



RIZALMAN MAMAT (PROFESSOR DR.)

Dean

Faculty of Mechanical Engineering,
Universiti Malaysia Pahang,
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Date: 10 July 2017

Visiting Professor
Faculty of Mechanical Engineering & Mechatronics
Karlsruhe University of Applied Science
Germany (2017)

Visiting Professor
Faculty of Engineering
Universitas Abulyatama
Aceh, Indonesia (2017)

Visiting Professor
Faculty of Engineering
Universitas Gajah Putih
Aceh, Indonesia (2017)

Visiting Professor
STKIP-Bumi Persada
Lhokseumawe-Aceh, Indonesia (2017)

Visiting Professor
STKIP Bina Bangsa Getsempena
Banda Aceh, Indonesia (2017)

Visiting Professor
Faculty of Engineering
Universitas Malahayati
Lampung, Indonesia (2017)

Visiting Professor
Faculty of Industrial Technology
Institute Teknologi Nasional
Malang, Indonesia (2017)

Guest Professor
Department of Mechanical Manufacture & Automation
Ningxia University,
Yinchuan, China (2016)

Visiting Professor
PSN College of Engineering
(affiliated college of Anna University, India), 2016

Visiting Professor
Department of Mechanical Manufacture & Automation
Ningxia University,
Yinchuan, China (2015)

Academic Qualification

PhD (Fuel & Energy), University of Birmingham, United Kingdom

M.Eng. (Mechanical), Universiti Teknologi Malaysia

Bachelor of Mechanical Engineering (Aeronautics), Universiti Teknologi Malaysia

Administrative Experiences

1. Dean, Faculty of Mechanical Engineering, Universiti Malaysia Pahang,
Date of appointment: 1 January 2016 (1/1/16 - 31/12/17)
2. Dean, Faculty of Mechanical Engineering, Universiti Malaysia Pahang,
Date of appointment: 1 March 2015 (1/3/15 - 31/12/15)
3. Dean, Faculty of Mechanical Engineering, Universiti Malaysia Pahang,
Date of appointment: 1 March 2013 (1/3/13 - 28/2/15)
4. Deputy Dean (Research & Postgraduate Studies), Faculty of Mechanical Engineering,
Universiti Malaysia Pahang, Date of appointment: 11 October 2012 (11/10/12 - 28/2/13)
5. Deputy Dean (Research & Postgraduate Studies), Faculty of Mechanical Engineering,
Universiti Malaysia Pahang, Date of appointment: 11 October 2010 (11/10/10 - 10/10/2012)
6. Head of Department, Faculty of Mechanical Engineering, Universiti Malaysia Pahang,
Date of appointment: 24 May 2010 (15/05/10 - 14/05/12)
7. Head of Focus Group, Energy Sustainability Focus Group
8. President, Majlis Bersama Jabatan, Universiti Malaysia Pahang, 2010

Research Interest

Heat transfer, Combustion, Internal Combustion Engine, Alternative Energy, Computational Fluid Dynamics, Propulsion System

Postgraduate Students (Summary)

	Number of postgraduate students			
	PhD		MSc (by research mode)	
	Graduated	On-going	Graduated	On-going
Main Supervisor	6	6	5	2
Co-supervisor	3	5	7	3

PROJECT LEADER

1. Fundamental Study of Jatropha Biodiesel Oil on Ultra-Low Emission Homogeneous Charge Compression Ignition Engine Combustion, FRGS/2/2013/TK06/UMP/02/4, RM115,200. 12/2013 – 12/2015, Project Leader
2. Electrostatic Charging of Diesel Particulate Matter from Automobile Exhaust Gas, FRGS-KPT Grant (RDU110112) 08/07/2011-08/07/2013, Project leader
3. Experimental study on exhaust gas recirculation (EGR) with liquefied petroleum gas (LPG) on-board injection operating with a single cylinder diesel engine, (15/01/2014 – 14/01/2016) RM27,500. RDU140302. Project leader
4. Diesel Engine performance with Emulsified Water-Diesel Fuel, (02/10/2015 – 01/10/2017), RM39,900, RDU150001. Project Leader
5. Sea Water Scrubber System for Reduction of Diesel Particulate Matter, RDU110318, 1/7/2011-1/7/2013, Project Leader
6. Cylinder Mixture Stratification Method using High Pressure Direct Injection of Compressed Natural Gas for 4 Stroke Engine, RDU120343, 01/06/2012 – 30/11/2014
7. Utilization of Unconventional Oil in Light Diesel Engine, RDU110334, 1/8/2011-1/8/2012, Project Leader
8. Design and Development of Automobile Cooling System using new coolant, RDU110333, 15/08/2011 – 15/08/2012, Project Leader
9. Development of High Energetic Materials from Renewable Energy Resources, RDU110310, 15/5/2011 – 15/5/2012, Project leader
10. Performance and Emission Characteristics of a Diesel Engine Operating with Biofuel, UMP-Short Grant 2010 (RDU100333), 15/05/2010 – 14/05/2011, Project Leader
11. Characteristic of Biomass Derived Liquid Fuels, GRS100311, 11/07/2010 - 30/06/2012
12. Combustion Characteristic of High Energetic Fuel, GRS120327, 15/06/2012 – 14/05/2014
13. Engine Testing on Biodiesel Blend with Small Portion of Additive for Performance Improvement, GRS130307, 01/04/2013 – 31/03/2016
14. Modern Electrostatic Charging for Diesel Particulate Matter by using Electrostatic Cyclone under Positive DC Voltage, GRS130308, 01/04/2013 – 31/03/2015
15. Development and Efficiency Study of LPG Burner for Traditional Local Foundry, GRS110323, 15/06/2012 – 14/05/2014

16. Mengkaji Prestasi Potassium Nitrat Sebagai Bahan Dorong Pepejal untuk Enjin Rocket VOT 71901, Short-Grant UTM. 2004, Universiti Teknologi Malaysia (Project Leader)

PROJECT MEMBER

17. Engine Valve Seat wear study on Compressed Natural Gas (CNG) by using Nano Powder, FRGS, RM125, 10/03/2014 - 01/03/2017, Project member
18. Enhanced driver seating comfort in a small size car through digital human modelling(DHM)and pressure mapping method, FRGS, RM115,100, 01/09/2014 - 31/08/2017, Project member
19. Jathropha-Palm Blends a Biodiesel fuel for internal combustion engine: A development on blending process and analysis of performance, emissions and lubricity. 600-RMI/ST/FRGS 5/3/Fst (103/2010), Universiti Teknologi MARA, Project member
20. The Influence of Driving Behaviour Factors to Road Vehicle Safety and Accident Reduction, FRGS/2/2013/TK07/UMP/02/1, RM110,000. 12/2013 – 12/2015, Project member
21. Development and Characteristics of Waste Cooking Oil as Bio -lubricant and nano-lubricant at High Temperature, (Ref: FRGS/2/2013/TK01/UMP/02/4), RM59, 000 Approved
22. Concentrating Solar Thermal-Powered Biomass Syngas Modelling Process for Green Electricity Conversion, FRGS/2/2013/TK06/UMP01/1, RM100,000. 12/2013 – 12/2015, Project Member
23. The Effect of Steam Injection on Power and Emission of Hybrid Air-Diesel Engine Using Steam Injector, FRGS/2/2013/TK06/UMP/01/2, RM120,500. 12/2013 – 12/2015, Project member
24. Ambient Air Quality Monitoring of Particulate Matter in Around Waste Facilities. UMP Internal Research Grant RDU140361, (15/05/14 – 14/05/16) RM13,100, Project member
25. Turbocharger Performance Map and Engine Modeling for Turbo Engine, (05/06/2014 – 04/06/2016) UMP Internal Research Grant. RDU140378, RM20,600.
26. Analysis of Tire Derived Fuel Spray and Combustion Characteristics Inside Optical Accessible Chamber by Using Schlieren Photography Technique, UMP Internal Research Grant. RDU121418, (15/12/2012-14/12/2014), RM55,000, Project Member
27. Characteristic of Engine Oil with Nano Particle as an Additives, UMP Internal Research Grant. RDU130393, (25/11/2013 – 24/11/2015) RM34,500, Project member
28. Enhanced Cylinder Mixture Stratification Method Using Pre-Chamber Fuel Injection System for System Cylinder 4 Stroke Natural Gas Engine, UMP Internal Research Grant, RDU120343, (01/06/2012 – 31/05/2014), RM36,500, Project member
29. Underground Water Treatment System for Domestic and Agriculture Uses, **International Research Fund (South Korea)** RDU131008, (15/07/2013 – 14/07/2014), RM153,404.55, Project member

30. Development of Ultrasonic Superfine Waste Biomass Particles Pulverisation Equipment for Multiple Energy Conversion Utilization, **Industry Research Contract** RDU131401, (17/09/2013 - 18/09/2015), RM49,542, Project member
31. Development of Multiaxial Fatigue Modelling for Lightweight Automotive Suspension Components, UMP Internal Research Grant RDU1303127, (25/12/2013 – 24/12/2015), RM34,000. Project member
32. Fundamental Study of EG Based Nanofluids for Application in Automotive Cooling System, UMP Internal Research Grant RDU130391, (25/11/2013 – 24/11/2015) RM33,000. Project member
33. Development of Fuel Testing System on Chassis Dynamometer for Compressed Natural Gas Direct Injection Powered Vehicle, Internal Research Grant RDU130313, (15/05/2013 – 14/05/2015) RM35,000, Project member
34. Combustion Characteristics of Ammonium Perchlorate Base Solid Propellant at High Pressure, RDU121307, 15/11/2012 – 15/11/2014, Project member
35. Construct the Schlieren Optical Visualization and Modeling on Image Processing Technique for Flame Development and Fuel-Air Mixture Formation, RDU121201, 01/06/2012 – 31/05/2014, Project member
36. Next Generation of Renewable Energy & Combustion Strategies, MTUN-CoE Grant, 2012-2015, Project member
37. Development of New Lubricant Dispersed with Nanoparticles, RDU110336, 01/08/2011 – 01/11/2012, Project member
38. Performance & Emission of a Diesel Engine Operating with Emulsified Biodiesel, RDU120022, Project member
39. Experimental Investigation of Tidal Current Energy Extraction Potential in Kuala Pahang, RDU120318, 01/06/12 – 30/05/2014, Project member
40. Combustion Characteristic of Emulsified Biodiesel, FRGS-KPT Research Grant, FRGS/2012/TK07/UMP/03/12, 05/05/12-04/05/14, Project member
41. Computational Analysis on Thermal Stress in Diesel Particulate Filter during Soot Loading and Regeneration, FRGS-KPT Grant, 01/07/11-30/06/2013, Universiti Teknologi MARA, Project member
42. Analysis of Diesel and Biodiesel Fuels Spray Characteristics for Clear Spray Images by Using Nano-Spark Shadowgraph Photography Technique, FRGS-KPT Grant, 08/07/2011-08/07/2013, Project member
43. Development of Optical Accessible High Pressure Fuel Combustion Chamber for Diesel Fuel and Alternative Fuel Combustion Efficiency Experiment (RDU110308) 12/05/2011 – 12/05/2012, Project member

44. The Development of High Temperature Combustor System for High Performance Furnace Unit (RDU110301), 01/01/2011 – 31/12/2011, Project member
45. Modelling of Thermal Comfort and Productivity in Automotive Industries (RDU100351), 1/08/2010 – 31/07/2012, Project member
46. Determination of Certain Thermo-Physical Properties of Nanofluid Useful in the Estimation of Heat Transfer Coefficient, UMP-Short Grant 2010 (RDU100349) 15/07/2010 – 14/07/2011, Project member
47. Modeling And Analysis of Modular Wind Turbine System, UMP-Short Grant 2010 (RDU100325), 01/05/2010 – 31/10/2011, Project member
48. The Development and Efficiency Study of LPG Burner for Traditional Local Foundry. UMP-Short Grant 2010 (RDU100334), 15/05/2010 – 14/05/2011, Project member
49. Pembangunan Roket Motor Bersaiz Kecil, (Vot 72397), Universiti Teknologi Malaysia, Short-Grant UTM. 2007 (Researcher)
50. Assembly Line Balancing for Automotive Manufacturing-Short term Grant KUKTEM (RDU04/1/13) Amount RM36 000.00 (Researcher)

Consultations

1. Spray and combustion testing of a biofuel with 10 different fuel blend, UMP Consultancy & Training Sdn Bhd, 2017
2. Testing and analysis of novel catalytic converter, UMP Consultancy Sdn Bhd, 2016
3. Characterization of lean angle for a mixed flow turbine, UMP Consultancy Sdn Bhd, 2016
4. Spray test for biobased fuel at multi condition, UMP Consultancy & Training Sdn Bhd, 2016
5. Engine performance and emission testing with biofuel, UMP Consultancy Sdn Bhd, 2016
6. Combustion and emission test of multi-blend biobased fuel, UMP Consultancy Sdn Bhd, 2016
7. Testing and analysis of alumina nanofluids stability and properties, UMP Consultancy & Training Sdn Bhd, 2016
8. Testing and analysis of alumina nanofluids heat transfer performance, UMP Consultancy & Training Sdn Bhd, 2016
9. Development of Flood Barrier System for Jabatan Parit & Saliran (JPS), 2014
10. Design & Fabrication of Recycle Bin for Universiti Malaysia Pahang, 2013
11. Development of Mechanical Facilities for Water Treatment Project at Taman Tasik, Universiti Malaysia Pahang, Pekan Campus, 2013
12. Design of Integrated Fuel & Lubricant Oil Line System for Jabatan Pertanian Negeri Pahang, 2012

13. Proposal Design of 10 Ton Overhead Crane for Machinery Workshop at Jabatan Pertanian Negeri Pahang, 2012
14. Provision of a Diesel Engine Testing (SIRIM), 2011
15. Design & Optimise a Cooling Tube of Heat Exchanger for Exhaust Gas Recirculation (EGR), VIN Technologies Plc, (Cost : GBP2000), 2008

Professional Qualification / Membership of Professional Body

1. Graduate Engineer, Board of Engineer, Malaysia (BEM No. 38523R)
2. Institution of Mechanical Engineers (IMechE), United Kingdom (80134511)
3. Member, Society of Automotive Engineering, (SAE-UK: 9110)
4. Member, International Association of Engineering (IAENG 105382)
5. Member, British Science Association
6. Member, Instrumentation & Control Engineering Society
7. Member, Malaysian Energy Professionals Association (MEPA)
8. Member, The International Institute of Engineers, (E1075-Mechanical/Industrial)

Journal Editor

1. Guest editor, Energy, Elsevier, ISSN 0305-2314, (IF 4.3)
2. Editor Advisory Board, Biofuel Engineering, De Gruyter, ISSN: 2084-7181 (<http://www.degruyter.com/view/j/bfuel>)
3. Editor, Journal of Mechanical & Engineering Sciences, ISSN: 2289-4659

Journal Reviewer

1. Applied Energy, **Elsevier**, ISSN: 0306-2619 (ISI Impact Factor: 5.1)
2. Energy, **Elsevier**, ISSN 0360-5442, (ISI Impact Factor: 4.292)
3. Energy Conversion and Management, **Elsevier**, ISSN 0196-8904 (ISI Impact Factor: 2.775)
4. Applied Thermal Engineering, **Elsevier**, ISSN: 1359 - 4311, (ISI Impact Factor: 3.043)
5. Applied Mathematical Modelling, **Elsevier**, ISSN 0307-904X (ISI Impact Factor: 2.291)
6. Biomass and bioenergy, **Elsevier**, ISSN: 0961-9534 (ISI Impact Factor: 3.411)
7. International Journal of Thermal Sciences, **Elsevier**, ISSN: 1290-0729, (IF: 2.769)
8. Experimental Thermal and Fluid Science, **Elsevier**, ISSN: 0894-1777, (IF: 2.128)
9. International Journal of Heat & Mass Transfer, **Elsevier**, ISSN: 0017-9310, (IF: 2.857)
10. International Journal of Mechanical Sciences, **Elsevier**, ISSN: 0020-7403, (IF: 2.481)
11. International Journal of Heat and Mass Transfer, **Elsevier**, ISSN 0017-9310 (IF: 2.857)
12. Journal of Environmental Chemical Engineering, **Elsevier**, ISSN: 2213-3437, (IF: 0.810)
13. Fuel Processing Technology, **Elsevier**, ISSN: 0378-3820, (IF: 3.752)
14. Measurement, **Elsevier**, ISSN: 0263-2241, (IF: 1.742)

15. Physica B: Condensed Matter, **Elsevier**, ISSN: 0921-4526, (IF: 1.348)
16. Journal of Heat Transfer, American Society of Mechanical Engineers (**ASME**), ISSN: 0022-1481 (ISI Impact Factor: 1.718)
17. International Journal of Hydrogen Energy, **Elsevier** , ISSN: 0360-3199 (IF: 4.05)
18. Journal of The Energy Institute, **Elsevier**, ISSN: 1743-9671 (ISI Impact Factor: 0.46)
19. Case studies in Thermal Engineering, **Elsevier**, ISSN: 2214-157X (SNIP:1.260)
20. Journal of Resource-Efficient Technologies, **Elsevier**, ISSN: 2405-6537
21. Resource Efficient Technologies, **Elsevier**, ISSN: 2405-6537
22. Journal of Building Engineering, **Elsevier**, ISSN: 2352-7102
23. Journal of Applied Research and Technology, **Elsevier**, ISSN: 1665-6423
24. Engineering Science and Technology: An International Journal, ISSN: 2215-0986, **Elsevier**
25. Journal of the Association of Arab Universities for Basic and Applied Sciences, ISSN: 1815-3852, **Elsevier**
26. Journal of Aerospace Engineering, (American Society of Civil Engineering (**ASCE**), ISSN: 0893-1321
27. The Korean Journal of Chemical Engineering, ISSN: 0256-1115, Springer
28. Society of Automotive Engineering (SAE-US)
29. Journal of Environment Protection Engineering, Wroclaw University of Technology, Poland. ISSN: 0324-8828, (ISI Impact Factor: 0.44)
30. International Journal of Environmental Science Research and Technology, Springer, ISSN 1735-1472 (ISI Impact Factor: 1.844)
31. Journal of Renewable & Sustainable Energy, ISSN: 1941-7012, American Institute of Physics (ISI Impact Factor: 1.2)
32. Journal of Energy and Natural Resources, ISSN: 2330-7366, Science Publishing Group, USA
33. International Journal of Sustainable and Green Energy, Science Publishing Group, USA
34. Journal of Chemical Engineering and Material Sciences, Academic Journal, ISSN: 2141-6605
35. Journal of Mechanical Engineering Research, Academic Journals,
36. International Journal of Renewable Energy and Biofuels, IBIMA Publishing, ISSN: 2333-0589
37. Biofuel Engineering, De Gruyter, ISSN: 2084-7181 (SCOPUS)
38. Jurnal Mekanikal, ISSN: 2289-3873 (SCOPUS), Penerbit UTM
39. Jurnal Teknologi, ISSN: 2180-3722 (SCOPUS), Penerbit UTM
40. Journal of Sustainability Science and Management (JSSM), Penerbit UMT
41. International Journal of Sustainable Energy, ISSN: 1478-6451, Taylor & Francis
42. Journal of Material Science and Engineering, ISSN: 2161-6213, David Publishing, Illinois
43. Journal of Engineering Science & Technology , ISSN 1823-4690, Taylors University
44. IEM Journal, Institute of Engineer Malaysia, ISSN 0126-513X
45. International Journal of Physical Sciences, ISSN 19921950, Academic Journal Inc
46. International Journal of Automotive & Mechanical Engineering , ISSN 2180-1606, Penerbit UMP
47. Journal of Mechanical Engineering & Sciences, ISSN 2231-8380, Penerbit UMP

Professional Invitations

1. Visiting Professor, Karlsruhe University of Applied Science, Germany, 2016 – 2017
2. Visiting Professor, Universitas Gajah Putih, Aceh Indonesia, 2017
3. Visiting Professor, Universitas Serambi Mekah, Aceh Indonesia, 2017
4. Visiting Professor, Universitas Iskandar Muda, Aceh Indonesia, 2017
5. Visiting Professor, Universitas Malahayati, Lampung Indonesia, 2017
6. Visiting Professor, Institute Teknologi Nasional, Malang Indonesia, 2017
7. Visiting Professor, STKIP Getsempena, Aceh Indonesia, 2017
8. Visiting Professor, Abulyatama University, Aceh Indonesia, 2016
9. Guest Professor (2016), Faculty of Mechanical Engineering, Ningxia University, 489 Helanshan W Rd, Xixia, Yinchuan, Ningxia, China
10. Visiting Professor (2016), Faculty of Mechanical Engineering, PSN College of Engineering, affiliated to Anna University, Cennai, India
11. Visiting Professor (2015), Faculty of Mechanical Engineering, Ningxia University, 489 Helanshan W Rd, Xixia, Yinchuan, Ningxia, China
12. Keynote Speaker, International Conference on Sustainable Developments in Science Engineering Technology and Humanities, 10-11 March 2016, Tamilnadu, India
13. Keynote Speaker, International Conference on Functional Materials, 7 – 10 September 2016, Tamilnadu, India
14. Keynote speaker, Putrajaya International Built Environment, Technology and Engineering Conference, 24-25 September 2016, Putrajaya, Malaysia.
15. Keynote Speaker, Conference on Automotive Research (East Zone), 22 August 2016, Dungun, Terengganu, Malaysia
16. Invited lecture (2015) to Universitas Pendidikan Indonesia, Bandung, Indonesia
17. Invited speaker, (9th International Conference on Renewable Energy Sources (RES 15), April 23-25 2015, Kuala Lumpur
18. Invited speaker, How to get published in high impact journals, Faculty of Computer Science and Software Engineering, Universiti Malaysia Pahang, 1 June 2016
19. Invited panel for Research Grant evaluation by University of Technology, Petronas (UTP)
20. Invited panel as reviewing committee of Deanship Scientific Research (DSR) at Umm Al-Qura University, Saudi Arabia
21. Invited panel for FRGS evaluation (May 2015)
22. Invited panel for Anugerah Naib Chancellor 2015 (Vice Chancellor Awards 2015)
23. Invited guess lecture for Research and Publications (Organised by Universitas Pendidikan, Indonesia)
24. Invited speaker for Publications in High Impact Journal 2015 (Organised by Centre for Earth Resources and Research Management, CERRM)
25. Invited speaker for Research Methodology Course 2015 (Organised by Centre for Academic Innovation and Competitiveness, Universiti Malaysia Pahang)
26. Invited speaker for Research Methodology Course 2014 (Organised by Centre for Academic Innovation and Competitiveness, Universiti Malaysia Pahang)
27. Invited speaker for Research Methodology Course 2013 (Organised by Centre for Academic Innovation and Competitiveness, Universiti Malaysia Pahang)
28. Invited keynote speaker, 3rd Korea and Malaysia Workshop on Watershed Management, 26-28 June 2013. Seoul, Korea

PhD MAIN SUPERVISOR

1. Wan Azmi Wan Hamzah (2010-present) Thesis title: Heat Transfer Augmentation with Certain Nanofluids in a Plain Tube with Inserts (Main Supervisor) **[Status: Graduated]**
2. Obed Majeed Ali (2012-2014) Thesis title: Combustion Characteristic of Biodiesel Blend with Additives (Main Supervisor), **[Status: Graduated]**
3. Ahmad Fitri Yusop (2011-present) Thesis title: Influence of The Biofuel Properties on Internal Combustion Engine and Aftertreatment Performance (Main Supervisor) **[Status: Graduated]**
4. Akasyah Mohd Khathri (2012-present) Thesis title: Modeling of Engine Performance & Emission of a Multi-Cylinder Diesel Engine **[Status: Thesis writing]**
5. Mohd Hafizil Mat Yasin (2014-present) Thesis title: Cyclic Variations of a Diesel Engine Operating with Biofuel **[Status: Graduated]**
6. Abdol Baqi Mohammed Khdher (2014-present) Thesis title: Numerical analysis of thermohydraulic analysis of ribbed tube with Al₂O₃ nanofluids. **[Status: Graduated]**
7. Rosdi Salleh (2014-present) Thesis title: Experimental investigation of diesel engine operating with emulsified diesel **[Status: Thesis writing]**
8. Che Wan Mohd Noor (2014 - present) Thesis title: Prediction of marine diesel engine performance and exhaust emission using hybrid artificial intelligent approach **[Status: Thesis writing]**
9. Hazman Abu Hassan (2014 - present) Thesis title: Emissions of particulate matter from the combustion of oxygenated fuel in diesel engine **[Status: Thesis writing]**
10. Muhammad Yusri Ismail (2015 - present) Thesis: Performance and emission characteristics of a common-rail direct injection engine fuelled with alcohol blend **[Status: Graduated]**
11. Omar Ibraheem Awad (2015 - present) Thesis title: Investigations of Performance and Emission of a Gasoline Engine with Biofuel **[Status: Graduated]**
12. Mohamad Redhwan Bin Abd Aziz (2015- present) Thesis title: Nanofluids for engine cooling system

PhD CO-SUPERVISOR (UMP STUDENTS)

13. Mohd Hafiz Ali (2014-present) Thesis title: experimental investigation of the effect of antioxidant additives on exhaust emissions of a diesel engine using biodiesel,
14. Bennedict Foo Jing Siong (2014-present) Thesis: A fully integrated process for biodiesel production from Microalgae

15. Mohd Fadzil (2013-present) Thesis title: Design of fuel injection system for CNG engine,
16. Mohd Kamal Kamarulzaman (2015 - present) Thesis: Engine testing with Biofuel

PHD CO-SUPERVISOR (OTHER INSTITUTIONS)

17. Muhammad Bahaddin Kamal (2013-present) Thesis title: Biogas fuel testing on engine performance, Institution: School of Engineering, Universiti Teknologi Petronas (UTP),
[Status: Graduated]
18. Ibraheem (2015-present) Thesis title: Biodiesel from the biomass , Institution: School of Engineering, Universiti Teknologi Petronas (UTP), Tronoh, Perak
19. Irni Zakaria, (2012-present), Thesis title: Nanofluids on fuelcell system, Faculty of Mechanical Engineering, Universiti Teknologi MARA, Shah Alam, **[Status: Graduated]**
20. Farzad Jaliliantabar (2013-present) Thesis title: Using of EGR in diesel engine to reduce the emission by diesel and biodiesel blended fuel, Tarbiat Modares University, Tehran, Iran
[Status: Graduated]
21. Nemat Keramat Siarash (2014-present), Thesis title: Investigation of diesel engine vibration using biodiesel-diesel blends, Tarbiat Modares University, Tehran, Iran

MEng Students

(MASTER OF ENGINEERING) MAIN SUPERVISOR

1. Rafidah Rahim (2010-2012) Thesis title: Characteristic of Biomass Derived Liquid Fuel (Main Supervisor), **Graduated**
2. Mohd Hafizil Mat Yasin (2010-2012) Thesis title: Performance and Emission of a Diesel Engine Operating with Biofuel, (Main Supervisor), **Graduated**
3. Ahmad Fitri Yusop (2011-2013) Thesis title: Internal Combustion Engine and Aftertreatment Performance (Main Supervisor), **Graduated**
4. Shafiq Suhaimi, (2013-present) Thesis title: Air Intake Port Optimization Using CFD Analysis (Main supervisor), **[Status: Graduated]**
5. Muhammad Hafizi Jamaludin (2014-present), Thesis title: Combustion Characteristic of Ammonium Perchlorate Base Solid Fuel **[Status: Graduated]**
6. Wan Normawaa Wan Ghazali (2014-present), Thesis title: Combustion Characteristic of Emulsified Biodiesel on Diesel Engine
7. Mohd Fadhil Md Shukor (2014-present), Thesis title: Marine diesel engine performance with biodiesel

(MASTER OF ENGINEERING) CO-SUPERVISOR (UMP STUDENTS)

8. Nur Fauziah Bt Jaharudin (2011-present), Particulate Matter from the combustion of biodiesel
[Status: Graduated]
9. Khamisah Abdul Hamid (2013-present) Thesis title: Characteristic of nanofluids in cooling systems (Main Supervisor) **[Status: Graduated]**
10. Nor Ashikin Usri (2014-present) Thesis title: Nanofluids heat transfer **[Status: Graduated]**
11. Nur Atiqah Bt Ramlan (2011-present), Thesis title: Engine performance and emission of a diesel engine operating with biodiesel derived from waste cooking oil **[Status: Graduated]**
12. Mahbubul Hassan (2014-present), Thesis title: Particulate Matter (PM) from the combustion of emulsion fuel in diesel engine **[Status: Graduated]**

(MASTER OF ENGINEERING) CO-SUPERVISOR (OTHER INSTITUTIONS)

1. Siti Sakinah (2013-present), Thesis title: Nanofluid properties, Faculty of Mechanical Engineering, Universiti Teknologi MARA **[Status: Graduated]**
2. Muhamad Safwan Zainordin, (2014-2015), Thesis title: Automated Mixing Controller System of Emulsified Diesel Fuel for Internal Combustion Engine. Department of Mechanical Engineering, Karlsruhe University of Applied Science, Germany **[Status: Graduated]**

(BACHELOR DEGREE) CO-SUPERVISOR (OTHER INSTITUTIONS)

3. Edgar Hubert (2014-2015), Thesis title: Effect of water injection on diesel engine, Department of Mechanical Engineering, Karlsruhe University of Applied Science, Germany (Bachelor degree) **[Status: Graduated]**
4. Marcel (2014-2015), Thesis title: Effect of water injection on performance and emission of a diesel engine, Department of Mechanical Engineering, Karlsruhe University of Applied Science, Germany (Bachelor degree) **[Status: Graduated]**
5. Frank Carsten (2015-present), Thesis title: Engine performance and emission with water injection, Department of Mechanical Engineering, Karlsruhe University of Applied Science, Germany (Bachelor degree) **[Status: Graduated]**

Postgraduate Thesis Examiner

1. Philosophy of Doctor, Universiti Teknologi Malaysia, Thesis title: Heat transfer Augmentation Using Nano Fluids for Evacuated Tube Solar Collector Application, 2016

2. Philosophy of Doctor, Universiti Tenaga Nasional, Thesis title: CFD analysis of hydro-power for energy, 2016
3. Philosophy of Doctor, Universiti Tun Hussein Onn Malaysia, Thesis title: Parametric study on the design of baffle for 3-dimensional turning diffuser, 2016
4. Philosophy of Doctor, Malaysia-Japan Institute of Technologi, Thesis title: Real-Time Water-in-Diesel Emulsion Fuel Production System for Diesel Electric Generator, 2015
5. Master of Engineering (Mechanical), Universiti Teknologi Malaysia, Thesis title: Conversion of CNG engine, 2016
6. Master of Science thesis, Universiti Malaya, Thesis title: Fuel Consumption and Emission Characteristics Of A Biodiesel Fueled Engine at Idling Conditions, 2016
7. Master of Science, Universiti Kebangsaan Malaysia, Thesis title: Kajian berangka proses pembakaran bahan api hidrogen enjin pencucuhan mampatan dalam atmosfera argon-oksigen (in Malay Language), 2016
8. Master of Engineering, Universiti Teknologi Malaysia, Thesis title: Study on Combustion Performance of Jatropha and Used Cooking Oil Biodiesels in a Liquid Fuel Burner, 2016
9. Master of Science, Universiti Sains Malaysia, Thesis title: Investigation of Longitudinal Aerodynamic Characteristics of an Aircraft Model Wing with RGV Bird Feather Like Winglet, 2016
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16. Master of Mechanical Engineering, Universiti Tenaga Nasional, Thesis title: Numerical Investigation of a cross flow cooling tower, 2014
17. Master of Science, Universiti Teknologi Petronas, Thesis title: Effect of Pass Ratio and Flow Pass Configurations on the Thermal and Hydraulic Performance of the Aluminium Mini-Channel Heat Exchanger, 2014
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9. Performance and Emission Characteristics of a IDI Diesel Engine operating with Palm Methyl Ester (PME) 4th Engineering Conference 2011 (EnCON 2011), 29th November – 1st December 2011, Riverside Majestic Hotel Kuching, Sarawak organized by Faculty of Engineering, UNIMAS
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67. Rizalman Mamat, H.M. Xu, M.L.Wyszynski (2008) Performance and Emission Characteristics of High Performance Diesel Engine Operating with Biodiesel, Graduate School Poster & Networking Conference, 11 June 2008, The University of Birmingham, United Kingdom

Exhibitions

1. Water And Biodiesel As Emission Control In Diesel Engine Creation, Innovation, Technology & Research Exposition , Citrex2014 (Gold)

2. Rocket Engine For Weather Modification (Silver) Creation, Innovation, Technology & Research Exposition Citrex2014, (Gold)
3. Energy Extraction From Tidal Current, Innovation, Technology & Research Exposition , Citrex2014, (Gold)
4. Water And Biodiesel As Emission Control In Diesel Engine, International Invention, Innovation & Technology Exhibition (ITEX2014), Silver
5. New coolants for enhanced performance in automobile radiators and manufacturing process, Creation, Innovation, Technology & Research Exposition (CITREx2012), 26-28 March 2012, Silver Medal
6. Compact Turbine Jet Engine, Creation, Innovation, Technology & Research Exposition (CITREx2012), 26-28 March 2012
7. Variable Intake System for Spark-Ignition Engine, Creation, Innovation, Technology & Research Exposition (CITREx2012), 26-28 March 2012
8. Zinc Oxide Nanoparticle Synthesis with Furnace Reactor, 23rd International Invention, Innovation & Technology Exhibition, 17-19 May 2012, Kuala Lumpur, Silver Medal
9. Nanofluid Technology, 23rd International Invention, Innovation & Technology Exhibition, 17-19 May 2012, Kuala Lumpur, Gold Medal
10. Aluminium Oxide Nanoparticle Synthesis with Furnace Reactor, Creation, Innovation, Technology & Research Exposition (CITREx2012), 26-28 March 2012, Silver Medal
11. Electrostatic Charging for Reduce Particulate Matter from Automobile Exhaust Gas, Creation, Innovation, Technology & Research Exposition (CITREx2012), 26-28 March 2012, Silver Medal
12. Design of a Smart LPG Furnace, Malaysia Technology Expo 2011 (MTE2011), 17-19 February 2011, Kuala Lumpur, Bronze Medal
13. Design of a Smart LPG Furnace, Moscow International Innovation Salon (Archemedis 2011), 5-8 April 2011, Eco-Center Sokolniki, Moscow, Russia. Gold Medal
14. Development of High Temperature Combustor System for Automotive Casting Industries, Innovation and Invention Exhibition (InEx 2011), 6-7 December 2011, Gold Medal
15. Static Thrust Test Rig for Solid Rocket Motor, (2002) Invention, Innovation Industrial Design & Technology Exhibition (ITEX 2002)
16. Development of Potassium Nitrate Solid Rocket Propellant, (2002) Invention, Innovation Industrial Design & Technology Exhibition (ITEX 2002)
17. Design of Instrumentation for Rocket Engine Testing (2001) Industrial Art & Technology Exhibition (INATEX 2001)

18. Development of a Small Rocket Engine (2000) Industrial Art & Technology Exhibition
(INATEX 2000)

Patents

1. Malaysia Patent (Patent number: PI2011002027): Heat Transfer Nanofluids
2. Malaysian Patent (Patent number: PI 20023809): An Apparatus to Determine the Characteristics of Solid Propellant

Awards

1. Cendekia Bitara Award 2016 (Category: Journal publication)
2. Cendekia Bitara Award 2015 (Category: Journal publication)
3. Cendekia Bitara Award 2014 (Category: Journal publication)
4. Cendekia Bitara Award 2013 (Category: Journal publication)
5. Cendekia Bitara Award 2012 (Category: Research product)
6. Gold Medal, Nanofluid Technology, 23rd International Invention, Innovation & Technology Exhibition, 17-19 May 2012, Kuala Lumpur
7. Silver Medal, Zinc Oxide Nanoparticle Synthesis with Furnace Reactor, 23rd International Invention, Innovation & Technology Exhibition, 17-19 May 2012, Kuala Lumpur
8. Gold Medal, Development of High Temperature Combustor System for Automotive Casting Industries, Innovation and Invention Exhibition (InEx 2011), 6-7 December 2011
9. Gold Medal, Moscow International Innovation Salon (Archemedis 2011), 5-8 April 2011, Eco-Center Sokolniki, Moscow, Russia
10. Bronze Medal, Malaysia Technology Expo 2011 (MTE2011), 17-19 February 2011, Kuala Lumpur,
11. Ministry of Higher Education Scholarship, PhD at University of Birmingham, UK (2006-2009)
12. National Science Fellowship Award, M.Eng at University Teknologi Malaysia, (2000-2001)
13. MARA Scholarship, B.Eng (Mechanical), Universiti Teknologi Malaysia (1995-1999)
4. Dean list, 1995, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia
5. Dean list, 1996, Faculty of Mechanical Engineering, Universiti Teknologi Malaysia
6. Golden Key Award. 2006
7. Anugerah Penerbitan UTM, 2003