, 5 (6), 065003, Q2, ISI Journal.
17. MFA Akhbar, AR Yusoff (2019) Multi-objective optimization of surgical drill bit to minimize thermal damage in bone-drilling, *Applied Thermal Engineering*, 157(2) 113594, Q1, IF=3.771, WOS Journal.
18. NA Zainal, AR Yusoff (2019) Integrated Cooling Systems and Maximum Power Point Tracking of Fuzzy Logic Controller for Improving Photovoltaic Performances, *Measurement*, 131, 100-108, IF=2.359 Q1, WOS journal.
19. Salem Abdullah Bagaber and Ahmad Razlan Yusoff (2019) Energy and Cost Integration for Multi Objective Optimization in Sustainable Turning Process, 136, 795-810 *Measurement*, IF=2.359 Q2, ISI journal.
20. MFA Akhbar, AR Yusoff (2019) Drilling of bone: Effect of drill bit geometries on thermal bone osteonecrosis risk regions, *Journal of Engineering in Medicine*, 233(2), 207-218 Q3, IF=1.124, WOS Journal.
21. Salem Abdullah Bagaber and Ahmad Razlan Yusoff (2018) Multi-responses optimization in dry turning of a stainless steel as a key factor in minimum energy, *The International Journal of Advanced Manufacturing Technology*, 96(1-4), 1109-1122, IF=2.209 Q2, WOS journal.

22. Chatter suppression at high speed milling machine: MY-184771-A, 2016. Ahmad Razlan Yusoff, Madan Varmma Suparmaniam and Amirul Hakim Kamarazan. **Patent Granted**
23. A deep twist drilling apparatus, Utility Innovation: UI-2016702586, 2016. Ahmad Razlan Yusoff, Mohd Hazwan Syafiq Harun and Norlida Jamil. **Patent Granted**

List of Awards / Research / Project (Selected)

Award

1. The best UMP supervisor award (Engineering category) 2019.
2. UMP excellent service award (2006, 2013, 2017, 2018, 2019, 2020,2021,2022,2023,2024)
3. Cendekia Bitara (2011, 2015, 2016, 2017)
4. UMP Community Figure award (2016, 2022)
5. Sek Men Sultanah Hjh Kalsom Charity shield Award (2013,2015,2016,2019,2022)

Research

1. Machines Condition Monitoring based on Vibration Signal for Predictive Maintenance (UIC231517), International Matching Grant, RM20,000, 15/10/2023-14/10/2024.
2. Formulation of chip breaker design of cutting tool insert for effective chip evacuation in cutting process (RDU223024) UMP (Leader)RM 49500.00, 15/07/202214/08/2024. UMP distinguished internal grant
3. Improvement of energy in production lines, heating ventilation and air conditionings (HVAC) integrationsystems in electronic company, (RDU192412) MTUN Matching industrial grant (Leader) RM 104 300.00, 20/05/2019-19/11/2020.
4. Prototype Development of Optimum Irregular Milling Tools for Chatter Suppression in Machining Automotive Product, (RDU170801) PRGS (Leader) RM 77 760.000, 15/08/2017 14/08/2019.
5. Characterization of Thermal Conductivity and Viscosity of Alumina Nanocoolant with Ethylen glycerol based Fluid for Quenching Process, (RDU160142) FRGS (Leader) RM 82 400.000, 01/08/2016-30/07/2019.
6. Deep drilling technique for increasing cooling channel performance in hot press forming die (RDU1403121) RM274 000 (Leader) 1/7/2014-30/6/2016 E-Science Grant MOSTI.
7. Potential of integrated chatter avoidance and minimum quantity lubrication condition in machining process (Leader-FRGS Grant) (RDU 120104) RM 56 000.00 (2012-2014).

Consultancy Project

1. Integration of tool, product and condition monitoring, MIMOS(6 months) RM130,000.00 July 2024-Jan 2025.
2. Humidity measurement in general area at IIUM hospital, PENMEDIC sdn bhd. (3 months) RM24,000.00 July- October 2024.
3. Development of I.R 4.0 and TVET Module: Smart Machining Process, SIRIM (1.5 months) RM45,000.00 17 - 21 August 2020.
4. Ministry of Science Kazakstan, Panel Research Grant Project Evaluation, RM10,000, 2024
5. Ministry of Science Kazakstan, Panel Research Grant Project Evaluation, RM3,000, 2023
6. Ministry of Science Kazakstan, Panel Research Grant Project Evaluation, RM13,000, 2022
7. Energy Management Systems, TT electronics Bhd, RM28,000 1-13 November 2021.
8. Development of I.R 4.0 and TVET Module: Smart Machining Process, SIRIM (1.5 months) RM45,000.00 17 - 21 August 2020.
9. Development of Vibration Analysis Tools: Predictive Maintenance for Rotating Machinery and Machine- Induced Vibration using Vibration Analysis, SIRIM (1.5 months) RM20,000.00 15 March- 31 April 2019.

Community Service

1. Program Professor Turun Padang, Pendedahan AI dalam kehidupan bagi meningkatkan minat pelajar dan kompetensi guru dalam bidang STEM, SMK Indera Mahkota 2, Kuantan, RM1,850.
2. Chairman, Pertubuhan Persaudaraan Prihatin (Brotherhood Care), 2018-2025 (PPM 017-06-19072019).

3. Committee for Pertubuhan Intelektual Malaysia-Pintar (NGO Malaysia), 2020-2024.
4. Deputy Chairman, Jemaah Pengurusan Sistem Pendidikan Al-Irsyad, 2020-2026.
5. Committee, Masjid Fatimah Az-Zahra', Indera Sempurna Kuantan (MAFAZ), 2020-2026.
6. Advisor for Sek Men Hajjah Kalsom (SHARK) for F-1 project (2014-2024).
7. Member, Persatuan Pembimbing Masyarakat Sejahtera (PPMS).
8. Member, Ikatan Ilmuwan Nasional Malaysia (NGO Malaysia), 2019-2021.