

## JAMALUDDIN MAHMUD PROF IR DR

### Current Position:

Professor  
School of Mechanical Engineering  
College of Engineering  
Universiti Teknologi MARA  
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## ACADEMIC QUALIFICATIONS

<b>PhD (Engineering)</b> Cardiff University, UK Thesis Title: <i>"The Development of a Novel Technique in Measuring Human Skin Deformation In-vivo to Determine its Mechanical Properties"</i>	2010
<b>MSc in Manufacturing Engineering</b> International Islamic University Malaysia Thesis Title: <i>"Failure Analysis of Composite Materials"</i>	2002
<b>B. Eng (Hons) Mechanical</b> Universiti Teknologi MARA Malaysia	1996
<b>Diploma in Mechanical Engineering (Manufacturing)</b> Universiti Teknologi MARA Malaysia	1994

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## PROFESSIONAL QUALIFICATIONS

<b>Professional Engineer (Mechanical) , Ir</b> Board of Engineers, Malaysia (BEM)	2016
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## WORK EXPERIENCE

### Organisation 1: Universiti Teknologi MARA (UiTM) Malaysia

At the Office of Industry, Community & Alumni Network (ICAN), UiTM Chancellery

*Leadership experience:*

- **Head, Industry Linkage** Apr 2011 – Mar 2013

*Special Appointment*

- **UiTM Research Ethics Committee Member** 2014 – 2019
- **Advisor, Knowledge Transfer Programme (KTP Grant)** 2013 – 2018

*Research Leadership/ Appointment*

- **Editor-in-chief, Journal of Mechanical Engineering (Scopus indexed)** Jan 2020 – Present
- **Founder and Head of RIG – Biomechanical & Clinical Engineering (BioMeC) Research Group, Research Excellence Entity Tier 5** Oct 2016 – Oct 2021

At the Faculty of Mechanical Engineering,

*Administrative experience:*

- **Deputy Dean (Student Affairs)** April 2013 – Dec 2015
- **Head of Programme (EM220: BEng (Hons) Mechanical Eng)** July 2010 – Apr 2011
- **Head of Programme (EM110: Diploma Mechanical Eng)** 2003 – 2006

*Academia:*

- **Professor** Nov 2018 – Present
- **Associate Professor** July 2012 – Nov 2018
- **Senior Lecturer** July 2005 – July 2012
- **Lecturer** May 2001 – July 2005
- **Faculty Academic Board** 2003-2006, 2010, 2013-2015
- **Board of Curriculum Review** 2003/06, 2013/15, 2018/19

Organisation 2:

**International Islamic University Malaysia (IIUM), Jalan Gombak, 53100 Kuala Lumpur**

*Academia:*

**Part Time Tutor** 1999 – 2001

Demonstrating workshops and tutoring numerical methods, while pursuing MSc degree fulltime.

Organisation 3:

**UMW Equipment Sdn Bhd, Jalan Utas, Seksyen 15, 40000 Shah Alam, Selangor, Malaysia**

*Engineering Practice:*

**Service Executive** July 1996 – Oct 1998

Heading the After Sales Service Department (since Jan 1997) to maintain and repair customers' heavy construction equipment (e.g. excavators, bulldozers, shovels etc) at construction/ customers' sites.

In the first 6 months at UMW Equipment Sdn Bhd, I was attached at various departments as a Management Trainee.

## RESEARCH/TEACHING AREAS

Taught courses and conducted researches in the area of

- Mechanics of Materials
- Mechanics of Composite Materials
- Biomechanical Engineering (Biomechanics of Skin)
- Mechanical Engineering Design
- Numerical Methods
- Finite Element Method
- Research Methods

using

- Motion Analysis Technique
- Digital Image Correlation Technique
- Finite and Inverse Finite Element Method & FE Programming
- Reverse Engineering Approach

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## PUBLICATIONS

### Refereed Journals

1. MNAA Patar, NAS Manssor, MR Isa, NAI Jusoh, MJA Latif, PN Sivasankaran and **J Mahmud**, (2024). Quantifying and predicting the tensile properties of silicone reinforced with Moringa oleifera bark fibers, *BioResources* 19(2), pp. 3461-3474 {SCOPUS/ WoS IF: 1.747/Q2}. DOI: 10.15376/biores.19.2.3461-3474
2. MS Ismail, SMM al-Attas and **J Mahmud**, (2024). Buckling behaviour of steel dome cap design under external pressure, *International Journal of Pressure Vessels and Piping* 208, 105135 {SCOPUS/ WoS IF: 3.00/Q2} <https://doi.org/10.1016/j.ijpvp.2024.105135>
3. MHM Norli, AKA Sukimi, MH Ramlee, **J Mahmud** and AH Abdullah, (2024). Static Structural Analysis on Different Topology Optimization Transtibial Prosthetic Socket Leg. *International Journal of Technology*. Volume 15(2), pp. 455-462 {SCOPUS/ WoS}. <https://doi.org/10.14716/ijtech.v15i2.6711>
4. MS Ismail, **J Mahmud** and A Jailani, (2023). Buckling of an imperfect spherical shell subjected to external pressure, *Ocean Engineering*, Vol. 275, 114118 {SCOPUS/ WoS IF: 4.372/Q1}. <https://doi.org/10.1016/j.oceaneng.2023.114118>
5. MS Ismail and **J Mahmud**, (2023). Comparative evaluation of design codes for buckling assessment of a steel spherical shell, *Latin American Journal of Solids and Structures* 20 (5) e494 pp. 1-11 {SCOPUS/ WoS IF: 1.200/Q4}. <https://doi.org/10.1590/1679-78257473>
6. NAI Jusoh, NAS Manssor, PN Rajendra and **J Mahmud**, (2023). The Effect of Reinforcing Moringa Oleifera Bark Fibre on the Tensile and Deformation Behaviour of Epoxy and Silicone

- Rubber Composites, *Pertanika Journal of Science & Technology* 31 (4) pp. 1895 – 1910 {SCOPUS/ WoS} <https://doi.org/10.47836/pjst.31.4.17>
7. MHM Rosaidi, **J Mahmud**, SMA Rahman, NHA Halim, RIR Abdullah and MNAA Patar, (2023). Natural Frequencies Optimisation of Hybrid Composite Laminates using Response Surface Method, *Journal of Advanced Research in Applied Sciences and Engineering Technology*, Vol. 31(2) pp. 197-209 {SCOPUS} <https://doi.org/10.37934/araset.31.2.197209>
  8. SHK Bahrain, NNCA Rahim, **J Mahmud**, MN Mohammed, SM Sapuan, et al, Hyperelastic Properties of Bamboo Cellulosic Fibre–Reinforced Silicone Rubber Biocomposites via Compression Test, *International Journal of Molecular Sciences*, Vol. 23 (11) (2022), 6338, {SCOPUS/ WoS IF: 5.600/Q1}
  9. NFN Haris, MA Yahaya and **J Mahmud**, Tensile Properties of Silicone Biocomposite Reinforced with Waste Material (Hevea brasiliensis Sawdust): Experimental and Numerical Approach, *BioResources*, Vol. 17 (3) (2022), pp. 4623-4637 {SCOPUS/ WoS IF: 1.500/Q2}
  10. M Mali, AA Azlan, NNSM Musa, SS Arifin and **J Mahmud**, Compressive Failure Behaviour of Kevlar Epoxy and Glass Epoxy Composite Laminates Due to the Effect of Cutout Shape and Size with Variation in Fiber Orientations *International Journal of Integrated Engineering*, Vol. 14 (5) (2022), pp. 198-206 {SCOPUS/ WoS}
  11. MAM Norman, K Sivakumar, MNA Ab Patar and **J Mahmud**, A Prediction Model for Natural Frequencies on Kevlar/Glass Hybrid Laminated Composite using Artificial Neural Networks (ANN), *International Journal of Integrated Engineering*, Vol. 14 (5) (2022), pp. 207-214 {SCOPUS/ WoS}
  12. NAZ Abidin, **J Mahmud**, NAS Manssor, NNC Abd Rahim Physical and Mechanical Properties of Bamboo-Silicone Biocomposites (BaSiCs), *BioResources*, Vol. 17 (3) (2022), pp. 4432-4443 {SCOPUS/ WoS IF: 1.500/Q2}
  13. SHK Bahrain, NRN Masdek, **J Mahmud**, MN Mohammed, SM Sapuan, ..., Morphological, Physical, and Mechanical Properties of Sugar-Palm (*Arenga pinnata* (Wurmb) Merr.)- Reinforced Silicone Rubber Biocomposites, *Materials*, Vol. 15 (12) (2022), 4062, {SCOPUS/ WoS IF: 3.400/Q2}
  14. FAS Hamshary, MJA Latif, MS Zakaria, MN Harun, **J Mahmud** and HQ Nguyen, Effect of Water Content on Correlation of Biomechanical Properties and Grayscale of Articular Cartilage Using Low-Field MRI, *International Journal of Nanoelectronics & Materials*, Vol. 15 (SI) (2022), 259-269 {SCOPUS}
  15. M Mali, AK Hussain, MB Hassan and **J Mahmud** Analysis of Hard Point Mechanical Behaviour Due to Variations of Potting Agent Volume on a Composite Sandwich Panel, *Materials Science*, Vol. 28(4) (2022), pp. 467-473 {SCOPUS/ WoS IF: 1.000/Q4}
  16. NA Zainal Abidin, N Othman, AH Zulkefli and **J Mahmud**, Quantifying and Predicting Tensile Properties of Curcuma longa-silicone Biocomposite, *Materials Science* 28 (3) (2022), pp. 247-352 {SCOPUS/ WoS IF: 1.000/Q4}
  17. Ibramsa, MJ Abd Latif, MS Zakaria, MN Harun and **J Mahmud**, Quantitative Study of Articular Cartilage Based on Grayscale Assessment Using Low-Field MRI, *International Journal on Advanced Science, Engineering and Information Technology*, Vol. 12(1) (2022), pp. 231-236 {SCOPUS}
  18. MNAA Patar, AI Makhtar, **J Mahmud**, SA Abdullah, HA Ghani, SMA Ghani, H Lee and A Hanafusa. Smart Gnathometer for Bite Force Measurement, *Journal of Medical Device Technology*, Vol. 1(1), (2022) pp. 15–24. <https://doi.org/10.11113/jmeditec.v1n1.12>
  19. AAA Suhaimi and **Mahmud, J.** The Effects of Different Immersion Media on the Compressive Behaviour of *Arenga Pinnata*-Silicone Biocomposite., *International Transaction Journal of*

- Engineering, Management, & Applied Sciences & Technologies, 13(13), 13A13A, (2002) pp. 1-11. <http://TUENGR.COM/V13/13A13A.pdf>
20. NIM Tahir, M Mali, MN Nanihar and **J Mahmud**. A Comparison Study of Hybrid Composite Laminate Failure using Finite Element Analysis and Artificial Neural Network, *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 13(13), 13A13G, (2022) pp. 1-9. <http://TUENGR.COM/V13/13A13G.pdf>
  21. AD Azman, MNAA Patar, **J Mahmud**, H Lee and A Hanafusa, Dynamic Wet Scrubber System for Residential Waste Incinerator, *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 13(13), 13A13Q (2022) pp. 1-17. <http://TUENGR.COM/V13/13A13Q.pdf>
  22. MAM Norman and **J Mahmud**, Investigation of Natural Frequencies on Kevlar/Glass Hybrid Laminated Composite Plates Using Finite Element Simulation, *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, Vol. 12(9), 12A9A, pp. 1-9 (2021) {WoS/ Q3}.
  23. WNFSW Dagang, NHQN Hamdi, SH Marwan, **J. Mahmud**, NFA Manan, MH Ramlee, AH Abdullah, Effects of pentagonal pore sizes in the zinc hydroxyapatite parietal-temporal implant, *International Journal of Emerging Technology and Advanced Engineering*, Vol. 11(11), pp. 76–85 (2021){SCOPUS}.
  24. ASA Satmi, NH Fadilah, MYPM Yusof, NFA Manan, **J Mahmud**, SA Abdullah, Effectiveness and Comfort Assessment of the Novel Intra-oral Bisecting Angle Bisector® and Paralleling RINN® Digital Imaging Receptor Holders in Low Palatal Height Patients, *Archives of Orofacial Sciences*, Vol. 15(1), pp. 1–10 (2020){SCOPUS}.
  25. CH Le, DT Le, D Arey, P Gheorghe, AM Chu4 XB Duong, TT. Nguyen, TT Truong, Chander Prakash, ST Zhao, **J Mahmud**, J Gao and MS Packianather, Challenges and Conceptual Framework to Develop Heavy-Load Manipulators For Smart Factories, Vol. 11(8), pp. 209-216 (2020){SCOPUS}.
  26. WMNWA Rahman, NAB Johari, SN Sarmin, NYM Yunus, Y Japaruni, **J Mahmud** and MN Khairuddin, *Leucaena leucocephala*: A fast-growing tree for the Malaysian particleboard industry, *BioResources*, Vol. 15(4), pp. 7433-7442 (2020) {SCOPUS/ ISI IF: 1.409/Q2}.
  27. AFA Ghani and **J Mahmud**, Characterisation of hybrid carbon glass fibre reinforced polymer (C/GFRP) of balanced cross ply and quasi isotropic under tensile and flexural loading, *International Journal of Automotive and Mechanical Engineering*, Vol. 17(1), pp. 7792-7804 (2020) {SCOPUS/ Q2}.
  28. NAZ Abidin, MZHM Jailani, AK Hussain, **J Mahmud**, Experimental-Numerical Analysis of Woven Laminates under Tension, *Materials Science (Medžiagotyra)*. Vol. 26, No. 4. , pp 505 - 512, (2020) {SCOPUS/ ISI IF: 0.625/Q3}.
  29. FM Rohjoni, MNAA Patar, **J Mahmud**, H Lee and A Hanafusa, Finite element analysis of a transtibial prosthetic during gait cycle, *International Journal of Mechanical Engineering and Robotics Research*, Vol. 9(5), pp. 764-770 (2020) {SCOPUS/Q3}.
  30. SHK Bahrain and **J Mahmud**, Swelling behaviour and morphological analysis of *Arenga pinnata*–silicone Biocomposite, *Materials Letters*, Vol. 242, pp. 32-34 (2019) {SCOPUS/ ISI IF: 3.204/Q2}.
  31. UR Hashim, A Jumahat and **J Mahmud**, Improved tensile properties of basalt fibre reinforced polymer composites using silica nanoparticles *Materialwissenschaft und Werkstofftechnik*, Vol. 50(9), pp. 1149-1155 (2019) {SCOPUS/ ISI IF: 0.625/Q3}.

32. SAH Roslan, Z Yusof, ZA Rasid, MH Yahaya, MZ Hassan and **J Mahmud**, Dynamic instability response of smart composite material, *Materialwissenschaft und Werkstofftechnik*, Vol. 50 (3) pp. 302-310 (2019) {SCOPUS/ ISI IF: 0.625/Q3}.
33. T Rahayu, D Aprilawati, **J Mahmud**, B Purwanto and L Herawati, Both upper and lower extremity-only video game-based exercises (Exergaming) affect blood glucose serum levels and heart rates but not oxygen saturation in teenagers, *Journal of Physical Education and Sport*, Vol. 19 (114), pp. 802-807, 2019 {SCOPUS/ Q4}.
34. M Mali and **J Mahmud**, Compressive failure behaviour of unidirectional and woven Kevlar/Epoxy composite laminates under various angles of fiber orientation, *International Journal of Engineering and Advanced Technology*, Vol. 9(1), pp. 5868-5872, 2019 {SCOPUS/ Q4}.
35. M Mali, AK Hussain, MZ Zahrullaili, MF Alias and **J Mahmud**, Failure analysis on woven glass/epoxy composite laminates due to the effect of V-Notch and angle of fiber orientation, *Journal of Mechanical Engineering*, Vol. 8 (Special issue 1), pp. 192-199, 2019 {SCOPUS/ Q4}.
36. AZM Adnan, MA Yahaya, **J Mahmud**, MZ Othman, and TK Sheng, Misalignment effect of Split Hopkinson Pressure Bar (SHPB), *Journal of Mechanical Engineering*, Vol. 8 (Special issue 1), pp. 140-152, 2019 {SCOPUS/ Q4}.
37. AFA Ghani, MY Yaakob, MN Salim and **J Mahmud**, Hardness assessment of hybrid composite CFRP and GFRP, *International Journal of Recent Technology and Engineering*, Vol. 8(1), pp. 86-93, 2019 {SCOPUS/ Q4}.
38. SHK Bahrain and **J Mahmud**, Arenga pinnata – Silicone biocomposite: Quantifying its tensile properties using neo-hookean model, *International Journal of Recent Technology and Engineering*, Vol. 8(1), pp. 3186-3190, 2019 {SCOPUS/ Q4}.
39. AFA Ghani, AH Samsudin, SDM Sharom, YT Lu and **J Mahmud**, Effects of laminate arrangement on the failure behaviour of hybrid composite plates under transverse sinusoidal load, *International Journal on Advanced Science, Engineering and Information Technology*, Vol. 9(3), pp. 799-803, 2019 {SCOPUS/ Q4}.
40. SBM Yasin, NF Mohd, **J Mahmud**, NS Whashilah and Z Razak, Reduction of protector cover warpage via topology optimization, *International Journal of Advanced Manufacturing Technology*, Vol. 98 (9-12) pp. 2531-2537 (2018) {SCOPUS/ ISI IF: 2.601/Q1}.
41. N Sapiai, A Jumahat and **J Mahmud**, Mechanical properties of functionalised CNT filled kenaf reinforced epoxy composites, *Materials Research Express*, Vol. 5 (4), 045034 (2018), {SCOPUS/ ISI IF: 1.151/Q1}.
42. AF Ab Ghani, G Omar, MZ Sulaiman, A Jumahat and **J Mahmud**, Elasticity deformation and failure modes behavior of hybrid composite CFRP/GFRP under tensile loading, *International Journal of Advanced and Applied Sciences*, Vol. 5 (3), pp. 98-106 (2018), {ISI/ WoS Indexed}
43. AMA Wahab, A Nuh, ZA Rasid, A Abu, Z Tanasta, MZ Hassan and **J Mahmud**, Tensile behaviours of single-walled carbon nanotubes, *Materialwissenschaft und Werkstofftechnik*, Vol. 49(4), pp. 467-471 (2018). {SCOPUS/ ISI IF: 0.524/Q3}.
44. SHK Bahrain, **J Mahmud** and MH Ismail, Arenga Pinnata–Silicone Biocomposite Properties via Experimental and Numerical Analysis, *Materials Science (MEDŽIAGOTYRA)*, Vol. 24 (3), pp. 272-277 (2018) {SCOPUS/ ISI IF: 0.45/Q3}.
45. Z Yusof, ZA Rasid and **J Mahmud**, The Active Strain Energy Tuning On The Parametric Resonance Of Composite Plates Using Finite Element Method, *Journal of Mechanical Engineering*, Vol SI 5(1), pp. 104-119 (2018) {SCOPUS/ Q4}.

46. AF Ab Ghani, MR Mansor, MZ Selamat, A Jumahat and **J Mahmud**, The Novel Digital Image Correlation Technique in Predicting Behaviour and Failure of Hybrid Composite, *Journal of Telecommunication, Electronic and Computer Engineering*, Vol. 10 No. 2-8, pp. 125-129 (2018) {SCOPUS/ Q4}.
47. AF Ab Ghani and **J Mahmud**, Hardness, Tensile and Microstructure Assessment of Carbon/Glass Hybrid Composite Laminate, *Journal of Mechanical Engineering*, Vol. 15(2), pp. 91-105 (2018) {SCOPUS/ Q4}.
48. NFA Manan, AHA Aziz, **J Mahmud** and AH Abdullah, Analysis of Dryness Effect on Skin by Adapting Hyperelastic Constitutive Model, *Journal of Mechanical Engineering*, Vol SI 5(3), pp. 123-140, (2018) {SCOPUS/ Q4}.
49. H Lee, MNA Ab Patar, T Komeda, **J Mahmud** and Y Takahashi, Development of a quantitative evaluation method in occupational therapy exercise for upper limb motor function rehabilitation, *Journal of Mechanical Engineering* Vol. SI 5(2), pp. 258-274 (2018) ) {SCOPUS/ Q4}.
50. NFA Manan, MFM Jam, SK Sahu and **J Mahmud**, Failure Analysis of Graphite Epoxy Composite Plate Under Transverse Sinusoidal Load, *International Journal of Engineering & Technology*, Vol. 7 (3.11) pp. 62-66 (2018) {SCOPUS/ Q4}.
51. MAM Norman, MA Zainuddin and **J Mahmud**, The Effect of Various Fiber Orientations and Boundary Conditions on Natural Frequencies of Laminated Composite Beam, *International Journal of Engineering & Technology*, Vol. 7 (3.11) pp. 67-71 (2018) {SCOPUS/ Q4}.
52. H Lee, MNAA Patar, T Komeda, **J Mahmud** and Y Takahashi, Evaluation of four-wheel vehicle driven by lower limb with electric pedalling assistance for elderly people, *Journal of Mechanical Engineering*, Vol SI 5(5), pp. 29-43 (2018) {SCOPUS/ Q4}.
53. H Lee, MNAA Patar, T Komeda, **J Mahmud** and Y Takahashi, Development of a quantitative evaluation method in occupational therapy exercise for upper limb motor function rehabilitation, *Journal of Mechanical Engineering*, Vol SI 5(2), pp. 258-274 (2018) {SCOPUS/ Q4}.
54. ZAM Adnan, MA Yahaya, MNFA Manan and **J Mahmud**, Quantifying and comparing the hyperelastic properties of skin, leather and silicone, *International Journal of Engineering and Technology (UAE)*, Vol. SI 7 (4) pp. 45-59 (2018) {SCOPUS/ Q4}.
55. N Sapiai, A Jumahat and **J Mahmud**, Chapter 6: Wear Properties of Acid and Silane Modified CNT Filled Hybrid Glass/Kenaf Epoxy Composites, Book Title: *Synthesis and Tribological Applications of Hybrid Materials*, 2018 Wiley-VCH Verlag GmbH & Co. KGaA.
56. AF Ab Ghani, **J Mahmud**, S Nazran and N Muhammad, Mechanical properties extraction of composite material using digital image correlation via open source Ncorr, *Defence S and T Technical Bulletin*. Vol. 11(1), pp. 13-24 (2018), {SCOPUS/ Q3}.
57. R Rustam, AFA Nazri, MR Md Tasliman and **J Mahmud**, Finite Element Simulation and Analysis for the Design of a Pressure Vessel with Expansion Joint, *International Journal of Materials, Mechanics and Manufacturing*, Vol. 6(4), pp. 268-272 (2018).
58. AF Ab Ghani and **J Mahmud**, Shear deformation behavior of hybrid composite (GFRP/CFRP), *Materialwissenschaft und Werkstofftechnik*, Vol. 48 (3-4), pp. 273-282 (2017). {SCOPUS/ ISI IF: 0.524/Q3}.
59. SHK Bahrain, NS Radzi and **J Mahmud**, Sealing capability and hyperelastic behaviour of silicone biocomposites via compression test, *Materialwissenschaft und Werkstofftechnik*, Vol. 48, pp. 311-317 (2017). {SCOPUS/ ISI IF: 0.524/Q3}.

60. SHK Bahrain and **J Mahmud**, Tensile properties of silicone rubber via. experimental and analytical method adapting hyperelastic constitutive models, *Journal of Engineering and Applied Sciences*, Vol. 12 (SI 6), pp. 7703-7707, (2017). {SCOPUS/ Q3}.
61. NA Ramdzam and **J Mahmud**, Investigating the shear behaviour of hard points on honeycomb sandwich panels, *Journal of Mechanical Engineering*, Vol. SI 4(4), pp. 197-210, (2017), {SCOPUS}.
62. AF Ab Ghani, N Najwa, Z Selamat, Y Lu, A Jumahat and **J Mahmud**, Numerical study of hybrid composite CFRP/GFRP, *ARPN Journal of Engineering and Applied Sciences*, Vol. 12 (24), pp. 7186-7191, (2017) {SCOPUS/ Q3}.
63. M Mali, AH Samsudin, **J Mahmud**, AK Hussain and MD Alansary, Failure analysis of composite laminates under biaxial tensile load due to variations in lamination scheme, *Journal of Mechanical Engineering*, Vol. SI 4(5), pp. 167-182 (2017), {SCOPUS}.
64. SHK Bahrain, **J Mahmud**, ZA Rasid, and J Madete, Synthesization and microstructural analysis of *Arenga pinnata* fibres and silicone rubber for new silicone biocomposite material, *Journal of Mechanical Engineering*, Vol. SI 4(4), pp. 15-30 (2017), {SCOPUS}.
65. KN Hassan, AK Hussain, **J Mahmud** and AA Khalid, Static stability determination of an exhaust stack structure using finite element analysis, *Journal of Mechanical Engineering*, SI 4(5), pp. 153-166 (2017), {SCOPUS}.
66. **J Mahmud**, SHM Yusop and SNAM Noor, *Leather and Synthetic Leather: A Mechanical Viewpoint for Sustainability, Engineering and Technical Development for a Sustainable Environment*, Chapter 9, pp. 145-166 (2017).
67. NH Hashim, MJA Latif, YL Jaafar, R Ramlan and **J Mahmud**, Computational and Experimental Study of Articular Cartilage Thickness on Biomechanical Behavior, *International Journal of Applied Engineering Research*, Vol. 12, No. 16, pp. 5849-5856 (2017). {SCOPUS/ Q3}.
68. AF Ab Ghani and **J Mahmud**, A description on deformation and failure of hybrid composite under static loading, *Journal of Advanced Research in Materials Science* Vol. 36(1), pp. 21-21 (2017)
69. **J Mahmud**, Keynote Speech in *Biomechanics: Analysis and Benchmarking of Indexed Publications in Malaysia and South East Asia*, *Journal of Medical and Bioengineering* Vol. 5, No. 2, pp. 103-107 (2016).
70. G Mustapha , MFA Razak, MSM Hamzah, NHM Yahya and **J Mahmud**, The Development of a Low Cost Motion Analysis System: *Cekak Visual 3d V1.0*, *International Journal of GEOMATE*, Vol. 11, Issue 24, pp.2248-2252 (2016) {SCOPUS/ Q3}
71. A. F. Ab Ghani, M. B. Ali, S. DharMalingam and **J Mahmud**, "Digital Image Correlation (DIC) Technique in Measuring Strain Using Opensource Platform *Ncorr*", *Journal of Advanced Research in Applied Mechanics*, Vol. 26, No. 1. pp. 10-21, (2016).
72. G Mustapha, **J Mahmud**, M Zakaria, WRW Sulaiman, *Biomechanics research on martial arts – the importance of defensive study*, *Archives of Budo*, Vol. 11, pp. 187-195 (2015). {SCOPUS/ ISI IF: 1.31/ Q2/Q3}
73. MNA Ab Patar, T Komeda, **J Mahmud** and CY Low, *Model Based Design of Finger Exoskeleton for Post Stroke Rehabilitation Using a Slotted Link Cam with Lead Screw Mechanism*, *Lecture Notes in Electrical Engineering* , Vol. 349, pp 95-103 (2015). {SCOPUS/ Q3}
74. N Sapiai, A Jumahat and **J Mahmud**, Flexural and Tensile Properties Of Kenaf/glass Fibres Hybrid Composites Filled With Carbon Nanotubes, *Jurnal Teknologi*, Vol. 76, No. 3, pp 115-120 (2015). {SCOPUS/ Q3}



75. WW Amir, A Jumahat and **J Mahmud**, Effect of Nanoclay Content On Flexural Properties Of Glass Fiber Reinforced Polymer (GFRP) Composites, *Jurnal Teknologi*, Vol. 76, No. 3, pp 31-35 (2015). {SCOPUS/ Q3}
76. AH Samsudin, AK Hussain and **J Mahmud**, Deformation and Failure Analysis of Symmetric and Antisymmetric Graphite/epoxy Laminate Due To Variations In Fiber Orientation, *ARPN Journal of Engineering And Applied Sciences*, Vol . 10, No. 17, pp 7336-7344 (2015). {SCOPUS/ Q3}
77. MNA Ab Patar, T Komeda, CY Low and **J Mahmud**, Model-based Systems Engineering Of A Hand Rehabilitation Device, *Jurnal Teknologi*, Vol. 76, No. 4, pp 101-106 (2015). {SCOPUS/ Q3}
78. K Bujang, AFA Nazri, AFA Azam and **J Mahmud** , Development of A Motion Capture System Using Kinect, *Jurnal Teknologi*, Vol. 76, No. 11, pp 75-86 (2015). {SCOPUS/ Q3}
79. NFA Manan, **J Mahmud** and A Jumahat, Biomechanical Behaviour of Bovine Skin: An Experiment-theory Integration And Finite Element Simulation", *Jurnal Teknologi*, Vol. 76, No. 10, pp 103-111 (2015). {SCOPUS/ Q3}
80. KMST Yusuff, AFA Nazri, G Mustapha and **J Mahmud**, Analysis Of Static And Dynamic Motion Accuracy For Kinect-virtual Sensei System, *ARPN Journal of Engineering And Applied Sciences*, Vol . 10, No. 17, pp 7328-7335 (2015). {SCOPUS/ Q3}
81. AH Samsudin and **J Mahmud**, The Effect of Lamination Scheme and Angle Variations to the Displacements and Failure Behaviour of Composite Laminate, *Jurnal Teknologi*, Vol. 76, No. 11, pp 113-121 (2015). {SCOPUS/ Q3}
82. NFA Manan, SNAM Noor, NN Azmi and **J Mahmud**, Numerical Investigation of Ogden and Mooney-Rivlin Material Parameters, *ARPN Journal of Engineering And Applied Sciences*, Vol. 10, No. 15, pp 6329-6335 (2015). {SCOPUS/ Q3}
83. **J Mahmud**, Keynote Speech on Skin Biomechanics: An Experimental-Numerical Integration, *Journal of Medical and Bioengineering* Vol. 4, No. 1, pp. 24-30 (2015).
84. SNA Mohd Noor and **J Mahmud**, Skin Prestretch Evaluation Adapting Mooney-Rivlin Model, *Journal of Medical and Bioengineering* Vol. 4, No. 1, pp. 31-35 (2015).
85. NF Adull Manan, **J Mahmud**, and MH Ismail, Biomechanical testing of bovine skin using various sample specifications, *Materials Research Innovations* Vol. 18, No. S6, pp. 389-394 (2014). {SCOPUS/ ISI IF: 0.830/ Q3/Q4}
86. N Muhammad, A. Jumahat, MH Hamzah, and **J Mahmud**, Design and Fabrication of Compression Test Rig for Fibre-Reinforced Polymer Composites, *Materials Research Innovations* Vol. 18, No. S6, pp. 232-235 (2014). {SCOPUS/ ISI IF: 0.83/ Q3/Q4}
87. **J Mahmud**, CA Holt, SL Evans and NFA Manan. *Quantifying Skin Properties Using a Novel Integration Experiment-Finite Element Simulation and Skin Pre-Stretch Model*. *Advanced Science Letters*, American Scientific Publishers, Vol. 19, pp.3155-3160 (2013). {SCOPUS/ Q2/Q3}
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98. J Saedon, **J Mahmud** and S. Sapari. *Optimization Process Control in Thermoplastic Injection Moulding Using Design of Experiment (DOE) Method: Side Mirror*. Proceedings of the Conference on Scientific and Social Research, (CSSR 2005) Malaysia.
99. W Kuntjoro and **J Mahmud**. *Optimization of Truss Structure Based on Member Disposition*. Proceedings of the Conference on Scientific and Social Research, (CSSR 2005) Malaysia.
100. W Kuntjoro, J Saedon, AR Omar and **J Mahmud**. *Development of On-line Mechanical Engineering Design and Manufacturing Process*. Seminar Proceedings, Seminar IRPA 2005, Malaysia.
101. **J Mahmud**, W Kuntjoro and A Jumahat. *Failure Analysis of Fiber Reinforced Composite Materials Used in Malaysian Industries*. Proceedings of the Conference on Scientific and Social Research (CSSR 2004), Malaysia.
102. W Kuntjoro and **J Mahmud**. *Optimization of Structural Configuration Using Mathematical Programming*. Proceedings of the Conference on Scientific and Social Research (CSSR 2004), Malaysia.
103. **J Mahmud**, VD Natarajan and I Ismail. *First Ply Failure Analysis of Composite Plates*. Proceedings of the National Seminar on the Technological and Social Science (STSS 2004), Kuantan Malaysia.
104. **J Mahmud**, A Jaffar and J Saedon. *The Development of Mathematical and Computational Model to Solve Engineering Problems*. Malaysian Science and Technology Congress (MSTC 2004), COSTAM Malaysia.
105. J Saedon, **J Mahmud**, and Y Abdalla. *Influence of ICT in Manufacturing Environment: Issue and Challenge*, Malaysian Science and Technology Congress (MSTC 2004), COSTAM Malaysia.

106. A Jumahat, AK Ariffin, and **J Mahmud**. *Simulation Studies on Cold Compaction Process Using Finite Element Method*, Malaysian Science and Technology Congress (MSTC 2004), COSTAM Malaysia.
  107. W Kuntjoro, J Saedon, AR Omar and **J Mahmud**. *Development of On-line Mechanical Engineering Design and Manufacturing Process*, Seminar Proceedings, Seminar IRPA 2004, Malaysia.
  108. A Jumahat, **J Mahmud** and M Sani. *Ceramic Powder Compaction Process*. Proceedings of the National Seminar on the Technological and Social Science (STSS 2004), Kuantan Malaysia.
  109. **J Mahmud**, H Tamjehi and AZA Latiff. *Mode of Failure Analysis of E-glass-Epoxy*. Proceedings of Technical Postgraduate Symposium (Techpos 2004), University of Malaya.
  110. VD Natarajan, WMW Mohamed and **J Mahmud**. *An Effective Approach to the Teaching and Learning of Engineering Mechanics*. Proceedings of International Conference on University's Learning and Teaching (INCULT 2004), Malaysia.
  111. J Saedon, **J Mahmud** and NR Abdullah. *Evaluation Dispatching Rules in a Dynamic Scheduling Environment*. Proceedings of Technical Postgraduate Symposium (Techpos 2004), University of Malaya.
  112. MH Ismail and **J Mahmud**. *Effect of Temperature and Shear Rate on Flow Properties of Metal Injection Moulding Seedstock*. Proceedings of Technical Postgraduate Symposium (Techpos 2004), University of Malaya.
  113. A Jaffar, J Mahmud and N Yusoff. *Process Improvement of Polyurethane Injection Moulding for Car Seat Assembly Line*. International Conference on Product Design and Development (ICPDD 2004), University of Malaysia Sabah.
  114. J Saedon, W Kuntjoro and **J Mahmud**. *Computer Aided Reverse Engineering for Solid Model Development of Four Stroke Car Engine*. International Conference on Product Design and Development (ICPDD 2004), University of Malaysia Sabah.
  115. **J Mahmud**, J Saedon and VD Natarajan. *The Development of Computational Model in Performing Mode of Failure Analysis on Composite Plates*. The 12<sup>th</sup> Biennial Computational Techniques and Applications Conference, September 26 – October 1, 2004 (CTAC 2004), Melbourne Australia.
  116. J Saedon, **J Mahmud** and MJA Latif. *Developing a Discrete Event Simulation Model of Manufacturing Cell*. Proceeding of the Research and Consultancy Seminar 2003 (Serac 03), Universiti Teknologi MARA Malaysia.
  117. MJA Latif, **J Mahmud** and J Saedon. *Optimal Modelling and Design Using Finite Element Analysis*. Proceeding of the Research and Consultancy Seminar 2003 (Serac 03), Universiti Teknologi MARA Malaysia.
  118. **J Mahmud**, AF Ismail and J Saedon. *Finite Element Analysis of Progressive Failure for Composite Materials Using a Failure Criterion with Interaction Terms*. Proceedings of the International Conference on Advanced Technology of Experimental Mechanics 2003 (ATEM '03), Nagoya, Japan.
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## **COURSES/ TRAINING ATTENDED (SELECTED)**

### **External Certification**

- IEM Refresher Course for Interviewers, 30 March 2022.
- 1 Day IEM Outcome Based Professional Interview Training and Certification Workshop, 24 October 2020.
- WEBINAR - Workshop on Managing Engineering Competency Development (ECD) Logbook, 21 October 2020.
- Realignment Workshop for EAC Panel No.3/2018, Accreditation Department Training Centre, 17 October 2018.
- 9th Good Clinical Practice Workshop 2016, Faculty of Medicine, UiTM Sg. Buloh, 09 – 11 November 2016 (A Pass Certificate from The National Committee for Clinical research, Malaysia)
- EAC New Panel Evaluators Workshop, Hotel Bangi-Putrajaya, 22 – 24 August 2016, (Completed successfully and certificate received from The Engineering Accreditation Council (EAC) Board of Engineers Malaysia, BEM).
- 2nd Mentors Workshop 2016: “Log Book Training Scheme – Guidelines for Mentors”, 05 November 2016, IEM Training Centre PJ, Organised by IEM.
- Awareness Talk on Enhanced PI Process, 27 May 2016, IEM Training Centre PJ, Organised by IEM.
- Safety and Health at Work, 21 – 22 September 2015, IEM Training Centre PJ, (Mandatory PDP for P.Eng, Certificate from the Engineering Accreditation Council (EAC) Board of Engineers Malaysia, BEM).
- Engineering Management Practice, 16 – 17 March 2015, IEM Training Centre PJ, (Mandatory PDP for P. Eng, Certificate from The Engineering Accreditation Council (EAC) Board of Engineers Malaysia, BEM).
- Program Transformasi Negara Siri-2, 23 – 25 April 2015, Kem BTN Balik Pulau, Organised by Biro Tata Negara (BTN).
- Code of Ethics/ Regulation, 9 – 10 March 2015, IEM Training Centre PJ, (Mandatory PDP for P. Eng., Certificate from The Engineering Accreditation Council (EAC) Board of Engineers Malaysia, BEM).
- A-Slead: Blue Ocean Strategies in Higher Education Agenda, AKEPT Bandar Enstek, 16 - 18 July 2014, Organised and Certificate received from AKEPT MOHE.
- Seminar Perkongsian Aktiviti Terpilih PSPTN 2012 (Sharing of Best Practices), 21 June 2012, Dewan Serbaguna KPT, Organised by Ministry of Higher Education (MOHE) Malaysia.
- Industrial PhD Supervisors Training Programme, 13 – 14 February 2012, UiTM Shah Alam. (Requirement to become a supervisor for Industrial PhD candidate, certificate received from UTM)
- 5 Day MBA: Managing with Strategic Vision by Growth, Innovation and Leadership (Gil) University, Hotel Double Tree, Kuala Lumpur, 19 – 13 May 2011. (Certificate of Completion received from Frost and Sullivan).
- Intensive Workshop on Submission to EAC, Marriot Hotel Putrajaya, 2 – 3 November 2010, Anjuran Malaysian Society of Engineering & Technology (MSET). (Completed successfully and received Certificate from The Engineering Accreditation Department (EAD) Board of Engineers Malaysia, BEM).

- ISO9001:2000 Audit Training and Test, 2 - 4 & 7 July 2004, Universiti Teknologi MARA, (A Pass Certificate received from RAMS Management Consultant).

### **Internal Certification**

- Coaching Skills for Leadership Effectiveness, 8 July 2021, organised by Institut Kepimpinan & Pembangunan UiTM.
- Training for PROFESSIONAL EXCELLENCE, 10 February 2021, organised by Institut Kepimpinan & Pembangunan (ILD) UiTM.
- Grooming for Promotion (Grooming for Interview), 7 June 2018, Chancellery Office, Organised by ILD UiTM.
- Grooming for Promotion, 18 April 2018, ILD Bandar Enstek, Organised by ILD UiTM.
- Program Ikrar Bebas Rasuah (Talk on Interity and Pledge), 08 November 2017, FKM, UiTM Integrity Unit Tour.
- Latihan Penilai Dan Sesi Penilaian Anugerah Kualiti Naib Canselor (AKNC) 2017 (2017 AKNC Panels Training Programme and Evaluation), 03 – 05 Oktober 2017, ILD Bandar Enstek, Organised by InQKA UiTM.
- Sesi Latihan Penilaian Laporan AKNC AKNC 2015 (2015 AKNC Panel programmes), 26 – 27 September 2016, Dewan Al-Ghazali, Pejabat Pendaftar, Organised by InQKA UiTM.
- Talent Accelerated Leadership Excellent Series (Tales), 02 – 03 June 2015, Auditorium 1, Aras 4, ILQAM, Organised by ILQAM UiTM.
- Conference of Heads of Academic Departments of UiTM (Chad2014), 23-24 December 2014, Anjung Budiman, UiTM, Organised by HEA UiTM.
- Seminar Pengenalan kepada Akta 174 dan Pengendalian Kes Tatatertib Pelajar (Act 174 Seminar), 02 December 2014, Dewan Annexe UiTM, Organised by HEP UiTM
- Succession Management Series, 15 October 2014, Auditorium 1, ILQAM, Organised by ILQAM UiTM
- Sesi Penaziran Geran Dana Pembudayaan Penyelidikan (RAGS), 19 September 2014, Hotel Grand Bluewave, Shah Alam, Anjuran oleh Panel Penazir KPM.
- Bengkel Perdana HEP (HEP Perdana Workshop), 15 – 17 Jun 2014, Avillion Admiral Cove, Port Dickson, Organised by HEP UiTM.
- Course on Integrity: Pembudayaan Dan Pengukuhan Integriti, 19 February 2013, Dewan Seminar, Kolej Mawar, Organised by ICAN UiTM.
- Grooming for Promotion, 17 – 18 July 2012, Auditorium 1, Level 4 ILQAM, Organised by ILQAM UiTM.
- Professorial Lecture Series (Nobel Laurette), 12 June 2012, Dewan Agung Tuanku Canselor (DATC), Organised by HEA UiTM.
- Seminar: Community Service Vs Community Engagement, 6 July 2011, Auditorium 1, Level 4 ILQAM, Organized by Mr Mechai Foundation, Organised by ICAN UiTM.
- Leadership Symposium, 5 July 2011, Dewan Agong Tuanku Canselor, UiTM Shah Alam, Organised by HEA UiTM.
- Academic Management Series, 7 – 8 March 2011, Auditorium 1, Level 4 ILQAM, Organised by ILQAM UiTM.

- Kursus Penilaian Tahap Kecekapan (TK 5) (Competency Exam, Level 5) Intekma Resort & ILQAM, 13 – 16 December 2010, Anjuran ILQAM.
- T.O.T. Workshop for OBE-SCL Core-Trainers, Dewan Kuliah A & B, Kompleks S & T, 11 – 12 May 2010, Organised by HEA UiTM.

## FUNDED RESEARCH (GRANTS)

### As the Project Leader

**(Nine (9) Research Completed)**

Title	Level	Amount Approved	Date Approved/ Completed
“Hyper-Viscoelastic Modeling of Electrospun PVA/Honey/ Ag+ With Ogden Hyperelastic And Generalized Maxwell Models Via Experimental-Numerical Approach” <i>-Project Leader</i>	National (FRGS-MOHE Grant)	RM 95,534	Aug 2024
“Experimental-Numerical Analysis of a Novel Leucaena-Silicone Biocomposite” <i>-Project Leader</i>	University (GIP-UITM)	RM 21,600	Oct 2023
“Mathematical Modelling of Skin and Synthetic Skin (Hydrogel-Silicone Biocomposite) Deformation Behaviour Based on Hyperelastic Constitutive Equations” <i>-Project Leader</i>	National (FRGS-MOHE Grant)	RM 116, 000	Completed: 2019 (Started: 2016)
“Suction-Stretch Theory In Syntesising Composite Membrane Hyperelasticity” <i>- Project Leader</i>	National (ERGS-MOHE Grant)	RM 80,000	Completed: 2015 (Started: 2012)
“Bovine Skin Bio-Mechanical Characterisation” <i>-Project Leader</i>	National (FRGS-MOHE Grant)	RM 52,000	Completed: 2015 (Started: 2012)
“Suction-Stretch Theory In Syntesising Composite Membrane Hyperelasticity Part 2” <i>-Project Leader</i>	University (PSI-UITM)	RM 20,000	Completed: 2015 (Started: 2013)
“Bovine Skin Bio- Mechanical Characterisation Part 2” <i>-Project Leader</i>	University (PSI-UITM)	RM 20,000	Completed: 2015 (Started: 2013)
“Suction-Stretch Theory In Syntesising Composite Membrane Hyperelasticity Part 3” <i>-Project Leader</i>	University (CIFI-UITM)	RM 20,000	Completed: 2015 (Started: 2013)

“Bovine Skin Bio- Mechanical Characterisation Part 3” -Project Leader	University (CIFI-UITM)	RM 20,000	Completed: 2015 (Started: 2013)
“Finite Element Analysis to Determine the Mechanical Properties of Human Skin” - Project Leader	University (Dst-UITM)	RM 6,000	Completed: 2012 (Started: 2010)
“Failure Analysis of Fiber Reinforced Composite Materials Used in Malaysian Industries” - Project Leader	University (STG-UiTM)	RM 10,000	Completed: Jan 2004 (Started: 2002)

### On-going Research (As a Member)

Title	Level	Amount Approved	Date Approved
Failure Behaviour of thick composite laminates under vibration load with frequency-dependence and strain-dependence based on high order Flexure-Shear-Warp Theory	National (FRGS-MOHE Grant)	RM 84,476	Sep 2023
Experimental and Numerical buckling analysis of an imperfect stiffened steel spherical shell subjected to external pressure	National (FRGS-MOHE Grant)	RM 97,765	Sep 2023
The substantial effect of amount and morphology of porosity on mechanical properties of eggshell derived calcium phosphate (HA-Es) for nanomedicine application	National (FRGS-MOHE Grant)	RM 100,480	Sep 2022
Stab Resisting Behavior of High Density Polyethylene Reinforced Kevlar Trauma Liner and Polycarbonate Film	National (FRGS-MOHE Grant)	RM 183,900	Sep 2022
Modified Viscous Anand Model to Include Growth Kinetics of Ag3sn Intermetallic Compound in Predicting 95.5sn-4.0ag-0.05cu Solder Joints Failure Mechanism	National (FRGS-MOHE Grant)	RM 67,046	Sep 2021
In-situ Crack Prediction Meta-Model of Metal Memory Magnetic for Railway	National (FRGS-MOHE Grant)	RM 84,150	Sep 2020

Track Monitoring (Ref: FRGS/1/2020/TK0/UNISEL/03/1)			
“Development of Digital Imaging Sensor Holder for Intra-Oral Bisecting Angle Optimization”	National (PRGS-MOHE Grant)	RM 91, 000	Aug 2017
“Prototyping of Porous NiTi Alloy Dental Screw and Abutment by Metal Injection Moulding (MIM)	National (PRGS-MOHE Grant)	RM 198, 500	Aug 2017
“Dynamic Stress Prediction Model of Skin (Bovine) and Synthetic Skin (Silicone) under Low Impact Loading”	National (FRGS-MOHE Grant)	RM 100, 000	Aug 2017
“Characterization of low-frequency electromagnetic field for orthopedic fixation loosening mechanism” (Ref: FRGS/1/2017/TK03/UNIMAP/02/10)	National (FRGS-MOHE Grant)	RM 98, 000	Aug 2017

**Completed Research (As a Member) (> Thirty (30) research/technical reports)**

Title	Level	Value	Year of Completion
Hyper-Viscoelastic Modelling of Palate and Synthetic Palate (Hydrogel-Silicone Biocomposite) Under Biaxial Tension	National (FRGS-MOHE Grant)	RM 97, 200	Completed: 2022 (Started: Sep 2019)
Prediction Of Viscoelastic Behaviour Of Skin Using An Artificial Neural Network (ANN)	National (FRGS-MOHE Grant)	RM 82, 200	Completed: 2022 (Started: Sep 2019)
Bio-inspired algorithm for automatic behavioural characterization of spinal injured rats	National (Brain, Mind and Neuroscience Research Fund. Sponsor: YPOMNM)	RM 5,000	Completed: 2022 (Started: Aug 2020)
Identifying New Hyperelastic Constitutive Model Via Integration of Multiple Models in Medical Hybrid Biomaterials	National (FRGS-MOHE Grant)	RM 109, 700	Completed: 2022 (Started: Sep 2019)

High Adhesive Nanoresin Biobased Basalt Patch Prototype for Internal Defect Pipeline Rehabilitation	National (PRGS-MOHE Grant)	RM 156, 000	Completed: 2022 (Started: Jan 2019)
Progressive Failure Behaviour of Transverse Sinusoidally Loaded Thick Hybrid Composite Laminate Based On 3rd Order Shear-Warp Theory and Interchangeable Failure Criteria	National (FRGS-MOHE Grant)	RM 97, 000	Completed: 2022 (Started: Jan 2019)
“Development of Digital Imaging Sensor Holder for Intra-Oral Bisecting Angle Optimization”	National (PRGS-MOHE Grant)	RM 91, 000	Completed: 2020 (Started: Aug 2017)
“Prototyping of Porous NiTi Alloy Dental Screw and Abutment by Metal Injection Moulding (MIM)	National (PRGS-MOHE Grant)	RM 198, 500	Completed: 2021 (Started: Aug 2017)
“Dynamic Stress Prediction Model of Skin (Bovine) and Synthetic Skin (Silicone) under Low Impact Loading”	National (FRGS-MOHE Grant)	RM 100, 000	Completed: 2020 (Started: Aug 2017)
“Characterization of low-frequency electromagnetic field for orthopedic fixation loosening mechanism”  (Ref: FRGS/1/2017/TK03/UNIMAP/02/10)	National (FRGS-MOHE Grant)	RM 98, 000	Completed: 2021 (Started: Aug 2017)
“Failure Prevention of Stents due to Hemodynamic and Arterial Wall Interactions” (Ref: FRGS/1/2016/TK03/UTHM/02/10)	National (FRGS-MOHE Grant)	RM 121, 000	Completed: 2019 (Started: Aug 2016)
“NiTi Shape Memory Alloy With Titanium Hydride Phase Stabilizer”	National (FRGS-MOHE Grant)	RM 117, 200	Completed: 2018 (Started: 2015)
Failure Study Of High Order Warping Defects In Hybrid Composite Laminate For Static Loading(Ref: RAGS/1/2015/TK0/UTEM/03/17)	National (RAGS-MOHE Grant)	RM 78, 000	Completed: 2018 (Started: Nov 2015)
“Characterisation of biomechanical properties of articular cartilage using low-field magnetic resonance imaging (MRI) image  (Ref: FRGS/1/2015/TK05/UTEM/02/1)”	National (FRGS-MOHE Grant)	RM 87, 200	Completed: 2018 (Started: Nov 2015)



“Development of non-invasive technique to characterise biomechanical properties of articular cartilage in synovial joint using magnetic resonance imaging (MRI) image” (Leader from UTEM)	National (ScienceFund- MOSTI Grant)	RM 207, 400	Completed: 2017 (Started: 2014)
“Biomechanical Characterisation of Cranio-Maxillofacial Resorption Model”	National (FRGS-MOHE Grant)	RM 79, 200	Completed: 2017 (Started: 2014)
“Characterisation of Advanced Fibre Pultrusion Nanospheres Embedded Polymer Composites”	National (FRGS-MOHE Grant)	RM 117, 200	Completed: 2017 (Started: 2014)
“Characterisation Of High Order Warping Defects In Composite Laminate Progressive Failure”	National (FRGS-MOHE Grant)	RM 140, 200	Completed: 2016 (Started: 2014)
“Bio-Mechanical Characterisation of Fend Off Technique”	National (FRGS-MOHE Grant)	RM 93, 500	Completed: 2016 (Started: 2013)
“Advanced NiTi Intermetallic Compounds Superior Shape Memory Behaviour”	National (FRGS-MOHE Grant)	RM 94,330	Completed: 2015 (Started: 2012)
Pembangunan Sistem Analisis Gerakan Tiga Dimensi Silat Cekak	PSSCM	RM 50,000	Completed: 2015 (Started: 2013)
“Characterisation Of Advanced Carbon Fibre Laminates”	National (RAGS-MOHE Grant)	RM 80,000	Completed: 2014 (Started: 2012)
“Novel Hybrid Nanofiller Characteristic for High Fracture Toughness Ship Hull”	National (FRGS-MOHE Grant)	RM 91,560	Completed: 2014 (Started: 2012)
“Algorithm to Control Ankle Motion Amongst Hemiplegic Patients for Therapeutic Application”	National (Sciencefund)	RM 170,400	Completed: 2014 (Started: 2012)
“A New Robust Active Force Algorithm In High Precision Motion Control”	National (FRGS-MOHE Grant)	RM 40,000	Completed: 2013 (Started: 2011)
“Modelling and Performance Characterisation of A New Dynamic Ankle Foot Orthosis”	National (FRGS-MOHE Grant)	RM 46,440	Completed: 2013 (Started: 2010)

"A New Failure Criterion for Composite Materials"	National (FRGS-MOHE Grant)	RM 44,720	Completed: 2013 (Started: 2010)
"Tensile And In-Plane Shear Properties Of A Novel Fibre Reinforced Polymer Composite Laminates"	University	RM 10,000	Completed: 2012 (Started: 2011)
"Basic Study of Interference Screw Fixation Stability in Anterior Cruciate Ligament Reconstruction"	National (FRGS-MOHE Grant)	RM 50,740	Completed: 2012 (Started: 2010)
"Development of Online Mechanical Engineering Design And Manufacturing Processes "	National (IRPA Grant)	RM 130,000	Completed: 2007 (Started: 2004)
" The Development and Improvement of the Car Seat Polyurethane Injection Moulding Process"	University (IRDC Grant)	RM 43, 970	Completed: 2006 (Started: 2004)
"Simulation Studies on Cold and Warm Compaction Processes of Iron Powders using Finite Element Method"	University (STG-UiTM)	RM 10,000	Completed: 2005 (Started: 2003)
"Optimization of Truss Structure Based on Member Disposition"	University (STG-UiTM)	RM 20,000	Completed: 2005 (Started: 2004)
"Optimization Process Control In Thermoplastic Injection Moulding Using Design Of Experiment (DOE) Method: Side Mirror"	University (STG-UiTM)	RM 10,000	Completed: 2005 (Started: 2004)
"Optimization Of Structural Configuration Using Mathematical Programming"	University (STG-UiTM)	RM 10,000	Completed: 2004 (Started: 2003) * Won the Best Fundamental Research Award at CSSR 2004

### Completed Consultancy Projects

Title	Customer	Value	Year of Completion
"CNC Wirecut Course" - <i>Member</i>	Kolej Vokasional Butterworth	RM 5,310	Completed (13 – 14 Mac 2023)
"Module Development and Training for GO Time Series" - <i>Founder</i>	PG Students (CADEM Centre)	RM 4,000	Completed: 2013 (Started: 2013)

“DN 50 - FE Modelling Facilitation and Output Analysis” - <i>Project Leader</i>	Tepat Teknik Sdn Bhd	RM 2,200	Completed: 2013 (Started: 2013)
International Judge for CIPTA 2013	Institut Teknologi Brunei	RM 1,500	Completed: 2013 (Started: 2013)
“Finite Element Analysis of Expansion Joints (HE-101 and HE-102)” - <i>Project Leader</i>	Tepat Teknik Sdn Bhd	RM 8,000	Completed: 2011 (Started: 2011)

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## KNOWLEDGE TRANSFER PROGRAMMES (FUNDED KTP GRANTS)

### Management Role related to KTP:

- **KTP Advisor** April 2013 – Mar 2018  
Advising and assisting ICAN pertaining to Knowledge Transfer Programme promotion, administration and management.
- **Head of Industry Linkage** Apr 2011 – Mar 2013  
(At the Office of Industry, Community & Alumni Network (ICAN), UiTM Chancellery  
**CAPs Manager** (UiTM Person in charge for the MOE Critical Agenda Projects – Knowledge Transfer Programme)  
**Achievement** – For the year 2012 submission, UiTM obtained the highest number and amount of KTP grant (3<sup>rd</sup> Rolling/2013: **16 projects, RM2.017M**)

### Knowledge Transfer Programmes (KTP Grants)

Title	Level	Amount Approved	Date Approved/ Completed
“Transferring Expertise to Bakal Sejati Sdn Bhd in establishing greener injection molding system to increase productivity and produce high Quality Plastic Bottles”  Industry: Bakal Sejati Sdn Bhd	National (KTP-MOHE Grant)	RM 144, 935	Completed: 2016 (Started: 2014)
“Green Event Management (GEM) Procedure Manual Development Project With Kumpulan Media Karang kraf”  Industry: Kumpulan Media Karang kraf	National (KTP-MOHE Grant)	RM 161, 318	Completed: 2015 (Started: 2013)
“Transfer of Expertise of Engineering Automation Technologies into Rabbit Production Industry”  Industry: Rabbit Village d Muar	National (KTP-MOHE Grant)	RM 100, 604	Completed: 2015 (Started: 2013)
“Transferring Expertise To Homestay Operators In Formulating Products Using Available Resources : A Generation Of Idiosyncratic Identity And Income”	National (KTP-MOHE Grant)	RM 126,587.50	Completed: 2014 (Started: 2012)

## POSTGRADUATE SUPERVISION

### PhD Student (Graduated – Main Supervision)

1. Dr Mohd Arif Mat Norman, Graduated in February 2024  
(GOT: Graduate on Time & APC: Excellent Researcher Award)  
Thesis Title: "*Development of a novel natural frequencies prediction tool for laminated composite plates using Integrated Artificial Neural Network (ANN)-Simulink MATLAB*"
2. Mohamad Mali, Graduated in August 2022 (GOT & APC)  
Thesis Title: "*Progressive Failure Behaviour of Transverse Sinusoidally Thick Hybrid Composite Laminate Based on 3rd Order Shear-Warp Theory and Interchangeable Failure Criteria*"
3. Dr Ahmad Fuad Ab Ghani, Graduated in July 2019  
Thesis Title: "*Multi Methods Properties Extraction of Hybrid Composite Layups Under Various Loading Conditions*"
4. Dr Siti Humairah Kamarul Bahrain, Graduated in May 2019 (GOT & APC)  
Thesis Title: "*Experimental Characterisation and Hyperelastic Modelling of the Mechanical Behaviour of Arenga Pinnata – Silicone Biocomposite*"
5. Dr Azizul Hakim Samsudin, Graduated in March 2019  
Thesis Title: "*Failure Prediction of Composite Laminates Based on Multitudinous Combined Lamination and Failure Theories*"
6. Dr Ghazirah Mustapha @ Mustafa, Graduated in June 2018  
Thesis Title: "*Biomechanical Characterisation of Seni Silat Cekak Movement using a novel 3D Motion Capture-Analysis System*"
7. Dr Nor Fazli Adull Manan, Graduated in June 2016  
Thesis Title: "*Assessing Multiple Approaches and Various Hyperelastic Models for Biomechanical Properties of Animal Skin*"

### PhD Student (Graduated – Co- Supervision)

1. Dr Mazyan Yahya, Graduated in February 2022  
Thesis Title: "*Synthesis and Characterisation of Pulverised Titanium Niobium Alloy for Potential Biomedical Application*"
2. Dr Noriah Yusoff, Graduated in May 2019  
Thesis Title: "*Analytical Evaluation, Fabrication and Characterisation of Capacitive Interdigital Micro-Electro-Mechanical System Breath Sensor*"
3. Dr Napisah Sapiai, Graduated in December 2017  
Thesis Title: "*Mechanical and Wear Properties of Functionalised Carbon Nanotubes Modified Kenaf Composites*"

4. Dr Mohd Nor Azmi Ab Patar, Shibaura Institute of Technology, Japan,  
Graduated in March 2017  
Thesis Title: *“Development of Finger Contracture Prevention System for Early Post Stroke Rehabilitation”*

### **MSc by Research (Graduated Students – Main Supervision)**

1. Nurdalilah Noordin, Graduated in December 2022  
Thesis Title: *“Failure Prediction of Composite Laminates with Various Cutouts Shapes using ANN”*
2. Muhammad Amir Azhan Zulkifli, Graduated in December 2022  
Thesis Title: *“Failure Analysis of Hybrid Boron/Glass Composite Laminates with Various Cutouts Shapes and Sizes under Biaxial Tension”*
3. Ahmad Faiz Ahmad Nazri, Graduated in October 2018  
Thesis Title: *“Development of Motion Capture-Analysis System using Kinect and Matlab for Modified RULA (mRULA)”*
4. Mohamad Mali, Graduated in February 2018  
Thesis Title: *“Deformation and Failure Analysis of Composite Laminates under Various Load and Boundary Conditions”*
5. Nurul Nadiah bt Azmi, Graduated in November 2016  
Thesis Title: *“Hyperelastic Constitutive Analysis of Agar Silicone and Kenaf Silicone Biocomposite”*
6. Mastura Abdul Rahim, Graduated in February 2016  
Thesis Title: *“Finite Element Implementation to Predict Failure of Composite Laminate”*
7. Siti Hajar Mohd Yusop, Graduated in May 2015  
Thesis Title: *“Investigating the Biomechanical Properties of Fresh Goat Skin, Natural dried Skin and Leather”*
8. Siti Noor Azizzati Mohd Noor, Graduated in April 2015  
Thesis Title: *“Experimental-Numerical Analysis of Silicone Sheet Adapting Hyperelastic Constitutive Equations”*

### **MSc by Research (Graduated Student – Co Supervision)**

1. Wan Nur Fatini Syahirah W. Dagang, Graduated in March 2023  
Thesis Title: *“Biomechanical Analysis of Parietal-Temporal Implant: Effects of Pore Structures and Material Properties”*
2. Auni Izzati Jusoh, Graduated in June 2022 (GOT & APC)  
Thesis Title: *“Quantifying and Predicting The Tensile And Compressive Properties Of Moringa Oleifera Barks - Silicone Biocomposites”*
3. Noorainol Faiz Noor Haris, Graduated in August 2021  
Thesis title: *“Experimental and Numerical Study of Hevea Brasilensis - Silicone Biocomposite”*

4. Shahrul Hisyam Marwan, Graduated in July 2014  
Thesis title: *"Human Skull 3D Model Development and Biomechanical Analysis in Full Frontal Crash"*.
5. Noriah binti Yusoff, Graduated in 2008  
Thesis title: *"Flexible Line Automation and Industrial Robotic Application of the Polyurethane Injection Moulding Process"*.
6. Abdul Malik Hussein Abd Jalil, Graduated in 2006  
Thesis title: *"Finite Element Analysis of Aircraft Structure Using Super Element"*.

### **Master in Engineering Management (Graduated – Main Supervision)**

1. Aziz bin Ambia, Graduated in 2015  
Dissertation Title: *"Implementation of Distributed Control System using Profinet Technology in Industrial Food Production"*

### **PhD Student (On-going – Main Supervision)**

1. Abdullah Azmin Abdullah Suhaimi, 2020/2023  
Research Team: *"Experimental Characterisation and Hyperelastic Modelling of Novel Silicone Biocomposites"*
2. Mohd Hidayat Ab Rahman, 2022/2025  
Research theme: *"The Conceptual Design of an Innovative Protective Device for Safety Shoes Made of Natural Fibre Reinforced Composites"*
3. Aliff Farhan Mohd Yamin, 2022/2025  
Research theme: *"Modified Viscous Anand Model to Include Growth Kinetics of Ag3Sn Intermetallic Compounds in Predicting 96.5sn-3.0ag-0.05cu Solder Joints Failure Mechanism in Ball-Grid-Array Assembly Package During Thermal Mechanical Cycles"*
4. Nurul Nadiah Azmi, 2023/2026  
Research theme: *"Development and Biomechanical Analysis of Electrospun PVA/Honey-Based Scaffold for Wound Healing using Generalised Maxwell and Kelvin Voight Model"*
5. Mohd Suhairil Meon, 2023/2026  
Research theme: *"Progressive Failure Analysis of Composite Laminates under Low-Velocity Impact using Modified Damage Criteria"*

### **PhD Student (On-going – Co- Supervision)**

1. Ya'akob Yusof, 2021/2024  
Research theme: *"Biomechanical Elucidation of Spinal Injured Rats Kinematics Behavior Using Deep Neural Networks"*
2. Mohd Hazwan Mohamed Norli, 2021/2024  
Research theme: *"Parametric Optimization of 3D Printed Transtibial Prosthetic Socket"*
3. Jamaliah Md Said, 2020/2023  
Research theme: *"Repair and Rehabilitation Behaviour of Damage Surfaces using Granite Dust Filled Arenga Pinnata Fibre Epoxy Composites"*
4. Nur Nabila Mohd Nazali, 2020/2023 Research theme: *"Identifying New Hyperelastic Constitutive Model via Integration of Multiple Models in Medical Hybrid Biomaterials"*

### **MSc by Research (On-going – Main Supervision)**

1. Muhammad Hadri Bin Mohd Rosaidi, 2022/2024  
Research theme: *"Simulation, Optimisation And Prediction Of Natural Frequencies Of Hybrid Composite Laminates"*
2. Muhammad Hamizan Bin Hidzer, 2022/2024  
Research theme: *"Experimental-numerical Analysis Leucaena-silicone Biocomposite"*
3. Muhammad Faiz Syazwan Salleh, 2024/2026  
Research theme: *"Parametric Optimisation And Prediction Of Buckling Load For Thin Cylindrical Shell Under Compression"*
4. Norzihan Rahimi 2024/2026  
Research theme: *"Optimisation and Prediction of Flexura and Buckling Failure of Graphite/Glass Epoxy Laminate"*

### **MSc by Research (On-going – Co-Supervision)**

1. Syukrina Harun, 2024/2026 Research theme: *"Development of Twill Kenaf Yarn Fabric (Composite) with Untwisted Kenaf Yarn"*



### **MSc (Mixed Mode) (Graduated – Main Supervision)**

1. Liu Yongsheng, Graduated in April 2024  
Dissertation Title *“Four-Axis Programming Of Nx12.0 Software Based on Bing Dwen Dwen and Machine Tool Processing of Huazhong CNC System in China”*
2. Farhah Nadhirah Md Nordin Graduated in April 2024  
Dissertation Title *“Integrated Simulation and Numerical Methods In Predicting The Buckling Behaviour Of Thin-Cylindrical Shell Under Compression”*
3. Amiro Iqbal Mohd Aminudin, Graduated in April 2022  
Dissertation title: *“Performance Analysis Of Earth Switch Springs In Medium Voltage Switchgear Based On Industrial Standards”*
4. Muhammad Nadiarulah Nanihar, Graduated in October 2021  
Dissertation Title: *“A Comparison Study of Failure Prediction of Composite Laminate using Finite Element Analysis and Artificial Neural Network”*
5. Ahmed Abbas Abed Al Hussein Shnawa, Graduated in May 2021  
Dissertation title: *“Multi- Scale Modelling for Failure Analysis of Various Composite Laminates under Biaxial Loading”*
6. Ahmad Faridzal Rosli, Graduated in April 2021  
Dissertation Title: *“Experimental-Numerical Analysis Of Kaolin-Silicone Biocomposites”*
7. Abdullah Azmin Abdullah Suhaimi, Graduated in 2020  
Dissertation Title: *“The Effect of Different Immersion Medium and Temperature on the Compressive Behaviour of Arenga Pinnata – Silicone Biocomposite”*
8. Nur Shafiueltwana Mohd Shafie, Graduated in 2020  
Dissertation Title: *“Experimental-Numerical Analysis of Sepiolite Incorporated Silicone Biocomposite Material”*

### **MSc (Mixed Mode) (Graduated – Co Supervision)**

1. Muhammad Naim Abdu Salam, Graduated in 2020  
Dissertation Title: *“Finger Exoskeleton for Early Acute Stroke Rehabilitation: Control Design and Performance Analysis”*

### **MSc (Mixed Mode) (On-going – Main Supervision)**

Nil

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## POST GRADUATE VIVA & THESIS EVALUATION

### External Examiner - PhD Viva & Thesis Evaluation

1. Thesis Examiner (External), for PhD Thesis, *Biomechanics Analysis of Malaysian Elite Power Stroke Technique*, Fakhrizal Azmy Nasruddin, **Universiti Teknologi Malaysia (UTM)**, October – December 2023.
2. Thesis Examiner (External), for PhD Thesis, *Mechanical Properties of Hybrid FLY-ASH/ Natural Fibre-Reinforced Composites*, Zainun Achmad Karmo Main, **Universiti Tun Hussein Onn Malaysia (UTHM)**, July – September 2023.
3. Thesis Examiner (External), for PhD Thesis, *Investigation on the Effect of Nutrient Alloying Elements in Biodegradable Mg-Based Orthopedic Implant*, Nurul Shafyra Mohd Sabri, **Universiti Teknologi Malaysia (UTM)**, Mac – Mei 2023.
4. Thesis Examiner (External - International), for PhD Thesis, *Thermal Modeling and Parametric Optimization of EDM of SiC/CNT Nonconductive Ceramic Matrix Composite (CMC)*, Pallavi Chaudhury, **Siksha 'O' Anusandhan (Deemed to be University), India**, January – February 2022.
5. Thesis Examiner (External), for PhD Thesis, *Design and Evaluation of Synthetic Paediatric Mid-Thoracic Spine Model for Scoliosis Research*, Nor Amalina Muhayudin, **Universiti Malaysia Perlis (UniMAP)**, July – October 2021.
6. Thesis Examiner (External), for PhD Thesis, *Biomimetic Electrospun Scaffolds for Functional Tissue Engineering of Articular Cartilage*, Khoo Weily, **Universiti Tun Hussein Onn Malaysia (UTHM)**, March – May 2021.
7. Thesis Examiner (External), for PhD Thesis, *Structural Design and Analysis of Lightweight Foam-Filled Kraft Paper Honeycomb Structure*, Nurdina Abd Kadir, **International Islamic University Malaysia (IIUM)**, February – May 2021.
8. Thesis Examiner (External - International), for PhD Thesis, *Development, Evaluation and Analysis of Al 5083 Matrix Hybrid Composite Reinforced with MWCNT, Mob and Ni*, Sajeeb Rahiman A H, **Karunya Institute of Technology and Sciences, India**, February – March 2021.
9. Thesis Examiner (External), for PhD Thesis, *Optimization of Machining Parameters and Tool Geometrical Feature for Effectively Trimming CFRP Aero Composite Material*, Syahrul Azwan Sundi, **Universiti Teknikal Malaysia Melaka (UTEM)**, December 2020 – January 2021.
10. Thesis Examiner (External), for PhD Thesis, *Stability Analysis Of Combined Shell Structures*, Mohd Shahrom Ismail, **Universiti Teknikal Malaysia Melaka (UTEM)**, September – November 2020.
11. Thesis Examiner (External), for PhD Thesis, Mohd Syafiq Mohd Suri, **Universiti Teknologi Malaysia (UTM)**, September – November 2020.
12. Thesis Examiner (External), for PhD Thesis, *BioPattern: A Nature's Pattern Biomimicry Design Framework For Novel Idea Generation*, Foo Chin Toong, **Universiti Tun Hussein Onn Malaysia (UTHM)**, March – June 2020.

13. Thesis Examiner (External), for PhD Thesis, *Modelling of Residual Stress Relaxation of Shot-peened ASTM A516 Grade 70 Carbon Steel*, Mohd Rashdan Isa, **Universiti Tenaga Nasional (UNITEN)**, August – October 2019.
14. Thesis Examiner (External), for PhD Thesis, *A Hybrid Haptic Feedback Stimulation Prosthetic Device to Recover the Missing Sensation of the Upper Extremity Amputees*, Mohammed Najeh Nemah, **Universiti Tun Hussein Onn Malaysia (UTHM)**, August – September 2019.
15. Thesis Examiner (External), for PhD Thesis, *Determinants Factors of Operational Excellence: The Moderating Effect of External Environment*, Mohd Hafeez Al-Amin Abdul Wahab, **Universiti Malaysia Kelantan (UMK)**, January – April 2019.
16. Thesis Examiner (External), for PhD, Thesis *Application of the GTF Technique in conjunction with Numerical Modelling of the Human Arterial Network to Improve Cardiovascular Diagnostics*, Ahmed Tamkin Butt, **University of Nottingham Malaysia Campus (UNMC)**, October 2018 – January 2019.
17. Thesis Examiner (External), for PhD Thesis, *The Effect of Chemical Treatment, Fibre Length, Fibre Content and Injection Moulding Parameter to UV Irradiation Resistance of Oil Palm Fibre Reinforced Composites*, Muhamad Fitri, **Universiti Tun Hussein Onn Malaysia (UTHM)**, August 2017 – October 2018.
18. Thesis Examiner (External), for PhD Thesis, *Investigation of Anatomical Interaction of Cortical Bone and Single Edge Crack under Tensile Loading Based on Homogeneity and Heterogeneity Properties*, Nurul Najwa Mansor, **Universiti Malaysia Perlis (UniMAP)**, May 2017 – May 2018.
19. Thesis Examiner (External), for PhD Thesis, *Glenoid Implant with New Artificial Glenoid Labrum using Functionality Graded Polyvinyl Alcohol Hydrogel in Reducing Rocking Horse Phenomena after Shoulder Replacement*, Abdul Hadi Abdul Wahab, **Universiti Teknologi Malaysia (UTM)**, August 2017 – January 2018.
20. Thesis Examiner (External), for PhD Thesis, *Dynamic Degradation of Porous Magnesium Under A Simulated Environment Of Human Cancellous Bone*, Amir Putra Md Saad, **Universiti Teknologi Malaysia (UTM)**, October – December 2016.
21. Thesis Examiner (External), for PhD Thesis, *Modeling and Application of Piezoelectric Actuators in Active Repair of Isotropic and Composite Structures*, Ahmed Abuzaid Ahmed, **International Islamic Universiti Malaysia (IIUM)**, July – September 2016.
22. Thesis Examiner (External), for PhD Thesis, *Deformation Behavior of Cortical Bone Subjected to Quasi Static Loading using Anisotropic Yield Criteria by Finite Element Method*, Ng Theng Pin, **Universiti Teknologi Malaysia (UTM)**, February – May 2016.
23. Thesis Examiner (External), for PhD Thesis, *Investigation in Monotonic and Cyclic Behaviour of Trabecular Bone Under Uniaxial and Multiaxial Loading*, Mohd Al-Fatihhi bin Mohd Szali Januddi, **Universiti Teknologi Malaysia (UTM)**, September – November 2015.
24. Thesis Examiner (External), for PhD Thesis, *Development of Link Elbow Implant and Related Surgical Guide for Total Elbow Arthroplasty*, Milad Heidari, **Universiti Teknologi Malaysia (UTM)**, December 2014 – March 2015.
25. Thesis Examiner (External), for PhD Thesis, *Optimisation of Vehicle Front End Geometry for Adult and Child Pedestrian Protection*, Kausalyah Ventakason, Kulliyah of Engineering, **International Islamic University Malaysia (IIUM)**, December 2014 - February 2015.

## External Examiner – MSc (Research Mode) Viva & Thesis Evaluation

1. Thesis Examiner (External), for MSc Thesis, *The Effect of Coefficient of Friction Between Rail Vehicle Wheels and Rail Track on Operation Power Consumption*, Nur Shahibrahim Mahamudin, **International Islamic University Malaysia (IIUM)**, September – October 2023.
2. Thesis Examiner (External), for MSc Thesis, *Study on the Correlation Between Water Content, Biomechanical Properties and Greyscale Image of Articular Cartilage*, Furas Anes Saleh Hamshary, **Universiti Teknikal Malaysia Melaka (UTEM)**, May – June 2023.
3. Thesis Examiner (External), for MSc Thesis, *Crash Analysis of Composite Aircraft Fuselage Under Belly Landing*, Sharifah Nadhirah Syed Abd Rahman Alqudsy, **International Islamic University Malaysia (IIUM)**, February – May 2023.
4. Thesis Examiner (External), for MSc Thesis, *Analysis of Warpage and Springback of Thick Uni-Directional Carbon-Epoxy Laminates Cured using Autoclave*, Muhammad Mushab Zakaria, **International Islamic University Malaysia (IIUM)**, February – April 2022.
5. Thesis Examiner (External), for MSc Thesis, *Residual Strength Analysis of Corroded Pipeline Subjected to Combined Loadings using Artificial Neural Networks*, Michael Yin Kai Lo, **Universiti Teknologi Petronas (UTP)**, August – October 2021.
6. Thesis Examiner (External), for MSc Thesis, *Predicting The Elastic Behaviour Of Multilayer High Density Interconnect Printed Circuit Board From Its Constituent Materials*, Loon Kuan Teng, **Multimedia University (MMU)**, February 2019 – May 2019.
7. Thesis Examiner (External), for MSc Thesis, *Design, Development and Performance of a Low Cost Three-Dimensional Metal Printer*, Nor Ana Rosli, **Universiti Teknikal Malaysia Melaka (UTEM)**, January - March 2018.
8. Thesis Examiner (External), for MSc Thesis, *Design of the Low-Stiffness-Resilient Shaft (LSRS) for Semi-Active-Steering (SAS) system*, Najaf Hussain, **Universiti Teknologi Petronas (UTP)**, Jan 2017 – Mac 2017.
9. Thesis Examiner (External), for MSc Thesis (Research Mode), *Characterization of Biomechanical Properties of Articular Cartilage Across Synovial Joint*, Yusra Liyana Jaafar, **Universiti Teknikal Malaysia Melaka (UTEM)**, September - October 2016.
10. Thesis Examiner (External), for MSc Thesis (Research Mode), *Micro-Mechanical and Flow Behaviours of Friction Stir Welded Thick Nylon-6 Plates*, Muhammad Adeel Zafar, **Universiti Teknologi Petronas (UTP)**, March 2016 - May 2016.
11. Thesis Examiner (External), for MSc Thesis (Research Mode), *An Accurate Model for Analysis of Composite Laminated Cylindrical Shell under Hygrothermal Loads*, Saleh Naji Musaed Al-Subar, **International Islamic University Malaysia (IIUM)**, January 2016 - March 2016.
12. Thesis Examiner (External), for MSc Thesis (Research Mode), *Computational Malaysian Female Anthropometry Test Dummy*, Lina Tam, **Universiti Tun Hussein Onn Malaysia (UTHM)**, January 2015 - March 2015.
13. Thesis Examiner (External), for MSc Thesis (Research Mode), *Robust Position Encoding and Velocity Deduction for Remote Monitoring of Irrigation Water System*, Abdallah S.Z. Alsayed, Faculty of Engineering, **Universiti Putra Melaka (UPM)**, January 2015 - March 2015.

14. Thesis Examiner (External), for MSc Thesis (Research Mode), *Biomechanical Study of Human Lumbar Spine with Total Disc Replacement of Maveric® Prosthesis using Finite Element Method*, Siti Nurfaezah Zahari, Faculty of Mechanical Engineering, **Universiti Teknikal Malaysia Melaka (UTEM)**, December 2014, Viva 11 March 2015.
15. Thesis Examiner (External), for MSc Thesis (Research Mode), *Computer Integrated Design and Manufacturing of Patient Specific Lower Limb Orthoses Through 3D Reconstruction*, Morshed Alam, Faculty of Engineering, **University of Malaya (UM)**, September 2014, Viva 23 December 2014.

### **Internal Examiner – PhD Viva & Thesis Evaluation**

1. Thesis Examiner (Internal), for PhD Thesis, *Numerical Simulation Analysis and Experimental Verification On Distortions Induced By Wire-Arc Additive Manufacturing Components With Costing Analysis*, Keval Priapratama Prajadhiana, School of Mechanical Engineering, College of Engineering, Universiti Teknologi MARA, August – November 2023.
2. Thesis Examiner (Internal), for PhD Thesis, *Damage Resistance and Tolerance of Silica Nanoparticles Kevlar/Glass Fibre Modified Hybrid Composites*, Norazean Shaari@Md, Faculty of Mechanical Engineering, Universiti Teknologi MARA, February – July 2018.

### **Internal Examiner – MSc (Research Mode) Viva & Thesis Evaluation**

1. Thesis Examiner (Internal), for MSc Thesis (Research Mode), *Design for Modularity of Blended Wing Body (BWB) Baseline II-e2 Unmanned Aerial Vehicle (UAV)*, Mat Zaini Katon, Faculty of Mechanical Engineering, Universiti Teknologi MARA, December 2013.
2. Thesis Examiner (Internal), for MSc Thesis (Research Mode), *Design and Development of a Mouth Spacer for Dental Surgery Applications*, Nurnida Elmira Othman, Faculty of Mechanical Engineering, Universiti Teknologi MARA, November 2013.
3. Thesis Examiner (Internal), for MSc Thesis (Research Mode), *Development of In Vivo Measurement Technique to Predict Biomechanical Properties of Human Tibia*, Hydar Saadi Hasan Al-Wasti, Faculty of Mechanical Engineering, Universiti Teknologi MARA, July 2013. (Viva 25 Feb 2014).

## Viva Chair – PhD and MSc (Research Mode)

1. Chair, Viva Session for PhD candidate, Ummu Raihanah Hj Hashim, *Synergistic Effects of Nanographene-Nanosilica on Thermo-mechanical and Thermal Properties of Unidirectional Basalt Fibre Reinforced Polymer Composites*, FKM UiTM, 15 May 2020.
2. Chair, Viva Session for PhD candidate, Armansyah, *Friction Stir Spot Welded Characterization Of Al Alloy 5052- H1112 and Artificial Neural Network Prediction Model*, 31 October 2019.
3. Chair, Viva Session for PhD candidate, Mohd Rozaiman Aziz, *Hydrodynamic Ram Ballistic Limit Analysis of Aluminium Tank*, FKM UiTM, 16 March 2016.
4. Chair, Viva Session for PhD candidate, Rizal Effendy Mohd Nasir, *Stability Augmentation System Using Canard Control Surface for Longitudinal Flight Dynamics of Blended Wing-Body Unmanned Aerial Vehicle*, IPSIS UiTM, Intekma Resort, Selangor, 17 July 2013.
5. Chair, Viva Session for MSc candidate (Research Mode), Khairul Ashraf Kamarudin, *Hydrogen Production from Low-Temperature Catalytic Thermochemical Processing of Palm Oil Empty Fruit Bunches*, FKM UiTM, 29 March 2018.
6. Chair, Viva Session for MSc candidate (Research Mode), Nor Hidayah Mohd Razif, *Heat Transfer Analysis For Ammonia-Water Mixture Heat Exchanger Of An Energy Recovery System*, FKM UiTM, 16 October 2017.
7. Chair, Viva Session for MSc candidate (Research Mode), Khairunnisa Johar, *Classification of Electroencephalogram Data using Electromyography as a Marker for BCI Controlled Hand Prosthesis*, FKM UiTM, 9 May 2017.
8. Chair, Viva Session for MSc candidate (Research Mode), Muhammad Faris Abd Manap, *Prediction Of Epoxy-UHMWPE Acetabular Cup Performance At New Inclination And Anterersion Orientation*, FKM UiTM, 29 March 2017.
9. Chair, Viva Session for MSc candidate (Research Mode), Nurhasanah Ismail, *The Effect Of Basic Parameters And The Addition Of Helical Tapes In A Hot Tube On The Performance Of The Ranque-Hirsch Vortex Tube Model A20400*, FKM UiTM, 26 January 2017.
10. Chair, Viva Session for MSc candidate (Research Mode), Norhashidah Manap, *Mechanical Properties of Kenaf Hybrid Composite Laminates*, FKM UiTM, 18 December 2015.
11. Chair, Viva Session for MSc candidate (Research Mode), Nurul Fathiah Mohamed Rosli, *A Real-Time Algorithm of Optical Tactile Sensor for Surface Characterization*, FKM UiTM, 13 August 2015.
12. Chair, Viva Session for MSc candidate (Research Mode), Syarifah Noor Deraman @ Adb Rahman, *Investigation of Binaural Beats And Isochronic Tones on Beta And Gamma Brain Wave Frequencies*, FKM UiTM, 1 July 2015.
13. Chair, Viva Session for MSc candidate (Research Mode), Noorul Wahida Abdul Razak, *The Tensile Behaviour of Polymer Composite with Oil Palm Empty Fruit Bunch and Nanoclay Reinforcement*, Faculty of Mechanical Engineering UiTM, 27 October 2014.
14. Chair, Viva Session for MSc candidate (Research Mode), Haszeme Abu Kasim, *Parametric Study of Nozzle Connections in Eclipsoidal Head Vessel*, IPSIS UiTM, Intekma Resort, Selangor, 8 April 2014.

15. Chair, Viva Session for MSc candidate (Research Mode), Ahsana Aqilah Ahmad, *Resistive Tactile Sensing Using Conductive Rubber Sheet and Quantum Tunnelling Composites Pills for Robotic Hand*, IPSIS UiTM, Intekma Resort, Selangor, 13 December 2013.
16. Chair, Viva Session for MSc candidate (Research Mode), Robert Ngendang Anak Lidam, *Distortion Analysis of Multipass GMAW Process on Ship Panel Application Using FEM and Experimental Validation*, IPSIS UiTM, Intekma Resort, Selangor, 16 April 2013.

### **Viva & Dissertation Evaluation (Master in Engineering Management):**

1. Dissertation Examiner for Master in Engineering Management candidate, Norlisah Saharuddin, *The Effect of Smoke Exposure From Diesel Heavy Duty Engine to The Worker's Lungs*, Faculty of Mechanical Engineering UiTM, 2 December 2015.
  2. Dissertation Examiner for Master in Engineering Management candidate, Saleh Samid, *To establish MOEL for Knowledge Management System to Improve Maintenance Efficiency for Coal Handling Plant in Stesen Janaelektrik Sultan Salahuddin Abdul Aziz (SJSSAA)*, Faculty of Mechanical Engineering UiTM, 2 December 2015.
  3. Dissertation Examiner for Master in Engineering Management candidate, Nur Syazana Mohd Nabin, *Stringent Importation of False Declaration on Boron-Added Steel Product Imported From Major Steel Producer in the World into Malaysia*, Faculty of Mechanical Engineering UiTM, 8 January 2015.
  4. Dissertation Examiner for Master in Engineering Management candidate, Mohd Isran Che Mustapha, *Implementation of Condition Based Maintenance (CBM) for Medium Voltage Substations for TNB Distribution Pasir Gudang*, Faculty of Mechanical Engineering UiTM, 26 June 2014.
  5. Dissertation Examiner for Master in Engineering Management candidate, Mohammad Haznor Bin Mohd Hizan, *Emergency Response Management Plan for Pokok Sena City Gate Station using Dispersion and Radiation Analysis Result Parameter*, Faculty of Mechanical Engineering UiTM, 9 January 2013.
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## **SOCIETAL INVOLVEMENT**

### **Professional Body**

- Registered Professional Engineer (Ir) with the Board of Engineers Malaysia since 31 March 2016. (P. Eng. No. 17303)
- Registered Graduate Engineer with the Board of Engineers Malaysia since 23 May 2001. (BEM No. 32709A)

### **Professional Association/ Society**

- Corporate Member, The Institution of Engineers, Malaysia (MIEM No.: 80504)
- Senior Member of IEEE (SMIEEE member #92154121)
- Life Member of Malaysian Invention & Design Society (MINDS – Membership No. 1962)
- Member of Persatuan Industri Komposit (PIK)
- Senior Member of International Association of Computer Science and Information Technology (IACSIT Senior Membership No. 80343528)
- International Association of Engineers (IAENG Member No: 118142)
- Cardiff University Alumni (Membership No. 706538)
- MITASA (Membership No. 6108)
- UTIMAS

### **Research Community**

- i-mechanica since 2008.
- ResearchGate
- Invited member of Centre for Applied Biomechanics (CAB), University of Malaya, Malaysia

### **Malaysian Post Graduate Society in Cardiff, UK**

- President (2007-2008) of the Malaysian Post Graduate Society, Cardiff (known as Cardiff Keluarga and registered with the Malaysian Student Department, UK & Eire)



## SPECIAL INVITATIONS / APPOINTMENTS / EXPERTISE CONTRIBUTIONS

### INTERNATIONAL LEVEL

#### Keynote/ Invited Speaker

- **Keynote Speaker** for Innovative Manufacturing, Mechatronics & Materials Forum 2021 (iM3F 2021), Virtual Platform, Universiti Malaysia Pahang, 20 September 2021.
- **Keynote Speaker** for 1<sup>st</sup> Colloquium for System and Sports Engineering (COSSE 2019), Universiti Teknologi MARA Shah Alam, 15 July 2019.
- **Keynote Speaker** for National Conference on Multidisciplinary Research and Practise 2018, KUPTM Kuala Lumpur, 24 November 2018.
- **Plenary Speaker** for Seminar Nasional 2018 (SEMNASTEK 2018), Dumai Indonesia, 15 November 2018.
- **Plenary Speaker & Conference Chair** for International Conference on Mechatronics and Electrical Systems (ICMES 2018), Bangkok Thailand, 12 – 14 October 2018.
- **Keynote Speaker & Conference Chair** for 2018 6th International Conference on Nanomaterials and Materials Engineering (ICNME 2018), Langkawi Malaysia, 23 – 25 March 2018.
- **Keynote Speaker** for ICFMS 2016 and ICMES 2016, Hong Kong, 4 – 6 December 2016.
- **Keynote Speaker** for ICEIM 2016, Kuala Lumpur, Malaysia, 10 – 12 September 2016.
- **Keynote Speaker & Conference Chair** for ICEDA 2016 and ICCBB 2016, Langkawi, Malaysia, 30 July 2016.
- **Invited Speaker**, 4th International Conference on Advances in Mechanical Engineering (ICAME 2015) 26-27 August, 2015, Patra Jasa Bali, Indonesia
- **Keynote Speaker** for ICMDE 2015, Jeju Island, Korea, 17 May 2015.
- **Keynote Speaker** for MIMT 2015, Melaka, Malaysia, 6 –7 March 2015.
- **Keynote Speaker** for ICMST 2014, ICCST 2014 and ICNIC 2014, Sarawak Malaysia, 7 – 8 June 2014
- **Keynote Speaker** for MIMT 2014, ICMIB 2014 and ICIIE 2014, Penang, Malaysia, 10-11 March 2014.
- Invited paper (at *IMechE Medicine and Health Division Meeting*: 15 October 2009, pp 43-48). J Mahmud, SL Evans and CA Holt. *Using Motion Capture and Analysis to Explore the Mechanical Properties of Human Skin in-vivo*. Measurement and Sensing in Medicine and Health: Capturing Motion and Musculoskeletal Dynamics.
- Invited speaker (at Cardiff University, *Skin Focus Group 5<sup>th</sup> Meeting*: 21 January 2009). J Mahmud, SL Evans and CA Holt. *Biomechanics of Skin*.

- Invited speaker (at Scientific Research Colloquium, Cardiff University organized by Malaysian Post Graduate Society, 5 September 2009). J Mahmud. Managing your *PhD research*.

### Visiting Professor/ Researcher

- **Visiting Researcher (Associate Professor)**, Shibaura Institute of Technology, **Japan**, 7 – 13 February 2016.

### Mentor for In-Bound Post Doc/ Visiting Researcher

- **Mentor** to Mr Guerrah Ayoub, Visiting Researcher (PhD Candidate), from the Faculty of Technology, University of El-Oued, **Algeria**, 11 – 20 December 2017.

### International Panel of Judges for Invention & Innovation Competition

- **Official (International) Judge** for The Crown Prince Cipta Award 2013, **Brunei Darussalam**, Institut Teknologi Brunei, 25 – 28 February 2013.
- **International Panel of Judges**, 35th International Invention, Innovation and Technology Exhibitions (ITEX 2024), Kuala Lumpur Convention Centre 16 – 18 May 2024.
- **International Panel of Judges**, 34th International Invention, Innovation and Technology Exhibitions (ITEX 2023), Kuala Lumpur Convention Centre 11 – 12 May 2023.
- **International Panel of Judges**, 33rd International Invention, Innovation and Technology Exhibitions (ITEX 2022), Kuala Lumpur Convention Centre 26 – 27 May 2022.
- **International Panel of Judges**, 30th International Invention, Innovation and Technology Exhibitions (ITEX 2019), Kuala Lumpur Convention Centre 2 – 4 May 2019.
- **International Panel of Judges**, 28th International Invention, Innovation and Technology Exhibitions (ITEX 2017), Kuala Lumpur Convention Centre 11 – 13 May 2017.
- **International Panel of Judges**, 27th International Invention, Innovation and Technology Exhibitions (ITEX 2016), Kuala Lumpur Convention Centre 12 – 14 May 2016.
- **Chief Judge**, International Invention, Innovation & Design Competition (IIID Johor 2015), 29 October 2015.

- **International Panel of Judges**, 26th International Invention, Innovation and Technology Exhibitions (ITEX 2015), Kuala Lumpur Convention Centre 21 – 23 May 2015.
- **Chief Judge**, International Invention, Innovation & Design Competition (IIID Johor 2014), 20 August 2014.
- **International Panel of Judges**, 25th International Invention, Innovation and Technology Exhibitions (ITEX 2014), Kuala Lumpur Convention Centre 8 – 10 May 2014.
- **Head Judge**, World Varsity Engineering Challenge (WoVEC) 2014, IIUM Kuala Lumpur 16 –17 April 2014.
- **International Panel of Judges**, 24th International Invention, Innovation and Technology Exhibitions (ITEX 2013), Kuala Lumpur Convention Centre 9 – 11 May 2013.
- **International Panel of Judges**, 23rd International Invention, Innovation and Technology Exhibitions (ITEX 2012), KLCC 17 – 19 May 2012.

### **International Panel for Career Promotion**

- **External Assessor** for Promotion (Associate Professor – Blind Review), Department of Biomedical Technology, College of Applied Medical Sciences, King Saud University, **Kingdom of Saudi Arabia**, February 2022.
- **External Assessor** for Promotion (Professor – Blind Review), Department of Biomedical Technology, College of Applied Medical Sciences, King Saud University, **Kingdom of Saudi Arabia**, September 2021.
- **External Assessor** for Promotion (Associate Professor – Blind Review), Department of Biomedical Technology, College of Applied Medical Sciences, King Saud University, **Kingdom of Saudi Arabia**, December 2018.
- **Evaluator** and External Assessor for Promotion (Associate Professor – Blind Review), Biomedical Department, College of Engineering, Ajman University, **UAE**, March – April 2018.
- **Referee** and External Assessor for Promotion (Associate Professor – Blind Review), College of Technological Studies, Public Authority of Applied Education and Training (PAAET), **Kuwait**, January – February 2015.

## **International Panel for Evaluation of Research Proposals**

- **Reviewer** and Panel of Experts, Evaluation of THREE (3) Research Proposals (Blind Review), Directed Research Projects, The Deanship of Scientific Research, King Saud University, January 2022.
- **Reviewer** and Panel of Experts, Evaluation of Research Proposal (Blind Review), National Centre of Science and Technology Evaluation (NCSTE), Ministry of Education and Science, **Republic of Kazakhstan**, March – April 2019.
- **Evaluator** and External Assessor, Evaluation of Research Proposal (Blind Review), Biomedical Department, Sultan Qaboos University Deanship of Research, **Sultanate of Oman**, November 2017.

## **Other international appointments/ contributions**

- **Mentor** for Participants, British Council – Newton Fund for VU-HEIE Project, UK-ASEAN Workshop 2018 on “Cost-effective solutions and assistive technologies for low-income ageing populations”, 22 – 24 August 2018, Hanoi, Vietnam
- Conference Program Co-Chair, 8th International Conference on Biomedical Engineering and Technology (ICBET 2018), 23 – 25 April 2018, Bali, Indonesia
- Track Chair for Mechanical Engineering Applications, 2014 IEEE Colloquium on Humanities, Science and Engineering Research (CHUSER 2014)
- Track Chair for Mechanical Engineering Science & Applications, First International Postgraduate Colloquium on Science and Technology 2014 (IPCOST 2014)
- Chair of ICMIB 2014 and Conference co-Chair, 5th International Conference on Mechanical, Industrial, and Manufacturing Technologies (MIMT, ICIIE & ICMIB 2014), Penang, Malaysia, 10-11 March 2014.
- Track Chair, Symposium on humanities, science and engineering research (SHUSER 2013)
- Invited Chair, 2nd International Conference on Medical Information and Bioengineering (ICMIB 2013), Bali Island 16 – 17 March, 2013.

## **NATIONAL LEVEL**

### **External Examiner for Academic Programme**

- External Examiner for BEng and MEng in Mechanical Engineering / B511 & B531 (Malaysia), **Heriot-Watt University**, 2022/23 – 2025/26.
- Examiner for Diploma in Automotive Engineering Technology (Motorsport), **DRB-HICOM University of Automotive Malaysia**, 1 November 2023 – 31 October 2025.
- External Examiner for BEng in Mechanical Engineering with Honours, **Universiti Selangor**, 2022 – 2024.
- External Examiner for BEng and MEng in Mechanical Engineering, **Heriot-Watt University**, 2020/21 – 2021/22.

### **External Assessor/ Panel for Career Promotion**

- External Assessor for Promotion (Associate Professor – Dr. Mohd Hasnun Arif Hassan), **Universiti Malaysia Pahang (UMP)**, September 2023.
- External Assessor for Promotion (Professor – Dr. Syed Tarmizi Syed Shazali), **Universiti Malaysia Sarawak (UNIMAS)**, August 2023.
- External Assessor for Promotion (Associate Professor – Dr. Norshahida Sarifuddin), **International Islamic University Malaysia (IIUM)**, February 2023.
- External Assessor for Promotion (Associate Professor – Dr. Farah Diana Mohd Daud), **International Islamic University Malaysia (IIUM)**, November 2022.
- External Assessor for Promotion (Associate Professor – Dr. Mohd Nazri Omar), **Universiti Malaysia Perlis (UniMAP)**, August 2022.
- External Assessor for Promotion (Associate Professor – Ts. Dr. Mohd Azrul Hisham Mohd Adib), **Universiti Malaysia Pahang (UMP)**, May 2022.
- External Assessor for Promotion (Professor – Dr Al Emran Ismail), **Universiti Tun Hussein Onn Malaysia (UTHM)**, July 2021.
- External Assessor for Promotion (Professor – Dr Zuraidah Ahmad), **International Islamic University Malaysia (IIUM)**, November 2020.
- External Assessor for Promotion (Associate Professor – Dr Mohd Sultan Ibrahim Shaikh Dawood), **International Islamic University Malaysia (IIUM)**, February 2020.

- External Assessor for Promotion (Associate Professor – Ir Dr Mohd Rizal Alkahari), **Universiti Teknikal Malaysia Melaka (UTeM)**, November 2018.
- External Assessor for Promotion (Associate Professor – Dr Mohd Juzaila Abd Latif), **Universiti Teknikal Malaysia Melaka (UTeM)**, April 2017.
- External Assessor for Promotion (Associate Professor – Dr Jaffar Syed Mohamed Ali), **International Islamic University Malaysia (IIUM)**, April 2017.

### **External Assessor/ Panel for Evaluation of Research Proposals**

- **Evaluator**, Evaluation of Research Proposal (Application no. 047), Yayasan UTP Fundamental Research Grant (YUTP-FRG 1/2021), Universiti Teknologi Petronas, July 2020.
- **Evaluator**, Evaluation of Research Proposal (Application no. 88), Yayasan UTP Fundamental Research Grant (YUTP-FRG 2020), Universiti Teknologi Petronas, August 2019.
- **Evaluator**, Evaluation of Research Proposal (Application no. 32), Yayasan UTP Fundamental Research Grant (YUTP-FRG) 2019, Universiti Teknologi Petronas, December 2018.

### **Special appointments**

- **Board Member**, Institut Sains Negara (ISN), 2019/2021 session, appointed by the **Minister, Ministry of Youth and Sports, Malaysia**.

### **Other national appointments/ contributions**

- **Panel Evaluator for Engineering Accreditation Council (EAC)**, 1 January 2024 – 31 December 2029.
- **Technical Advisory Committee (TAC) Member** for ILJTM, Manpower Department, Ministry of Human Resources Malaysia, 31 July 2024 – 30 July 2026.
- **Panel Evaluator**, Fundamental Research Grant Scheme (FRGS) 2024, Ministry of Higher Education, March – April 2024.
- **Technical Advisory Committee (TAC) Member** for ILJTM, Manpower Department, Ministry of Human Resources Malaysia, 01 August 2022 – 31 July 2024.

- **Panel Evaluator**, Fundamental Research Grant Scheme (FRGS) 2023, Ministry of Higher Education, March – April 2023.
- Verification Panel for Final Examination Questions (Manufacturing Field) Session 2/2021, Advanced Technology Training Center (ADTEC Shah Alam), 20 – 21 April 2022.
- **Panel Evaluator**, Fundamental Research Grant Scheme (FRGS) 2022, Ministry of Higher Education, March – April 2022.
- Industrial Panel Evaluator, Final Year Project Presentation (PTA), Advanced Technology Training Center (ADTEC Shah Alam), 29 December 2021.
- **EAC Panel**, Interim Accreditation, Universiti Malaysia Perlis (UniMAP), October – November 2021.
- **Panel Evaluator**, Fundamental Research Grant Scheme (FRGS) 2021, Ministry of Higher Education, April 2021.
- **Technical Advisory Committee (TAC)** Member for ILJTM, Manpower Department, **Ministry of Human Resources Malaysia**, 24 September 2020 – 24 September 2022.
- **Technical Advisory Committee (TAC)** Member for ILJTM, Manpower Department, **Ministry of Human Resources Malaysia**, 24 September 2018 – 24 September 2020.
- **External Advisor (Academic)** Panel Member for Engineering Department, Faculty of Engineering and Life Sciences (FSKH), **Universiti Selangor (unisel)**, 01 May 2020 – 30 April 2022.
- **Board of Studies (BOS)** Member for MSc (Automotive Engineering), Mechanical Engineering Department, Kulliyah of Engineering (KOE), **International Islamic University Malaysia (IIUM)**, 03 February 2020 – 02 February 2022.
- **Self-Accreditation Panel** of Assessor for Master of Engineering (Mechanical), **Universiti Kuala Lumpur (UniKL)**, 09 August 2019 – 08 August 2022.
- **Chair**, Technical Evaluation Committee (JK Teknikal Penilaian 4), **Resource and Educational Technology Division (BSTP)**, Ministry of Education Malaysia, De Palma Hotel Ampang, 10 – 15 June 2019.
- **Chair**, Technical Evaluation Committee (JK Teknikal Penilaian 4), **Resource and Educational Technology Division (BSTP)**, Ministry of Education Malaysia, Royal Hotel Kuala Lumpur, 15 – 20 April 2019.
- Technical Advisory Committee (TAC) Member for ILJTM, Manpower Department, **Ministry of Human Resources Malaysia**, 29 August 2016 – 28 August 2018.
- **EAC Panel**, Accreditation Visit, Universiti Malaysia Perlis (UniMAP), 6 – 7 November 2018.

- Verification Panel for Final Examination Questions (Manufacturing Field) Session 2/2018, Advanced Technology Training Center (ADTEC Shah Alam), 28 – 29 August 2018.
- Invited Speaker, “PhD on Time Course (Module: Timeline, Viva Presentation & Managing Supervisor)”, 15 August 2018, Institute of Leadership and Development (ILD UiTM), Bandar Enstek.
- Panel Interviewer for Scholarship (International Candidates), Malaysia International Scholarship; offered by Malaysian Government and managed by the Ministry of Education Malaysia, DVC (R&I) Building UPM 18 July 2018.
- Industrial Panel Evaluator, Final Year Project Presentation (PTA), Advanced Technology Training Center (ADTEC Shah Alam), 17 May 2018.
- Observer, **EAC Accreditation Visit**, Universiti Teknikal Malaysia Melaka (UTeM), 2 – 3 April 2018.
- Verification Panel for Engineering Technology Diploma Syllabus (Manufacturing, Machining), Advanced Technology Training Center (ADTEC Shah Alam), 6 – 7 March 2018.
- Panel Member for PhD Scholarship Interview, The Human Life Advancement Foundation (HLAF), 9 October 2017, Bangunan UMNO PWTC, Kuala Lumpur.
- Verification Panel for Final Examination Questions (Manufacturing Field), Advanced Technology Training Center (ADTEC Shah Alam), 5 September 2017.
- Invited Speaker, “*PhD on Time Course (Module: Timeline, Viva Presentation & Managing Supervisor)*”, 12 July 2017, Institute of Leadership and Development (ILD UiTM), Bandar Enstek.
- Invited Speaker, “*Effective Postgraduate Supervision (EPS) Course – Experience Sharing*”, 27 April 2017, Institute of Leadership and Development (ILD UiTM), Bandar Enstek.
- Invited Speaker, “*One Day Seminar on RADIOSS/ HyperWorks Application in FEA and Biomaterials*” jointly organised by UMP and ORS Technologies Sdn Bhd, 27 March 2017, Universiti Malaysia Pahang (UMP) Pekan.
- Verification Panel for Engineering Technology Diploma Syllabus (Manufacturing, Machining), Advanced Technology Training Center (ADTEC Shah Alam), 28 March 2017.
- Invited Speaker, “*Avoiding and Detecting Plagiarism*” Institute of Graduate Studies (IGS) Research Skills Seminar, 12 March 2017, Anjung Seri Budiman, Universiti Teknologi MARA, Shah Alam.
- Verification Panel for Final Examination Questions (Manufacturing Field), Advanced Technology Training Center (ADTEC Shah Alam), 1 March 2017.



- Invited Speaker, “*PhD on Time Course (Module: Timeline, Viva Presentation & Managing Supervisor)*”, 22 February 2017, Institute of Leadership and Development (ILD UiTM), Bandar Enstek.
- Invited Speaker, “*Avoiding and Detecting Plagiarism*” Institute of Graduate Studies (IGS) Research Skills Seminar, 20 December 2016, Auditorium 1, Institute of Business Excellence (IBE), Universiti Teknologi MARA Shah Alam.
- Advisor II, Organizing Committee for NISCC 2016, National Innovative Smartphone Controller Contest at Universiti Teknologi MARA Shah Alam, 16 November 2016.
- Panel Member for PhD Scholarship Interview, The Human Life Advancement Foundation (HLAF), 24 November 2016, Bangunan UMNO PWTC, Kuala Lumpur.
- Invited Speaker, “*Avoiding and Detecting Plagiarism*” Institute of Graduate Studies (IGS) Research Skills Seminar, 7 October 2016, Dewan Kuliah B, Kompleks Kejuruteraan, Shah Alam, Universiti Teknologi MARA.
- Invited Speaker, “*Mechanical Tests and Biomechanical Characterisation of Soft Tissue*” Seminar on Tissue Engineering in conjunction of MESPIC 2016, 30 September 2016, Dewan Alamanda, Kompleks Kejuruteraan, Shah Alam, Universiti Teknologi MARA.
- Verification Panel for Final Examination Questions (Manufacturing Field), Advanced Technology Training Center (ADTEC Shah Alam), 1 & 2 September 2016.
- Industrial Panel Evaluator, Final Year Project Presentation (PTA), Advanced Technology Training Center (ADTEC Shah Alam), 5 May 2016.
- Invited Speaker & Facilitator, “*Engineering Research and High Impact Publications*” Workshop, 27 March 2016, Universiti Teknologi MARA Johor.
- Verification Panel for Final Examination Questions (Manufacturing Field), Advanced Technology Training Center (ADTEC Shah Alam), 1 & 2 March 2016.
- Invited Speaker & Facilitator, “*Scientific Journal Publication*” Workshop, 16 – 17 February 2016, Universiti Teknologi MARA Terengganu.
- Founder and Invited Speaker, “G.O. Time Series Workshop Malaysia Tour – Northern Region”, Academia Pro Hub Seminar and sponsored by ICOE Construction, 25 October 2015. Location: Universiti Utara Malaysia (UUM), Sintok, Kedah.
- Invited Speaker for International Invention, Innovation & Design Competition (IIID Johor 2015), 30 September 2015, Title “*Tips of Winning: The IIID Success Formulas*”.
- Founder and Invited Speaker, “G.O. Time Series Workshop Malaysia Tour – Southern Region”, Academia Pro Hub Seminar and sponsored by ICOE Construction, 16 August 2015. Location: Universiti Teknologi Malaysia (UTM), Skudai Johor.
- Invited Speaker Academia Pro Hub Seminar, 24 June 2015, Title “*Thesis and Publication writing*”, Bandar Baru Bangi.

- Panel Interviewer for MOHE Scholarship Programme, 11 June 2015, ILKAP Bangi.
- Founder and Invited Speaker, “G.O. Time Series Workshop Malaysia Tour – Central Region”, Academia Pro Hub Seminar and sponsored by ICOE Construction, 27 May 2015. Location: Universiti Teknologi MARA, Shah Alam.
- Founder and Invited Speaker, “G.O. Time Series Workshop Malaysia Tour – Eastern Region entitled “*Strategic Management for Research study*”, Academia Pro Hub Seminar and sponsored by ICOE Construction, 8 April 2015. Location: Universiti Malaysia Pahang (UMP), Gambang.
- Industrial Panel Evaluator, Final Year Project Presentation (PTA), Advanced Technology Training Center (ADTEC Shah Alam), 7 November 2014.
- Verification Panel for Final Examination Questions (Manufacturing Field), Advanced Technology Training Center (ADTEC Shah Alam), 2 & 3 September 2014.
- Invited Speaker for International Invention, Innovation & Design Competition (IIID Johor 2014), 11 June 2014, Title “*Fishing for Gold: A Guide for Success*”.
- Panel Reviewer, Knowledge Transfer Programme (KTP) Internal Review Session, International Islamic University Malaysia (IIUM), 6 May 2014.
- Panel of Judges, Invention, Innovation & Design Competition (IID Johor 2013), 19 September 2013.
- Invited Speaker, Knowledge Transfer Workshop, International Islamic University Malaysia (IIUM), 2 September 2013.
- Panel Evaluator & Session Chair for Research Seminar (SHPKPT 2012) organised by Ministry of Higher Education (MOHE), AKEPT 8 – 9 November 2012.
- Chair of Panel Evaluators, Innovation Tracer Programme (Jejak Inovasi), Selangor, 4 – 22 October 2012.
- Panel of Judges, IID Johor 2012, UiTM Segamat, 13 September 2012
- Panel Evaluator of Text Book Division, Ministry of Education Malaysia February – May 2012
- Trainer for Industry Led Professional Certification (IPC) Programme at Malaysian Automotive Institute (MAI) 11–13 January 2012.
- Invited Speaker for Knowledge Transfer Programme Grant Application (at UiTM faculties and campuses) December 2011 – July 2012.
- Panel Evaluator (at Politeknik Shah Alam) for Malaysian Polytechnic Scholarship - PhD proposals, 2011.
- Main Committee and Business Matching, PECIPTA 2011, KLCC September 2011.

- Trainer for Finishing School and Programme Kemahiran Insaniah, UiTM, 2011-2012
- Invited Researcher at Centre of Applied Biomechanics, University of Malaysia (October 2010 – present)
- Technical Committee for the Malaysian Automotive Institute (MAI) Undergraduate Apprentice Programme (July 2010 – present)
- Invited speaker (at FKM Colloquium, Universiti Teknologi MARA, 28 July 2010). J Mahmud. *Research in Biomechanical Engineering*.
- Invited speaker (at Malaysian Automotive Institute (MAI) Undergraduate Apprentice Programme Technical Session, 2 September 2010). J Mahmud. *Basic Mechanics*.
- Curriculum Advisor Committee for MARA Skills Institute, Malaysia (2005)
- Invited academician to the Motorola Malaysia Sdn Bhd University Relations (2003)
- Panel Evaluator for the Technical Proposal (Malaysian IRPA Grant) (2003)

### **Journal Editorial Board (International/National Journal):**

- **Editor-in-Chief**, Journal of Mechanical Engineering (JMEchE), ISSN 1823-5514 (Jan 2020 – Present) {Scopus indexed}
  - UiTM Best Journal and Best Journal (S&T) 2021 (+RM1000 & RM500 Cash Prize)
  - UiTM Best Journal and Best Journal (S&T) 2020
- Journal of Medical Device Technology (JMEDITEC), UTM Press, (Journal Editorial Board, 2021 – Present)
- International Journal of Engineering Sciences & Emerging Technologies (IJESET), ISSN 2231-6604 (Journal Editorial Board, 2012 – Present)
- Journal of Mechanical Engineering (International Journal), UiTM Press, ISSN 1823-5514 (Journal Editorial Board, 2003 – 2005)
- Journal of Human and Technology Interaction (IJHaTI), UTEM, ISSN 2590-3551 (Journal Editorial Board, 2017 – Present)
- International Journal of Solid Mechanics and Materials Science (IJSMMS), Sigma Research and Consulting Publications, (Journal Editorial Board, 2017 – Present)
- Applied Bionics and Biomechanics (Special Issue: Application of Current Biomechanics in Orthopaedic Surgery), JCR Impact Factor 0.703 (2015), Hindawi Publishing Corp, ISSN: 1176-2322 (Guess Editor)
- Jurnal Teknologi, Vol. 76, No. 11 (2015), Penerbit UTM Press, eISSN 2180-3722, (Guess Chief Editor)
- Jurnal Teknologi, Vol. 76, No. 7: *Bioengineering And Ergonomics* (2015), Penerbit UTM Press, eISSN 2180-3722, (Guess Editorial Board)
- Jurnal Teknologi, Vol 76, No 3: *Advances in Materials Science and Technology* (2015), Penerbit UTM Press, eISSN 2180-3722, (Guess Editorial Board)
- Guess Editorial Board, Applied Mechanics and Materials Vols 541-542 (2014), ISSN 1660-9336

### **Journal Reviewer (International/National Journal):**

- Materials, MDPI, ISSN: 1996-1944, Scopus Indexed, Q2, JCR Impact Factor 3.400 (2023).
- Engineering Failure Analysis, Elsevier B.V., ISSN: 1350-6307 (Print), Scopus Indexed, Q1, JCR Impact Factor 2.157 (2018).
- Journal of Medical Imaging and Health Informatics, American Scientific Publishers, ISSN: 2156-7018 (Print): EISSN: 2156-7026 (Online), JCR Impact Factor 0.877 (2015).
- Materials Science (Medziagotyra), Kaunas University of Technology (Lithuania) Publishing, ISSN: 1392-1320, Scopus Indexed, Q3, JCR Impact Factor 0.428 (2015).
- International Journal of GEOMATE, The Geomate International Society, Japan, ISSN: 2182-2982 (Print), ISSN: 21862990 (Online), Scopus Indexed, Q2/ Q3.
- Journal of Structures, Hindawi Publishing Corporation, ISSN 2356-766X.
- Journal of Medical and Bioengineering (JOMB), Engineering and Technology Publishing (ETP), ISSN 2301-3796.
- Journal of Mechanical Engineering (International Journal), UiTM Press, ISSN 1823-5514. – SCOPUS indexed. Scopus Indexed, Q4.
- Jurnal Teknologi (Sciences & Engineering), UTM Press, e-ISSN 2180-3722. . – SCOPUS indexed, Scopus Indexed, Q3.

### **Book Editorial Board (International/National Journal):**

- Panel Editor, Student Handbook 2013/2014, Faculty of Mechanical Engineering, UiTM Press

### **Paper Reviewer (International/National Conferences):**

- 9th International Conference and Exhibition on Sustainable Energy and Advanced Material (ICE-SEAM 2023)
- International Conference on Biomechanics and Medical Engineering (ICBME 2021)
- 7th Mechanical Engineering Research Day (MERD'20)
- 6th International Conference on Advances in Mechanical Engineering (ICAME 2019)
- International Conference on Biomechanics and Medical Engineering (ICBME 2018)
- 5<sup>th</sup> International Conference on Advances in Mechanical Engineering (ICAME 2017)
- The Second International Conference on Science, Engineering & Environment (SEE-Osaka 2016)

- 2016 International Conference on Engineering Design and Analysis (ICEDA 2016)
- Mechanical Engineering & Science Postgraduate International Conference (MESPIC 2016)
- 4<sup>th</sup> International Conference on Advances in Mechanical Engineering (ICAME 2015)
- Advancement in Information Technology International Conference (ADVCIT 2014)
- Conference, Competition and Exhibition 2014 (CCE 2014)
- 2014 IEEE Colloquium on Humanities, Science and Engineering Research (CHUSER 2014)
- International Colloquium on Science and Technology 2014 (ICOST 2014)
- 2014 IEEE Symposium on Computer Applications & Industrial Electronics (ISCAIE 2014)
- 2014 IEEE International Conference on Power and Energy (PECON 2014)
- Third International Conference on Biomedical Engineering and Biotechnology (ICBEB 2014)
- International Colloquium of Art and Design Education Research (i-CADER 2014)
- International Colloquium on Textile Engineering, Fashion, Apparel & Design 2014 (ICTEFAD 2014)
- International Conference on Computing, Networking and Communication (ICNC 2014)
- 2013 International Conference on Business, Engineering and Industrial Applications (ISBEIA 2013)
- 2013 IEEE Symposium on Wireless Technology & Applications (ISWTA 2013)
- International Civil and Infrastructure Engineering Conference 2013 (InCIEC 2013)
- International Colloquium on Sports Science, Exercise, Engineering & Technology (ICoSSEET 2014)
- Second International Conference on Advanced Micro and Nanocomposite for Engineering 2014, (ICNC 2014).
- 2013 IEEE Symposium on Computers and Informatics (ISCI 2013)
- International Conference on Advances in Mechanical Engineering (ICAME 2013)
- 2013 IEEE Business Engineering and Industrial Applications Colloquium (BEIAC 2013)
- 2012 International Symposium on Humanities, Science & Engineering Research (SHUSER 2012)
- 2011 IEEE Symposium on Computers and Informatics (ISCI 2011)
- 2011 International Symposium on Humanities, Science & Engineering Research (SHUSER 2011)
- 2011 International Conference on Business, Engineering and Industrial Applications (ICBEIA 2011)

- 2011 IEEE International Conference on Signal and Image Processing Applications (ICSIPA 2011)
  - International Conference on Advances in Mechanical Engineering (ICAME 2010)
  - 2<sup>nd</sup> International Congress on Engineering Education (ICEED 2010)
  - 2010 International Conference on Computer Applications and Industrial Electronics (ICCAIE 2010)
  - 2010 International Conference on Science and Social Research (CSSR 2010)
  - Conference on Science and Social Research (CSSR 2004)
- 

## **CONFERENCE ORGANISING COMMITTEE**

- 8th International Conference on Applications & Design In Mechanical Engineering (ICADME 2023), 4-5 September 2023, Universiti Malaysia Perlis.
  - Advisory Panel
- 2023 the 12th International Conference on Engineering and Innovative Materials (ICEIM 2023) 1-3 September 2023, Osaka, Japan.
  - Publicity Chair
- Innovative Manufacturing, Mechatronics & Materials Forum 2023 (iM3F 2023), 7-8 August 2023, Virtual Platform, Universiti Malaysia Pahang, Malaysia.
  - Advisory Committee
- Innovative Manufacturing, Mechatronics & Materials Forum 2022 (iM3F 2022), 20 July 2022, Virtual Platform, Universiti Malaysia Pahang, Malaysia.
  - Advisory Committee
- 2nd International Conference on Biomechanics and Medical Engineering (ICBME 2021), 10 March 2021, Virtual Platform, Shah Alam
  - Conference Chair and Steering Committee for WCOSET 2021
- 7th International Conference on Applications & Design in Mechanical Engineering (ICADME 2021), Virtual Platform, Universiti Malaysia Perlis, Malaysia.
  - Advisory Panel
- Innovative Manufacturing, Mechatronics & Materials Forum 2020 (iM3F 2020), 6 August 2020, Virtual Platform, Universiti Malaysia Pahang, Malaysia.
  - Advisory Committee
- 2018 3rd International Conference on Mechatronics and Electrical Systems (ICMES 2018) 12 – 14 October 2018, Chulalongkorn University, Bangkok, Thailand
  - Conference Chair

- International Conference on Biomechanics and Medical Engineering (ICBME 2018)  
12 – 14 September 2018, Kuala Lumpur
  - Conference Chair and Head Organiser (FKM UiTM)
  
- 2018 3rd International Conference on Functional Materials and Steel (ICFMS 2018)  
10-12 September 2018, Kitakyushu, Japan
  - Publicity Chair
  
- 6th International Conference on Nanomaterials and Materials Engineering (ICNME 2018)  
23 –25 March 2018, Langkawi Malaysia,
  - Conference Chair
  
- International Conference on Innovative Technology, Engineering and Sciences (iCITES 2018)  
1 – 2 March 2018, Pekan Pahang
  - Advisory Committee
  
- 2nd International Conference on Mechatronics and Electrical Systems (ICMES 2017)  
22 – 25 December 2017, Wuhan China
  - Conference Committee Chair
  
- International Medical Device & Technology Conference (iMEDITEC 2017),  
6 – 7 September 2017, Universiti Teknologi Malaysia, Johor
  - Institution Reps Committee
  
- International Conference on Mechanical Engineering and Electrical Systems (ICMES 2016)4 –  
6 December 2016, Hong Kong
  - Conference Co-Chair
  
- 4th International Conference on Advances in Mechanical Engineering (ICAME 2015)  
26 – 27 August 2015, Patra Jasa Bali, Indonesia
  - Promotion and Technical Committee
  - Chairperson (Keynote Session), 4th International Conference on Advances in  
Mechanical Engineering (ICAME 2015) 26-27 August 2015, Patra Jasa Bali, Indonesia
  - Session Co-Chair, 4th International Conference on Advances in Mechanical  
Engineering (ICAME 2015) 26-27 August 2015, Patra Jasa Bali, Indonesia
  
- 4th International Conference on Medical Information and Bioengineering (ICMIB 2015), 6 – 7  
March 2015, Malacca, Malaysia
  - Workshop Chair (ICMIB 2015)



- 6th International Conference Science and Technology (ICMST 2015), 1 – 2 June 2015, Bandar Seri Begawan, Brunei Darussalam
  - Honourable Conference Committee Members
- 2014 International Conference on Advance Materials Research and Application (AMRA 2014) 12 – 14 December 2014, Sanya, Hainan, China
  - Technical Programme Committee
- 2014 International Conference on Industrial Technology and Applications (ICITA 2014) 24 – 25 October 2014, Kuching Malaysia
  - Technical Committee
- 3rd International Conference on Medical Information and Bioengineering (ICMIB 2014) 10 – 11 March 2014, Gurney Hotel, Penang, Malaysia
  - Workshop Chair (ICMIB 2014)
- 2nd Global Conference on Materials Science and Engineering (CMSE 2013) 20 – 22 November 2013, Xianning, Hubei Province of China
  - Technical Program Committee
- 3rd International Conference on Advances in Mechanical Engineering (ICAME 2013), 28 – 29 August 2013, Malacca, Malaysia.
  - Sponsorship Committee
- 2012 International Symposium on Robotics and Intelligent Sensors 2012 (IRIS2012), 4 – 6 September 2012, Kuching, Sarawak, Malaysia
  - Technical Committee
- 1<sup>st</sup> German-Malaysian Workshop “Advances in Mechatronics and Engineering Technology” which will be held as an integral part of the 1st Joint Symposium on System-Integrated Intelligence (SysInt 2012), 27 – 29 June 2012, Hannover, Germany
  - Technical Committee
- Marketing Arms Workshop (MAW 2012) 8 – 9 February 2012, Intekma Resort, Shah Alam, Malaysia
  - Organising Chair
- Symposium of Academia, Businesses and Community Networking (SABCN) 2011, 10 November 2011, UiTM Shah Alam, Malaysia
  - Deputy Chairman II
- International Conference on Advances in Mechanical Engineering (ICAME 2010), 2 – 5 December 2010, Shah Alam Malaysia
  - Secretariat
  - Session Chair

- Best Paper Panel Judge
  - Eighth International Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE 2008), 27 February – 1 March 2008, Porto, Portugal
    - Technical Assistant
  - National Conference on Advances in Mechanical Engineering (NAME '05) 18 – 20 May 2005, Malaysia
    - Secretariat
- 

## INTELLECTUAL PROPERTY/ PATENT/ COPYRIGHT

- “A Method of Producing a Dental Implant Article with Nickel Titanium Alloy” Patent Number, **MY-173241-A**, Filed: January 2015. Granted: 08 January 2020 (Member)
  - “A Dental Inspection Apparatus”, Patent pending, **PI2020005321**, 2020 (Member).
  - “VSATT: Vibration Simulation & Analysis Teaching Tool”, Copyright no.: **CRLY2023W00950**, 2023 (Team Member).
  - “CHyCLOP: Compendious Hybrid Composite Failure Load Predictor”, Copyright no.: **CRLY2021W05707**, 2021 (Team leader).
  - “MOBSil: Moringa Oleifera Bark – Silicone Biocomposite”, Copyright no.: **CRLY2021W01311**, 2021 (Team Leader).
  - “AJ FratNeP – Natural Frequency Predictor”, Copyright no.: **CRLY2021W03077**, 2021 (Team leader).
  - “BaSiC – Bamboo-Silicone Biocomposite”, Copyright no.: **CRLY00011032**, May 2018. (Team Leader)
  - “CarbonGlass Hybro”, Copyright no.: **CRLY00011004**, 2018. (Team Leader)
  - “AJ FALOP: A Matlab Programme for Failure and Deformation Analysis Based on High Order Shear Deformation Theory using Failure Theories with Interaction Terms”, Copyright Pending, **CRLY00008585**, 2018. (Team Leader)
  - “Arenga pinnata – Silicone Biocomposite for Cushioning Applications”, Copyright Pending, **CRLY00008337**, 2018. (Team Leader)
  - “FJ Sense”, Copyright, **LY2016001411**, June 2016.
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## INNOVATION, INVENTION & DESIGN (IID) ACHIEVEMENT

### International Level

<p>Product name: "VSATT: Vibration Simulation &amp; Analysis Teaching Tool" (Team Member)</p> <ul style="list-style-type: none"> <li>• Gold Medal</li> </ul> <p>Penang International Invention, innovation and Design (PIID 2023), 16 -18 May 2023.</p>	2023
<p>Product name: "VSATT: Vibration Simulation &amp; Analysis Teaching Tool" (Team Member)</p> <ul style="list-style-type: none"> <li>• Gold Medal</li> </ul> <p>International Invention, Innovation &amp; Design Exposition For Built Environment And Engineering (IIDBEE 2023), 20 January 2023</p>	2023
<p>Product name: "AJ NatFreP: AJ Natural Frequency Predictor" (Team Leader)</p> <ul style="list-style-type: none"> <li>• Gold Medal Award</li> <li>• Canadian Special Award of Excellence by Inventors Circle</li> <li>• Certificate of Excellence Special Award by Organizer, Toronto International Society of Innovation &amp; Advanced Skills (TISIAS)</li> </ul> <p>7th Edition International Invention Innovation Competition in Canada (ICAN 2022), Toronto Canada, 27 August 2022</p>	2022
<p>Product name: "Gelatin Skin as a New Hyperelastic Healing Patch" (Team Leader)</p> <ul style="list-style-type: none"> <li>• Gold Medal Award</li> <li>• Special Award by World Invention Intellectual Property Associations (WIIPA)</li> </ul> <p>7th Edition International Invention Innovation Competition in Canada (ICAN 2022), Toronto Canada, 27 August 2022</p>	2022
<p>Product name: "MOBSil: Moringa Oleifera Bark – Silicone Biocomposite" (Team Leader)</p> <ul style="list-style-type: none"> <li>• Gold Medal Award</li> <li>• Diploma and Special Award by Eurobusiness-Haller and Haller pro inventio Foundation</li> <li>• Special Award by Toronto International Society of Innovation &amp; Advanced Skills (TISIAS)</li> </ul> <p>6th Edition International Invention Innovation Competition in Canada (ICAN 2021), Toronto Canada, 28 August 2021</p>	2021

<p>Product name: “Compendious Hybrid Composite Failure Predictor (CHyCLOP)” (Team Leader)</p> <ul style="list-style-type: none"> <li>• Gold Medal Award</li> <li>• Diploma and Special Award by Romanian Investors Forum and Euro Invent</li> <li>• Special Award by Toronto International Society of Innovation &amp; Advanced Skills (TISIAS)</li> </ul> <p>6th Edition International Invention Innovation Competition in Canada (ICAN 2021), Toronto Canada, 28 August 2021</p>	2021
<p>Product name: “HeBraC: Hevea brasiliensis – Silicone Biocomposite” (Team Leader)</p> <ul style="list-style-type: none"> <li>• WICO 2021 Gold Medal Award</li> <li>• Special Award by Toronto International Society of Innovation &amp; Advanced Skills (TISIAS)</li> </ul> <p>10th World Inventions Olympics (WICO 2021), Korea, 10 July 2021</p>	2021
<p>Product name: “MOBSil: Moringa Oleifera Bark – Silicone Biocomposite” (Team Leader)</p> <ul style="list-style-type: none"> <li>• WICO 2021 Gold Medal Award</li> <li>• Special Award by World Invention Intellectual Property Associations (WIIPA)</li> <li>• Special Award by Korea University Invention Association (KUIA)</li> </ul> <p>10th World Inventions Olympics (WICO 2021), Korea, 10 July 2021</p>	2021
<p>Product name: “CV3D: Cekak Visual 3D”</p> <ul style="list-style-type: none"> <li>• Gold Medal</li> </ul> <p>iCAN 2018 3rd International Invention Innovation Competition, 2018 Toronto Canada, 1 September 2018</p>	2018
<p>Product name: “Porous NiTi Dental Screw Implant by Innovative Powder Metallurgy Route”</p> <ul style="list-style-type: none"> <li>• Gold Medal</li> <li>• Special Award (iENA 2017)</li> </ul> <p>ITEX 2017, KLCC</p>	2017
<p>Product name: “CV3D: Cekak Visual 3D”</p> <ul style="list-style-type: none"> <li>• Gold Medal</li> </ul> <p>International Engineering Invention &amp; Innovation Exhibition (i-ENVEX 2016), Perlis</p>	2016
<p>Product name: “Porous NiTi for Biomedical Implant”</p> <ul style="list-style-type: none"> <li>• Silver Award</li> </ul> <p>ITEX 2012, KLCC</p>	2012
<p>Product name: ““APSil: Arenga pinnata – Silicone Biocomposite for Cushioning Applications” (Team Leader)</p> <ul style="list-style-type: none"> <li>• Bronze Medal</li> </ul> <p>ITEX 2018, KLCC</p>	2018

Product name: "Multi-Functional Trolley" • Bronze Medal IID ASEAN - UiTM Kedah	2011
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### International Level (Advisor to Students' Innovation Team)

- Champion – IMechE Asia Pacific Design Competition for the Visually Impaired (DCVI), Hong Kong "Navi-Sense" 2013

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### National Level

- Platinum Award (+RM200 Cash Prize) and Gold Medal, GDIID 2021 "Compendious Hybrid Composite Failure Predictor (CHyCLoP)" 2021
- Gold Medal (Top 3), GDIID 2021, "MOBSil: Moringa Oleifera Bark – Sil ..." 2021
- Gold Medal – iidex 2020, UiTM Shah Alam, "HeBraC: Hevea brasiliensis – Sil .." 2020
- Special Award – iidex 2018 Diamond Award (Design) (+RM1000 Cash Prize), "Multiple Angle Bisector..." 2018
- Special Award – iidex 2018 Diamond Award (Inventor - Student), (+ RM1000 Cash Prize), "Hybro: C/GFRP Hybrid Laminates ..." 2018
- Special Award – iidex 2016 Elevator Pitch (Bronze), "Porous NiTi Dental Implant" 2016
- Gold Award (+ RM3000 Cash Prize) – PATA HIID "Location Riskiness Index" 2012
- Gold Award – Penang Invention, Innovation and Design (PIID 2023) "VSATT: Vibration Simulation & Analysis Teaching Tool" 2023
- Gold Award – IIDBEEEX 2023, UiTM Kolej Alam Bina, "VSATT: Vibration Simulation & Analysis Teaching Tool" 2023
- Gold Medal – iidex 2016, UiTM Shah Alam, "Multiple Angle Bisector..." 2018
- Gold Medal – iidex 2016, UiTM Shah Alam, "Hybro: C/GFRP Hybrid Laminates.." 2018
- Gold Medal – iidex 2018, UiTM Shah Alam, "BaSic: Bamboo-Silicone Biocomp.." 2018
- Gold Medal – iidex 2017, UiTM Shah Alam, "APSil: AP-Silicone Biocomposite" 2017
- Gold Medal – iidex 2017, UiTM Shah Alam, "AJ FaLoP: Failure Load Predictor" 2017
- Gold Medal – iidex 2016, UiTM Shah Alam, "FJ Sense: Low Cost Motion Capture" 2016
- Gold Medal – iidex 2016, UiTM Shah Alam, "Porous NiTi Dental Implant..." 2016
- Gold Medal – iidex 2016, UiTM Shah Alam, "Springback Defect Prediction..." 2016
- Gold Medal – IP 2012, Village Mall, Kedah "Basic NDE Education Kit..." 2012
- Gold Medal – IP 2012, Village Mall, "Homestay Eco-Experience Index" 2012

- Gold Medal – IID UiTM Johor, “*Location Riskiness Index*” 2012
  - Silver Medal – Penang Invention, Innovation and Design (PIID 2015), Penang, “*Cekak Visual 3D v1.0*” 2015
  - Silver Award – iideX 2013, UiTM Shah Alam, “*Nanosilica Filled Fibre Composites*” 2013
  - Silver Award – iideX 2013, UiTM Shah Alam, “*Alternative Fabrication of Porous Pseudo-Elastic NiTi Alloy...*” 2013
  - Silver Award – iideX 2013, UiTM Shah Alam, “*Green Homestay Sustainable Index (GHSI)*” 2013
  - Silver Medal – IID UiTM Johor, “*Near-Net-Shape Processing of Porous...*” 2012
  - Silver Medal – IID UiTM Terengganu, “*Flawed Specimen using Acrylic...*” 2012
  - Bronze – IID UiTM Terengganu, “*An interchangeable Turning Sprue...*” 2012
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## AWARDS & RECOGNITION

### International Level

- Best Paper Award (at iM3F 2023, Virtual Platform, organised by UMP) 2023  
“The Implementation of the single perturbation load approach to axially-compressed stiffened-stringer cylinder”  
MS Ismail, FN Nordin, CH Le, HQ Nguyen & **J Mahmud**
- Best Paper Award (at CSSR 2021, Virtual Platform, organised by UiTM) 2021  
“The Effects of Different Immersion Media on the Compressive Behaviour of Arenga Pinnata-Silicone Biocomposite”,  
AA Abdulah Suhaimi & **J Mahmud**
- Best Paper Award (at ICBME 2018, Seri Pacific Hotel Kuala Lumpur, Malaysia) 2018  
“Quantifying Tensile Properties of Bamboo Silicone Biocomposite using Yeoh Model”, KN Hassan, **J Mahmud**, AK Hussain & MA Yahaya.
- Best Paper Award (at ICBME 2018, Seri Pacific Hotel Kuala Lumpur, Malaysia) 2018  
“The synthesis of agar silicone biocomposite and its mechanical properties”,  
NN Azmi, **J Mahmud** & MJA Latif.
- Best Paper Award (at ICAME 2017, Krabi Thailand) 2017  
“Evaluation of four-wheel vehicle driven by lower limb with electric pedalling assistance for elderly people”,  
H Lee, MNAA Patar, T Komeda, **J Mahmud** & Y Takahashi

### National Level

- PSSCM Special Recognition for publication contribution, 2017  
“Buku Silat Cekak Silat Akademik, Jilid 2”

## **University/ Faculty Level**

- Anugerah Penyelia Terbaik (Best Supervisor Award, UiTM Malaysia) (+ RM2000 Cash Prize) 2020
  - UiTM Best Journal & Best Journal (S&T) 2021 (+RM1000 & RM500 Cash Prize) 2022  
Journal of Mechanical Engineering; as Editor-in Chief
  - Anugerah Pasukan Penyelidikan Cemerlang 2020 2021  
in conjunction with Hari Anugerah Kualiti Dekan & Hari Apresiasi Staf FKM
  - Anugerah Penerbitan Berimpak Tinggi (High Impact Publications Award 2020) 2021  
in conjunction with Hari Anugerah Kualiti Dekan & Hari Apresiasi Staf FKM
  - Anugerah Penyelidik Cemerlang (Excellent Researchers Award 2020) 2021  
in conjunction with Hari Anugerah Kualiti Dekan & Hari Apresiasi Staf FKM
  - UiTM Best Journal & Best Journal (S&T) 2020 (+RM1000 & RM500 Cash Prize) 2021  
Journal of Mechanical Engineering; as Editor-in Chief
  - First Place, Best Publication Award 2019 (Prisma), in conjunction with 2020  
Hari Anugerah Kualiti Dekan & Hari Apresiasi Staf FKM
  - Impactful Publication Award 2019, in conjunction with 2020  
Hari Anugerah Kualiti Dekan & Hari Apresiasi Staf FKM
  - Best Supervisor Award 2019, in conjunction with 2020  
Hari Anugerah Kualiti Dekan & Hari Apresiasi Staf FKM
  - First Place, Best Publication Award 2017 (Prisma), in conjunction 2018  
with Hari Anugerah Kualiti Dekan & Hari Apresiasi Staf FKM
  - Excellent Service Award (Anugerah Perkhidmatan Cemerlang UiTM) 2015
  - First Place, Best Publication Award 2014 – 2015 (Prisma), FKM 2015
  - Vice Chancellor's Quality Award – Faculty Champion (Team Member) 2014
  - UiTM Incentive Award for High Impact Publication 2011
  - Vice Chancellor's Quality Award – Faculty Champion (Project Member) 2011
  - Vice Chancellor's Quality Award – Overall Champion (Project Coordinator) 2010
  - Best Fundamental Research Award (at CSSR 2004) 2004
  - Excellent Service Award (Anugerah Perkhidmatan Cemerlang UiTM) 2004
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