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Academic Qualification

1. Ph.D Industrial Science, (Design and Production Processes Engineering) Ibaraki University, Japan, 2010.
2. M.Eng. (Ecosystem Engineering), The University of Tokushima, Japan, 2002
3. B.Eng. Mechanical Engineering, Ehime University, Japan, 2000

Professional Certification

1. Certified Welding Engineer, Japan Welding Engineering Society, 2012
2. Certified Welding Inspector, CSWIP 3.1, TWI, UK, 2013

Working Experiences / Appointment

1. Jan 2015 – Current Associate Professor – Universiti Malaysia Pahang
2. April 2010 – Dec 2014 Senior Lecturer – Universiti Malaysia Pahang
3. May 2003 – Mac 2010 Lecturer – Universiti Malaysia Pahang
4. April 2002 – April 2003 Production Engineer – Assembly Services Sdn Bhd, S.Alam

Research Interest

Manufacturing Processes- Joining & Welding, Laser Applications on Manufacturing Processes, Light Alloys, Casting

Position

1. Deputy Dean Research & Postgraduate Studies, Faculty of Mechanical Engineering, UMP (April 2015-Mac 2017)
2. Deputy Dean Research & Postgraduate Studies, Faculty of Mechanical Engineering, UMP (Mac 2013-Mac 2015)
3. Head of Mechanical Engineering Program, Faculty of Mechanical Engineering, UMP (April 2012-2013)
4. Head of Manufacturing Processes Research Group, Faculty of Mechanical, UMP (2011- 2012)
5. Head of Mechanical Engineering Program, Faculty of Mechanical Engineering, UMP (April 2010-March 2012)
6. Head of special task force for EAC audit for Bachelor Degree of Mechanical Engineering Program (2010-2012)
7. Research Fellow of Center of Automotive Engineering, UMP (2010-current)
8. Head of Academic Program, Faculty of Mechanical Engineering, UMP (2005-2007)

9. Coordinator of Material Engineering, Strength Materials and Scanning Electron Microscope laboratories, Faculty of Mechanical Engineering, KUKTEM/UMP (2003-2007)
10. Member of Technical Evaluation for laboratory equipment, Faculty of Mechanical Engineering (2003-2007)
11. Coordinator for development of new curriculum for a new program, Faculty of Mechanical Engineering (2003-2005)
12. Coordinator for Degree of Mechanical Engineering Program, Faculty of Mechanical Engineering, KUKTEM (2003-2005)
13. Internal Auditor for Academic Quality Assurance, KUKTEM (2004)

Professional Qualification / Membership / Affiliation / Experience

1. Certified Welding Inspector CSWIP 3.1(TWI, UK)
2. Certified Welding Engineer (The Japan Welding Engineering Society)
3. Registered Engineer, Board of Engineer, Malaysia (BEM) (No.43892)
4. Senior Member, Japan Society of Mechanical Engineer, (091360), 2009-2011
5. Associate Member, Welding of Institute Malaysia (AMWIM20100596), 2010-current
6. Member, Laser Institute of America (IND34756) , 2010-2011
7. Fellow researcher, Automotive Engineering Centre, Universiti Malaysia Pahang

Subject Teach

Undergraduate Degree: Joining & Welding, Manufacturing Processes, Materials Engineering, Dynamics,

Post Graduate Supervision/Examiner

Supervision

Level	Topics/Student's name	Status
PhD	Numerical and Experimental study on optimal fin to fin spacing finned circular and elliptical tubes/ Tahseen Ahmad Tahseen	Graduated 2014
PhD	Predict Microstructure and Mechanical Properties for welded Titanium Alloy (Ti-6Al-4V), Yassin Mustafa Ahmed	Graduated
PHD	Real-time monitoring of the Fibre Laser Welding process using acoustic signature/ Mohd Fadhlán bin Mohd Yusof	In Progress
Phd	Effect of High Power Laser Welding on the Microstructure and Mechanical Properties of Austenitic Stainless Steel/ Ghusoon Ridha Mohammed Ali	In Progress
Phd	The Study of Dissimilar And Similar Metal Joining For Stifneer Plate Application/ Mohammed Midhat	Graduated 2018
Phd	Hardness and surface roughness investigation by wet wear on different types of metals/Hassan Abdurassoul Abdulhadi	Graduated 2018
Phd	Induction Heat-Assisted Friction Stir	In Progress

	Welding/ Mohd Azam	
Msc	Corrosion on Friction Stir Mg Alloys/ Nurul Shuhada Mohamed	In progress
MSc	Enhancement On Solder Alloy Strength Using Different Sn, Ag, Cu Composition Through Mechanical Mixing/NADHRAH BINTI MURAD	In Progress
Msc	Friction Stir welding of Mg alloy and Al Alloy/Nurul Hidayah	Viva
MsC	An Experimental Study And Modeling On Gas Metal Arc Welded Lap Joint Of A7075-T651 aluminium Alloy To AZ31B Magnesium Alloy/Md Rafiqul Islam	Graduated, 2015
MsC	Variable Helix And Variable Pitch Tool Geometry Effect On The Performance Of Process Damping In Milling/ Mohd Adib Shaharun	Graduated, 2014
Msc	Preparation And Characterisation Of Tixal 1-X Nano Alloys For Potential Use In Advanced Technology Applications/_Rozman Bin Mohd Tahar	Graduated, 2015
MSc	Study Of Dissimilar Aluminum Alloy A6061&A7075 By Fusion Welding/Nurfakhriah Bt Noordin	In Progress
Msc	Study On Dissimilar Aluminium Alloys Of AA7075 And AA6061 By Friction Stir Welding/Nurain Amelia Binti Sathari	Thesis submission
MSc	To Enhance Graphite Nodularity Of Modified Ductile Ni-Resit Using Direct Insertion Of Alloying Elements During Casting/ Khairul Muzafar Ahmad	Graduated, 2017
MSc	Mechanical Properties And Fracture Of Friction Stir Welded Aluminum Alloy 5083/Muhammad Azrie Husainy Mohd Jasri	Graduated 2016
Msc	Weldability Of Advance High Strength Steel/KHAIRUL IHSAN BIN YAAKOB	Graduated 2017
Msc	Dissimilar Welding Of AA6061&A7075/MUHAMMAD NAQUIUDDIN BIN MAT SALLEH	Graduated 2017
MsC	Effect of Nickel Surface finish on solder joint reliability/Hardinnawirda Kahar	Graduated 2017
MsC	Effect of Nickel Doping on Immersion gold surface/ Zetty Akhtar Abd malek	Graduated 2017
MSc	Dynamic Analysis of Friction Stir Welding Joints in Dissimilar Material Plate Structure/SITI NORAZILA BINTI ZAHARI	Graduated 2017

Thesis Examiner

1. Nurul Syahida Binti Mohd Nasir, Master of Science , “ Effect of heat input to the variant selection at CGHAZ of welded Carbon Steel. 2017 Universiti Malaysia Kelantan
2. Hydrothermal effect on mechanical properties of Adhesively Bonded T-Joint, UNIMAP, Year 2016 (Master Thesis)
3. Design and development of Micro-friction stir welding, University Malaya, 2016
4. Closed-Form solutions and stress analysis of adhesively bonded dissimilar joint, UNIMAP, Year 2016 (Master Thesis)

5. Study the Effect of adiabatic extrusion on structure, thermal and physical properties of PA6/C20A nanocomposite, Universiti Malaysia Pahang, Year 2013 (Master Thesis)
6. University Malaya, High Temperature And Superplastic Forming Of Boronized Duplex Stainless Steel, Year 2012 (Master Thesis)
7. University Malaya, Year 2012 (Master Thesis)
8. University Malaya, Embedment of hydroxyapatite (HA) on titanium alloy (Ti6Al4V) via Superplastic deformation method for medical application. Year 2011 (Master Thesis)

List of Publications

A) International and National Journal

1. K. I. Yaakob, M. Ishak, S. R. A. Idris, M. H. Aiman, M. M. Quazi, Characterization of heat-treated gas metal arc-welded boron steel sheets, *The International Journal of Advanced Manufacturing Technology* 2017, Volume 92, 452,
2. K.I. Yaakob, M. Ishak* and S.R.A. Idris, The effect of pulse welding parameters on weld geometry of boron steel using low power fibre laser, *Journal of Mechanical Engineering and Sciences* Volume 11, Issue 3, pp. 2895-2905, September 2017.
3. N Murad, SR Aisha, M Ishak, Effects of Cooling Rates on Microstructure, Wettability and Strength of Sn3.8Ag0.7Cu Solder Alloy, *Procedia Engineering* 2017, 184, 266-273
4. M Ishak, Mnm Salleh, Sr Aisha, The Mechanical And Microstructural Study Of Welded AA7075 Using Different Filler Metals, *International Journal of Computational Methods and Experimental Measurements*, 2017, Vol 5 issue 5, pp 696-712.
5. MM Hasan, M Ishak, MRM Rejab, Influence of machine variables and tool profile on the tensile strength of dissimilar AA7075-AA6061 friction stir welds, *The International Journal of Advanced Manufacturing Technology*, 2017, 90 (9-12)
6. HA Abdulhadi, SNAS Ahmad, I Ismail, M Ishak, GR Mohammed, Experimental Investigation of Thermal Fatigue Die Casting Dies by Using Response Surface Modelling ,*Metals* 2017, 7 (6), 191.
7. MFM Yusof, MA Kamaruzaman, M Ishak, MF Ghazali, Porosity detection by analyzing arc sound signal acquired during the welding process of gas pipeline steel, *The International Journal of Advanced Manufacturing Technology* 2017, 89 (9-12)
8. GR Mohammed, M Ishak, SN Aqida, HA Abdulhadi, Effects of heat input on microstructure, corrosion and mechanical characteristics of welded austenitic and duplex stainless steels: A review, *Metals* ,2017, 7 (2), 39
9. MM Hasan, M Ishak, MRM Rejab, Effect of backing material and clamping system on the tensile strength of dissimilar AA7075-AA2024 friction stir welds, *The International Journal of Advanced Manufacturing Technology*, 2017, 1-17.
10. Islam, M., Ishak, M., Shah, L., Idris, S., Meriç, C. Dissimilar welding of A7075-T651 and AZ31B alloys by gas metal arc plug welding method. *The International Journal of Advanced Manufacturing Technology*. 2016, 1-11.
11. Hasan, M.M., Ishak, M., Rejab, M. Influence of machine variables and tool profile on the tensile strength of dissimilar AA7075-AA6061 friction stir welds. *The International Journal of Advanced Manufacturing Technology*. 2016, 1-11.
12. Othman, N.H., Abdul Razak, N., Ahmad Shah, L.H., Ishak, M. Effect of Taper Pin Ratio on AA7075 Aluminium Alloy Friction Stir Welding. In: *Key Engineering Materials*, Trans Tech Publications, 2016, Vol. 701, pp. 154-8.

13. Kahar, H., Abd Malek, Z.A., Idris, S.R.A., Ishak, M., Goosey, M. Intermetallic growth and shear strength of SAC305/EN-Boron. *Soldering & Surface Mount Technology*. 2016, 28.
14. Salleh, M., Ishak, M., Shah, L., Idris, S. The effect of ER4043 and ER5356 filler metal on welded Al 7075 by metal inert gas welding. *High Performance and Optimum Design of Structures and Materials II*. 2016, 166, 213.
15. Murad, N., Aisha, S., Muhammad, M.I. Effects of sintering temperatures on microstructures and mechanical properties of Sn₄. 0Ag₀. 5Cu₁. 0Ni solder alloy. In: *Electronics Manufacturing Technology (IEMT) & 18th Electronics Materials and Packaging (EMAP) Conference, 2016 IEEE 37th International, IEEE, 2016*, pp. 1-7.
16. Hassan, M.M., Ishak, M., Ruzaimi, M. A simplified design of clamping system and fixtures for friction stir welding of aluminium alloys. *Journal of Mechanical Engineering and Sciences (JMES)*. 2015, 9, 1628-39.
17. Ishak, M., Noordin, N.F.M., Hakim, L., Shah, A. FEASIBILITY STUDY ON JOINING DISSIMILAR ALUMINUM ALLOYS AA6061 AND AA7075 BY TUNGSTEN INERT GAS (TIG). *Jurnal Teknologi*. 2015, 75.
18. Ishak, M., Noordin, N., Razali, A., Shah, L., Romlay, F. Effect of filler on weld metal structure of AA6061 aluminum alloy by tungsten inert gas welding. *International Journal of Automotive and Mechanical Engineering*. 2015, 11, 2438.
19. Tahseen, T.A., Ishak, M., Rahman, M. An overview on thermal and fluid flow characteristics in a plain plate finned and un-finned tube banks heat exchanger. *Renewable and Sustainable Energy Reviews*. 2015, 43, 363-80.
20. Ahmed, Y.M., Khidhir, B.A., Sahari, K.S.M., Ishak, M. Study of Mechanical Properties on Thick Titanium Alloy (Ti - 6Al- 4V) Multi-Passes Weld. *Journal of Multidisciplinary Engineering Science and Technology (JMEST)*. 2015, 2, 660-5.
21. Ahmed, Y.M., Sahari, K.S.M., Khidhir, B.A., Ishak, M. Optimization of Multi-layer Welding of Titanium Alloy. *Research Journal of Applied Sciences, Engineering and Technology*. 2015, 10, 1029-34.
22. Tahseen, T.A., Rahman, M., Ishak, M. Experimental Study on Heat Transfer and Friction Factor in Laminar Forced Convection over Flat Tube in Channel Flow. *Procedia Engineering*. 2015, 105, 46-55.
23. Al-Dabbagh, J.B., Rozman, M.T., Mahadzir, I., Siti Aisyah, H. Structural and phase formation of TiAl alloys synthesized by mechanical alloying and heat treatment. 2015.
24. N.A.A, S., A.R, R., M, I., L.H, S. MECHANICAL STRENGTH OF DISSIMILAR AA7075 AND AA6061 ALUMINUM ALLOYS USING FRICTION STIR WELDING. *International Journal of Automotive and Mechanical Engineering (IJAME)*. 2015, 11, 2713-2.
25. MAHM Jasri, M.A., A Ismail, M Ishak. The microstructure of aluminum A5083 butt joint by friction stir welding. In: *INTERNATIONAL CONFERENCE ON MATHEMATICS, ENGINEERING AND INDUSTRIAL APPLICATIONS 2014 (ICoMEIA 2014)*, AIP Publishing, 2015, Vol. 1660, p. 070103.
26. Al-Dabbagh, J.B., Tahar, R.M., Ishak, M., Harun, S.A. Synthesis and Characterization of Nano Ti-50% Al by Mechanical Alloying. In: *Design and Computation of Modern Engineering Materials*, Springer International Publishing, 2014, pp. 329-43.
27. Ishak, M., Islam, M., Sawa, T. GMA spot welding of A7075-T651/AZ31B dissimilar alloys using stainless steel filler. *Materials and Manufacturing Processes*. 2014, 29, 980-7.
28. Tahseen, T.A., Rahman, M., Ishak, M. An experimental study of air flow and heat transfer over in-line flat tube bank. *International Journal of Automotive and Mechanical Engineering*. 2014, 9, 1487.
29. Shah, L., Ishak, M. Review of research progress on aluminum–steel dissimilar welding. *Materials and Manufacturing Processes*. 2014, 29, 928-33.
30. M, I., A, A., A, H., Ahmad. Effect of Solution Treatment Temperature on Microstructure and Mechanical Properties of A356 Alloy. *International Review of Mechanical Engineering (IREME)*. 2014, 8, 289-95.

31. Tahseen, T.A., Rahman, M., Ishak, M. Heat transfer and pressure drop prediction in an in-line flat tube bundle by radial basis function network. *International Journal of Automotive and Mechanical Engineering*. 2014, 10, 2003.
32. Tahseen, T.A., Ishak, M., Rahman, M. An experimental Study of Heat Transfer and Friction Factor Characteristics of Finned Flat Tube Banks with In-line Tubes Configurations. *Applied Mechanics & Materials*. 2014.
33. Tahseen, T.A., Ishak, M., Rahman, M. Performance predictions of laminar heat transfer and pressure drop in an in-line flat tube bundle using an adaptive neuro-fuzzy inference system (ANFIS) model. *International Communications in Heat and Mass Transfer*. 2014, 50, 85-97.
34. Al-Dabbagh, J.B., Tahar, R.M., Ishak, M., Harun, S.A. Effect of the Milling Parameters on the Characteristics of Ti-50%Al Nanocrystallite Synthesized by Mechanical Alloying (MA). *International Journal of Engineering Research & Technology (IJERT)*. 2013, 2, 2113-9.
35. Ishak, M., Tahseen, T.A., Rahman, M.M. EXPERIMENTAL INVESTIGATION ON HEAT TRANSFER AND PRESSURE DROP CHARACTERISTICS OF AIR FLOW OVER A STAGGERED FLAT TUBE BANK IN CROSSFLOW. *International Journal of Automotive and Mechanical Engineering (IJAME)*. 2013, 7, 900-11.
36. Shah, L., Akhtar, Z., Ishak, M. INVESTIGATION OF ALUMINUM-STAINLESS STEEL DISSIMILAR WELD QUALITY USING DIFFERENT FILLER METALS. *International Journal of Automotive and Mechanical Engineering (IJAME)*. 2013, 8, 1121-31.
37. Shah, L., Razak, N.A.A., Juliawati, A., Ishak, M. Investigation on the mechanical properties of TIG welded AA6061 alloy weldments using different aluminium fillers. *GSTF Journal of Engineering Technology (JET)*. 2013, 2, 116.
38. Tahseen, T.A., Ishak, M., Rahman, M. Laminar forced convection heat transfer over staggered circular tube banks: A CFD approach. *Journal of Mechanical Engineering and Sciences*. 2013, 4, 418-30.
39. Ishak, M., Maekawa, K., Yamasaki, K. The characteristics of laser welded magnesium alloy using silver nanoparticles as insert material. *Materials Science and Engineering: A*. 2012, 536, 143-51.
40. Tahseen, T.A., Ishak, M., Rahman, M. Analysis of laminar forced convection of air for crossflow over two staggered flat tubes. *International Journal of Automotive and Mechanical Engineering*. 2012, 6, 753-65.
41. Ishak, M., Takagi, H. The characteristics of unidirectional solidified Ni-Al-Mo alloys. *Materialwissenschaft und Werkstofftechnik*. 2012, 43, 416-20.
42. Tahseen, T.A., Ishak, M., Rahman, M. A numerical study of forced convection heat transfer over a series of flat tubes between parallel plates. *Journal of Mechanical Engineering and Sciences*. 2012, 3, 271-80.
43. Khan, M.A.R., Rahman, M., Kadirgama, K., Maleque, M., Ishak, M. Prediction of surface roughness of Ti-6Al-4V in electrical discharge machining: A regression model. *Journal of Mechanical Engineering and Sciences*. 2011, 1, 16-24.
44. Ishak, M., Yamasaki, K., Maekawa, K. Lap Fillet Laser Welding of AZ31B Thin Sheet Magnesium Alloy using Silver Nanoparticles. *Journal of Solid Mechanics and Materials Engineering*. 2010, 4, 51-62.
45. Ishak, M. Study on Lap Fillet Welding of AZ31B Magnesium Thin Sheets using Pulsed Nd:YAG Laser Ibaraki University, Japan; 2010.
46. Ishak, M., Yamasaki, K., Maekawa, K. Lap fillet welding of thin sheet AZ31magnesium alloy with pulsed Nd:YAG laser. *Journal of Solid Mechanics and Materials Engineering*. 2009, 3, 1045-56.

B) International and National Conference Papers

1. **Mahadzir Ishak**, M.N.M. Salleh, S.R.A Idris, The effect of ER 4043 and ER 5356 filler metal on welded

Al 7075 by Metal Inert Gas welding, 7th International Conference on Computational Methods and Experiments in Materials Characterisation 2015.

2. L. H. Shah, U. K. Mohamad, K.I. Yaakob, A.R. Razali, **M. Ishak**, Lap Joint Dissimilar Welding Of Aluminium Aa6061 And Galvanized Iron Using TIG Welding, International Conference on Mechanical and Engineering Research ICMER 2015, UMP
3. M. N. M. SALLEH , **M. Ishak** , M. F. R. Romlay, A Study On Bead On Plate Welding Of Aa7075 By Low Power Fiber Laser , International Conference on Mechanical and Engineering Research ICMER 2015, UMP
4. Nur Fakhriah Mohd Noordin, **Mahadzir Ishak**, and Luqman Hakim Ahmad Shah, Prediction and Optimization of Process Parameters on Metal Inert Gas of Dissimilar Aluminium Alloy AA6061-T6 and AA7075-T6 using Response Surface Method Analysis, International Conference on the Science and Engineering Material (ICOSEM15), Kuala Lumpur.
5. N. F. M. Noordin , **M. Ishak** , and L. H. Shah, Parametric Studies On Tensile Strength In Joining AA6061-T6 And Aa7075-T6 By Gas Metal Arc Welding Process, International Conference on Mechanical and Engineering Research ICMER 2015, UMP
6. M Jasri, M Afendi, A Ismail, **M Ishak**, The hardness effect of friction stir welding by MILKO 37 milling machine, International Conference On Mathematics, Engineering And Industrial Applications 2014 (ICoMEIA 2014), AIP Publishing.
7. M Jasri, M Afendi, A Ismail, **M Ishak**, The microstructure of aluminum A5083 butt joint by friction stir welding, International Conference On Mathematics, Engineering And Industrial Applications 2014 (ICoMEIA 2014), AIP Publishing.
8. **Mahadzir Ishak**, Nur Fakhriah Mohd Noordin, Ahmad Syazwan Kamil Razali, L.H. Shah , The Effect Of Filler Metal Of A6061 On Weld Structure On Aluminum Alloy, International Symposium On Metallurgy And Welding Technology 2014 (ITCME14), Kuala Lumpur (May 2014)
9. **Mahadzir ishak** and M. Rafiqul, Weldability Of A7075-T651 And AZ31B Dissimilar Alloys By MIG Welding Method Based On Welding Appearances, International Conference on Science & Engineering in Mathematics, Chemistry and Physics (ScieTech 2014), Jakarta (Jan 2014)
10. Md. Rafiqul Islam, **Mahadzir Ishak**, Modelling And Optimizing Of Joint's Fracture Toughness Between A7075-T651 And AZ31B Dissimilar Alloys Welded By GMA Spot Welding Method, 2nd International Conference On Recent Advances In Automotive Engineering & Mobility Research (ReCAR December 2013)
11. Tahseen Ahmad Tahseen, **M. Ishak** and M.M. Rahman /An Experimental Study of Heat Transfer and Friction Factor Characteristics of Finned Flat Tube Banks With In Line Tubes Configurations , The International Conference on Advances in Mechanical and Manufacturing Engineering (ICAM²E) 26-28 November 2013.
12. **Mahadzir Ishak**, Azrul Amir, Asnul Hadi, Effect of Solution Treatment Temperature on Microstructure and Mechanical Properties of A356 Alloy, International Conference on Mechanical Engineering Research 2013 (ICMER13) 1-3 July,2013, Kuantan, Malaysia
13. L. H. Shah, Z. Akhtar and **M. Ishak**, Investigation on aluminium-stainless steel dissimilar weld quality using different filler metals, International Conference on Mechanical Engineering Research 2013 (ICMER13) 1-3 July,2013, Kuantan,Malaysia
14. Tahseen Ahmad Tahseen, **M. Ishak** and M. M. Rahman, An experimental study air flow and heat transfer of air over in-line flat tube bank, International Conference on Mechanical Engineering Research 2013 (ICMER13) 1-3 July,2013, Kuantan,Malaysia
15. **Mahadzir Ishak**, The investigation of defects on welded AZ31B magnesium alloys, International conference on Advanced Computational and Engineering Experimenting (ACEX2012) 1-5 July, 2012, Istanbul, Turkey.

16. T.A.Tahseen, **M. Ishak**, M.M Rahman, A numerical study laminar forced convection of air for in line bundle of cylinders flow, International conference on production, energy and reliability (ICPER2012), Kuala Lumpur Convection Center, 12-14 June 2012.
17. Md. Rafiqul Islam and **Mahadzir Ishak**, Effects of Heat Input on Mechanical and Material Properties of Metal Inert Gas welded Thick AISI 1012 Steel Sheet, International Conference on Mechanical and Engineering Research (ICMER2011), 5-7 Dec 2011
18. **Mahadzir Ishak**, and H. Takagi, The Characteristics of Unidirectional Solidified Ni-Al-Mo alloys. 5th International Conference on Advanced Computational Engineering and Experimenting, (ACE-X2011), Villamoura. Portugal, July 3-6, 2011.
19. Rizalman Mamat, Cik Anuar Mohamed Yunus, Jasri Mohamad, **Mahadzir Ishak**, Numerical Analysis Of Fresh Air Dispersion In Combustion Chamber Of A Portable Furnace, 5th International Conference On Advanced Computational Engineering And Experimenting, (ACE-X2011), Villamoura. Portugal, July 3-6.
20. S.F. Ismail, M.Y Taib, **M.Ishak**, Sustainable Analysis of Lightweight Lift System Design for Disable People using Finite Element, International Conference on Robotic Automation System (ICORAS 2011), 23-24 May 2011
21. S Fatimah, **M. Ishak** and S N Aqida, CO2 Laser Cutting of Glass Fiber Reinforce Polymer Composite, International Conference on Mechanical and Engineering Research (ICMER2011), 5-7 Dec 2011.
22. T.T.Mon, Mohd Fazli Ismail, Lee Gok Chui, M. Rahman, Asnul Hadi Ahmad, **Mahadzir Ishak**, Khairul Fikri Muhamad, Feasible Laser Processing Parameters in Fabrication of Micro-Holes on PMMA, International Conference on Mechanical and Engineering Research (ICMER2011), 5-7 Dec 2011.
23. T.A. Tahseen, **M. Ishak** and M.M. Rahman, A Numerical Study Of Forced Convection Heat Transfer For Staggered Tube Banks In Cross-Flow, International Conference on Mechanical and Engineering Research (ICMER2011), 5-7 Dec 2011.
24. Md. Ashikur Rahman Khan, M.M. Rahman, K. Kadirgama, **M. Ishak** and Asmizam Bin Mokhtar, Artificial Intelligence Model To Evaluate Surface Roughness of Ti-5Al-2.5Sn using Graphite Electrode in EDM, Proceedings of Malaysian Technical Universities International Conference on Engineering & Technology (MUiCET 2011) , 13-15 Nov 2011.
25. **Mahadzir Ishak**, K. Yamasaki, K. Maekawa, Characteristics of Welded Thin Sheet AZ31 Magnesium Alloy, Proceedings of Malaysian Technical Universities International Conference on Engineering & Technology (MUiCET 2011) , 13-15 Nov 2011.
26. **Mahadzir Ishak**, Kazuhiko Yamasaki, Katsuhiro Maekawa, Microstructure and Corrosion Behavior of Laser Welded Magnesium Alloys with Silver Nanoparticles, International Conference on Mechanical and Industrial Engineering, Amsterdam, Sept 2010
27. Cik Anuar Mohamed Yunus, Rizalman Mamat, Jasri Mohamad , **Mahadzir Ishak**, Design, Fabrication and Testing of LPG Furnace,, International Conference for Advance Mechanical Engineering 2010, Shah Alam, 2010.
28. Cik Anuar Mohamed Yunus, Rizalman Mamat, Jasri Mohamad , **Mahadzir Ishak** , CFD Analysis of Air Flow in a Smart LPG Furnace, International Conference for Advance Mechanical Engineering 2010, Shah Alam, 2010
29. M.H. Mansor, M.H. Ramli ,M. Mailah and **M. Ishak**. Intelligent active force control applied to precise machine, National Conference for Mechanical Engineering Research and Post graduate Student, UMP, 2010
30. **Mahadzir Ishak**, Kazuhiko Yamasaki, Katsuhiro Maekawa, Lap Fillet Welding Characteristics of AZ31 Magnesium Alloy by Pulsed Nd:YAG Laser, International Conference on Advances in Materials and Processing Technologies, Kuala Lumpur, Malaysia, Oct. 26-29, 2009.
31. **Mahadzir Ishak**, Kazuhiko Yamasaki, Katsuhiro Maekawa, Nd:YAG laser lap fillet welding of thin sheet AZ31 magnesium alloy using silver nanopaste[®], JSME Ibaraki conference, 2009
32. **Mahadzir Ishak**, Kazuhiko Yamasaki, Katsuhiro Maekawa, Investigation of laser beam welding processed of thin sheet AZ31B magnesium-based alloy, ISCU4, Ibaraki, Japan, 2008

33. **Mahadzir Ishak**, Kazuhiko Yamasaki, Katsuhiro Maekawa ,Lap fillet welding of thin sheet AZ31 magnesium alloy with Nd:YAG laser, JSME Ibaraki conference, 2008
34. M.F.F Ab. Rashid, **M.Ishak** and M.Z.Sidek, Analysis of industrial robot selection for spot welding purpose in automotive manufacturing, proceeding Advanced Processes and System in Manufacturing, May 2005
35. W.M. Wan Muhamad, M.F.F. Ab. Rashid, **M. Ishak** & M.Z. Sidek , Design And Simulation Of Robotic Spot Welding System For Automotive Manufacturing Application, Proceedings 35th International Conference on Computers and Industrial Engineering, Istanbul, Turkey 19-22 June 2005 , pg1409-1414.
36. **Mahadzir Ishak**, Hitoshi Takagi, Nano-scale precipitation of Ni-Al-Mo unidirectional solidified composite (In Japanese), proceeding strength and mechanical reliability symposium-30th Japanese Material Society, Shikoku division October 2001
37. **Mahadzir Ishak**, Hitoshi Takagi and Kenji Kanazawa, Nano-scale precipitation hardening in Supercomposite (In Japanese), Proceeding JSMS Composite, 30th March 2001

List of Books/Chapter in books

1. Joining Technologies, Edited by **Mahadzir Ishak**, ISBN 978-953-51-2597-6, Print ISBN 978-953-51-2596-9, 282 pages, Publisher: InTech, Chapters published September 21, 2016.
2. **Mahadzir Ishak**, Experimental and Numerical Investigation of Advanced Materials and Structures. Series: Advanced Structured Materials, Vol. 41, Chapter: Characteristics of Welded Thin Sheet AZ31 Magnesium Alloy, 2013, VI, 330 p, ISBN 978-3-319-00505-8. Book edited by Öchsner, Andreas; Altenbach, Holm , Springer.
3. **Mahadzir Ishak**. NdYAG laser, Chapter: Laser welding of thin sheet Magnesium Alloys. Intech Open Access Publisher ISBN 979-953-307-327-8 Book edited by:Prof. Dr. Dan C. Dumitras
4. Jinan B Al-Dabbagh, Rozman Mohd Tahar, **Mahadzir Ishak**, Siti Aisyah Harun. Design and Computation of Modern Engineering Materials, Chapter: Synthesis and Characterization of Nano Ti-50% Al by Mechanical Alloying,Pages 329-343, Publisher Springer International Publishing. Book edited by Öchsner, Andreas.

Editorial Activities

Books/Journal	Publications	Date Publication
International Review Of Mechanical Engineering, Vol 8 (IREME)	Praise Worthy prize	Jan 2014 (Published Online)
IOP Conference Series: Materials Science And Engineering Volume 50, 2013	IOP Science	16 th Dec 2013 (Published online)
Proceeding Of International Conference In Mechanical Engineering Research (ICMER2013)	UMP	1 July 2013
IOP Conference Series: Materials Science And Engineering Volume 36, 2012	IOP Science	18 Sept 2012 (Published online)
Proceedings Of International Conference In Mechanical Engineering Research (ICMER 2011)	UMP	Dec 2011
Editor, FKM bulletin 2017	UMP	Jan 2017

List of Research / Project

EXTERNAL

1. Technofund MOSTI, Tailor Welded Blanks (Twb) Equipment Development (TF0713D278), project member (On going)
2. Ningxia University, China, The Mechanical Behavior of sandwich structure based on corrugated cores , project Member(UIC 171505)
3. Prototype Research Grant (PRGS) Development Of Force And Temperature Controlled Friction Stir Welding Machine (FSW) For Dissimilar Metal Joining Application, Project Leader (On Going)
4. Fundamental Research Grant (FRGS), An Alternative Mathematical Model Of Welding Current To Predict Defects Via Small Signal Analysis, Project Member (on-going)
5. Fundamental Research Grant (FRGS), Dissimilar Metal Joining Of Aluminum And Magnesium Based Alloy By Gas Metal Arc Spot Welding Technique, Project Leader (ON Going)
6. Knowledge Transfer Grant, Technology Transfer For The Mass Manufacturing of Plastic Optical Fiber (POF) Coupler, Project Member (On going)
7. Fundamental Research Grant (FRGS), To Enhance Graphite Nodularity Of Modified Ductile Ni-Resist Using Direct Insertion Of Alloying Elements During Casting, Project Member (ON Going)
8. Fundamental Research Grant (FRGS), Characterizing Of Electrical And Thermal Characteristic Of Piezoelectric Ultrasonic Motor For A Better Speed And Torque Performance, Project Member (On going)
9. RAGS KPT , Microstructure And Mechanical Characterization Of Semisolid Metal Components For Wrought Aluminium Alloys, Project Member (On going)
10. Knowledge Transfer Grant , Improvement of Extracted Agarwood Aquilaria Oil Productivity and quality By Installing Automated Hydro Distillation System, Project Member (Ongoing)
11. Fundamental Research Grant (FRGS), Enhancement of Weldability in light alloys (A6061 & A7075) dissimilar metal welding, Project Leader (COMPLETED, 2015)
12. Fundamental Research Grant (FRGS), solder joint reliability between lead free solders and direct immersion gold surface finish for automotive electronic devices application. Project Member, (COMPLETED, 2015)
13. Fundamental research grant, Modelling And Performance Characteristics Of Finned Flat Tubes Heat Exchanger. Project Member, (Completed, 2015).
14. RAGS KPT, Mechanical and Metallurgical Characterisation of friction stir welding joints of Aluminum and steel alloys. Project Member, (COMPLETED, 2015)
15. Fundamental research grant scheme (FRGS), Ministry of Higher Learning, Interface Bonding Properties Enhancement in Thermal Barrier Coating of Laser Hardened Die Steel. Project Member, (COMPLETED 2015).
16. Prototype Research Grant Scheme(PRGS), Industrial Testing Of A 3-Axis CNC Machine Using The Predefined Closest-Distance Volume Interpolator For Tailor Welded Blanks (TWBs) Application. Project Member, (COMPLETED, 2014)
17. Fundamental Research Grant Scheme (FRGS) Ministry of Higher Learning, Hybrid Optimisation Model to Enhanced the Machinability of Titanium Alloys, Project Member, (Completed, 2012).

INTERNAL

1. Universiti Malaysia Pahang, Effect of Laser Welding parameters on dissimilar welded Austenitic and Duplex Stainless Steel for Tailor-Welded Blank application, Project leader (On going)
2. Universiti Malaysia Pahang, Investigation Of Microstructure Development And Corrosion Performance Of Friction Stir Welded Light Alloys, Project Member (on-going)
3. Universiti Malaysia Pahang, Development of welded stiffener plates using dissimilar and similar metal joining technique, Project Leader (completed, 2017)
4. UMP pre-com grant, Industrial Testing Of A 3-Axis Cnc Tailor Welded Blank Laser Welding Machine Using Predefined Closest-Distance Volume Interpolator (UIC161001), Project Member (ongoing)
5. Universiti Malaysia Pahang, Effect Of Fibre Laser Parameters Onto Solder Alloy Joining Properties, Project Member (ongoing)
6. University Malaysia Pahang, Development of a new technique to weld dissimilar metals for automotive applications, Project Leader (completed,2015).
7. University Malaysia Pahang, Development of TIG/MIG welding machine for joining light alloys, project Leader (completed, 2012)
8. University Malaysia Pahang, New Technique for cutting polymer composite by low power laser, Project Leader (completed, 2012).
9. Universiti Malaysia Pahang, Development Of A Solder Ally (Sn-Cu-Ni) For Electrical Connection At Automotive Electronic Devices Using Powder Metallurgy Method, Project Member, (On going)
10. Universiti Malaysia Pahang, Structural Dynamic Properties Investigation of Dissimilar Materials (AA 7075, AA 6061, AZ31B) Joints Produced by Friction Stir Welding (FSW), Project Member (On going)
11. Universiti Malaysia Pahang, Development of Titanium Manganese Alloys Foams for Biomedical Applications by Metal Injection Molding, Project Member (Ongoing)
12. Universiti Malaysia Pahang, Development of Thin Sheet Metal Mechanical Properties Database for Micro-Manufacturing Application, Project Member (Completed, 2015)
13. Universiti Malaysia Pahang, The Development and Efficiency Study of LPG Burner for Traditional Local Foundry, Project Member, (Completed, 2012)
14. Universiti Malaysia Pahang, Development Of EDM Injection Flushing Technique To Enhance Machining Performance On Titanium Alloy For Automotive Valve Application, Project Member (Completed, 2014)
15. Universiti Malaysia Pahang, Development of a New Material with High Wear Resistant for Automotive Brake, project Member (Completed, 2014)
16. Universiti Malaysia Pahang, Development of Quality Monitoring System for Dissimilar Metals Welding using Air Borne Acoustic Wave, Project Member (Completed, 2015)
17. Universiti Malaysia Pahang, New Type Of Coating Material For Automotive Electronic Devices Application, Project Member (Completed, 2014)
18. Universiti Malaysia Pahang, Design and Fabrication of Solar Car Body and Chassis, Project Member (Completed, 2014)
19. Universiti Malaysia Pahang, Development of a Portable Quality-Confirmation Inspection Unit for Automotive Checking Fixture, Project Member (Completed 2015)
20. Universiti Malaysia Pahang, The Development of High Temperature Combustor System for High Performance Furnace Unit, Project Member (Completed 2011)
21. Universiti Malaysia Pahang, Development of New Filler Material in Controlling Corrosion of Weld Non Ferrous Alloys, Project Member (Completed 2012)

22. Universiti Malaysia Pahang, Solder Joint Reliability between Lead Free Solder and Direct Immersion Gold Surface Finish for Automotive Electronic Devices Application. Project Member (Completed 2015)
23. Universiti Malaysia Pahang, Development of Real Time Monitoring Welding Defect Detection System, Project Member (Completed 2014)
24. Universiti Malaysia Pahang, Carbon Nano-composite Paper for Energy Storage, Project Member (Completed 2012)
25. University College of Engineering & Technology (KUKTEM), Design & Simulation of Robotic Welding System for Automotive Manufacturing, 26/01/2004- 31/01/2005. (RDU030105).(completed)
26. University College of Engineering & Technology (KUKTEM), Assembly Line Balancing for Automotive Manufacturing Application, 01/07/2004 – 30/06/2005. (RDU040113)(completed)

Patents

1. Heat regulators system in a furnace, Paten filing (PI2011003946)
2. Gas Metal Arc Spot Welding Technique for Joining Aluminium and Magnesium Dissimilar Alloys, Paten filing (PI2014002026)
3. Clamping Jig For Dissimilar Friction Stir Welding, Paten filling (PI 2017700587)

Consultation

1. Metal Coating investigation, TUBEX Sdn Bhd, Jul 2013
2. Materials Failure Analysis, Esteem Energy Engineering Sdn Bhd, UMPH UMPS/140190/006, 2014
3. Training For Piping Guide Review And Pipe Welding Fabrication, Umph, UCT 150318, Nov 2015
4. Failure Analysis On Inlet Guide Vanes & Expander Wheel-K/Kt 2302, Petronas Chemical Derivatives Sdn Bhd, Vot: Umps/150190/003, July 2015
5. Material Failure Analysis Fractured Compressor Wheel, UMPH, 2016
6. Laser marking for polymer, UCTQ17-132 and UCT170132, May 2017
7. Laser Marking on Stainless Steel and wood, UCT170054, Feb2017
8. Laser Marking on Stainless Steel and Titanium Alloys Surfaces, UCT170142, July 2017
9. Training Heat Treatment on Metal Alloy and Metallography Analysis, UCT 170313
10. Laser marking on Stainless Steel and Wood frame , UCT 170118
11. Laser cutting and Marking, UCT 170128

Keynote/seminar

1. Keynote Speaker; 1st International Workshop on Recent Advanced in Welding and Joining (IWRWJ-2017), 14-19 Mac 2017, Amrutvahini College of Engineering, India.
2. Invited Speaker, International Laser Technology and Optics Symposium 2017 iLATOS 2017, 26-28th September 2017, Pulau Spring Johor
3. Penceramah Seminar Technology Update- Laser Welding Technology SIRI 2/2017, 25 October 2017, IKTBN Pagoh, Johor.
4. Keynote Speaker, 2nd International Conference on Engineering Technology and Applied Science at National Institute of Technology Malang, 2 Dec 2017.
5. Penceramah bengkel validasi soalan peperiksaan akhir Sesi 2/2017 Pusat Latihan Teknologi Tinggi (ADTEC) Kemaman, 29-30 Oktober 2017