

## CURRICULUM VITAE



Dr. MOHD IDRIS SHAH ISMAIL

Department of Mechanical and Manufacturing Engineering  
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### Education

1. D.Eng, Mechanical Engineering, 2012, Okayama University, Japan.
2. M.Eng.Sc, Mechanical Engineering, 2007, Universiti Malaya.
3. B.Eng, Mechanical Engineering, 2001, The University of Tokushima, Japan.

### Areas of Interest

1. Non-traditional Machining.
2. Process Modeling and Simulation.
3. Intelligent Manufacturing.

### Working Experiences

Position	Duration
1. Associate Professor.	Dec 2019 to date
2. Senior Lecturer.	Apr 2012 – Nov 2019
3. Tutor.	Feb 2003 – Apr 2012
Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, UPM.	
4. Research Assistant.	Oct 2011 – Mar 2012
Department of Materials and Manufacturing Technology, Graduate School of Natural Science and Technology, Okayama University, Japan.	Oct 2010 – Mar 2011
5. Mechanical Engineer.	Apr 2001 – Feb 2003
Mitsubishi Electric (M) Sdn. Bhd.	

### Appointments / Administrative Work

Position	Duration
Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, UPM.	
1. Coordinator, Master of Engineering Management.	Jan 2017 to date
2. Coordinator of Development.	Jan 2016 – Mar 2017
3. Coordinator, Master of Manufacturing Systems Engineering (Off-Campus).	Sep 2015 – Mar 2016
4. Coordinator of Industry and Community Relations.	Mar – Dec 2015
5. Head, Laboratory of Materials Processing.	Feb 2013 – Mar 2015, Jan 2021 to date
Faculty of Engineering, UPM.	
6. Committee of Technical Evaluation and Quotation.	Jan 2016 – Dec 2017
7. Committee of Multimedia and ICT.	Sep 2012 – Sep 2014

### Professional Qualification/ Membership/ Affiliation

1. Member, Malaysian Tribology Society (MYTRIBOS).
2. Member, Malaysia Design Council (MRM).
3. Member, Japan Society of Mechanical Engineers (JSME).
4. Member, Japan Laser Processing Society (JLPS).
5. Member, Japan Society for Precision Engineering (JSPE).
6. Member, Society of Automotive Engineers of Japan (JSAE).
7. Member, European Scientific Association for Material Forming (ESAFORM).
8. Member, International Association of Engineers (IAENG).
9. Member, Engineering Society (The University of Tokushima).
10. Graduate Member, Board of Engineers Malaysia (BEM).

### Publications

#### Journals

1. S. Dehghan, E. Soury, **M.I.S. Ismail**: *A Comparative Study on Machining and Tool Performance in Friction Drilling of Difficult-to-Machine Materials AISI304, Ti-6Al-4V, Inconel718*, Journal of Manufacturing Processes, Vol.61, 2021, pp.128-152. (IF: 4.086, Q2).
2. M. Asnawi Omar, B.T.H.T. Baharudin, S. Sulaiman, **M.I.S. Ismail**, M. Afian Omar: *Characterisation of Powder and Microstructure, Density and Surface Roughness for Additively Manufactured Stent Using Medical Grade ASTM F75 Cobalt Chromium (CoCrMo) by Selective Laser Melting (SLM) Technology*, Advances in Materials and Processing Technologies, In-press. (Indexed by Scopus).
3. M. Asnawi Omar, B.T.H.T. Baharudin, S. Sulaiman, **M.I.S. Ismail**, M. Afian Omar: *Evaluation of Chemical Composition, Heat Treatment, Mechanical Properties and Electro Chemical Polishing for Additively Manufactured Stent Using ASTM F75 Cobalt Based Superalloy (CoCrMo) by Selective Laser Melting (SLM) Technology*, Advances in Materials and Processing Technologies, In-press. (Indexed by Scopus).
4. S. Ghaffari, M.T. Suraya, M.A. Azmah Hanim, **M.I.S. Ismail**: *Effects of ECAR Process on the Mechanical Properties of Explosively Welded Al/Cu/Al*, Australian Journal of Mechanical Engineering, In-press. (Indexed by Scopus).
5. M. Asnawi Omar, B.T.H.T. Baharudin, S. Sulaiman, **M.I.S. Ismail**, M. Afian Omar: *Characterisation of Elemental Analysis, Carbon Sulphur and Impact Test of Stent Manufacturing Using Medical Grade ASTM F75 Cobalt Chromium (CoCrMo) by Selective Laser Melting (SLM) Technology*, Advances in Materials and Processing Technologies, In-press. (Indexed by Scopus).
6. S. Dehghan, **M.I.S. Ismail**, E. Soury: *A Thermo-Mechanical Finite Element Simulation Model to Analyze Bushing Formation and Drilling Tool for Friction Drilling of Difficult-to-Machine Materials*, Journal of Manufacturing Processes, Vol.57, 2020, pp.1004-1018. (IF: 4.086, Q2).
7. N.A. Ismail, **M.I.S. Ismail**, A. As'array, M.K.A. Ariffin: *Vibration Analysis of Forming Tool and Thin Sheet Metal in Robot-Based Single Point Incremental Sheet Forming*, Test Engineering and Management, Vol.83, No.7-8, 2020, pp.121-126. (Indexed by Scopus).
8. M.Z. Abdul Mutalib, **M.I.S. Ismail**, A. As'array, N.A. Abdul Jalil: *Multi-objective Optimization in Friction Drilling of AISI 1045 Steel Using Grey Relational Analysis*, International Journal of Modern Manufacturing Technologies, Vol.12, No.1, 2020, pp.75-81. (Indexed by Scopus).
9. M. Lalegani Dezaki, M.K.A. Ariffin, **M.I.S. Ismail**: *Effects of CNC Machining on Surface Roughness in Fused Deposition Modelling (FDM) Products*, Materials, Vol.13, 2020, Article ID 2608 (28 pages). (IF: 3.057, Q2).
10. N.A. Ismail, **M.I.S. Ismail**, M.K.A. Ariffin, A. As'array: *Surface Characterization of Heat-Affected Zone in Robot-Based Incremental Sheet Forming*, Jurnal Tribologi, Vol.24, 2020, pp.126-134. (Indexed by Scopus).
11. M.Z. Abdul Mutalib, **M.I.S. Ismail**, A. As'array, N.A. Abdul Jalil: *Evaluation of Tool Wear and Machining Performance by Analyzing Vibration Signal in Friction Drilling*, Jurnal Tribologi, Vol.24, 2020, pp.100-109. (Indexed by Scopus).

12. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**: *Crossing Weighted Uncertainty Scenarios Assisted Distribution-Free Metamodel-Based Robust Simulation Optimization*, Engineering with Computers, Vol.36, No.1, 2020, pp.139-150. (IF: 3.938, Q1).
13. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**: *Comparative Study of Metamodeling and Sampling Design for Expensive and Semi-Expensive Simulation Models Under Uncertainty*, Simulation, Vol.96, No.1, 2020, pp.89-110. (IF: 1.090, Q4).
14. M.K.A. Ariffin, N.A. Sukindar, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *The Effect of Process Parameters in Extruding Scaffold Design Using Synthetic Biomaterials*, International Journal of Modern Manufacturing Technologies, Vol.11, No.3, 2019, pp.9-20. (Indexed by Scopus).
15. S. Dehghan, **M.I.S. Ismail**, M.K.A. Ariffin, B.T.H.T. Baharudin: *Measurement and Analysis of Thrust Force and Torque in Friction Drilling of Difficult-to-Machine Materials*, International Journal of Advanced Manufacturing Technology, Vol.105, No.7-8, 2019, pp.2749-2769. (IF: 2.633, Q2).
16. S. Sulaiman, M. Aljerimi, **M.I.S. Ismail**, M.F. Fadzil: *Thermal-Induced Defects and Optimization of Casting Process*, International Journal of Mechanical Engineering and Robotics Research, Vol.8, No.6, 2019, pp.900-904. (Indexed by Scopus).
17. S. Dehghan, **M.I.S. Ismail**, M.K.A. Ariffin, B.T.H.T. Baharudin: *Friction Drilling of Difficult-to-Machine Materials: Workpiece Microstructural Alterations and Tool Wear*, Metals, Vol.9, No.9, 2019, Article ID 945 (14 pages). (IF: 2.117, Q1).
18. S. Dehghan, **M.I.S. Ismail**, M.K.A. Ariffin, B.T.H.T. Baharudin, A. Parnianifard: *Experimental Investigation on Friction Drilling of Stainless Steel AISI 304*, International Journal of Machining and Machinability of Materials, Vol.21, No.4, 2019, pp.279-299. (Indexed by Scopus).
19. N.A. Ismail, **M.I.S. Ismail**, M.A.M. Radzman, M.K.A. Ariffin, A. As'arry: *Parametric Optimization of Robot-Based Single Point Incremental Forming Using Taguchi Method*, International Journal of Integrated Engineering, Vol.11, No.1, 2019, pp.217-224. (Indexed by Scopus).
20. W.A.B. Baara, B.T.H.T. Baharudin, M.K.A. Ariffin, **M.I.S. Ismail**: *Effect of Elastic Module Degradation Measurement in Different Size of the Nonlinear Isotropic Kinematic Yield Surface on Springback Prediction*, Metals, Vol.9, No.5, 2019, Article ID 511 (12 pages). (IF: 2.117, Q1).
21. A. Hozoorbakhsh, M. Hamdi, A.A.D.M. Sarhan, **M.I.S. Ismail**, C.Y. Tang, G.C.P. Tsui: *CFD Modelling of Weld Pool Formation and Solidification in a Laser Micro-welding Process*, International Communications in Heat and Mass Transfer, Vol.101, 2019, pp.58-69. (IF: 3.971, Q1).
22. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**, N.A. Ebrahim: *Recent Developments in Metamodel Based Robust Black-box Simulation Optimization: An Overview*, Decision Science Letters, Vol.8, No.1, 2019, pp.17-44. (Indexed by Scopus).
23. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**: *Trade-off in Robustness, Cost and Performance by a Multi-objective Robust Production Optimization Method*, International Journal of Industrial Engineering Computations, Vol.10, No.1, 2019, pp.133-148. (Indexed by Scopus).
24. M.K.A. Ariffin, S.H. Fazel, **M.I.S. Ismail**, S.B. Mohamed, Z. Wahid : *Mechanical Properties of Bone Scaffold Prototypes Fabricated by 3D Printer*, Journal of Engineering Science and Technology, Vol.13, No.SI Nov, 2018, pp.29-38. (Indexed by Scopus).
25. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**: *Design and Analysis of Computer Experiments Using Polynomial Regression and Latin Hypercube Sampling in Optimal Design of PID Controller*, Journal of Applied Research on Industrial Engineering, Vol.5, No.2, 2018, pp.156-168.
26. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**, M.R. Magahmi, C. Gomes: *Kriging and Latin Hypercube Sampling Assisted Simulation Optimization in Optimal Design of PID Controller for Speed Control of DC Motor*, Journal of Computational and Theoretical Nanoscience, Vol.15, No.5, 2018, pp.1471-1479. (Indexed by Scopus).
27. **M.I.S. Ismail**, A.S. Buang: *Precision Joining of Steel-Aluminum Hybrid Structure by Clinching Process*, Journal of Advanced Manufacturing Technology, Vol.12, No.1, 2018, pp.25-36. (Indexed by Scopus).
28. M.Z. Abdul Mutalib, **M.I.S. Ismail**, N.A. Abdul Jalil, A. As'arry: *Characterization of Tool Wear in Friction Drilling*, Jurnal Tribologi, Vol.17, 2018, pp.93-103. (Indexed by ESCI-WOS).

29. R.E. Ibrahim, R. Ramli, M.K. Talari, S.M. Yahaya, S. Sulaiman, **M.I.S. Ismail**: *Corrosion Behaviour of Al-Si Cast Alloy Reinforced with Titanium Diboride (TiB<sub>2</sub>) and Scandium (Sc)*, Journal of Engineering and Science Research, Vol.2, No.2, 2018, pp.1-8.
30. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**: *Kriging-assisted Robust Black-box Simulation Optimization in Direct Speed Control of DC Motor Under Uncertainty*, IEEE Transactions on Magnetics, Vol.54, No.7, 2018, Article ID 4900210 (10 pages). (IF: 1.651, Q3).
31. R. Ramli, R.E. Ibrahim, M.K. Talari, S.M. Yahaya, S. Sulaiman, **M.I.S. Ismail**: *Characterization of Aluminium-Silicon (Al-Si) Cast Alloy Refined with Titanium Diboride (TiB<sub>2</sub>) and Scandium (Sc)*, Journal of Mechanical Engineering, Vol.SI 5, No.1, 2018, pp.62-70. (Indexed by Scopus).
32. K.I. Imhan, B.T.H.T. Baharudin, A. Zakaria, **M.I.S. Ismail**, N.M.H. Alsabti, A.K. Ahmad: *Features of Laser Tube Bending Processing Based on Laser Forming: A Review*, Journal of Laser, Optics & Photonics, Vol.5, No.1, 2018, Article ID 1000174 (8 pages). (Indexed by EBSCO).
33. S. Dehghan, **M.I.S. Ismail**, M.K.A. Ariffin, B.T.H.T. Baharudin: *Experimental Investigation on Friction Drilling of Titanium Alloy*, Engineering Solid Mechanics, Vol.6, No.2, 2018, pp.135-142. (Indexed by Scopus).
34. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Analysis of Mechanical Properties of Polylactic Acid Using a New 3D Printer Nozzle*, Journal of Computational and Theoretical Nanoscience, Vol.15, No.2, 2018, pp.666-675. (Indexed by Scopus).
35. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Effects of Nozzle Die Angle on Extruding Polymethylmethacrylate in Open-source 3D Printing*, Journal of Computational and Theoretical Nanoscience, Vol.15, No.2, 2018, pp.663-665. (Indexed by Scopus).
36. **M.I.S. Ismail**, M.J. Bahari, N. Shuib: *Thermal Deformation of Gas Metal Arc Welding on Aluminum Alloy T-Joints*, Engineering Solid Mechanics, Vol.6, No.1, 2018, pp.21-26. (Indexed by Scopus).
37. K.I. Imhan, B.T.H.T. Baharudin, A. Zakaria, **M.I.S. Ismail**, N.M.H. Alsabti, A.K. Ahmad: *Improve the Material Absorption of Light and Enhance the Laser Tube Bending Process Utilizing Laser Softening Heat Treatment*, Optics and Laser Technology, Vol.99, 2018, pp.15-18. (IF: 3.319, Q1).
38. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**: *An Overview on Robust Design Hybrid Metamodeling: Advanced Methodology in Process Optimization Under Uncertainty*, International Journal of Industrial Engineering Computations, Vol.9, No.1, 2018, pp.1-32. (Indexed by Scopus).
39. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**: *Robust Product Design: A Modern View of Quality Engineering in Manufacturing Systems*, International Journal of Recent Advances in Multidisciplinary Research, Vol.4, No.12, 2017, pp.3220-3225.
40. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Optimization of the Parameters for Surface Quality of the Open-Source 3D Printing*, Journal of Mechanical Engineering, Vol.SI 3, No.1, 2017, pp.33-43. (Indexed by Scopus).
41. K.I. Imhan, B.T.H.T. Baharudin, A. Zakaria, **M.I.S. Ismail**, N.M.H. Alsabti, A.K. Ahmad: *Investigation of Material Specifications Changes During Laser Tube Bending and Its Influence on the Modification and Optimization of Analytical Modeling*, Optics and Laser Technology, Vol.95, 2017, pp.151-156. (IF: 2.503, Q2).
42. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Analysis on the Impact Process Parameters on Tensile Strength Using 3D Printer Repetier-Host Software*, ARPN Journal of Engineering and Applied Sciences, Vol.12, No.4, 2017, pp.3341-3346. (Indexed by Scopus).
43. S. Dehghan, **M.I.S. Ismail**, M.K.A. Ariffin, B.T.H.T. Baharudin, S. Sulaiman: *Numerical Simulation on Friction Drilling of Aluminum Alloy*, Materialwissenschaft und Werkstofftechnik (Materials Science and Engineering Technology), Vol.48, No.3-4, 2017, pp.241-248. (IF: 0.625, Q4).
44. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Analysis on Temperature Setting for Extruding Polylactic Acid Using Open-Source 3D Printer*, ARPN Journal of Engineering and Applied Sciences, Vol.12, No.4, 2017, pp.1348-1353. (Indexed by Scopus).



45. M.R. Ismail, Z. Leman, **M.I.S. Ismail**: *Mechanical Properties of Dissimilar Aluminium Joints Using Friction Stir Welding (FSW)*, SkillsMalaysia Journal, Vol.2, No.1, 2016, pp.49-60.
46. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Analyzing the Effect of Nozzle Diameter in Fused Deposition Modeling for Extruding Polylactic Acid Using Open Source 3D Printing*, Jurnal Teknologi, Vol.57, 2016, pp.7-15. ([Indexed by Scopus](#)).
47. A. Hozoorbakhsh, **M.I.S. Ismail**, A.A.D.M. Sarhan, A. Bahadoran, A.A. Nuraini: *An Investigation of Heat Transfer and Fluid Flow on Laser Micro-welding Upon the Thin Stainless Steel Sheet (SUS304) Using Computational Fluid Dynamics (CFD)*, International Communications in Heat and Mass Transfer, Vol.75, 2016, pp.328-340. ([IF: 3.718, Q1](#)).
48. **M.I.S. Ismail**, Y. Okamoto, A. Okada: *Thermo-mechanical Analysis on Thermal Deformation of Thin Stainless Steel in Laser Micro-welding*, International Journal of Manufacturing, Materials, and Mechanical Engineering, Vol.6, No.2, 2016, pp.51-66. ([Indexed by Scopus](#)).
49. **M.I.S. Ismail**, W.M. Afieq: *Thermal Analysis on Weld Joint of Aluminum Alloy in Gas Metal Arc Welding*, Advances in Production Engineering & Management, Vol.11, No.1, 2016, pp.29-37. ([IF: 1.424, Q3](#)).
50. K.I. Imhan, B.T.H.T. Baharudin, A. Zakaria, **M.I.S. Ismail**, N.M.H. Alsabti, A.K. Ahmad: *The Impact of Tube Diameter and Thickness on Laser Tube Bending Process*, Buletin Optik, Vol.3, 2016, pp.35-40.
51. E.A. Rahim, N.M. Warap, Z. Mohid, M.R. Ibrahim, **M.I.S. Ismail**: *A Prediction of Laser Spot-to-Cutting Tool Distance in Laser Assisted Micro Milling Inconel 718*, Advances in Materials and Processing Technologies, Vol.1, No.3-4, 2015, pp.529-541. ([Indexed by Scopus](#)).
52. T.C. Ng, S.H. Tang, K.H. Lee, A.S. Azfanizam, **M.I.S. Ismail**, G. Morteza: *The Analysis of Lean Manufacturing Tools in Malaysia's Manufacturing Industry*, Journal of Scientific Research and Development, Vol.2, No.12, 2015, pp.95-100.
53. A. Hozoorbakhsh, **M.I.S. Ismail**, A.A. Nuraini: *A Computational Analysis of Heat Transfer and Fluid Flow in High-speed Scanning of Laser Micro-welding*, International Communications in Heat and Mass Transfer, Vol.68, 2015, pp.178-187. ([IF: 2.559, Q1](#)).
54. **M.I.S. Ismail**, Z. Taha: *Surface Hardening of Tool Steel by Plasma Arc with Multiple Passes*, International Journal of Technology, Vol.5, No.1, 2014, pp.79-87. ([Indexed by Scopus](#)).
55. **M.I.S. Ismail**, Y. Okamoto, A. Okada: *Neural Network Modeling for Prediction of Weld Bead Geometry in Laser Micro-welding*, Advanced in Optical Technologies, Vol.2013, 2013, Article ID 415837 (7 pages). ([Indexed by Scopus](#)).
56. **M.I.S. Ismail**, Y. Okamoto, A. Okada, Y. Uno, M. Mukhtar: *Micro-welding of High Thermal Conductive Material Aluminum-Graphite Composite by Pulsed Nd:YAG Laser*, Journal of Laser Micro/Nanoengineering, Vol.8, No.1, 2013, pp.90-96. ([IF: 0.731, Q3](#)).
57. **M.I.S. Ismail**, Y. Okamoto, A. Okada, Y. Uno, K.Ueoka: *Direct Micro-joining of Flexible Printed Circuit and Metal Electrode by Pulsed Nd:YAG Laser*, International Journal of Precision Engineering and Manufacturing, Vol.13, No.3, 2012, pp.321-329. ([IF: 1.585, Q1](#)).
58. **M.I.S. Ismail**, Z. Taha, M. Hamdi: *Experimental Design and Performance Analysis in Plasma Arc Surface Hardening*, Jurnal Teknologi, Vol.57, 2012, pp.57-75. ([Indexed by Scopus](#)).
59. **M.I.S. Ismail**, Y. Okamoto, A. Okada, Y. Uno: *Experimental Investigation on Micro-welding of Thin Stainless Steel Sheet by Fiber Laser*, American Journal of Engineering and Applied Sciences, Vol.4, No.3, 2011, pp.314-320. ([Indexed by EBSCO](#)).
60. **M.I.S. Ismail**, Y. Okamoto, Y. Uno: *Numerical Simulation on Micro-welding of Thin Stainless Steel Sheet by Fiber Laser*, International Journal of Electrical Machining, Vol.16, 2011, pp.9-14. ([Indexed in ERA](#)).
61. **M.I.S. Ismail**, Z. Taha: *Prediction of Hardness Distribution in Plasma Arc Surface Hardening using Neural Network*, Journal of Science and Technology, Vol.16, No.1, 2009, pp.19-28. ([Indexed by EBSCO](#)).

## Conference Proceedings

1. M.A. Azmah Hanim, M.Y.A. Syafiq, T.T. Dele Afolabi, **M.I.S. Ismail**: *Formation of Intermetallic Layer with Multiwall Carbon Nanotubes Reinforcement in Sn-0.7Cu Solders on Bare Copper Surface Finish with Laser Soldering Method*, 4th International Symposium on Advanced Materials and Nanotechnology (iSAMN 2020), pp.45-48 – Serdang (Online), Malaysia, 2020.
2. N.A. Ismail, **M.I.S. Ismail**, A. As'array, M.K.A. Ariffin: *Vibration Analysis of Forming Tool and Thin Sheet Metal in Robot-Based Single Point Incremental Sheet Forming*, International Conference on Advances in Manufacturing and Materials Engineering (ICAMME 2019), No.164 – Putrajaya, Malaysia, 2019.
3. M.Z. Abdul Mutalib, **M.I.S. Ismail**, N.A. Abdul Jalil, A. As'array: *Evaluation of Tool Wear and Machining Performance by Analyzing Vibration Signal in Friction Drilling*, International Conference on Advanced Processes and Systems in Manufacturing (APSIM 2019), No.P005 – Bangi, Malaysia, 2019.
4. N.A. Ismail, **M.I.S. Ismail**, M.K.A. Ariffin, A. As'array: *Surface Characterization of Heat-Affected Zone in Robot-Based Incremental Sheet Forming*, International Conference on Advanced Processes and Systems in Manufacturing (APSIM 2019), No.P004 – Bangi, Malaysia, 2019.
5. Z. Wahid, M.K.A. Ariffin, B.T.H.T. Baharudin, F. Mustapha, **M.I.S. Ismail**: *ABAQUS Simulation of Different Critical Porosities Cubical Scaffold Model*, International Conference on Recent Advances in Industrial Engineering and Manufacturing (ICRAIEM 2018), No.ICRAIEM-0095 – Penang, Malaysia, 12–13 Dec 2018. Published in IOP Conference Series: Materials Science and Engineering, Vol.530, 2019, Article ID 012018 (7 pages). ([Indexed by Scopus](#)).
6. B.T.H.T. Baharudin, M. Asnawi Omar, S. Sulaiman, **M.I.S. Ismail**, M.A. Omar: *Stent Manufacturing Using Medical Grade ASTM F75 Cobalt Chromium (CoCrMo) by Selective Laser Melting (SLM) Technology*, Advances in Materials and Processing Technology Conference (AMPT 2018), No.ME01-12 – Dublin, Ireland, 2018.
7. M.K.A. Ariffin, N.A. Sukindar, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Analyzing Flow Behavior of Polymethylmethacrylate Using Open-source 3D Printing*, Advances in Materials and Processing Technology Conference (AMPT 2018), No. ME01-05 – Dublin, Ireland, 2018.
8. R. Ramli, A.Z.O. Arawi, M.K. Talari, M.M. Mahat, N.N. Bonnia, S.M. Yahaya, S. Sulaiman, **M.I.S. Ismail**: *Wear Characterization of Nano-hydroxyapatite with Addition of Titanium (HA-Ti)*, International Conference on Materials Engineering and Applications (ICMEA 2018) – Bali, Indonesia, 2018. Published in IOP Conference Series: Materials Science and Engineering, Vol.348, 2018, Article ID 012001 (7 pages). ([Indexed by Scopus](#)).
9. Z. Wahid, M.K.A. Ariffin, B.T.H.T. Baharudin, F. Mustapha, **M.I.S. Ismail**: *Polymer in Additive Manufacturing for Biomedical Application: A Review*, FEIIC International Conference on Engineering Education and Research (FICEER 2017), No.I-02 – Madinah, Saudi Arabia, 2017.
10. Z. Wahid, M.K.A. Ariffin, B.T.H.T. Baharudin, F. Mustapha, **M.I.S. Ismail**: *Surface Roughness Determination and Comparison of Parts Printed Using Different Additive Manufacturing Techniques*, The 8th Thai Society of Mechanical Engineers, International Conference on Mechanical Engineering (TSME-ICoME 2017), No.AMM0025 – Bangkok, Thailand, 2017.
11. A. Parnianifard, A.S. Azfanizam, **M.I.S. Ismail**, M.K.A. Ariffin: *Hybrid Polynomial Regression and Latin Hypercube Sampling in Optimal Design of PID Controller for Speed Control of DC Motor*, 3rd International Material, Industrial and Manufacturing Engineering Conference (MIMEC 2017), No.013998 – Miri, Malaysia, 2017.
12. S. Dehghan, **M.I.S. Ismail**, M.K.A. Ariffin, B.T.H.T. Baharudin: *Experimental Investigation on Friction Drilling of Titanium Alloy*, 3rd International Material, Industrial and Manufacturing Engineering Conference (MIMEC 2017), No.012022 – Miri, Malaysia, 2017.
13. A. Parnianifard, A.S. Azfanizam, M.K.A. Ariffin, **M.I.S. Ismail**, S. Dehghan: *Surrogate-assisted Robust Optimization for Expensive Simulation Modeling: The Case of DC Motor Control Under Uncertainty*, 3rd International Material, Industrial and Manufacturing Engineering Conference (MIMEC 2017), No.011922 – Miri, Malaysia, 2017.
14. M.K.A. Ariffin, N.A. Sukindar, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Slicer Method Comparison Using Open-Source 3D Printer*, 6th International Conference on Material Science

- and Engineering Technology (ICMSET 2017), No.1001 – Seoul, Republic of Korea, 2017. Published in IOP Conference Series: Earth and Environmental Science, Vol.114, 2018, Article ID 012018 (4 pages). ([Indexed by Scopus](#)).
15. S. Dehghan, **M.I.S. Ismail**, M.K.A. Ariffin, B.T.H.T. Baharudin: *Parametric Study on Friction Drilling of Stainless Steel*, 5th International Conference and Exhibition on Sustainable Energy and Advanced Materials (ICE-SEAM 2017), No.Tri08 – Melaka, Malaysia, 2017.
  16. M.Z. Abdul Mutalib, **M.I.S. Ismail**, N.A. Abdul Jalil, A. As'arry: *Characterization of Tool Wear in Friction Drilling*, 5th International Conference and Exhibition on Sustainable Energy and Advanced Materials (ICE-SEAM 2017), No.Tri04 – Melaka, Malaysia, 2017.
  17. R. Ramli, N.H. Azhar, M.K. Talari, S.M. Yahaya, S. Sulaiman, **M.I.S. Ismail**: *Mechanical Properties of Titanium-hydroxyapatite (Ti-HA) Composite Coating on Stainless Steel Prepared by Thermal Spraying*, 3rd Electronic and Green Materials International Conference (EGM 2017) – Krabi, Thailand, 2017. Published in AIP Conference Proceedings, Vol.1885, No.1, 2017, Article ID 020027 (5 pages). ([Indexed by Scopus](#)).
  18. R. Ramli, M.K. Talari, S.M. Yahaya, S. Sulaiman, **M.I.S. Ismail**, M.A. Azmah Hanim: *Corrosion Characterization of in-situ Titanium Diboride (TiB<sub>2</sub>) Reinforced Aluminum-Copper (Al-Cu) Alloy by Two Methods: Salt Spray Fog and Linear Polarization Resistance (LPR) Rechnique*, International Conference on Nanoscience and Nanotechnology (NANO-SciTech 2017) – Shah Alam, Malaysia, 2017. (**Best Oral Presentation Award**). Published in AIP Conference Proceedings, Vol.1963, 2018, Article ID 020021 (7 pages). ([Indexed by Scopus](#)).
  19. M.S. Yusoff, Z. Leman, S. Sulaiman, **M.I.S. Ismail**, M.Y. Ismail: *Delphi Technique for a Validation of a Value Lean Manufacturing Framework for Malaysian SMEs*, International Conference on Engineering, Technologies and Applied Sciences (ICETAS 2017), No.90 – Kuala Lumpur, Malaysia, 2017.
  20. M.K.A. Ariffin, A. Johar, **M.I.S. Ismail**, R. Muhamed, S.B. Mohamed: *Simulation of 3D Orthogonal Cutting Process Using Finite Element Analysis*, 3rd International Conference on Computational Methods in Engineering and Health Sciences (ICCMEH 2016), No.55 – Kyushu, Japan, 2016.
  21. S. Dehghan, **M.I.S. Ismail**, M.K.A. Ariffin, B.T.H.T. Baharudin: *Numerical Simulation on Friction Drilling of Aluminum Alloy*, 2nd International Conference on Mechanical, Manufacturing and Power Plant Engineering (ICMMPE 2016), No.169854 – Kuala Lumpur, Malaysia, 2016.
  22. S. Sulaiman, Z. Marjom, **M.I.S. Ismail**, M.K.A. Ariffin, N. Ashrafi: *Effect of Modifier on Mechanical Properties of Aluminium Silicon (Al-SiC) Composites*, Advances in Materials and Processing Technology Conference (AMPT 2016), No.364 – Kuala Lumpur, Malaysia, 2016. Published in Procedia Engineering, Vol.184, 2017, pp.773-777. ([Indexed by Scopus](#)).
  23. A. Golshan, B.T.H.T. Baharudin, H. Aoyama, M.K.A. Ariffin, **M.I.S. Ismail**, A.A. Ehsan: *Ultraprecision Machining of Silicon Wafer by Micromilling Process*, Advances in Materials and Processing Technology Conference (AMPT 2016), No.281 – Kuala Lumpur, Malaysia, 2016. Published in Procedia Engineering, Vol.184, 2017, pp.192-196. ([Indexed by Scopus](#)).
  24. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Comparison on Dimensional Accuracy Using a Newly Developed Nozzle for Open-Source 3D Printer*, International Conference on Aerospace, Robotics, Biomechanics, Neurorehabilitation, Mechanical Engineering and Manufacturing Systems (ICMERA 2016) – Bucharest, Romania, 2016. Published in Applied Mechanics and Materials, Vol.859, 2017, pp.15-19. ([Indexed by EBSCO](#)).
  25. R.E. Ibrahim, R. Ramli, M.K. Talari, S. Sulaiman, **M.I.S. Ismail**: *Preliminary Study on Properties of Aluminium-Silicon (Al-Si) Alloy Reinforced by in-situ Titanium Diboride (TiB<sub>2</sub>)*, The International Conference on Material Science and Engineering Technology (ICMSET 2016), No.172 – Phuket, Thailand, 2016. Published in Key Engineering Materials, Vol.737, 2017, pp.11-15. ([Indexed by Scopus](#)).
  26. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Analysis on Temperature Setting for Extruding Poly(lactic Acid) Using Open-Source 3D Printer*, Regional Conference on Marine and Mechanical Engineering (ReMME 2016), No.83 – Ipoh, Malaysia, 2016.

27. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Analysis on the Impact of Process Parameters on Tensile Strength Using 3D Printer Repetiere-Host Software*, Regional Conference on Marine and Mechanical Engineering (ReMME 2016), No.17 – Ipoh, Malaysia, 2016.
28. K.I. Imhan, B.T.H.T. Baharudin, A. Zakaria, **M.I.S. Ismail**, N.M.H. Alsabti, A.K. Ahmad: *An Analytical and Experimental Investigation of Average Laser Power and Angular Scanning Speed Effects on Laser Tube Bending Process*, 5th International Conference on Engineering and Innovative Materials (ICEIM 2016), No.I1001 – Kuala Lumpur, Malaysia, 2016. Published in MATEC Web of Conferences, Vol.95, 2017, Article ID 05008 (4 pages). (Indexed by Scopus).
29. N.A. Sukindar, M.K.A. Ariffin, B.T.H.T. Baharudin, C.N. Aiza, **M.I.S. Ismail**: *Evaluation on the Process Parameters Influencing the Surface Texture Using Open-Source 3D Printing*, International Conference on Advanced Processes and Systems in Manufacturing (APSIM 2016), No.11 – Kuala Lumpur, Malaysia, 2016. (Indexed by WOS).
30. R. Ramli, S. Sulaiman, M.A. Azmah Hanim, **M.I.S. Ismail**, M.K. Talari, S.M. Yahaya: *Corrosion Characterisation of Al-Cu Reinforced in-situ Titanium Diboride (TiB<sub>2</sub>)*, The International Conference on Green Design and Manufacture (IConGDM 2016) – Phuket, Thailand, 2016. Published in MATEC Web of Conferences, Vol.78, 2016, Article ID 01001 (7 pages). (Indexed by Scopus).
31. B.T.H.T. Baharudin, A. Sellakutti, **M.I.S. Ismail**, Z. Leman: *C<sub>p</sub> and C<sub>pk</sub> Improvement for Chemical Mechanical Polishing (CMP) BPSG Layer Using DMAIC Approach*, Advances in Materials and Processing Technology Conference (AMPT 2015), No.214 – Madrid, Spain, 2015.
32. T.C. Ng, S.H. Tang, K.H. Lee, A.S. Azfanizam, **M.I.S. Ismail**, G. Morteza: *The Analysis of Lean Manufacturing Tools in Malaysia's Manufacturing Industry*, IPN-IWNEST 2015 Conferences, No.018-icemie – Kuala Lumpur, Malaysia, 2015.
33. R. Ramli, S. Sulaiman, M.A. Azmah Hanim, **M.I.S. Ismail**, M.K. Talari: *Mechanical and Microstructure Characterization of Aluminium-Copper (Al-Cu) Reinforced with in-situ Titanium Diboride (TiB<sub>2</sub>)*, The International Conference on Green Design and Manufacture (IConGDM 2015) – Surabaya, Indonesia, 2015. Published in Key Engineering Materials, Vol.673, 2016, pp.117-125. (Indexed by Scopus).
34. E.A. Rahim, N.M. Warap, Z. Mohid, R. Ibrahim, **M.I.S. Ismail**: *Numerical Analysis of Laser Preheating for Laser Assisted Micro Milling of Inconel 718*, International Integrated Engineering Summit (IIES 2014), No.104 – UTHM Johor, Malaysia, 2014.
35. E.A. Rahim, N.M. Warap, Z. Mohid, R. Ibrahim, **M.I.S. Ismail**: *A Prediction of Laser Beam-to-Cutting Tool Distance of Inconel 718*, Advances in Materials and Processing Technology Conference (AMPT 2014), No.296 – Dubai, UAE, 2014.
36. R. Ramli, S. Sulaiman, **M.I.S. Ismail**, M.A. Azmah Hanim, M.K. Talari: *Wear Properties of Metal Matrix Composite Al-Cu and Al-Cu-TiB<sub>2</sub>*, International Conference on Functional Materials and Metallurgy 2014 – Penang, Malaysia, 2014. Published in Materials Science Forum, Vol.819, 2015, pp.268-273. (Indexed by Scopus).
37. E.A. Rahim, Z. Mohid, N.M. Warap, R. Ibrahim, **M.I.S. Ismail**: *A Prediction of Laser Spot-to-Cutting Tool Distance in Laser Assisted Micro Milling*, 9th International Conference on Micromanufacturing (ICOMM 2014), No.32 – Singapore, 2014.
38. Z. Mohid, N.M. Warap, E.A. Rahim, R. Ibrahim, **M.I.S. Ismail**: *Study on Laser Assisted Micro Milling (LAMM) Processing Characteristics Titanium Alloy (Ti6Al4V) Using TiAlN Coated Carbide Micro Ball Mill*, 9th International Conference on Micromanufacturing (ICOMM 2014), No.31 – Singapore, 2014.
39. N.M. Warap, Z. Mohid, **M.I.S. Ismail**, R. Ibrahim, E.A. Rahim: *Determination of Heat Flux Intensity Distribution and Laser Absorption Rate of AISI D2 Tool Steel*, International Conference on Mechanical and Manufacturing Engineering (ICME 2013), No.691 – Putrajaya, Malaysia, 2013. Published in Applied Mechanics and Materials, Vol.465-466, 2014, pp.720-724. (Indexed by Scopus).
40. Z. Mohid, N.M. Warap, S. Hassan, **M.I.S. Ismail**, R. Ibrahim, E.A. Rahim: *Numerical Analysis of Laser Heating for Laser Assisted Micro Milling Application*, International Conference on



Mechanical and Manufacturing Engineering (ICME 2013), No.689 – Putrajaya, Malaysia, 2013. Published in Applied Mechanics and Materials, Vol.465-466, 2014, pp.730-734. (Indexed by Scopus).

41. Z. Mohid, N.M. Warap, R. Ibrahim, **M.I.S. Ismail**, E.A. Rahim: *A Method of Tool Engagement Temperature Estimation on Laser Assisted Micro Milling*, The 7th International Conference on Leading Edge Manufacturing in 21st Century (LEM 21), No.B017 – Miyagi, Japan, 2013.
42. Y. Okamoto, S. Matsuoka, **M.I.S. Ismail**, A. Okada: *Thermal Deformation in Micro-welding of Thin Stainless Steel by Single-mode Fiber Laser*, 12th International Conference on Progress of Machining Technology (ICPMT 2012), No.1010, 2012, pp.144-147 – Nigata, Japan, 2012. (Indexed by Scopus).
43. **M.I.S. Ismail**, Y. Okamoto, A. Okada, Y. Uno, M. Mukhtar: *Micro-welding of High Thermal Conductive Material Aluminum-Graphite Composite by Pulsed Nd:YAG Laser*, 12th International Symposium on Laser Precision Microfabrication (LPM 2011), No.106 – Kagawa, Japan, 2011.
44. **M.I.S. Ismail**, Y. Okamoto, Y. Uno: *Direct Joining of FPC and Metal Electrode by Pulsed Nd:YAG Laser*, 29th International Congress on Application of Lasers and Electro-Optics (ICALEO 2010), No. M406, 2010, pp.864-870 – California, USA, 2010. (Indexed by Scopus).
45. **M.I.S. Ismail**, Y. Okamoto, Y. Uno: *Direct Joining of FPC and Metal Electrode by Pulsed Nd:YAG Laser* (Poster Presentation), 73rd Conference of Japan Laser Processing Society, pp.206 – Osaka, Japan, 2010.
46. **M.I.S. Ismail**, Y. Okamoto, Y. Uno: *Fundamental Study on Micro-welding of Thin Stainless Steel Sheet by Fiber Laser*, 16th International Symposium on Electromachining (ISEM-XVI), pp.431-435 – Shanghai, China, 2010. (Indexed by Scopus).

#### Chapter in Books

1. K.I. Imhan, B.T.H.T. Baharudin, A. Zakaria, **M.I.S. Ismail**, N.M.H. Alsabti, A.K. Ahmad: *The Effect of Thermal and Mechanical Properties of the Metals on the Laser Tube Bending Process*, Case Study on Material Engineering and Applied Sciences: UPM and KU 2019 (Ed: M.A. Azmah Hanim, S. Sulaiman, C.N. Aiza, T.T. Dele-Afolabi), Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, Universiti Putra Malaysia and Kirikkale University, 2019, pp.206-219, eISBN 978-983-2408-68-0.
2. **M.I.S. Ismail**, Y. Okamoto, A. Okada: *Micro-welding of Super Thermal Conductive Composite by Pulsed Nd:YAG Laser*, Nd:YAG Laser (Ed: D.C. Dumitras), InTech, 2012, pp.161-182, ISBN 978-953-51-0105-5.

#### Books

1. **M.I.S. Ismail**, M.K.A. Ariffin, Z. Leman, R. Samin, B.T.H.T. Baharudin, S. Sulaiman, A.A. Faieza, S.H. Tang, N. Zulkifli, N. Ismail, M.S.N. Amirah: *Dissertation Guideline (2nd Edition)*, Department of Mechanical and Manufacturing Engineering, Faculty of Engineering, Universiti Putra Malaysia, Malaysia, 2017, ISBN 978-983-2408-57-4.

#### Research Grants

No.	Project Title	Year	Source of Fund
1.	Precision Joining of Metal-Polymer Hybrid Structure by Laser Irradiation.	2018-2021	Putra Grant (Leader)
2.	Tool Condition Monitoring of Friction Drilling Using Expert System.	2018-2020	Putra Grant - IPS (Leader)
3.	Sensing, Modeling and Control of Robot-based Incremental Sheet Forming.	2016-2019	Putra Grant - IPS (Leader)
4.	Characterization and Modeling of Friction Drilling on Hard-to-Machine Materials.	2015-2017	FRGS (Leader)
5.	Experimental and Numerical Investigations in Thermal Friction Drilling of Difficult-to-Machine Materials.	2015-2017	Putra Grant - IPS (Leader)

6.	In-Process Monitoring and Adaptive Control of Weld Joint Penetration in Fusion Welding.	2013-2016	Putra Grant - IPM (Leader)
7.	Influence of Laser Welding Parameters on Microstructure and Mechanical Properties of Ultra-high Strength 22MnB5 Boron Steel.	2019-2021	FRGS (Member)
8.	Characterization and Analysis of Multi-grade Biocompatible Metal-Polymer/Polymer-Polymer Composite Polylactic Acid (PLA based) for Fused Deposition Modelling in Additive Manufacturing.	2019-2020	FRGS (Member)
9.	Investigation on Effect of Multilayer Coated Carbide Tools for Free Cutting Steel (AISI 12L14) Turning.	2019-2020	FRGS (Member)
10.	Stent Manufacturing Using Cobalt Chromium Molybdenum by Selective Laser Melting (SLM) Technology.	2017-2019	Putra Grant - IPS (Member)
11.	Experimental Investigation on Micro-Milling Process of Silicon Wafer for Microfluid Devices in Medical Industries.	2016-2017	AUN/SEED-Net - CRI (Member)
12.	Development of Extrusion Head of Fused Deposition Modeling (FDM) for Biomedical Material.	2015-2017	FRGS (Member)
13.	In-situ Titanium Diboride (TiB <sub>2</sub> ) Reinforced by Aluminum Alloy Hybrid Metal Matrix Composites.	2015-2017	FRGS (Member)

#### Professional Services/Consultation

#### Professional Services

No.	Title	Position	Year
1.	Advances in Materials and Processing Technologies (ISSN: 2374-068X).	Journal Reviewer	2019-2021
2.	5th International Conference on Advanced Technologies in Design, Mechanical and Aeronautical Engineering (ATDMAE 2021).	Technical Committee	2021
3.	7th International Conference on Digital Manufacturing and Automation (ICDMA 2020).	Technical Committee	2021
4.	6th International Conference on Mechanical and Electronics Engineering (ICMEE 2020).	Technical Committee	2021
5.	Journal of Laser Micro/Nanoengineering (ISSN: 1880-0688).	Journal Reviewer	2017-2020
6.	Materials and Design (ISSN: 0264-1275).	Journal Reviewer	2020
7.	Journal of Materials Engineering and Performance (ISSN: 1059-9495).	Journal Reviewer	2020
8.	International Journal of Technology (ISSN: 2086-9614).	Journal Reviewer	2020
9.	Thin-Walled Structures (ISSN: 0263-8231).	Journal Reviewer	2020
10.	Manufacturing Letters (ISSN: 2213-8463).	Journal Reviewer	2020
11.	World Journal of Engineering (ISSN: 1708-5284).	Journal Reviewer	2020
12.	Engineering Science and Technology (ISSN: 2215-0986).	Journal Reviewer	2020

13.	9th International Conference on Material Science and Engineering Technology (ICMSET 2020).	Technical Committee	2020
14.	4th International Conference on Advanced Technologies in Design, Mechanical and Aeronautical Engineering (ATDMAE 2020).	Technical Committee	2020
15.	Journal of Thermal Science (ISSN: 1003-2169).	Journal Reviewer	2019
16.	International Journal of Thermal Sciences (ISSN: 1290-0729).	Journal Reviewer	2019
17.	Journal of Materials Science Research and Reviews.	Journal Reviewer	2019
18.	International Communications in Heat and Mass Transfer (ISSN: 0735-1933).	Journal Reviewer	2019
19.	Computers and Electronics in Agriculture (ISSN: 0168-1669).	Journal Reviewer	2019
20.	5th International Conference on Computational Methods in Engineering and Health Sciences (ICCMEH 2019).	Conference Reviewer	2019
21.	5th International Conference on Electrical, Control and Computer Engineering (InECCE 2019).	Conference Reviewer	2019
22.	3rd International Conference on Intelligent Manufacturing and Automation Engineering (ICIMA 2019).	Technical Committee	2019
23.	8th International Conference on Material Science and Engineering Technology (ICMSET 2019).	Technical Committee	2019
24.	6th International Conference on Chemical and Material Engineering (ICCME 2019).	Technical Committee	2019
25.	2nd International Conference on Mechanical and Digital Manufacturing (ICMDM 2019).	Technical Committee	2019
26.	International Conference on Advances in Mechanical and Manufacturing Engineering (ICAM <sup>2</sup> E 2019).	Technical Committee	2018-2019
27.	Advances in Mechanical Engineering (ISSN: 1687-8140).	Journal Reviewer	2018
28.	Journal of Mechanical Science and Technology (ISSN: 1738-494X).	Journal Reviewer	2017-2018 2014-2015
29.	Journal of Mechanical Engineering and Sciences (ISSN: 2289-4659).	Journal Reviewer	2018
30.	7th International Conference on Material Science and Engineering Technology (ICMSET 2018).	Technical Committee	2018
31.	3rd International Conference on Control, Robotics and Cybernetics (CRC 2018).	Technical Committee	2018
32.	International Conference on Mechanical and Digital Manufacturing (ICMDM 2018).	Technical Committee	2018
33.	5th Annual International Conference on Materials Science, Metal and Manufacturing (M3 2018).	Technical Committee	2018
34.	AEROS Conference 2017.	Conference Reviewer	2017
35.	6th International Conference on Material Science and Engineering Technology (ICMSET 2017).	Technical Committee	2017
36.	Global I-Lead STEM Camp 1Malaysia - SMK Tunku Kurshiah, Negeri Sembilan.	Facilitator	2017

37.	International Conference on Advanced Processes and Systems in Manufacturing (APSIM 2016).	Conference Reviewer	2016
38.	International Conference on Mechanical Automation and Control Engineering (ICMAE).	Conference Reviewer	2016
39.	5th International Conference on Engineering and Innovative Materials (ICEIM 2016).	Technical Committee	2016
40.	Competition of Creation, Innovation Technology and Engineering Through Exhibition (CiTEX 2016).	Judge	2016
41.	F1 Competition in Schools - SMK King George V, Negeri Sembilan.	Technical Advisor	2015-2016
42.	ASEAN Engineering Journal (ISSN: 2229-127X).	Journal Reviewer	2015
43.	Jurnal Kejuruteraan (ISSN: 0128-0198).	Journal Reviewer	2015
44.	5th International Conference on Noise, Vibration and Comfort (NVC).	Conference Reviewer	2015
45.	3rd International Conference on Recent Advances in Automotive Engineering and Mobility Research (ReCAR).	Conference Reviewer	2015
46.	AUN/SEED-Net Regional Conference on Mechanical and Manufacturing (RCMME 2013).	Technical Committee	2013
47.	International Conference on Advances in Mechanical and Manufacturing Engineering (ICAM <sup>2</sup> E 2013).	Technical Committee	2013

#### Consultation

No.	Title	Authority	Amount	Year
1.	Modeling and Simulation of Heat-Reaction Dispersion Model Using Computational Fluid Dynamics (CFD).	Biowin Sdn. Bhd.	RM 13,920	2014
2.	Modeling and Simulation of Heat Transfer Dispersion Model Using Computational Fluid Dynamics (CFD).	Biowin Sdn. Bhd.	RM 4,500	2013

#### Teaching

##### Postgraduate

No.	Code	Course	Credit
1.	EMM5100	Research Methodology	3 (3+0)
2.	EMM5716	Computer Aided Design and Manufacture	3 (3+0)
3.	EMM5714	Facilities Layout	3 (3+0)
4.	EMM5708	Automation and Robotics	3 (3+0)
5.	EMM5706	Design of Manufacturing Systems	3 (3+0)
6.	EMM5702	Advanced Manufacturing Technology and Processes	3 (3+0)
7.	EMM5504	Engineering Product Design and Innovation	3 (3+0)

##### Undergraduate

No.	Code	Course	Credit
1.	EMM4711	Tooling Engineering	3 (3+0)
2.	EMM4706	Manufacturing Systems Design	3 (3+0)



3.	EMM4303	Tribology	3 (3+0)
4.	EMM3812	Mechanical Engineering Laboratory (IV)	1 (0+1)
5.	EMM3722	Manufacturing Technology and Processes	3 (3+0)
6.	EMM3704	Manufacturing Automation (I)	3 (2+1)
7.	EMM3526	Computer Aided Engineering	3 (1+2)
8.	EMM3514	Numerical Methods	3 (2+1)
9.	EMM3506	Engineering Design (I)	3 (2+1)
10.	EMM3110	Thermodynamics (I)	3 (3+0)

#### Awards/Recognition

No.	Title	Award Authority	Level	Year
1.	Incentive Award in Journal Paper	Universiti Putra Malaysia	University	2016
2.	Bronze Medal (Filament Nozzle Extruder for Synthetic Biomaterial)	Invention, Research and Innovation Exhibition (PRPI), Universiti Putra Malaysia	University	2016
3.	Excellence Award in Teaching	Faculty of Engineering, Universiti Putra Malaysia	Faculty	2016-2018
4.	Excellence Service Award	Universiti Putra Malaysia	University	2015, 2019
5.	Excellence Service Certificate	Universiti Putra Malaysia	University	2013-2019 2008

#### Student Supervision

##### PhD (Main Supervisor)

No.	Name	Title	Status
1.	Mohamad Aizat Mohd Radzman (GS52594)	Real-Time Monitoring of Laser Transformation Hardening with High-Speed Optical Scanning.	On-going
2.	Mohd Zurrayen Abdul Mutalib (GS46183)	Tool Condition Monitoring of Thermal Friction Drilling Using Expert System.	On-going
3.	Nazarul Abidin Ismail (GS43989)	Predictive Modeling of Tool Wear in Robot-based Incremental Sheet Forming.	On-going
4.	Shayan Dehghan (GS41782)	Experimental and Numerical Investigations in Friction Drilling of Difficult-to-Machine Materials.	Completed

##### PhD (Co-Supervisor)

No.	Name	Title	Status
1.	Razi Hadi Al-Zubaidi (GS54917)	Effects of Self-Efficacy as Mediating Variable on Project Management in Sustainable Development.	On-going
2.	Zairul Amri Zakaria (GS54252)	Characterization and Analysis of Functionality Graded Material (FGM) Polymer-Fibre Composite of Fused Deposition Modelling (FDM) in Additive Manufacturing (3D Printing).	On-going
3.	Khudhur Parween Ali Khudhur (GS51932)	Optimization of Drilling Parameters of Hole Quality of Nickel-Base Super Alloy Using Non-Traditional Machining Processes.	On-going

4.	J Thamil Selvi Jayapirakasam (GS48385)	Development of Wireless Robotic Bomb Defuser with Leap Motion Controller.	On-going
5.	Zaliha Wahid (GS47546)	Characterization of End-user Functional Parts Fabricated by Additive Manufacturing Technique.	On-going
6.	Amir Parnianifard (GS46398)	Development of Robust Design Hybrid Metamodeling in Simulation-Optimization: Applied in Production and Project Management.	Completed
7.	Sina Ghaffari (GS46322)	Investigation of Mechanical and Microstructure Properties of Explosive-welded Al-Cu-Al Three Layers After Equal Channel Angular Rolling Process.	On-going
8.	Mohd Asnawi Omar (GS45040)	Stent Manufacturing Using Cobalt Chromium Molybdenum (CoCrMo) by Selective Laser Melting (SLM) Technology.	On-going
9.	Nor Aiman Sukindar (GS42749)	Analyzing and Development of Fused Deposition Modelling Nozzle for Extruding Biomaterials.	Completed
10.	Almukhtar. Ib. A. Aljeremi (GS42636)	Reducing Effect of Overheating Around Side Riser Neck by Modifying Geometric Shape of the Riser Neck.	On-going
11.	Zolkarnain Marjom (GS41838)	Effects of Cooling Slope and Vibration Mold Method on the Microstructure and Mechanical Properties of LM25-Al-Si Alloy.	On-going
12.	Wisam Ali Basher Baara (GS41644)	Influence of Elastic Modulus Change and Anisotropy Coefficient in Unloading Stage by Springback Prediction of Light Weight Material.	On-going
13.	Abolfazl Golshan (GS39825)	Experimental Investigation on Micro-Milling of Silicon Wafers for Microfluidic Devices in Medical Application.	Completed
14.	Mohd Shahrizan Yusoff (GS38448)	Development of Synergistic Operational Model Towards Sustainability Lean Manufacturing Practice for Malaysian Small and Medium-sized Industry.	Completed
15.	Khalil Ibraheem Imhan (GS38154)	Laser Tube Bending Process for Stainless Steel 304.	Completed
16.	Ng Tan Ching (GS35595)	Determining Lean Manufacturing Sustainability Effectiveness in Malaysia Using Hybrid Interpretive Structural and Structural Equation Models.	Completed
17.	Rosmamuhamadani Ramli (GS34430)	Characterization and Mechanical Properties of In-situ Titanium Diboride Reinforced Aluminum Copper Alloy Composites.	Completed

#### Master by Research (Main Supervisor)

No.	Name	Title	Status
1.	Asghar Hozoorbakhsh (GS33505)	Parametric Investigation of Heat Transfer and Fluid Flow on Laser Micro-welding.	Completed

### Master by Coursework (Main Supervisor)

No.	Name	Title	Status
1.	Siti Hazlina Mokhtar (GS57231)	Laser Joining of Dissimilar Materials.	On-going
2.	Zaidatul Syima Zainal (GS55782)	Safety Marking Checker on Carton.	On-going
3.	Ali Mahmood (GS54755)	Selective Surface Modification Using Single-Mode Fiber Laser with High-Speed Scanning.	On-going
4.	Habil Hadi Mohammed (GS53381)	Surface Polishing of Fused Deposition Modeling (FDM) Printed Parts by Single-Mode Fiber Laser.	Completed
5.	Nur Syazwani Ibrahim (GS52865)	Surface Polishing Using Single-Mode Fiber Laser.	Completed
6.	Aisha Rohaya (GS52584)	Laser Cutting of Natural Fiber Reinforced Polymer Composite.	Completed
7.	Mohd Yusrin Mohd Yusof (GS51681)	Feasibility Studies on Incorporation of Linear LDPE Over the Properties of Ethylene-Propylene-Dience Monomer Rubber Compound (EPDM).	Completed
8.	Abdul Aziz Misland (GS51122)	Prediction of Tool Condition Monitoring on Incremental Sheet Forming Using Machine Learning.	Completed
9.	Omar Navas Ahamed Hameed Aslam (GS51005)	Design and Development of Cutting Machine for Large Circular Profile.	Completed
10.	Desriani Badari (GS49716)	Finite Element Modeling on Laser Transformation Hardening.	Completed
11.	Kishore Kumar Madhavan (GS48399)	Effect of Urban Heat Island in Urban and Sub-urban Area.	Completed
12.	Nur Balqish Abdul Manap (GS47532)	Development of Surface Roughness Measurement Using Image Processing.	Completed
13.	Mohamad Aizat Mohd Radzman (GS46727)	Optimization of Process Parameters in Robot-Based Single Point Incremental Forming Using Taguchi Method.	Completed
14.	Iffli Efendy Abdullah (GS46661)	Plastic Pipe Welding of High Density Polyethylene (HDPE) for Water Distribution Industry.	Completed
15.	Nur Syuhada Sang Sudin (GS46145)	Friction Stir Spot Welding on Dissimilar Materials of Aluminum Alloy and Stainless Steel.	Completed
16.	Nor Hazirah Mohammad (GS45795)	Experimental Investigations on Surface Modification by Grinding-Hardening Process.	Completed
17.	Noor Azzira Sulaiman (GS45501)	Analysis of Job Load and Workers' Attitude on Productivity in Production Assembly Line.	Completed

18.	Meria Masheela Md Adnan (GS44793)	An Energy Efficiency (EE) Performance of Air Conditioning System in Government's Office Building.	Completed
19.	Muhammad Afiq Abdul Shukor (GS44784)	Improvement of Performance and Strength of Ratcheting Element in Power Tool Impact Mechanism Using Material from Powder Metallurgy.	Completed
20.	Saidatul Aishah Asgar Zaidi (GS44282)	Experimental Study of Rubber-Metal Bonding in Automotive Industries.	Completed
21.	Ahmad Salleh Buang (GS43648)	Experimental and Numerical Investigation of Clinching Process on Dissimilar Materials.	Completed
22.	Ch'ng Jin Jun (GS42971)	Process Simulation of Porosity in Die Casting of Aluminum Alloy.	Completed
23.	Zubaidah Mohamed@Macason (GS42469)	Predictive Modeling of Machining Performance in Thermal Friction Drilling Using Artificial Neural Network.	Completed
24.	Mohd Anwar Siddiq Abd Jalil (GS42441)	Experimental Investigation of Tool Geometry in Thermal Friction Drilling.	Completed
25.	Abdolfazl Nourani (GS42089)	Effect of Sheet-Metal Thickness Tolerance in Clinching Process.	Completed
26.	Mohd Haris Md Mahiyuddin (GS41266)	Thermal Analysis of Cooling Efficiency for Dual Unit Charger.	Completed
27.	Khalid Talib Haloob (GS41256)	The Impact of Leadership Requirements on Management Performance of Drilling Wells Companies in Iraq.	Completed
28.	Muhamad Anas Mohammad Sayuti (GS41016)	Experimental Investigation of Tool Life Performance in Friction Drilling.	Completed
29.	Saipul Nizam Mohd Marzuki (GS39187)	A Study of Measurement Error and Uncertainty of Digital Vernier Caliper by Coordinate Measuring Machine (CMM).	Completed
30.	Erfan Shamsaddini Lori (GS39187)	Machining Parameters in Friction Stir Welding of Aluminum Alloy AA1100.	Completed
31.	Kamarul Al-Hafiz Abdul Razak (GS39024)	Analysis of Material Removal Rate (MRR), Tool Wear Rate (TWR) and Surface Roughness (SR) with Different Electrode for High Chromium Steel on EDM Die Sinking Using Full Factorial Method.	Completed
32.	Saiful Nizwan Mhd Saleh (GS38105)	Study on the Effect of Various Sintering Temperatures to the Physical, Microstructure and Mechanical Properties of Natural Hydroxyapatite with 2% Alumina as Additive.	Completed
33.	Mohamed Faisol Mohamed Nor (GS38104)	Development of Ultra High Molecular Weight Polyethylene (UHMWPE) Based Zinc Oxide (ZnO) Hybrid Composites for High Performance of Medical Applications.	Completed



34.	Amer Isyraqi Hussin (GS38093)	Study and Analyze the Optimum Parameters of Wirecut for SKD11 Tool Steel Machining.	Completed
35.	Tan Wen Ching (GS37701)	Design and Fabrication of a Prototype Thermoelectric Cooling System Based on Peltier Effect.	Completed
36.	Norsyafiqah Shuib (GS37700)	Fusion Welding of Aluminum Alloy AA6061 T-Joints: A Study of Mechanical Properties.	Completed
37.	Regunathan Parasumanan (GS37336)	Optimization of Copper Wire Usage for Wire Bonding Process in Semiconductor Industry.	Completed
38.	Mariyam Jameelah Bahari (GS36904)	Fusion Welding of Aluminum Alloy AA6061 T-Joints: A Study of Thermal Deformation.	Completed
39.	Muhammad Faliq Mohamad Nazer (GS35698)	Numerical Analysis of Pipe Bending by Plasma Arc.	Completed
40.	Amir Soleymani (GS34722)	Thermal Model for Prediction of Deposition Dimension of Deposited Nickel Superalloy.	Completed