

MUHAMMAD HUSSAIN BIN ISMAIL

*Faculty of Mechanical Engineering, Universiti Teknologi Mara, 40450, Shah Alam, Selangor
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BORN

DECEMBER 21, 1976
KUALA KUBU BHARU, SELANGOR

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CAREER OBJECTIVES

- To excel educational and research profession in the area of expertise in order to uphold the mission and vision of the university.
- To discover and elevate new findings towards sustainability research work in line with current national and global agenda
- To continuously enhance professional and personal career development in all areas (research and innovation, teaching-learning, consultancy and community services)

STRENGTHS

- Poised and professionals with great interpersonal skills
- Thrive in a dynamic & challenging environment
- Experienced in conducting research seminar/workshop in the field of powder metallurgy (metal injection molding), metallographic examinations and materials characterization

AREA OF SPECIALIZATION

- Powder metallurgy, particularly in metal injection moulding (MIM)
- Industrial Metallurgy covers all aspects of Ferrous and non-ferrous metal.
- Porous bio-metallic and ceramics for biomedical applications.

EDUCATIONAL BACKGROUND

UNIVERSITI KEBANGSAAN MALAYSIA
B.Eng (Hons) in Mechanical and Materials Engineering (1999)

UNIVERSITI KEBANGSAAN MALAYSIA
M.Sc, Effect of Powder Loading in Processing Conditions of Metal Injection Moulding (2002)

UNIVERSITI OF SHEFFIELD, UNITED KINGDOM
PhD, Porous NiTi by Metal Injection Moulding (MIM) using Partly Water Soluble Binder System (Oct 2007- Dec 2012)

PROFESSIONAL AFFILIATION

Member of Board of Engineer Malaysia, BEM
(Membership No : 36668A)

Member, Electron Microscopy Society of Malaysia (EMSM)
Life Membership

Secretary of Malaysian Powder Metallurgy and Particulate Materials Association (MPM²A)
(Membership No : 009)

Member of Malaysian Tribology Society, MyTRIBOS
(Life Membership No : L0015)

WORKING EXPERIENCE

ORGANISATION 1

1.1 University Level

1.1.1 Appointed as Head of Tie 5 UiTM Research Initiativef Group (RIG), Industrial Metallurgy Research Group (IMReG) : 11 Oct 2016 -10 Oct 2018

- Founder of the IMReG
- Coordinate research and consultation work related to Metallurgy area

1.1.2 Appointed as Faculty of Mechanical Engineering Deputy Dean (Research and Industrial Networking) : 1 Nov 2015 – present

- Coordinate research activities and industrial linkage among faculty members
- Advisor and Head of Event for innovation program, namely Research, Innovation, Symposium & Exposition 2015, 15-16 Nov 2015
- Chairman for Malaysian Engineering Postgraduate International Conference, MESPIC 2016
- Chairman for Kumpulan Inovatif Kakitangan (KIK)
- Chairman for Strategic Busines Unit (SBU), FKM
- Acting Dean, representing Dean in the 85th UiTM Convocation on 22 & 23 October 2016.

1.1.3 Radiation Protection Officer (RPO) : 2005 - 2007

- Responsible for documentation for all equipments in UiTM related to X-Ray source such as X-Ray Diffractometer (XRD) and Gas Calorimetry (GC).
- Appointed as officer-in-charge and auditee for licensing documentation certification to Atomic Energy License Board (AELB) and Malaysia Nuclear Malaysia (formely known as MINT).
- Responsible for proposing a post of Science Officer in the FKM to the be appointed as RPO.

1.2 Faculty Level

1.2.1 Mechanical Engineering and Science Postgraduate International Conference (MESPIC 2016) : 28-29 September 2016

- Appointed as Chairman of the conference
- Chief Editor for Materials Science and Engineering Section

1.2.2 Research Innovation Symposium and Exposition (RISE 2015) : 15-16 Nov 2016

- Appointed as Head for Event Management
- Doa Recital during Closing Ceremony
- Responsible for Symposium Layout and Event Management

1.2.3 International Conference on Advances in Mechanical Engineering (ICAME 2015)

- Appointed as Chairman for Paper & Proceedings
- Doa Recital during opening ceremony
- Reviewing panel for several papers related to field of specialization
- Chairman of a parallel session

1.2.4 Head, Centre for Advanced Materials Research (CAMAR) : Jan 2012- Oct 2015

- Founder of the CAMAR and appointed as the Head in May 2006
- Coordinate research activities among faculty and associate members.
- Facilitate task for Deputy Dean (Research, Community and Industry Networking), especially in promoting research work under CAMAR.
- Organize a series of workshop in collaboration with industries related to materials research, development and technologies.
- Event Manager/ Chairman for several events organised:

2015

- Seminar on Materials Thermal Conductivity in collaboration with Innolab Solutions Sdn. Bhd. and Perkin Elmer Malaysia, 28 October
- Workshop on Ball Milling in collaboration with LMS Scientific Solutions Sdn. Bhd and Vistec Technology Services, 18 August.
- SEM Worksop in collaboration with Hi-Tech Instruments, 20 – 27 May.
- Materials Science Workshop in collaboration with Crest Nano Solutions, 29-30 April.

2014

- Basic Course of Foundry and Metallurgy, 19 – 20 August
- Workshop on Residual Stress by X-Ray Diffraction (XRD) in collaboration with Rigaku, Japan, 23 July.
- Seminar in Thermal Analysis Instruments in collaboration with LMS Scientific Solutions Sdn. Bhd and NETSCZH (Germany), 15 April.
- Materials Lecture Competition (MLC 2014) in collaboration with Institue of Materials Malaysia (IMM) and Petronas, 3 April

2013

- Seminar on Biomedical Engineering in collaboration with Faculty of Dentistry, UiTM and School of Aerospace, Mechanical and Mechatronic Engineering, The University of Sydney, Australia, 9 December.
- Materialise Workshop: Mimics Innovation Suite in collaboration with Faculty of Dentistry, UiTM and Materialise, 8 October.

- 6th Malaysian Powder Metallurgy Symposium in conjunction with International Conference on Advances in Mechanical Engineering, ICAME 2013, 29 August.
- Workshop on Materials Analysis with Advanced Microscopes in collaboration Hi-Tech Instruments, 3 – 4 July.
- Advanced Materials Characterization by Electron Probe Micro Analyser (EPMA) in collaboration with QC Scientific and Shimadzu, Japan, 12 June.
- Workshop on Nano and Micro Imaging Solutions in collaboration with Crest Nanosolutions Sdn. Bhd, 5 – 6 March.
- One Day Seminar on Particle Size Analysis, Technologies and Instrumentation in collaboration with Malaysian Powder Metallurgy and Particulate Materials Association (MPM²A) and Micromeritics, 25 February.

2007

- Advances in Powder Metallurgy & Particulate Materials in collaboration with UKM and Sumitomo Electric Sintered Components (SESC), APM² 07, 21-22 August.
- Workshop on Sample Preparation and Microscopic Examination in collaboration with Leader Technologies, SAMPLE PREP 07, 24 – 25 July.
- Seminar on Fundamental of Powder Metallurgy (P/M) in Metal Matrix Composite (MMC) Application, 29 January

2006

- Workshop on Sample Preparation and Microscopic Examination in collaboration with Leader Technologies, SAMPLE PREP 06, 3 – 4 July.

2005

- Workshop on Basic NDT for Materials Evaluation, 30th August

- Participating in several Innovation & Invention Competitions:
 - UiTM Level : IID 2007, 2008, 2013, 2014, 2016
 - National Level : PECIPTA 2007 and MTE 2104
 - International Level: ITEX 2007, 2008, 2012, 2014 IENA 2007 and ARCHIMEDES 2008.
- Organizing research visit to established research centres/institute of higher learnings (IHLs) for potential research collaboration.
 - Lab Asia, PWTC, 6 – 8 Oct 2015
 - Perkin Elmer, July 2015
 - Universiti Teknologi Petronas, Feb 2015
 - Kolej Kemahiran Tinggi Kuantan (KKTM) Kuantan, Feb 2015

1.2.5 Executive Committee for the Materials Lecture Competition (MLC) 2013-2015

- Jury and mentor for students' participation at Faculty and University Level
- Best Achievement : 3rd place in MLC 2013

1.2.6 Director of Industry Outreach Program (IOP 2014)

- One-day event, which aims to strengthen relationship between industries and FKM staff through promoting service and expertise available
- More than 50 companies from different backgrounds participating in the event
- Establish collaborations between faculty members and the industries in any possible matters that will bring benefits for both sides.

1.2.7 Composite Lab Manager : 2012 – Oct 2015

- Coordinate laboratory activities in terms of purchasing, equipment maintenance, inventory, usage and updating of all important documents.
- Attend a series of meetings with the Facilities Department for proposed renovation work.
- Monitor the use of laboratory equipment by students and outsider to ensure the standard operating procedure is followed.

1.2.8 Director of ‘Sukan Piala Dekan 2015’

- Manage to organize a sporting event with participation of all FKM branches in Malaysia (Penang, Bukit Besi, Pasir Gudang and Shah Alam)
- Achievement : Overall champion by winning 7 games out of 9 events

1.2.9 Chairman FKM Examination Committee (Jan 2013 – July 2014)

- Coordinate and prepare an examination timetable for every semester

1.2.10 Timetable Committee : 2003 -2005

- Committee member from 2001-2003
- Appointed as Chairman in 2003 and end in 2006
- Responsible in generating the academic timetable every semester for FKM and servicing lecturers.

1.2.11 Materials Science Lab Manager : 2002 – 2007

- Managed to renovate the Lab according to proposed layout and becoming a lab-benchmark by other lab inside and outside UiTM, particularly for Metallurgical study.
- Coordinated laboratory activities in terms of purchasing, equipment maintenance, inventory, usage and updating of all important documents.
- Organize a series of workshop in collaboration with industries related to materials research, development and technologies.
- Conducted several consulting work with companies such as TUV Rheinfield, Malaysia, KTM and TUV Pfalz Asia Sdn. Bhd.

1.2.12 Jawatankuasa Kebajikan Staf FKM 2002-2004

- Organized several events related to FKM Staff Affair
- Deputy Director II for an event, Program Pelaksanaan Perancangan Strategik FKM 2001-2010 at the Impiana Resort, Cherating Kuantan 2- 4 Aug 2002
- Deputy Chairman for the Majlis Berbuka Puasa FKM, 23 November 2002

ORGANISATION 2

2.1 Sekolah Kebangsaan Taman Tun Teja, Rawang

2.1.1 Yang Dipertua (YDP) PIBG SK Tun Teja (SKTT), Rawang : Feb 2014 – Feb 2016

- Honorary guest for Hari Graduasi SKTT, 17 Nov 2015
- Invited guest for some activities conducted by the school such as Hari Sukan Pra-Sekolah, Hari Sukan Tahunan, Majlis Berbuka Puasa Bersama Anak Yatim and Majlis Solat Hajat Perdana UPSR.
- Provide community service by organizing a free tuition class for year 6 students for UPSR preparation in collaboration with Masjid Al-Ehsaniah Kg Melayu Batu 16 Rawang and Kumpulan Sokongan IbuBapa (KSIB) SKTT

- Facilitate school in a fund-raise project to improve the school's infrastructure in Hari Keusahawanan 2015. Manage to get participation from few government bodies such as Pejabat Kesihatan Daerah Gombak, Ibu Pejabat Polis Daerah Gombak and UiTM.

2.1.2 AJK Majlis Pemuafakatan PIBG (MPPIBG) Zon Gombak : Mac 2014 – Feb 2016

- Coordinate and support activities initiated by PIBG in Zon Gombak

2.1.3 AJK Sukan & Ko-Korikulum PIBG SK Tun Teja, Rawang : Feb 2013- Feb 2014

- Invited speaker for sharing academic and career path for Year 5 and 6 students during Hari Kerjaya 2014.
- Facilitate and coordinate some activities conducted such as Sukan Tahunan 2014, Hari Guru, Majlis Berbuka Puasa Bersama Anak Yatim and Majlis Kecemerlangan Pelajar
- Participating in Bowling Event between PIBG Zon Gombak, Feb 2015

ORGANISATION 3

3.1 Panel Penasihat Fakulti Kejuruteraan Mekanikal, Politeknik Shah Alam : Feb 2013 – present

- Advisory panel for related events organized by the Faculty
- Jury for final year project Diploma students. (31 Oct 2012)

ORGANISATION 4

4.1 Research Society

4.1.1 Secretary 1 of Malaysian Powder Metallurgy and Particulate Materials Association (MPM2A): Dec 2011 – present (Membership no : 009)

- Appointed as Vice Chairman in 6th Powder Metallurgy Symposium in Kuala Lumpur, 29-30 Aug 2016
- Facilitate task in organizing a series of workshops and seminar in collaboration with universities
- Coordinate and collaborate research activities among researchers in the field of Powder Metallurgy and Particulate Materials.
- Organize industrial visits and networking to industries related to Powder Metallurgy

4.1.2 Member of Malaysian Tribology Society (MyTRIBOS) : 2014 – present (Membership no : L0015)

- Secretariat in Malaysian International Tribology Conference (MITC 2013 in Kota Kinabalu and MITC 2015 in Penang)

4.1.3 Life member of Electron Microscopy Society of Malaysia (EMSM) : 2005 – present

- Presenting papers at the annual conference of EMSM, 2003 (Langkawi), 2004 (Putrajaya) and 2006 (Terengganu)

ORGANISATION 5 (During PhD Study Leave in Sheffield, UK)

5.1 Department of Materials Science and Engineering, University of Sheffield, UK : 2008 - 2011

- Facilitate Master, PhD and postdoc students for conducting experimental work related to mechanical testing such as compression test, rheological test and injection moulding of metals.

5.2 Sekolah Melayu Sheffield (SMS) 2008 -2009

- Appointed as Secretary
- Responsible for documentation pertaining to Malay's community student family in Sheffield.
- Organized school session for Bahasa Melayu and Fardhu Ain for year 6-12 Malay students in Sheffield at Subud Centre, Darnall, Sheffield
- Organized 'Kantin SMS' during school session to give opportunities to the Malaysian community to sell Malaysian cuisine.
- Committee member for 'Sukan Musim Sejuk', 31 Jan 2009.
- Organized educational school trip to The Deep in Hull on 21 Dec 2008.

5.3 Kelab UMNO Sheffield (KUSheff) 2009 – 2010

- Appointed as IT Committee Member which responsible for development of KuSheff Blog
- Organizing committee for several community service activities such as;
 - Representing Sheffield Community in the Merdeka Celebration on 25th Sept at the Tun Abdul Razak Research Centre, Brickendonberry, Hertford, London.
 - Program Induksi Pelajar Baru Sheffield University : 21 Sept 2010 at the Information Centre, University of Sheffield
 - Hari Imigresen & Malaysian Bazaar : 7 Aug 2010 at Brommhall Centre, Sheffield
 - Sembang-Sembang PhD: 30 Jul 2010 at St Andrew's Church Hall, Sheffield
 - Self-Motivation: In the Islam Way: 20 May 2010 at Muslim Welfare House, Sheffield.
 - Career Talk : 13 Mac 2010 at the Information Centre, University of Sheffield

5.4 Institute of Energy Research, Juelich, Germany 27 July -21 Aug 2009

- Appointed as Invited Scientist from the Juelich Research Centre for one month research attachment.
- Sponsored by the University of Sheffield (GBP1000), UK under the Excellent Exchange Scheme Award.
- Conducted research work on the processing of NiTi alloy by Warm Press using a water soluble binder system under supervision of Dr. Martin Bram.
- Research finding was published in the magazine of **Powder Injection Moulding International** Vol.5 No. 4 (2011). pg. 78-85 and **Sains Malaysiana** by UKM (Q3, IF: 0.407), Vol. 42. No 12, pg 1769-1773 (2013)

ORGANISATION 6

6.1 Department of Mechanical and Materials, UKM Bangi : June 1999 – Jan 2001

- Post Graduate Research Assistant.
- Lab Demonstrator and Tutor for Engineering Drawing & AutoCAD at the Department for undergraduate students.

6.2 Kolej Rahim Kajai, UKM Bangi: 2000- 2001

- Felo (Staff Resident).
- Manager for Badminton in the Sukan Antara Kolej event.
- Representing UKM in Inter-Varsity Games at UTM, Skudai in 2000

ORGANISATION 7

Tractors Malaysia Berhad (TMB) under NGV Business: March 1998 – May 1998

- Trainee Engineer at the Natural Gas Business (NGV) Division, Tractors Malaysia Berhad, SS13, Subang
- Jobs scope involved preparing documents for Natural Gas Pipeline installation, supervised NGV dispenser project at PROTON, Shah Alam

List of Courses taught (2001 – present)

No.	Course Name	Level	Year
1	Strategy and Management of Innovation (MEM705)	Master	2016
2	Industrial Project (MEM790)	Master	2014
3	Materials for Engineering Applications (MEC681)	Bachelor	2014-2015
4	Engineering Statics (MEC 412)	Bachelor	2012 - present
5	Mechanics of Materials (MEC 411)	Bachelor	2013, 2015
6	Materials Science (MEC 418)	Bachelor	2012, 2013
7	Basic Mechanics (MEC 410)	Bachelor	2012
8	Mechanics and Materials Lab (MEC 424)	Bachelor	2012 - 2014
9	Special Topic on Powder Metallurgy (KJM595)	Bachelor	2006
10	Strength of Materials (KJM244)	Diploma	2006
11	Strength of Materials I (KJM211)	Diploma	2002 - 2004
12	Metallurgy (KJP212)	Diploma	2002 - 2005
13	Materials Science (KJM 414)	Degree	2004
14	Dynamic and Materials Lab (KJM410)	Diploma	2004
15	Machine Element Design (KJM337),	Diploma	2003
16	Mechanics of Materials II (KJM 494),	Diploma	2003
17	Automotive Technology 1 (KJV311),	Diploma	2001 - 2002
18	Automotive Engineering (KJP383),	Diploma	2002

RESEARCH

	Research Project	Source	Total Funds (RM)	Begin	End
1	Co-Researcher: Porous Polycaprolactone/Hydroxyapatite (PCL/HA) Biocomposite by Solid State Foaming using Supercritical Carbon Dioxide (Ref : FRGS/1/2016/TK05/UITM/02/8)	MOE-FRGS	96,0800.00	Aug 2016	July 2018
2	Principal Researcher : Development of Induction Heating System Incorporated with Brass Ring (Ref : KPT.600-6/2/18 Jld (47)	KPT-PPRN	47,143.00	Aug 2016	Feb 2017
3	Principal Researcher : Solving the Problem of Machining of Alumina Guide Pin Sintered Components (Ref : KPT.600-6/2/18 Jld (53)	KPT-PPRN	50,000.00	Aug 2016	Jan 2017
4	Co-researcher : Development of Highly Inter-Connected of Porous Titanium Implant Mix with Palm Stearin Binder by Metal Injection Moulding Technique	DANA-LESTARI	20,000.00	2015	2017
5	Co-researcher : Development of Dissimilar Titanium- Stainless Steel Fusion Welds Using Novel High Entropy Alloy (HEA) Fillers (Ref: 100-RMI/SF 16/6/2)	MOSTI-ScienceFund	143,500.00	2015	2017
6	Principal Researcher : NiTi Shape Memory Alloy with Titanium Hydride Phase Stabilizer (Ref : FRGS/1/2015/TK05/UITM/03/4)	MOE-FRGS	117,200.00	2015	2017
7	Co-researcher (Mentor) : Tribological Properties Enhancement of Pulverized Copper Matrix Composite via Carbon Nanotube De-agglomerator (Ref: FRGS/1/2015/TK05/UITM/03/3)	MOE-FRGS	114,200.00	2015	2017
8	Co-researcher : Effect of Processing Parameters on Novel Metal-Ceramic Composite through Powder Injection Molding (Ref: TRGS/2/2014/UKM/02/4/1)	MOE-TRGS	343,400.00	2014	2016
9	Co-researcher : Transferring Expertise to Bakal Sejati Sdn. Bhd in Establishing greener injection moulding system to increase productivity and produce high quality plastic bottle (Ref: 438020140003)	ICAN-KTP	144,935.00	2014	2016
10	Co-researcher : Carburizing Paste Compound (CPC) Steel Heat Treatment (Ref: RAGS/1/2014/TK01/UITM//4)	MOE-RAGS	80,000.00	2014	2016
11	Co-researcher (Mentor) : Functionally graded aluminium foam with space holder replication (Ref: RAGS/1/2014/TK01/UITM//7)	MOE-RAGS	80,000.00	2014	2016
12	Co-researcher : Experimental and numerical study of thermo fluid properties of porous copper samples as heat sinks (Ref: RAGS/1/2014/TK04/UITM//7)	MOE-RAGS	80,000.00	2014	2016
13	Co-researcher : Study of New Heat Treated Ductile Cast Iron Microstructure and its Mechanical Properties (Ref: RAGS/1/2014/TK04/UITM//7)	MOE-RAGS	80,000.00	2014	2016

14	Co-researcher (Mentor) : Scaffold Structured Beta Phase Titanium-Niobium Alloy (Ref: RAGS/1/2014/TK04/UITM//4)	MOE-RAGS	80,000.00	2014	2016
15	Co-researcher (Mentor) : Stabilized Niobium nanoparticle in beta phase pulverized Titanium metal (Ref: FRGS/1/2014/TK04/JPP/03/1)	MOE-FRGS	91,200.00	2014	2016
16	Co-researcher : Effect of Processing Parameters on Novel Metal-Ceramic Composite through Powder Injection Molding (Ref: TRGS/2/2014/UKM/02/4/1)	MOE-TRGS	343,400.00	2014	2016
17	Co-researcher : Thermo-Mechanical Behaviour of Novel Nanoparticles Hybrid Fibre Laminates	MOE - RACE	44,500.00	Jan 2014	Jan 2016
18	Principal researcher : Modelling and Fabrication of High-Strength Energy Absorber Cellular Aluminium Foam	MOE - RACE	49,000.00	Jan 2014	Jan 2016
19	Principal researcher : Advanced NiTi intermetallic compounds superior shape memory behaviour	RMI - PSI	60,000.00	Dec 2013	Dec 2015
20	Co-researcher : Water leaching Kinetics of Fugitive Materials in Injection Moulded Porous Copper	MOHE-FRGS	143,000.00	Nov 2013	Nov 2015
21	Co-researcher : HAP blended Palm Stearin binder : Rheological behaviour in powder injection moulding	MOHE - ERGS	103,000.00	Jun 2013	Jun 2016
22	Co-researcher : Fugitive materials in metal injection moulding of highly-porous Copper	MOHE - ERGS	80,000.00	Jun 2013	Jun 2015
23	Co-researcher (Mentor) : Self-healing Nitinol metallic structure	MOHE - FRGS	131,000	Apr 2013	Apr 2015
24	Co-researcher : Rheological behaviour of feedstock Hydroxyapatite powder from clamshell with palm stearin binder	MOHE-FRGS	105,000	Apr 2013	Apr 2015
25	Co-researcher : Thermo-Mechanical Characteristics of Superior Carbon Nanotubes Nanocomposites	MOHE-RAGS	80,000.00	Dec 2012	Nov 2014
26	Co-researcher (Mentor) : The influence of binder system and processing conditions of nearly equiatomic NiTi alloy	MOHE - RACE	50,000.00	Dec 2012	Nov 2014
27	Co-researcher : Advanced Walet Template Design using modified high-temperature stoneware	MOHE - ERGS	50,000.00	May 2012	May 2014
28	Principal researcher : Advanced NiTi intermetallic compounds superior shape memory behavior	MOHE - FRGS	94,330.00	April 2012	April 2015
29	Co-researcher : Rheological characterization of highly porous Titanium alloy feedstock for metal injection moulding (MIM) process using palm stearin binder system	MOHE-FRGS	56,000.00	2012	2014
30	Co-researcher : Bovine skin Bio-mechanical characterization	MOHE-FRGS	52,000.00	2012	2014
31	Co-researcher : Novel hybrid nano-filler characteristics for high fracture toughness	MOHE-FRGS	91,560.00	2012	2014

	shiphull				
32	Co-researcher : Characterization and mechanical testing of Ti-6Al-4V green part mixed with palm stearin binder system using metal injection moulding (MIM) process	DANA-RIF	32,000	2012	2014
33	Co-researcher : Bone regeneration using Eggshell powder	DANA-RIF	32,000	2012	2014
34	Co-researcher (Mentor) : Processing and Characterization of Highly Porous Copper for Thermal Management Applications (TMAs)	DANA-RIF	32,000	2012	2014
35	Co-researcher : First Principle Computational Study of Multiferroic Materials	DANA-RIF	60,000	2012	2014
36	Co-researcher : Compressive Properties of A Novel Fibre Reinforced Polymer Composite Laminates	DANA-RIF	RM32,000	2012	2014
37	Co-researcher : Characterization of Newly Developed Feedstock in Metal Injection Moulding Application using Titanium mix with palm stearin binder system	MOHE-FRGS	100,000.00	2007	2011
38	Co-researcher : Characterization of a novel light-weight metal matrix composite with nanomaterials reinforcement	e-Science	267,994.00	2006	2011
39	Principal researcher : Study on Stability of A Novel Binder System Based on Palm Oil in Metal Injection Molding (MIM) Application	IRDC-UiTM	12,000.00	2005	2006
40	Co-researcher : Optimization of Gating System Design in Casting Iron Component by Casting Simulation	IRDC-UiTM	26,000.00	2004	2005
41	Principal researcher : An Investigation of Rheological Behaviour of Water Soluble Binder System for Metal Injection Molding (MIM) Feedstock	IRDC-UiTM	43,162.00	2004	2006
	Principal researcher : Characterization of Homogeneous Feedstock for Metal Injection Molding (MIM) Process	IRDC-UiTM	22,000.00	2002	2003

POSTGRADUATE SUPERVISION

PhD/MSc (RESEARCH) SUPERVISION COMPLETED (Includes Co-supervision)

	Students Name	Institutions	Year Enrolled	Year End
1	Istikamah bt. Subuki (2005220301) converted from MSc to PhD Co-SV <i>"Injection Molding of Stainless Steel Powder (316L) using Palm Stearin Binder System"</i>	UiTM/SIRIM	2005	2010
2	Ummu Raihanah Hashim (2012916907) : Co-SV (MSc) "Compression properties of Aluminium foam reinforced fibre composite rod"	UiTM	2013	2015
3	Nurul Huda M, Ali (2012986249) : Co-SV (MSc) "Injection moulding of synthesized HAP powder from clamshell"	UiTM (Chem Eng)	2013	2015
4	Mohd Ikhwan Jamaludin (2012127163) : Co-SV(MSc) "Development of highly inter-connected of porous titanium implant mix with palm stearin binder by metal injection moulding"	UiTM	2013	2015
5	Muhammad Hafizuddin Jumadin (2012977067) : Co-SV (MSc) <i>"An investigation on Carbon particle size and paste concentration on coating kinetics of carburised steel"</i>	UiTM	2013	2015
6	Mohd Fadzli Ismail(2013683498): Co-SV(MSc) <i>"Impact Resistance of Advanced Hybrid abd Sandwich Laminates"</i>	UiTM	2013	2015
7	Nor Fazli Abdull Manan (PhD) : Co-SV <i>"A novel technique o determine properties of skin using biomechanical principles"</i>	UiTM	2012	2016
8	Razmi Noh Mohd Razali (2012570805) : Co-SV (MSc) "Processing of Aluminium foam produced by iniltration NaCl space holder"	UiTM	2013	2015
9	Rosliza Razali (2012992519): Co-SV (MSc) <i>"The influnce of Ni-Ti ratio on shape memory and pseudo-elastic properties prepared by metal injection moulding"</i>	UiTM (Chem Eng)	2013	2015

MEng (Master in Engineering Management) SUPERVISION COMPLETED (Includes Co-SV)

	Students Name	Institutions	Year Enrolled	Year End
1	Norradzila Abd Mokhti (2012766643) : SV <i>"Effects of Additives on ABS Scrap to Reduce Wastage as"</i>	UiTM	2012	2015

	<i>Second Material</i>			
2	Nur Afzaniza binti Kamaludin (201144231) : SV "The Development of KCC Own Colorant for Tinting Machine Usage"	UiTM	2013	2015
3	Ruhaizad bin Ahmad (2014249926): SV "Comparative study between original and counterfeit engine oil filter for Kawasaki Motors (Malaysia) Sdn Bhd"	UiTM	2015	2016

ON-GOING POSTGRADUATE (RESEARCH) SUPERVISION (Includes Co-supervision)

	Students Name	Institutions	Year Enrolled	Year End
MSc				
1	Siti Athirah bt. Rashid (2011375039): SV "Development of open cell copper foam by compaction for thermal management application"	UiTM/SIRIM	2012	2016
2	Zulaila Abdullah (2012396205): Co-SV "Processing and characterization of shape memory NiTi Intermetallic compounds by metal Injection moulding"	UiTM (Chem Eng)	2013	2015
3	Siti Norazlini Abd Aziz (2013253282) : Co-SV "Ceramic Injection Moulding of HAP using Environmental Friendly Binder System"	UiTM	2013	2015
4	Nur Atikah Abu Kasim (2013546807) : Co-SV "Optimization process of MIM of porous Ti-6Al-4V with palm stearin binder"	UiTM	2013	2015
5	Muhammad Hafizuddin Mohamad Basir (2013977885) : Co-SV "Enhancement of Wear Properties 316L Stainless Steel through Shot Blasting Treatment and Paste Boronizing Process"	UiTM	2013	2015
6	Mahfuzah Zainudin (2014435524) :SV "Injection moulding of Ytria Stabilized Zirconia for Dental Application"	UiTM	2014	2016
7	Nor Shamimi Shaari (2014219862) : SV "Study of mechanical and wear properties of carbon nanotubes reinforce copper matrix composites by using powder metallurgy route"	UiTM	2014	2016
8	Ros Atikah Abdul Kadir (2014473234) : SV "TiH ₂ Micro-Porous Replication near-net-shape Pseudo Elastic NiTi Alloy"	UiTM	2014	2016
9	Nur Hidayatul Nadhirah binti Elmi Azham Shah (2014649744) : SV _converted to PhD in 2016 "Comparative study between Vacuum Arc Melting and Powder Metallurgy of beta-phase TiNb alloy"	UiTM	2014	2016
10	Siti Mariana binti Hosnie (2014584641): SV "Effects of TiH ₂ powder on microstructure and mechanical	UiTM	2015	2017

	<i>properties produced by powder metallurgy route”</i>			
11	Mohd Arifhakim bin Azizan (2014149351) : SV ”Development of Functional graded aluminium foam for sound absorber application”	UiTM	2015	2017
12	Mohd Firhan bin Morni : SV ”Development of 2C-powder Injection moulding”	UiTM	2015	2017
13	Siti Humairah Binti Kamarul Bahrain (2015286428) : Co-SV ”Experimental-Numerical Study of Silicone Biocomposite Mechanical Behaviour Adapting Hyperelastic Constitutive Equations	UiTM	2015	2017
14	Siti Hajarnaimah binti Kamarudin (2015253804) : Co-SV ”Study of Zirconia addition on Synthesize Hap hot press materials”	UiTM (Chem. Eng)	2016	2018
15	Izzul Adli bin Mohd Arif (2015463276) : Co-SV ”Effect of Boron Added Titanium Filler on Microstructure and Mechanical Properties of CP-Ti and Ti-15-3 Alloy Weldments	UiTM (FSG)	2016	2018
PhD				
1	Nur Hidayatul Nadhirah binti Elmi Azham Shah (2014649744) : SV _converted to PhD in 2016 ”Comparative study between Vacuum Arc Melting and Powder Metallurgy of beta-phase TiNb alloy”	UiTM	2016	2019
2	Ummu Raihanah Hj Hashim (2015752509): Co-SV (PhD) ”Fibre Microbuckling Model of Unidirectional and off-axis Natural Fibre Composite Laminates”	UiTM	2016	2020
3	Ahmad Lutfi bin Anis (2013746823): Co-SV (PhD) ”Effect of filler modification on grain refinement and mechanical properties of Ti-6Al-4V Titanium Alloy welds prepared by GTAW Technique”	UiTM (Fac. Of Applied Science)	2014	2017
4	Hafizi bin Lukman (2012379815) : Co-SV (PhD) ”Impact Response of Circular Tube with Aluminium Foam Filler”	UiTM	2014	2017
5	Suffiyana Akhbar (2014416314) : Co-SV(PhD) ”Development of porous HAP scaffold by using polymer water soluble binder”	UiTM (Chem. Eng)	2014	2017
6	Ismail Lias (2013890776) : SV(PhD) ”Porous media heat exchanger of organic rankine cycle (ORC) for recovering exhaust energy”	UiTM	2014	2017
7	Mazyan Yahya (2013619002) : SV (PhD) ”The influence of Ti/TiH2- Nb Ratio on Porosity and Beta phase formation produced by Powder Metallurgy Route”	UiTM	2013	2016
8	Nor Amalina Nordin (2012648228): SV (PhD) ”Development of porous copper by metal injection moulding	UiTM	2013	2016

	<i>incorporated with space holder materials”</i>			
9	Nurbailah Abd. Hamid (2013444896) : Co-SV (PhD) “ <i>Application of NiTiNol wire in Seismic Concrete</i> ”	UiTM (Civil Eng)	2013	2016

M. ENG (MASTER IN ENGINEERING MANAGEMENT) ON-GOING SUPERVISION

	Students Name	Institutions	Year Enrolled	Year End
MSc				
1	Muhammad Kamarul Ariffin bin Zakaria (2013833054): SV “ <i>Investigation of Factors Affecting the Lifetime of Final Knife Unit: Screw Press Vs. Pneumatic Method</i> ”	UiTM	2013	2016

COMPLETED UNDERGRADUATE SUPERVISION (FINAL YEAR PROJECT)

No	Students name	Id	Title of FYP	Year Completed
1	Yusb Ishaq b. Mohamad Mior Sharul Nizam b. Mior Ahmad	2001641608 2001476202	<i>Homogenous feedstock for metal injection molding (MIM) process</i>	Mar 2004
2	Muhammad Nazri b. Nayan Mohammad Azizi b. Abdullah	2001476401 2001476266	<i>Virtual Material Science Laboratory Manual</i>	Mar 2004
3	Khirman b. Khalid	2001194243	<i>Study of Pore Structure Evolution during Debinding Process</i>	Oct 2004
4	Mohamad Fahmi b. Ghazali	2001194250	<i>Rheological Study of MIM Water Soluble Binder System</i>	Oct 2004
5	Mohd Khuzairy b. Mohd Yusof	2001194906	<i>Sintering Study in Metal Injection Molding (MIM) Process</i>	Oct 2004
6	Muhamad Rizal b. Khalid	2000127658	<i>Effect of Flow Rate on Development of Microstructure By MIG Welding</i>	Oct 2004
7	Abdul Rahman b. Mat Saed Aqil b. Abdul Wahab	2002658970 2002242115	<i>Effect of Different Pressure On Densification of Sintered Parts</i>	April 2005
8	Mohd Lukmman b. Awg. Noh	2002658135	<i>A Study of Failure Phenomena of Proton Waja's Door Handle</i>	April 2005
9	Muhammad Fatah Fadullah b. Abbas	2001499452	<i>Characterization of Powder Loading For Metal Injection Moulding (MIM)</i>	April 2005
10	Nor Azri b. Jumiran (Co-SV)	2001194680	<i>Effect of Filling Time on Metallurgical Properties of Casting Component</i>	April 2005
11	Ahmad Safri b. Mohammed Salleh Khairul Bahrein b. Khalid	2002242099 2002241716	<i>Effect of Gas Flow Rate During Metal Inert Gas (MIG) Welding on Tensile Strength</i>	April 2005
12	Ahmad Tarmizi b. Jantan	2003648213	<i>Design And Fabrication of Mechanical Engineering Faculty (FKM) Sample Plaque Using Slip Casting Method</i>	April 2006

13	Mohd Farizul b. Abdul Rashid	2003665298	<i>Effect of Heating Rate on The Slip Casting Product</i>	April 2006
14	Nik Muhammad Hasnan b. Nik Ibrahim	2003289168	<i>Effect of Milling Process on Incinerator Bottom Ash (IBA) Properties</i>	April 2006
15	Muhamad Faizol b. Mohamad Rashidi	2003289111	<i>Preliminary Investigation of A Novel Process of Lightweight Aggregate from Incinerator Bottom Ash (IBA)</i>	April 2006
16	Noor Rizman b. Kasmuri	2003289182	<i>Densification Behaviour of Powder Metallurgy (P/M) Honda Ex-5 Starter Component</i>	Nov 2006
17	Rosmaria bt. Husin	2003329356	<i>Effect of Reinforcement Size on the Mechanical Properties Of Rice Husk-Epoxy Composite</i>	Nov 2006
18	Hanim Falina bt. Mohd Hashim	2004215443	<i>Comparative Study between Conventional Natural Agregate and Newly Developed Synthetic Aggregate</i>	Apr 2007
19	Jamaliah bt. Md Said	2004215450	<i>Study of Microstructural Evolution of Powder Metallurgy (PM) Parts during Sintering Process</i>	Apr 2007
20	Mohd Akmal b. Mohd Nasir	2004215118	<i>Development and Characerization of Low Cost Ceramic Matrix Composites (CMC) :Alumina - Fly Ash Composite</i>	Apr 2007
21	Muhammad Firdaus b. Musa	2003329132	<i>Design and Fabrication of FKM Gear Plaque Using Slurry Casting</i>	Apr 2007
22	Muhammad 'Abdul Hakim b. Hashim (Co SV)	2009816808	<i>Processing and Characterization of Porous Alumina by using Space Holder Method</i>	July 2012
23	Robi Arsam b. Arman (Co SV)	2009856628	<i>Processing and Characterization of Porous Hydroxyapatite using Space Holder Method</i>	July 2012
24	Syed Mohd Hasif Wafa b. Syed Mohd Hassan (Co SV)	2009643852	<i>Characteristic of Eggshell in Substitution of Hydroxyapatite in Biomedical Appliances</i>	July 2012
25	Nur Sarah bt. Mohd Nasir	2009731173	<i>Investigation of Modulus of Elasticity of Fired Clay Brick Containing Palm Oil Mill Bottom Ash (POBA)</i>	Jan 2013
26	Sara Akma bt. Isa	2009553093	<i>Capillary Rheological Study Of The MgO - Al₂O₃ - AlN Feedstock</i>	Jan 2013
27	Siti Nur Alyani bt. Abdul Aziz	2009548745	<i>Talc Effect to the Densification of Alumina</i>	Jan 2013
28	Mohd Khairul Idham b. Mohamad (Co Sv)	2009741035	<i>Sintering of Alumina - AlN System For Heat Sink</i>	Jan 2013
29	Muhamad Azri b. Taib (Co Sv)	2009117727	<i>Characterization and Rheological Studies on Ready - Made Feedstock of Stainless Steel 316L in Metal Injection Molding (MIM) Process</i>	Jan 2013
30	Muhammad 'Izzat Iskandar b. Idris (Co Sv)	2009910981	<i>Magnesite Effect to the Alumina Sintering for Heat Sink Application</i>	Jan 2013
31	Razmi Noh b. Mohd Razali (Co SV)	2009190649	<i>The Effect of the Microstructure and Mechanical Properties of Aluminium Foam Produced by Co2 Casting Process using NaCl Space</i>	Jan 2013

			<i>Holder</i>	
32	Mohd Khairi b. Mohd Taib (Co SV)	2009700167	<i>Design, Fabrication and Energy Absorption of Aluminium Foam Produced by Green Sand Casting Process using Lost-Foam Technique</i>	Jan 2013
33	Muhammad Tasqil Amin b. Mohd Yusof	2009822586	<i>Interaction of Municipal Solid Waste Ash (MSMA) With Aluminium in Metal Matrix Composite (MMC)</i>	July 2013
34	Afiq b. Ismail	2009636614	<i>Fabrication and Characterization of NiTi Alloy by Powder Metallurgy Process</i>	July 2013
35	Nor Adibah bt. Ahmad Hafidz (Co SV) FSG	AS 225/FSG	<i>Slow Pyrolysis of Kenaf Waste</i>	July 2013
36	Azrai b. Zulkiffli	2009276008	<i>Design and Fabrication of Powder Metallurgy Mould for Compaction And Metal Injection Moulding Processes</i>	July 2013
37	Khairul Rizal b. Ahmad Radzi	2009286936	<i>Shape Memory Characterization of NiTi Alloy Produced by Powder Metallurgy Route</i>	July 2013
38	Mohd Mizam b. Saidi Ali	2009848882	<i>Design and Fabrication of Non - Destructive Evaluation (NDE) Educational Kit Replication for Educational Purpose</i>	July 2013
39	Mohd Naqhie b. Che Ariffin	2009655156	<i>Ceramic Injection Moulding (CIM) Of Robotic Finger</i>	July 2013
40	Mohd Redzuan b. Roslan	2009636242	<i>Fabrication of FKM Bookmark by Injection Molding Process</i>	July 2013
41	Mohd Shahafiz b. Ismail	2009657516	<i>Replication Of T-Joint Welding Defects Using Reverse Engineering For NDE Kits</i>	July 2013
42	Muhammad Asraf b. Zulkhalil	2009220218	<i>Design and Fabrication of Artificial Teeth by Slip Casting</i>	July 2013
43	Muhammad Zaid b. Hasim	2009654102	<i>Design and Fabrication of Interchangeable Turning Sprue Bushing in Multi Cavity Mould Family</i>	July 2013
44	Ahmad Hamizan b. Ahmad Shazali	2009662176	<i>The Effect of Aluminium Components when Combined With Fly Ash</i>	July 2013
45	Mohd A'idil Munir b. Khider	2009617152	<i>Norel Empty Fruit Bunch Ash (EFBA) as Additives in Improving Properties Of Aluminium</i>	July 2013
46	Muhamad Adizal Nizam b. Adainuri	2009479324	<i>Effect of Paper Sludge Ash Composition on Mechanical Stress and Strain Behaviour In Aluminium Matrix Composite</i>	July 2013
47	Muhammad Farhan b. Johari	2009560675	<i>Effect of Heat Treatment on Porous Ni-Rich Nickel Titanium Produced by Metal Injection Molding (MIM)</i>	July 2013
48	Mohd Zulfahmi b. Yunus	2010548647	<i>The Hardenability of Material Through Jominy End - Quench Test</i>	Jan 2014

49	Muhammad Akif b. Sharifuddin	2009126101	<i>Metallurgical Aspects of Malay 'Keris'</i>	Jan 2014
50	Muhammad Safuan b. Abdul Somad	2010148395	<i>Porous Nickel Titanium by Powder Metallurgy Using Titanium Hydride As Pore Forming Agent</i>	July 2014
51	Nur Hana bt. Bashiron	2009119127	<i>Processing of Titanium Based Alloy by Powder Metallurgy Route</i>	July 2014
52	Wan Mohamad Syazwan Wan b. Saat	2009737053	<i>Shape Memory Behaviour of Nickel Titanium (NiTi) Alloy Produced by Cold-Isostatic Pressing) Followed by Argon-Sintering</i>	July 2014
53	Mashitah bt. Masood	2011693332	<i>Comparison of Metallographic and Hardness Profile for Different Heat Input on Welded Duplex Stainless Steel S31803</i>	July 2014
54	Mohammad Haziq b. Mohd Hashim	2011224572	<i>Effect of Welding Preheats on Metallurgical Analysis And Microstructural Development</i>	July 2014
55	Nur Hidayatul Nadhirah bt. Elmi Azham Shah	2010298666	<i>Protective Coating In Labuan Shipyard And Engineering (LSE) : Conventional Blasting Using Garnet With Meeting Oil And Gas Standard (Realibility Of Recycled Garnet)</i>	July 2014
56	Nurul Hasnan b. Ramli	2011898722	<i>Welding Quality Assessment for Oil and Gas Industry by Comparison of Mechanical Testing Properties and Microstructure Analysis</i>	July 2014
57	Mohd Arifhakim b. Azizan	2010821408	<i>Fabrication and Characterization of Sound Absorption Properties of Open - Cell Aluminium Foam</i>	July 2014
58	Arief Azdar Hidayat b. Darman	2010864232	<i>Injection Moulding Of Copper Feedstock</i>	July 2014
59	Mohamad Ikmal b. Taiman (Co Sv)	2011417474	<i>Effect of High Volume Space Holder on Porous Copper Prepared By Powder Metallurgy</i>	July 2014
60	Mohamad Izzat b. Mohamad Anuar (Co Sv)	2011251468	<i>Mechanical Properties of Porous Copper: Effect of Low Volume Space Holder</i>	July 2014
61	Mohamad Nizam b. Mohd Noor (Co Sv)	2011678468	<i>Processing and Characterization of Solid Copper : Metal Injection Moulding Employing Palm Stearin Based Binder System</i>	July 2014
62	Nur Hidayah bt. Bashiron	2009128737	<i>Near-Net-Shape Processing of Nearly Equiatomic NiTi by Warm Compaction</i>	July 2014
63	Muhammad Izzat b. Mohd Adzhar (Co Sv)	2010490584	<i>Effect of Agar Binder to the Mechanical Properties of Alumina Using Slip Casting Method</i>	July 2014
64	Faiq Aizad b. Nazri	2010682558	<i>Effect of Polyethylene Glycol (PEG) Binder to the Mechanical Properties of Alumina Using Slip Casting Method</i>	July 2014
65	Maryam bt. Mhd Khair	2010230888	<i>Effect of Palm Stearin Binder to the Mechanical Properties of Alumina Using Slip Casting Method</i>	July 2014

66	Siti Soleha bt. Ibrahim	2010191463	<i>Porous Stainless Steel by Powder Metallurgy Route</i>	Jan 2015
67	Khadijah bt. Mohamed Sabri	2010396647	<i>Design And Fabrication of Orthodontic Implant By Powder Injection Moulding</i>	Jan 2015
68	Muhammad Safwan b. Suhaimi	2008400796	<i>Material Investigation of Smart CAMAR Logo Using NiTi Shape Memory Alloy</i>	Jan 2015
69	Nur Atira bt. Sharif	2011871522	<i>Effect of Heat Treatment on the Microstructure and Mechanical Behaviour of NiTi Produced by Metal Injection Moulding and Vacuum Arc Melting Techniques</i>	July 2015
70	Mohd Irsyadudden b. Nasir	2012611928	<i>Design And Fabrication of Metal Foam Tube for Heat Exchanger Application</i>	July 2015
71	Salahudin b. Limat	2012410192	<i>Development of Biomedical Staple Using Metal Injection Moulding</i>	July 2015
72	Mohd Shafie b. Juahir	2011425494	<i>Design and Fabrication Of FKM Keychain by Injection Moulding Of Waste Material (Plastics)</i>	July 2015
73	Mohd Hanif b. Nadzri (Co-SV)	2011676226	<i>Effect Of Palm Stearin Binder Loading To The Rheological Properties and Mechanical Properties of Alumina Using Injection Moulding Process</i>	July 2015
74	Nor Hazlee b. Nor Rahman	2012697596	<i>Effect of Rotational and Transverse Speed On Weld Profile And Microstructure Friction Stir Welded Aluminium Alloy Joints</i>	July 2015
75	Mohamad Faizuddin b. Hashim	2012492852	<i>Design And Fabrication Of FKM Plaque By Hot Pressing And Using Waste Plastic Material</i>	July 2015
76	Syed Mohamad Ilham Syah b. Syed Mostamam	2012216942	<i>Optimizing of FKM Bookmark/Letter Opener Using Injection Moulding</i>	July 2015
77	Muhammad Dzahir b. Mushaimi	2012526899	<i>Residual Stress Measurement on a AA6061-T6 Aluminium Alloy Friction Stir Butt Weld Using X-Ray Diffraction Method</i>	Jan 2016
78	Iskandar Dzulkernain b. Md Rafee	2013222632	<i>Study of Compression Behaviour of Aluminium Foam Produced by SpaceHolder Method</i>	July 2016
79	Ahmad Aslam b. Ahmad	2012426134	<i>Mini Multi Purpose Furnace</i>	July 2016
80	Mohd Zarifi b. Bakar	2013210892	<i>Optimization of FKM Plaque by Warm Press of Saw Dust/Rice Husk</i>	July 2016
81	Mohammad Syafiq b. Rosli	2012885266	<i>Design and Fabrication of Plaque by Hot Pressing of Waste Bottle</i>	July 2016
82	Muhammad Syakir b. Abdull Rahim	2012488768	<i>Production and Market Study of FKM Product “ Keris Envelope Opener”</i>	July 2016
83	Abdul Muzammil b. Mohd Azaiuddin	2013817094	<i>Properties of Thermal Conductivity of Aluminium Foam</i>	July 2016
84	Muhammad Syamim b. Martius	2013615484	<i>Thermal Conductivity Study of Recycle Copper Mesh Composite with Copper Plate</i>	July 2016

85	Muhammad Faris b. Zainol	2012216446	Design and Fabrication of Manually Operated Injection Moulding Machine for Simple Plastic Moulded Parts	July 2016
86	Wan Abdul Hafiz b. Jarudin	2013425102	Effect of Heat treatment on the Microstructure and Mechanical Properties of Superelastic NiTi Rebar for Civil Application	July 2016
87	Muhammad Akmal b. Ahmad Shazalli	2013239654	Study of Microstructure and Mechanical Properties of Hybrid Superelastic NiTi alloy with Steel Rebar for Reinforce Concrete Beam	July 2016

ON-GOING UNDERGRADUATE SUPERVISION (FINAL YEAR PROJECT)

No	Students name	Id	Title of FYP	Year Completed
1	Muhammad Hariz bin Zubir	2014	<i>Design and fabrication of micro machining ceramic guide pin</i>	July 2017
2	Nurul Najwani binti Mohd Ghazali	2014642012	<i>The physical and mechanical behaviour of alumina guide pin</i>	July 2017
3	Mohammad Syafizzat bin Jamaludin	2014865172	<i>Design and fabrication of induction brazing machine for joining process</i>	July 2017
4	Nur Afiqah binti Norazman	2014684978	<i>Fabrication of TiNbAlloy Fracture Plate by Powder Metallurgy Route</i>	July 2017
5	Nur Eirdyna Nasuha binti Mohd Nor	2014807512	<i>Functional fatigue behaviour of superelastic beta Ti40Nb alloy for load bearing biomedical application</i>	July 2017

INNOVATIONS , AWARDS & PATENTS

- Best of the Best Award in the Breakthrough Invention Innovation and Design Exhibition (BIIDE 2016) organized by UiTM Pahang, 7-8 Nov 2016, Project title : Cheap Fabrication Process of Ti-6Al-4V for Biomedical Applications.*
- 2nd Runner up for Product Pitching during IIDEX 2016 at Dewan Agung Tuanku Canselor, DATC UiTM, 22nd Sept 2016. The award was sponsored by Bank Islam Malaysia Berhad (BIMB)*
- Best paper Award at the Malaysian Engineering and Science Postgraduate International Conference (MESPIC 2016), 27-29 Sept 2016, Paper title : Fabrication of Porous β -Ti40Nb alloy Incorporated with TiH₂ via Powder Metallurgy Route Under Reducing Environment*
- Excellent Performance Award (Anugerah Khidmat Cemerlang) from the UiTM for the year 2014*
- Award at the International Conference on Advances in Mechanical Engineering (ICAME 2015), 26-27 August 2015 Bali, Indonesia.
Best Paper*

- i. *The Influence of Ni-Ti Ratio on the Reversible Austenite-Martensite Transformation and Mechanical Properties Produced by Metal Injection Moulding*
- ii. *Influence of space holder on rheological behavior of copper feedstocks for metal injection molding*

Best Presenter

- i. *Shape memory investigation of smart CAMAR logo using NiTi alloy wire*
6. *Panglima Awang Invention Award-Platinum Professional Category Award in the Research Invention, Innovation & Design 2014, 13-14 Dec, UiTM Melaka*
 7. *Best MyRA file Award from Faculty of Mechanical Engineering, Dec 2012*
 8. *Innovation and Commercialization Award (2nd place) from Faculty of Mechanical Engineering, Dec 2012*
 9. *Excellent Exchange Scheme Award from the University of Sheffield to undertake research work at the Institute of Energy, Julich, Germany commencing 27 July-21 Aug 2009*
 10. *Best Innovation Achievements Award (Anugerah Pencapaian Penyelidikan Terbaik 2008) from UiTM. The award was sponsored by the Bank Islam Malaysia Berhad (BIMB)*
 11. *Excellent Performance Award (Anugerah Khidmat Cemerlang) from the UiTM for the year 2006*
 12. *PhD scholarship Award by the Government of Malaysia to pursue post-graduate studies at the University of Sheffield, United Kingdom from 15 Sept 2007 – 14 Sept 2011*
 13. *Awarded Post-Graduate Scheme (Skim Pasca Siswazah) from Centre of Post-Graduate Studies, Universiti Kebangsaan Malaysia (UKM) to pursue post-graduate studies at UKM from Jun 1999 – Dec 2001*
 14. *Innovation Activities & Award Achievement*

Bil	Project / Innovation	Event	Date	Award
1	<i>Palm Stearin Based Biopolymer Binder System for use in Injection Moulding of Metal Powders</i>	Inventions, Innovation & Design, IID 2007, Dewan Annexe, UiTM Shah Alam	Jan, 24-25 2007	GOLD
2	<i>Artificial Lightweight Aggregate (ALWA) from Paper Sludge Ash</i>			SILVER
3	<i>Vertically "Heat & Drop" Furnace for Jominy Quench End Test</i>			BRONZE
4	<i>Potential of Recycling Municipal Solid Waste Ash (MSWA) to form Lightweight Aggregate</i>			BRONZE
5	<i>Water Soluble Binder System in Metal Injection Moulding (MIM) Application</i>			BRONZE
6	<i>Potential Application of Water Soluble Binder System in Metal Injection Moulding (MIM) Process for</i>	18 th International Inventions, Innovations &	May, 18-20 2007	GOLD

	<i>Fabrication of Small and Complex Precision Metal Parts</i>	Technology Exhibition, ITEX '07, Kuala Lumpur Convention Centre (KLCC)		
7	<i>Vertical Tube "Heat and Drop" Furnace for Jominy Quench End Test</i>			SILVER
8	<i>Recycling Potential for Manufacture High Quality Artificial Lightweight Aggregate (ALWA) from Municipal Solid Waste Ash (MSWA) Incineration.</i>			BRONZE
9	<i>Palm Stearin Based Biopolymer Binder System for use in Injection Moulding of Metal Powders</i>	Pameran Rekacipta & Inovasi Institusi Pengajian Tinggi Awam, PECEIPTA '07, Kuala Lumpur Convention Centre (KLCC)	Aug, 10-12 2007	SILVER
10	<i>Artificial High Strength Aggregate (AHS) from Paper Sludge Ash</i>			None
11	<i>Potential Application of Water Soluble Binder System in Metal Injection Moulding (MIM) Process for Fabrication of Small and Complex Precision Metal Parts</i>	International Trade Fair (IENA) 2007, Nuremberg, Germany	Nov, 1-4 2007	GOLD
12	<i>Vertical Tube "Heat and Drop" Furnace for Jominy Quench End Test</i>			GOLD
13	<i>Rapid Binder Removal Using Two Stage Debinding Method in Metal Injection Moulding Process</i>	Inventions, Innovation & Design, IID 2008, Dewan Annexe, UiTM Shah Alam	March, 25-27 2008	GOLD (BEST POSTER AWARD)
14	<i>Novel Metal Matrix Composite (MMC) by Waste Materials Reinforcement</i>			GOLD
15	<i>Low Cost and Locally Fabricated Electro-Etching for Metallographic Sample Preparation</i>			SILVER
16	<i>Palm Stearin Based Biopolymer Binder System for use in Injection Moulding of Metal Powders</i>	11 th International Salon of Industrial Property "Archimedes"2008, Moscow, Russia	April, 1-4 2008	SILVER
17	<i>Rapid Binder Removal Using Two Stage Debinding Method in Metal Injection Moulding Process</i>	19 th ITEX '08, KLCC	10-13 May 2008	BRONZE
18	<i>Porous NiTi as bio-medical implant</i>	22 th ITEX '12 KLCC	May, 17-19 2012	SILVER
19	<i>Alternative fabrication of Porous pseudo-elastic NiTi alloy for biomedical implant applications</i>	IID FKM	August, 8 2012	GOLD
20	<i>Processing and Characterization of alumina for bone implant application using space holder method</i>			SILVER
21	<i>Development of eggshell in substitution of hydroxyapatite in biomedical appliances</i>			BRONZE
22	<i>Near-net-shape fabrication of Porous pseudo-elastic NiTi alloy for biomedical implant applications</i>	IID, UiTM Johor	13 Sept 2012	SILVER
23	<i>Flawed specimen using Acrylic Material</i>	IID, UiTM	20 Sept 2012	SILVER

	<i>for NDE Industry</i>	Terengganu		
24	<i>Alternative fabrication of Porous pseudo-elastic NiTi alloy for biomedical implant applications</i>	IIDEX Shah Alam	15-17 Mar 2013	GOLD
25	<i>Innovative processing of cellular aluminium foam by conventional casting incorporated with rock-salt space holder material</i>			GOLD
26	<i>Nanosilica filled fibre composite</i>			SILVER
27	<i>Development of eggshell in substitution of Hydroxyapatite in biomedical appliances</i>			SILVER
28	<i>Ti64 by metal injection moulding (MIM) using palm-stearin based binder system</i>			SILVER
29	<i>Development of porous alumina by using space holder method</i>			BRONZE
30	<i>Processing of Highly Porous Copper by metal injection moulding (MIM) using NaCl space holder method</i>			BRONZE
31	<i>Innovative green processing of bioceramics scaffolds from waste materials</i>	IID Johor	19 Sept 2013	BRONZE
32	<i>Innovative Processing of Cellular Aluminium Foam (CAF) by Conventional Casting Incorporated with Rock- Salt Space Holder Material (SHM)</i>	Malaysia Technology Expo (MTE), PWTC	20-22 Feb 2014	SILVER
33	<i>Eco Binder for Bioceramic HAp Scaffold Implant</i>	Int. Engineering Invention & Innovation Exhibition (i-ENVEX) 2014, UNIMAP, Perlis	11-13 Mar 2014	SILVER
34	<i>Dual Function of Palm Stearin in Processing of Hap Scaffold</i>	IIDEX, UiTM Shah Alam	27-30 Apr 2014	GOLD
35	<i>Formulation and Evaluation of the Osteoconductive Property of Locally Synthetic Hydroxyapatite from Egg as a novel bone substitute – An Experimental</i>			GOLD
36	<i>Injection Moulding of New Synthesised Method for Hydroxyapatite Scaffold from Stearin Based Binder System</i>			SILVER
37	<i>High Strength Cellular Aluminium Foam (HiS-CAF)</i>			SILVER
38	<i>Rapid Pack Carburizing (RPC) Steel Heat Treatment</i>			SILVER
38	<i>Dual Function of Palm Stearin in Processing of Hap Scaffold</i>	24 th ITEX `14 KLCC	8-10 May 2014	SILVER
39	<i>Alternative fabrication of Ti6Al4V for biomedical implant applications</i>	RIID 2014 UiTM Melaka	13-14 Dec 2014	GOLD & PANGLIMA AWANG AWARD
40	<i>Rapid Carburizing Heat Treatment (RCHT)</i>	PIID 2015 UiTM P. Pinang	26-27 Oct 2015	GOLD
41	<i>Micro-porous Nitinol by Near-net-shape</i>	Research	14-16 Nov	GOLD

	<i>Processing for Dental Implant Application</i>	Innovation Symposium Exposition (RISE 2015)	2015		
42	<i>Near-net-shape Processing of HAP for Bone Implant</i>				
43	<i>Self-Healing and Smart Rebar with Pseudoelastic Shape Memory Alloy for Reinforced Concrete Beam</i>				
44	<i>Hardness Enhancement of Copper/Carbon Nanotubes as Electrical Brushes in Electric Motor Application</i>				SILVER
45	<i>Zirconia Ceramic Dental Screw Fabricated via Powder Injection Moulding</i>				
46	<i>Let's Recycle</i>				
47	<i>Aluminium Foam Tube for Heat Exchanger Application</i>				Bronze
48	<i>Qualitative and Quantitative Method on Predicting Hardness of Ductile Iron</i>				
49	<i>Betaphase Titanium Alloy for Biomedical Application</i>				
50	<i>Development of Biomedical Staple using Metal Injection Moulding (MIM)</i>				
51	<i>Surface Treatment Technique in Improving Wear Resistance of 316L Stainless Steel</i>				
52	<i>Paste Carburizing Heat Treatment</i>				
53	<i>An Innovative Solvent Extraction Technique For MIM</i>	IIDEX, UiTM Shah Alam	20 – 23 Sept 2016	GOLD	
54	<i>Mechanical Behavior and Microstructure Aluminum Foam Tube Produce (AFTP) Using Infiltration Method With Vacuum-Gas</i>				
55	<i>Single Based Binder in Bioceramics Application</i>				
56	<i>Porous Niti Dental Implant By An Innovative Powder Metallurgy Route</i>				
57	<i>Fj Sense</i>				
58	<i>Let's Recycle</i>			SILVER	
59	<i>Cheap Fabrication Process of Ti-6Al-4V for Biomedical Applications.</i>			Breakthrough Invention Innovation and Design Exhibition (BIIDE 2016) UiTM Pahang	7-8 Nov 2016

15. Intellectual Property Right (IPR)

No	Title	Patent No
1	<i>A Method of Producing Aluminium Foam with Central Pillar (Principal Inventor)</i>	PI 2014704013
2	<i>A Method of Producing Dental Implant Article with Nickel Titanium Alloy (Principle Inventor)</i>	PI 2015700327
3	<i>Method for Producing A Hydroxyapatite Scaffold (Member)</i>	PI 2015703519
4	<i>Dual Function of Palm Stearin in Processing of HAP Scaffold</i>	UI 2014704093

	<i>(Member)</i>	
5	<i>A Method of Producing Aluminium Foam Tube for Heat Exchanger Application (Principal Investigator)</i>	LY2016002487

CONSULTATIONS AND EXPERTISE

Consultation Work

No	Consultation Work	Client (s)	Reference No	Duration
1	Alluette Nose Gear Compression Test	<i>Aviation Design Centre Sdn Bhd</i>	<i>20150629003</i>	29 th Jun -17 th July 2014
2	DN 50-FE Modelling Facilitation And Output Anlysis	<i>Tepat Teknik Sdn Bhd</i>	<i>0000159906003</i>	4 th - 5 th April 2013
3	Malaysian Symposium on Advances in Powder Metallurgy & Particulate Materials 2007 (APM2 07)	<i>Industries & Universities</i>	<i>100-IRDC 37/3/1621</i>	21st – 22nd August 2007
4	Workshop on Sample Preparation & Microscopic Examination 07 (Sample Prep 07)	<i>Industries & Universities</i>	<i>100-IRDC 37/7/1712</i>	24th – 25th July 2007
5	Evaluation of product quality and production machine in Harvik Rubber Industries Sdn. Bhd,Prai, Penang	<i>Harvick Industries, Prai, Penang</i>	<i>100-IRDC 37/7/P1443</i>	May 2006 – August 2006
6	Introduction to Conventional Manufacturing Technology (Industrial Materials)	<i>Kulliyah of Architecture & Environmental Design, IIUM</i>	<i>100-IRDC 37/7/1534</i>	28th Sept – 13th Oct 2006
7	Workshop on Sample Preparation and Microscopic Examination 06 (Sample Prep 06)	<i>Industries & Universities</i>	<i>100-IRDC 37/7/1462</i>	3rd – 4th July 2006
8	Metallographic Examination on Welded Components	<i>TUV Rheinland Malaysia Sdn. Bhd.</i>	<i>100-IRDC 37/7/1472</i>	Aug – Sept 2006
9	Macrostructure Analysis of Perodua MYVI Brake Pedal Component	<i>TUV Pfalz Asia Sdn. Bhd.</i>	<i>100-IRDC 37/7/1326 (T364)</i>	9th – 16th January 2006
10	Macrostructure Examination of Welded Components	<i>TUV Pfalz Asia Sdn. Bhd</i>	<i>100-IRDC 37/7/1273</i>	29th Oct – 29th Sept 2005

Invited Presentation in Seminar/Workshop & Conference

No	Event	Title of Presentation	Date & Venue	Venue
1	International Conference on Advances in Mechanical Engineering (ICAME 2015),	<i>The Influence of Ni-Ti Ratio on the Reversible Austenite-Martensite Transformation and Mechanical</i>	27 Aug 2015	Petrajasa Hotel, Bali, Indonesia

	Bali, Indonesia	<i>Properties Produced by Metal Injection Moulding – Invited</i>		
2	Surface Characterization-Phenom Table Top SEM Seminar	<i>The Importance of SEM in Powder Processing Technology – Guest</i>	13 Aug 2015	Bioprocess Department, Faculty of Chemistry, UiTM
3	Basic Course of Foundry & Metallurgy 2014'	<i>Basic Sample Preparation, Etching and Microscopy- Invited</i>	20 Aug 2014	Fac of Mech Engineering, UiTM
4	Research Course at the Institut Latihan Kepimpinan dan Pengurusan Fakulti (ILQAM)	<i>Reseach : An Introduction - Invited</i>	13 Feb 2014	ILQAM, UiTM, S. Alam
5	22 nd International Conference on Processing & Fabrication of Advanced Materials	<i>The Processing of Porous NiTi by Metal Injection Moulding (MIM) - Invited</i>	18 – 20 Dec 2013	National University of Singapore
6	Seminar on Biomaterials Engineering	<i>The Importance of SEM in Powder Processing Technology – Guest</i>	9 th December 2013	Faculty of Dentistry, UiTM
7	Malaysia Japan Tribology Meeting organized by Malaysian Tribology Society (MYTRIBOS)	<i>Materials Activities at FKM, UiTM- Invited</i>	28 th Aug 2012	MJIT, UTM Jalan Semarak

Jury in Innovation, Invention and Design Competition

No	Event	Date	Venue
1	International Innovation and Invention Exhibition ITEX 2015	12 May 2016	Kuala Lumpur Convention Centre (KLCC)
2	International Innovation and Invention Exhibition ITEX 2015	22 May 2015	
3	International Innovation and Invention Exhibition ITEX 2014	9 May 2014	
4	Inventions, Innovation & Design Student, IID 2013	4 Dec 2013	Faculty of Business, UiTM
5	Inventions, Innovation & Design, IID 2013	16 March 2013	Dewan Agung Tuanku Canselor UiTM Shah Alam

Research Proposal Evaluation

No	Event	Date	Venue
1	FRGS : 8 Jul 2013	8 Jul 2013	Institute of Science (IOS)
3	Dana Kecemerlangan KTP :	8 Mei 2013	Pej. Jaringan Industri, Masyarakat & Alumni

Internal Thesis Examiner

No	Student name	ID/ Course	Research Title	Date
1	Lailatul Harina binti Paijan (SV : Prof Ir Mohamed Nor Berhan)	2009127711 (EM780, MSc)	Structural Development of Expanded Austenite on Duplex Stainless Steel by Low Temperature Thermomechanical Nitriding Process	Feb 2014
2	Ana Syahidah binti Mohd Rodzi (SV : Prof Ir Mohamed Nor Berhan)	2009623858 (EM780, MSc)	<i>Study on Nanostructure Zinc Oxide Thin Film Characteristics</i>	Mar 2014
3	Mohd Shahrizan bin Adenan (SV : Prof Ir Mohamed Nor Berhan)	2009980393 (EM990, PhD)	<i>Characterization of Surface Layer Development on Duplex Stainless Steel Resulting From Thermomechanical Hybrid Treatment</i>	June 2015
4	Norhashidah binti Manap (SV : Prof Madya Dr Aidah Jumahat)	2013692244 (EM750, MSc)	<i>Mechanical Properties of Kenaf Hybrid Composite Laminates</i>	Nov 2015
5	Mohamed Ackiel Mohamed (SV : Prof Madya Dr Yupiter Manurung)	2012104123 (EM990, PhD)	<i>Novel Method Development of Fatigue Life Enhancement for Friction Stir Welded AA6061 Butt Joint</i>	Nov 2016

Paper & Journal Reviewer

	Paper title	Journal name, Publisher, Q, IF	Date of review completed
Journal			
1	<i>A study on the corrosion behavior of NiTi shape memory alloy in NaCl and H2SO4 solution</i>	Materials Science & Engineering : C (Elsevier), Q1, IF : 3.088	2 Sept 2015
2	<i>Silicon Carbide Formation from Natural Woods</i>	Jurnal Teknologi, UTM from ICAME 2015	24 June 2015
3	<i>Impact Energy and Ductility Index of Kevlar Reinforcement with Kenaf Polyester Composite</i>		
4	<i>Design Parameters Selection of Springback Effect in Air-V Bending Using Taguchi Approach on Advance High Strength Steel-Dp590</i>		
5	<i>Effect of Foam Density and Wall Thickness Interactions on the Axial and Oblique Energy Absorption Performances. Journal of Mechanical Engineering, FKM</i>	International Journal of Mechanical Engineering (IJMechE), UiTM, Scopus indexed	2 Mar 2014

6	<i>In vitro Mesenchymal Stem Cell Responses on Laser-Welded NiTi Alloy</i>	Materials Science & Engineering : C (Elsevier), Q1, IF : 3.088	30 Nov 2012
7	<i>In vitro Mesenchymal Stem Cell Responses on Laser-Welded NiTi Alloy</i>	Materials Science & Engineering : C (Elsevier), Q1, IF : 3.088	7 Aug 2012
8	<i>Sintering schedule for near-net shapping of mechanical components formed through warm compaction route</i>	Jurnal Teknologi UTM	23 April 2012
9	<i>Sintering behavior and mechanical properties of high speed steel powder processed in nitrogen-based atmosphere</i>		29 Mac 2012
10	<i>Penghasilan Titanium Tulen (Ti) Berbusa dengan Menggunakan Teknik Span</i>	IEM Journal	2 Dec 2009
11	<i>Metal Injection Moulding : An Advanced Processing Technology</i>	Journal of Industrial Technology, SIRIM Berhad	29 May 2005
Proceedings / Book Chapter			
1	<i>Rheological Property of Boundary Layer Formed by Oiliness Additive Evaluated by A New Rheometer with Narrow Clearance</i>	Malaysian International Tribology Conference (MITC 2015) Proceedings	18 Feb 2015
2	<i>Physical and Mechanical Properties of Injection Moulded Co-Cr-Mo Alloy Powder.</i> <i>Feedstock Preparation and Debinding Study of Injection Moulded CoCuMo Alloy Powder</i>	2 nd Advanced Materials Conference (AMC) 2014	15 Jan 2015
3	<i>Leather and Synthetic Leather: A Mechanical Viewpoint for Sustainability.</i>	Chapter in The Book Entitled: Engineering & Technological Development For Sustainable Environment, Intitute Of Graduate Studies (IPsis) UiTM	31 Dec 2014
4	<i>Development and Improvement of the Car Seat Polyurethane Injection Moulding Process</i> <i>Electron Microscopy Investigation on Formation of Silicon Carbide in Mechanically Milled Si and C Mixture</i>	Scientific And Social Research (CSSR) 2006 Proceedings	2 Mei 2006

PUBLICATION

Theses

Muhammad Hussain Ismail 2012, “*Porous NiTi by Metal Injection Moulding (MIM) using Partly Water Soluble Binder System*”, *PhD Thesis* UNIVERSITI OF SHEFFIELD, UNITED KINGDOM

Muhammad Hussain Ismail 2002, ‘Effect of Powder Loading in Processing Conditions of Metal Injection Molding, *M.Sc Thesis*, UNIVERSITI KEBANGSAAN MALAYSIA, MALAYSIA

Research Report

- [1] Nor Hafiez Mohd Nor, Muhammad Hussain Ismail, Norhamidi Muhamad, Julai 2011, Characterization of Newly Developed Feedstock in Metal Injection Moulding Application using Titanium mix with palm stearin binder system Institute of Research, Development and Consultancy, UiTM (FRGS)
- [2] Aidah Jumahat, Bulan Abdullah, Zahurin Halim, Muhammad Husain Ismail, Julai 2010, Characterization of a novel light-weight metal matrix composite with nanomaterials reinforcement Research Report, Institute of Research, Development and Consultancy, UiTM (e-Science Fund)
- [3] Muhammad Hussain Ismail, Nor Hafiez Mohd Nor and Dr Mohd Afian Omar. Sept 2007. 'An Investigation of Rheological Behaviour of Water Soluble Binder System for Metal Injection Molding (MIM) Feedstock' Research Report, Institute of Research, Development and Consultancy, UiTM
- [4] Muhammad Hussain Ismail, Assoc Prof Dr Norhamidi Muhamad and Aidah Jumahat. Sept 2007 'Study on Stability of A Novel Binder System Based on Palm Oil in Metal Injection Molding (MIM) Application' Research Report, Institute of Research, Development and Consultancy, UiTM
- [5] Nik Rosli Abdullah, Muhammad Hussain Ismail and Shahrul Azam Abdullah. Sept 2006 'Application of Lamb Waves in Wear Detection on Aluminium Plate'. Research Report, Institute of Research, Development and Consultancy, UiTM
- [6] Bulan Abdullah, Aidah Jumahat and Muhammad Hussain Ismail, April 2006. 'Optimization of Gating System Design in Casting Iron Component by Casting Simulation' Research Report, Institute of Research, Development and Consultancy, UiTM
- [7] Muhammad Hussain Ismail, Nur Hafiez Mohd Nor, May 2005, 'Characterization of Homogeneous Feedstock in Metal Injection Molding (MIM) Process', Research Report, Institute of Research, Development and Consultancy, UiTM

Book Chapters

- [1] Muhammad Hussain Ismail, Hywel A. Davies, Iain Todd, *Porous pseudo-elastic NiTi alloy for bone implant produced by transient liquid phase sintering following metal injection moulding (MIM) process*. Book Chapter in **Metal Injection Moulding of Implant Materials**. pg 149-188. (2013) Advanced Materials Research Centre (AMREC), SIRIM. ISBN 9789671158814

- [2] Muhammad Hafizuddin Jumadin, Bulan Abdullah, Muhammad Hussain Ismail, and Siti Khadijah Alias *Water-Based Pack Carburizing Technique: A Heat Treatment Practice for Sustainable Environment*. Book Chapter in **Engineering and Technical Development for Sustainable Environment**. pg 11-22. (2016) Apple Academic Press (APP), SIRIM. ISBN 9781771885218
- [3] Mohd Khairi Taib, Razmi Noh Mohd Razali, Bulan Abdullah, and Muhammad Hussain Ismail. *Compression Strength of Open-Cell Aluminum Foam Produced by Green Sand Casting Using Energy Conservation Lost-Foam Technique*. Book Chapter in **Engineering and Technical Development for Sustainable Environment**. pg 190-220. (2016) Apple Academic Press (APP), ISBN 9781771885218

Journal Papers

- [1] Lias, I., Nasir, M.I., Ismail, M.H., Mamat, A.M.I, *Design and fabrication of aluminium foam tube for heat exchanger application* **ARPN Journal of Engineering and Applied Sciences**, Asian Research Publishing Network, 11 (14), pp. 8721-8725 (2016)
- [2] Istikamah Subuki, Nurul Huda Abdullah, Muhammad Hussain Ismail. *Mixing Study of Synthesized Hydroxyapatite Powder with Palm Stearin Based Binder System*. **Advanced Research in Engineering and Information Technology International Conference (AREITIC)** (2016)
- [3] Siti Norazlini Abd Aziz, Nurul Huda M.Ali, Mimi Azlina Abu Bakar, Istikamah Subuki, Muhammad Hussain Ismail. *The Influence of Single Based Binder of Palm Stearin in HAp Feedstock on Rheological Properties Used for Ceramic Injection Moulding (CIM)* **Advanced Materials Research**. Trans Tech Publications Vol. 1134 pp 220-224 (2016)
- [4] M. H. Ismail, R. Razali, Z. Abdullah, I. Subuki, N. Muhamad, *Shape Memory Behaviour of NiTi Alloy Produced by MIM using Palm Stearin Based Binder*. **Advanced Materials Research**. Trans Tech Publications Vol.1133 pp 295-299 (2016)
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