



PERSONAL DETAILS

Name	Aman Mohd Ihsan Mamat														
Address	Faculty of Mechanical Engineering, Universiti Teknologi MARA, 40450, Shah Alam, Selangor, MALAYSIA														
Staff No	189837														
Grade of Position	Senior Lecturer (DM52)														
Faculty/ Department	Mechanical Engineering/ Thermofluids & Energy														
Research Area	Automotive & Aerospace Powertrain, Energy Recovery & Turbomachinery														
Date of Appointment	18 October 2005														
Date of promotion to the present position	1 Febuary 2009														
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Google Scholar	http://scholar.google.com/citations?hl=en&user=pELX_BUAAAAJ&view_op=list_works Citations: 131 H Index : 7 I10- Index : 5	Citation indices Citations h-index i10-index	<table border="1"> <thead> <tr> <th></th> <th>All</th> <th>Since 2011</th> </tr> </thead> <tbody> <tr> <td>Citations</td> <td>131</td> <td>104</td> </tr> <tr> <td>h-index</td> <td>7</td> <td>5</td> </tr> <tr> <td>i10-index</td> <td>5</td> <td>5</td> </tr> </tbody> </table>		All	Since 2011	Citations	131	104	h-index	7	5	i10-index	5	5
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Citations	131	104													
h-index	7	5													
i10-index	5	5													

A. ACADEMIC QUALIFICATION

	Qualification	Year	Institution
1.	American Degree Program – Certificate in General Studies	1997	Centre For Preparation Education – Institut Teknologi MARA (PPP-ITM)
2.	Bachelor of Mechanical Engineering – Aeronautics (Hons)	2001	Universiti Teknologi Malaysia, Skudai, Johor
3.	Mastere Specialize – Techniques Aeronautique et Spatials (Aeronautics)	2004	Ecolé Nationale de l’Aeronaique et De l’Espace (ENSAE), Toulouse, France
4.	Doctor of Philosophy in Mechanical Engineering Thesis Title : Design and Development of a High Performance LPT for Electric Turbocompounding Energy Recovery Unit in a Heavily Downsized Engine	2012	Imperial College London

B. PROFESSIONAL MEMBERSHIPS

	Membership	Year	Institution
1.	Member (49206R)	2006	Board of Engineers Malaysia (BEM)
2.	Member # 100061388	2009	American Society of Mechanical Engineers (ASME)

C. POSITIONS PREVIOUSLY HELD

	Position	Year	Organization/Employer
1.	Mechanical Designer	2002 - 2003	R&D 2, Visual Product Division, SONY TECHNOLOGY MALAYSIA, Bandar Baru Bangi, Selangor.

TEACHING & LEARNING

A. TEACHING PHILOSOPHY

NURTURING WORLD CLASS ENGINEERS THROUGH CLASS DISCUSSION, EXPERIENTIAL LEARNING, FAIR ASSESSMENT AND INNOVATIVE RESEARCH

B. SIGNIFICANT ACHIEVEMENTS AND DEVELOPMENT OF TEACHING

2004 - 2005

- i. First year of Teaching Engineer
- ii. Implement Power Point slide show teaching method for Strength Of Materials II (KJM311) subject.
- iii. Onsite teaching method for Body and Chassis Technology (KJV391&KJV326) subject to the national automotive industries such as PROTON Holdings Bhd and their supplier (Hicom Tek See)
- iv. Prepare Lecture Note for Propulsion Course (KJT315)
- v. Attended Regional Conference on Engineering Education (OBE implementation) – the first conference on engineering education in Malaysia

2006

- i. Onsite teaching method for Body and Chassis Technology (KJV391&KJV326) course to the national automotive industries such as PROTON Holdings Bhd and their supplier (Hicom Tek See)
- ii. Improvement of Propulsion (KJT315) Lecture note
- iii. Invitation External Lecturer for Aircraft Maintenance and Structure Repair

- iv. Propose a new program - Bachelor of Engineering in Mechanical Engineering (Aeronautics)

2007

- i. Started Outcome Based (OBE) for engineering course (KJM400)
- ii. Experience learning through Spaghetti Bridge Competition
- iii. Involve in the curriculum review for adapting OBE method for EM220 curriculum structure
- iv. Introduce Thermal Engineering (MEC551) course
- v. Invitation External Lecturer for Aircraft Maintenance and Structure Repair
- vi. Assessment Method Based on CO-PO (OBE) for KJM400
- vii. Prepare Power Point note for Strength Of Materials II (KJM311) subject.
- viii. Prepare Lecture Note for Propulsion Course (KJT315)

2008

- i. Continuous Quality Improvement (CQI) the implementation of Outcome Based Education (OBE) MEC400 and KJM491
- ii. Assessment Method Based on OBE for MEC400 and KJM491
- iii. Use Performance Criteria Rubrics as assessment tools
- iv. Lead the curriculum development for newly introduce subject for Aerospace Special Topics such as Introduction to Aircraft Schedule Maintenance (KJM594) and Aircraft Propulsion System (KJM595)
- v. Lead and manage the development of new program – Bachelor of Engineering in Mechanical Engineering (Aeronautics)
- vi. Wrote and presented Engineering Education Conference Paper “PROGRAM OUTCOME ASSESSMENT FOR ENGINEERING COURSE” for InCULT 2008 (Currently received 2 citations)

2012

- i. Taught Thermal Engineering (MEC551)
- ii. Assessment method based on OBE for MEC551
- iii. Introduce Problem Based Learning for MEC551 to accommodate for complex engineering problem (CEP) requirement
- iv. Used Performance Criteria Rubrics to give fair assessment for Problem Based Learning

2013

- v. Taught Thermal Engineering (MEC551) & MEC652 (Wind Turbine Design)
- vi. Assessment method based on OBE for MEC551 & MEC652
- i. Introduce Problem Based Learning for MEC551 & MEC652 to accommodate for complex engineering problem (CEP) requirement
- ii. Constructive alignment for the Performance Criteria Rubrics as a fair assessment tool in the Problem Based Learning
- vii. Apply Continuous Quality Improvement (CQI) and MyOBE to improve haigh failure rate in MEC551
- viii. Experiential learning for Wind Turbine Design by using the CFD analysis

2014

- i. Outcome Based Implementation for MEC551 and MEC 652
- ii. Assessment Method Based on OBE for MEC551 and MEC 652
- iii. Review the experiential learning for Wind Turbine Design (MEC652)
- iv. Use Performance Criteria Rubrics as assessment tools for Problem Based Learning
- iii. Blended Learning was implemented for teaching and learning in MEC652
- iv. Apply Continuous Quality Improvement (CQI) and MyOBE high failure rate in MEC551
- v. Wrote and presented an engineering education conference paper “Complex Engineering Problem Assessment in Thermal Engineering Course”, Second UiTM Colloquium for Teaching and Learning, June 2014

2015

- i. Improve the high failure rate in MEC551 from 55% in 2013 to 17% in 2015 (Result for Feb. 2016) by using constructive alignment in the Final Exam formatting.
- ii. Review the assessment strategy for Problem Based Learning assignment

- iii. Blended learning for MEC551

C. COLLABORATIVE OR TEAM TEACHING

Preparation for final exam questions for various sharing subjects including;

- i. Mechanics Of Materials II(KJM311)
- ii. Thermodynamics I (KJM231)
- iii. Heat and Fluids (KJM442)
- iv. Introduction to Mechanical Engineering Science (KJM203)
- v. Propulsion (KJT315/371)
- vi. Thermodynamics II (KJM491)
- vii. Thermal Engineering (MEC551)

D. COLLABORATIVE OR TEAM TEACHING

a. Assessment

- i. Final Year Project 1 & 2 panel for every semester since 2004
- ii. Industrial Project panel for Masters Engineering Management (EM704) program since 2014
- iii. External Examiner for UTM MSc Student – CHIONG MENG CHOUNG (SIMULATION STUDY THE EFFECT OF PASSIVE CONTROL TURBOCHARGING ON DIESEL PERFORMANCE) in 2014

b. Responses to student feedback

- i. Received MRI form and improve teaching and learning
- ii. Analyse and continuous quality improvement (CQI) are done for every semester

c. Development of flexible delivery modules

- i. Develop Power Point note for Strength Of Materials II (KJM311) subject.
- ii. Develop Lecture Note for Propulsion Course (KJT315)
- iii. Improving lecture note for Thermal Engineering (MEC551)
- iv. Improving lecture note for Wind Turbine Design (MEC 652)
- v. Applying blended learning for MEC652 and MEC551

d. Problem Based Learning Development

- i. Assignment based on Technical Survey which is the students need to make a simple survey in their interested area but related to the subjects. The implementation are for the Automotive Technology II (KJV392) subject and Body and Chassis Technology (KJV391) subject. The purpose of such kind assignment is to expose the students with currents issues and to ensure them to aware with the latest improvement in the automotive technologies. The presentation at the end of the assignment had success to initiate the students on how to make a good presentation.
- ii. Develop assignment base from OBE implementation for KJM 400
- iii. Develop assignment based from OBE implementation for KJM 491
- iv. Develop Complex Engineering Problem Assignment for MEC551 and MEC652
- v. Improving rubrics assessment method for Complex Engineering Problem

E. FORMAL TEACHING CONTACT

Year/ semester	Course code & Name	Credit Points	Total formal classroom contact	Size, Hours of contact per week
2005/Dec '04 – Apr 05	Strength Of Materials II/ KJM311	3		Size : 11 students Lecture : 3 hrs/week

Year/ semester	Course code & Name	Credit Points	Total formal classroom contact	Size, Hours of contact per week
			75 hrs/semester	Tutorial : 1 hr/week Lab : 2 hrs/week
2005/Dec '04 – Apr 05	Automotive Technology II/ KJV392	3	30 hrs/semester	Size : 30 students Lecture : 2 hrs/week
2005/Dec '04 – Apr 05	Body And Chassis Technology/ KJV391	2	45 hrs/semester	Size : 32 students Lecture : 2 hrs/week Tutorial : 1 hr/week
2005/ May '05	Thermodynamics I/ KJM231	4	60 hrs/semester	Size : 18 students Lecture :10 hrs/week Lab : 2 hrs/week
2005/ July '05 – Nov '05	Introduction to Fluid Mechanics/ KJM272	3	60 hrs/semester	Size : 38 students Lecture : 3 hrs/week Tutorial : 1 hr/week
2005/ July '05 – Nov '05	Body And Chassis Technology/ KJV391	2	45 hrs/semester	Size : 14 students Lecture : 2 hrs/week Tutorial : 1 hr/week
2005/ July '05 – Nov '05	Body And Chassis Technology/ KJV326	2	60 hrs/semester	Size : 28 students Lecture : 1hr/week Lab : 3 hrs/week
2005/ July '05 – Nov '05	Propulsion/ KJT315	3	45 hrs/semester	Size : 14 students Lecture : 2 hrs/week Tutorial : 1 hr/week
2005/ July '05 – Nov '05	Heat and Fluids/ KJM386	3	60 hrs/semester	Size : 67 students (2 groups) Lecture : 3 hrs/week Tutorial : 1 hr/week
2005/ July '05 – Nov '05	Introduction to Mechanical Engineering Science	4	60 hrs/semester	Size : 39 students Lecture : 5 hrs/week
2006/ Jan '06 – May '06	Body And Chassis Technology/ KJV326	2	60 hrs/semester	Size : 28 students Lecture : 1hr/week Lab : 3 hrs/week
2006/ Jan '06 – May '06	Propulsion/ KJT371	3	60 hrs/semester	Size : 25 students Lecture : 3 hrs/week Tutorial : 1 hr/week
2006/ Jan '06 – May '06	Aircraft Maintenance and Repair/ KJT350	3	28 hrs/semester	Size : 25 students Lecture : 2 hrs/week
2006/ Jan '06 – May '06	Heat and Fluids/ KJM442	3	60 hrs/semester	Size : 30 students Lecture : 3 hrs/week Tutorial : 1 hr/week
2006/ July '06 – Nov. '06	Body And Chassis Technology/ KJV326	2	60 hrs/semester	Size : 24 students Lecture : 1hr/week Lab : 3 hrs/week
2006/ July '06 – Nov. '06	Propulsion/ KJT371	3	60 hrs/semester	Size : 27 students Lecture : 3 hrs/week Tutorial : 1 hr/week
2006/ July '06 – Nov. '06	Aircraft Maintenance and Repair/ KJT350	3	28 hrs/semester	Size : 25 students Lecture : 2 hrs/week
2007/ Jan. '07 – May '07	Body And Chassis Technology/ KJV326	2	60 hrs/semester	Size : 4 students Lecture : 1hr/week Lab : 3 hrs/week
2007/ Jan. '07 –	Propulsion/ KJT371			Size : 25 students

Year/ semester	Course code & Name	Credit Points	Total formal classroom contact	Size, Hours of contact per week
May '07		3	60 hrs/semester	Lecture : 3 hrs/week Tutorial : 1 hr/week
2007/ Jan. '07 – May '07	Aircraft Maintenance and Repair/ KJT350	3	28 hrs/semester	Size : 28 students Lecture : 2 hrs/week
2007/ July '07 – Nov. '07	Heat and Fluids/ KJM442	3	60 hrs/semester	Size : 28 students Lecture : 3 hrs/week Tutorial : 1 hr/week
2007/ July '07 – Nov. '07	Propulsion/ KJT371	3	60 hrs/semester	Size : 3 students Lecture : 3 hrs/week Tutorial : 1 hr/week
2007/ July '07 – Nov. '07	Thermodynamics II/ KJM491	3	60 hrs/semester	Size : 37 students Lecture : 3 hrs/week Tutorial : 1 hr/week
2007/ Jan '07 – Nov. '07	Introduction to Engineering and Problem Solving	2	56 hrs/semester	Size : 35 students Lecture : 2 hrs/week Lab : 2 hrs/week
2008/ Jan '08 – April. '08	Thermodynamics II/ KJM491	3	42 hrs/semester	Size : 105 students Lecture : 9 hrs/week 3 Groups
2008/ Jan '08 – April. '08	Heat and Fluids/ KJM442	3	42 hrs/semester	Size : 30 students Lecture : 3 hrs/week
2008/ Intersesi 2008	Thermodynamics II/ KJM491	3	42 hrs/semester	Size: 23 students Lecture: 10 hrs/ week
2008/ July'08 – October '08	Thermodynamics II/ KJM491	3	42 hrs/ semester	Size: 26 students Lecture: 3 hrs/ week 1 group
2008/ July'08 – October '08	Introduction to Engineering and Problem Solving/ MEC400	3	56 hrs/ semester	Size: 74 students Lecture: 2 hrs/ week Lab: 2 hrs/ week 2 groups
2008/ July'08 – October '08	Heat and Fluids/ KJM442	3	42 hrs/ semester	Size: 26 students Lecture: 3 hrs/ week 1 group
2012/ September'12	MEC551/ Thermal Engineering	3	84hrs/semester	Size: 18/35 Lecture: 3 hrs/week 2 Groups
2013/ Mac'12	MEC551/ Thermal Engineering	3	42hrs/semester	Size: 15 Lecture: 3 hrs/week 1 Groups
2013/ Mac'12	MEC652/ Wind Turbine Design	3	112hrs/semester	Size: 27/30 Lecture: 4 hrs/week 2 Groups
2013/ September'12	MEC551/ Thermal Engineering	3	63hrs/semester	Size: 30/30 Lecture: 3 hrs/week 2 Groups
Mac 2013 – Jul 2013	Wind Turbine Design/ 652	3	56hrs/semester	Size: 30/30 Lecture: 3 hrs/week 2 Groups
Mac 2013 – Jul 2013	Thermal Engineering/ MEC551	3	56hrs/semester	Size: 30/30 Lecture: 3 hrs/week 2 Groups

Year/ semester	Course code & Name	Credit Points	Total formal classroom contact	Size, Hours of contact per week
Sept 2013 – Jan 2014	Thermal Engineering/ MEC551	3	56hrs/semester	Size: 15 Lecture: 3 hrs/week 1 Group
Mac 2014 – Jul 2014	Wind Turbine Design/ 652	3	56hrs/semester	Size: 28/32 Lecture: 3 hrs/week 2 Groups
Sep 2014 – Jan 2015	Thermal Engineering/ MEC551	3	56hrs/semester	Size: 31/28 Lecture: 3 hrs/week 2 Groups
Mac 2015 – Jun 2015	Wind Turbine Design/ 652	3	56hrs/semester	Size: 22 Lecture: 3 hrs/week 1 Group
Sep 2015 – Dec 2015	Thermal Engineering/ MEC551	3	56hrs/semester	Size: 31/28 Lecture: 3 hrs/week 2 Groups
Jan 2016- July 2016	Thermal Engineering/ MEC551	3	56hrs/semester	Size: 28 Lecture: 3 hrs/week 1 Groups
Jan 2016- July 2016	Thermofluids Lab I/ MEC454	1	28hrs/semester	Size: 28 Lecture: 2 hrs/week

F. SUPERVISION

a. Coursework and research supervision

Undergraduate (Bachelor of Engineering in Mechanical (Honours)- Completed

	UNDERGRADUATE	TITLE	YEAR SUBMITTED	ROLE
1	MOHD EFFANDY BIN MUKHTAR	DESIGN A SMALL WIND TUNNEL STUDIES FOR BOUNDARY LAYER EXPERIMENT	2005	MAIN SV
2	MUHAMAD NOR TAUFIK BIN SAHANI	A STUDY OF A SMALL WIND TUNNEL AND FABRICATION OF FLAT PLATE MODELS FOR BOUNDARY LAYER EXPERIMENT USING UITM LST1	2005	MAIN SV
3	MOHD RIDHWAN MOKHTAR	AERODYNAMICS OF BWB OF UAV USING CFD AT 0.3 MACH NUMBER	2006	MAIN SV
4	MOHD YUSOF	AERODYNAMICS OF BWB OF UAV USING CFD AT 0.7 MACH NUMBER	2006	MAIN SV
5	MOHD FAKRULLAH BIN ALI	TURBINE BLADE ANALYSIS USING CFD	2006	MAIN SV
6	MUHAMMAD FADZIL BIN SULAIMAN	AERODYNAMICS ANALYSIS OF BWB OF UAV WITH STEALTH SHAPE USING CFD	2006	MAIN SV
7	MOHD AMIRUL	ANALYSIS OF BWB OF UAV WITH LINEAR		MAIN SV

	UNDERGRADUATE	TITLE	YEAR SUBMITTED	ROLE
		TWIST USING CFD	2006	
8	SAFWAN ARWIN BIN RAMLI	AERODYNAMICS ANALYSIS OF AERIAL TARGET DRONE AT 0.3 MACH NUMBER USING CFD	2006	MAIN SV
9	MOHD TAUFIK	AERODYNAMICS ANALYSIS OF AERIAL TARGET DRONE AT 0.7 MACH NUMBER USING CFD	2006	MAIN SV
10	AHMAD FIRDAUS BIN DIN	STUDY OF AERODYNAMICS CHARACTERISTICS OF CAMBERED NACA AIRFOILS (2412) AT VARIOUS ANGLE OF ATTACK	2007	MAIN SV
11	MOHAMMAD ALIF AFWAN BIN ALIAD	CFD ANALYSIS TO OPTIMISE A LOW PRESSURE TURBINE	2013	MAIN SV
12	NOORI'ZZATI BINTI KHAIRUSALLEH	CFD ANALYSIS OF HORIZONTAL AXIS WIND TURBINE (HAWT) EDUCATION TEST BENCH	2014	MAIN SV
13	NAJMI HAZIQ BIN BADRULHISAM	THE PERODUA ECO-CHALLENGE (PEC) ENGINE PERFORMANCE ANALYSIS USING THE WEIGHT REDUCTION, EXHAUST GAS RECIRCULATION (EGR), AIR INTAKE TANK, AND SWIRL GENERATOR MODIFICATON	2014	MAIN SV
14	ABDUL QAIYUM BIN HANAFIAH	THE CHARACTERIZATION OF PERODUA MYVI ENGINE K3-VE 14 PERFORMANCE USING EXHAUST GAS RECIRCULATION (EGR)	2014	MAIN SV
15	NIK MOHAMMAD HAKIMI BIN MD NASIR	HEAT TRANSFER MODELLING ANALYSIS FOR THE CONDENSER OF ORGANIC RANKINE CYCLE (ORC)	2014	MAIN SV
16	MUHAMMAD ASYRAF BIN AHMAD	FULL TURBINE CFD ANALYSIS FOR NON-RADIAL FIBRE LOW PRESSURE TURBINE PERFORMANCE	2015	MAIN SV
17	ABDUL FATTAH BIN AHMAD	SINGLE PASSAGE CFD ANALYSIS FOR NON-RADIAL FIBRE ELEMENT OF LOW PRESSURE TURBINE	2015	MAIN SV
18	MOHD JAMAL BIN MOHD MOKHTAR	THERMAL ANALYSIS MODELLING OF WASTE HEAT EXCHANGER 9WHE0 FOR ORGANIC RANKINE CYCLE TO RECOVER EXHAUST WASTE ENERGY	2015	MAIN SV
19	MOHAMMAD IRSYADUDDEN NASIR	DESIGN AND FABRICATION OF METAL FOAM TUBE FOR HEAT EXCHANGER APPLICATION	2015	CO-SV
20	MOHAMMAD YUZER MOHAMMAD YUSOP	CFD ANALYSIS OF NON RADIAL FIBRE ELEMENT TURBINE USING SINGLE PASSAGE METHOD	2015	MAIN SV
21	MOHD SHUKRILLAH DZOBIT JAMAL	FULL TURBINE CFD ANALYSIS FOR VARIOUS EXIT ANGLE OF THE LOW PRESSURE TURBINE	2015	MAIN SV
22	NURULHANNAH KAMARUDDIN	CONDENSER DESIGN FOR ORGANIC RANKINE CYCLE (ORC)	2015	MAIN SV
23	AMIR HAKIM ABD WAHAB	EXPERIMENTAL SETUP OF A WASTE HEAT EXCHANGER (WHE) USING AMONIA-WATER MIXTURE	2015	MAIN SV
24	HAZREEN HAFIDZY HASHIM	1D GAS DYNAMIC SIMULATION FOR SINGLE-PISTON ENGINE PERFORMANCE ANALYSIS	2015	MAIN SV

b. Postgraduate

Masters in Engineering Management (Coursework)- Completed

STUDENTS NAME	TITLE	YEAR SUBMITTED	ROLE
MOHD NAZRI YUSUF	CUSTOMER AND MARKET INFLUENCE TOWARDS AIR CONDITIONING SERVICE IMPLEMENTATION AT SERVICE DEALERSHIPS	2014	MAIN SV

MSc in Mechanical Engineering (On-Going)

	STUDENTS NAME	TITLE	YEAR ENROLLED	YEAR END	ROLE
1	NUR HIDAYAH BINTI MOHD RAZIF	HEAT EXCHANGER ANALYSIS FOR THE CONDENSER OF ORGANIC RANKINE CYCLE (ORC)	2014	2016	MAIN SV
2	MOHAMAD TZHAQUIB FADHLULLAH B THAFARALLAH	HIGH RESOLUTION COMPUTER TOMOGRAPHY MODELLING AND EXPERIMENTAL OF POROUS COPPER HEAT SINKS	2014	2016	CO SV
3	SITI FATIMAH BINTI ABU TALIB	MODELING THE THERMO-ELECTRICAL EFFECTS OF WATER-ETHYLENE GLYCOL NANOFLUID COOLANTS IN A PEM FUEL CELL COOLING SYSTEM	2015	2017	CO SV
4	SITI NOR SYAZWANI BINTI RIDZUAN	THE ANALYSIS OF NON-RADIAL FIBRE MIXED FLOW TURBINE FOR RECOVERING WASTE HEAT ENERGY UITM	2015	2017	MAIN SV
5	ABDUL FATTAH BIN AHMAD	NUMERICAL ANALYSIS OF NON-RADIAL FIBRE MIXED FLOW TURBINE	2015	2017	MAIN SV
6	HAZIM BIN SHARUDIN	COMBUSTION AND EMISSIONS CHARACTERISTICS OF GASOLINE ENGINE FUELED WITH METHANOL-GASOLINE AND ISO-BUTANOL-GASOLINE BLENDS AT DIFFERENT ENGINE SPEEDS AND LOADS	2015	2017	CO SV
7	ZAINOL ABIDIN BIN AWANG SA	NUMERICAL ANALYSIS OF OUTDOOR VENTILATION CHARACTERISTIC ON URBAN BUILDING ARRAYS WITH RANDOM GEOMETRY	2015	2017	CO SV

PhD in Mechanical Engineering (On-Going)

	STUDENTS NAME	TITLE	YEAR ENROLLED	YEAR END	ROLE
1	IRNIE AZLIN @ NUR AQILAH ZAKARIA	THERMAL ENGINEERING OF A FUEL CELL POWER PLANT FOR VEHICLES	2012	2015 (Thesis Submitted)	CO SV
2	ISMAIL BIN LIAS	POROUS MEDIA HEAT EXCHANGER OF ORGANIC RANKINE CYCLE (ORC) FOR RECOVERING EXHAUST ENERGY	2014	2017	MAIN SV

3	MOHD HANIF BIN MAT@MUHAMMAD	ENGINE PERFORMANCE ANALYSIS OF EXHAUST ENERGY RECOVERY USING TURBOCOMPOUNDING	2014	2018	MAIN SV
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G. EVALUATION OF TEACHING (REPORT FROM UiTM STUDENT'S FEEDBACK ONLINE (SUFO) SYSTEM)

Course Tought	Semester/ Year	Number of students	Course rating	Teaching Rating
ME551 (9A)	Dec 2015	30	88.19 (Very Good)	86.42 (Very Good)
ME551 (3A)	Dec 2015	28	87.94 (Very Good)	887.54 (Very Good)
MEC652	July 2015	22	85.44 (Very Good)	85.68 (Very Good)
MEC551 (7A)	Jan 2015	21	91.06 (Excellent)	89.12 (Very Good)
MEC551 (12)	Jan 2015	29	85.84 (Very Good)	86.09 (Very Good)
MEC652 (TA2)	July 2014	23	88.06 (Very Good)	89.49 (Very Good)
MEC652 (TA1)	July 2014	24	90.69 (Excellent)	91.76 (Excellent)
MEC551 (9A)	Jan 2014	26	88 (Very Good)	85.13 (Very Good)
MEC551 (12)	Jan 2014	29	82.25 (Very Good)	81.46 (Very Good)
MEC551 (2B)	July 2013	14	86.63 (Very Good)	85.55 (Very Good)
MEC652	July 2013	28	88.88 (Very Good)	91.07 (Excellent)
MEC551(12)	Jan 2013	34	88.25 (Very Good)	87.92 (Very Good)
MEC551 (1B)	Jan 2013	16	82 (Very Good)	81.65 (Very Good)

RESEARCH AND PUBLICATION

A. RESEARCH

a. Major Research Themes and progress (including current and recent project

GRANT WITH MORE THAN RM100,000

TITLE	FUNDER	TOTAL (RM)	MEMBERS	START	EXPECTED TO FINISH
CHARACTERIZATION OF LEAN ANGLE FOR A MIXED-FLOW TURBINE (PROJECT CODE: CHARACTERIZATION OF LEAN ANGLE FOR A MIXED-FLOW TURBINE)	MINISTRY OF HIGHER EDUCATION FRGS	119,000	1. AMAN MOHD IHSAN BIN MAMAT (DR) LEADER, UITM 2.AZLI BIN ABD RAZAK MEMBER , PENSYARAH, UITM 3.WIRACHMAN WISNOE (DR) MEMBER, UITM	15-11-2013	14-11-2015
FLIGHT DYNAMICS OF BLENDED WING-BODY (BWB) WITH BLENDED TAIL-BODY (BTB). (PROJECT CODE: 600-RMI/FRGS 5/3 (103/2014))	MINISTRY OF HIGHER EDUCATION FRGS	123,000	1.RIZAL EFFENDY BIN MOHD NASIR MEMBER, UITM 2.FIRDAUS BIN MOHAMAD MEMBER, UITM 3.AMAN MOHD IHSAN BIN MAMAT (DR) MEMBER, UITM 4.WIRACHMAN WISNOE (DR) LEADER PROFESOR, UITM 5.WAHYU KUNTJORO (PROF. DR.) MEMBER, UITM 6.RAMZYAN BIN RAMLY MEMBER, UITM	01-08-2014	31-07-2016
BLENDED WING-BODY MICRO-CLASS UNMANNED AIRCRAFT PROTOTYPE FOR AERIAL SURVEILLANCE (PROJECT CODE: 600-RMI/PRGS 5/3 (3/2014))	MINISTRY OF HIGHER EDUCATION PRGS	180,000	1.WIRACHMAN WISNOE (DR) LEADER PROFESOR, UITM 2.FIRDAUS BIN MOHAMAD MEMBER, UITM 3.AMAN MOHD IHSAN BIN MAMAT (DR) MEMBER, UITM 4.RIZAL EFFENDY BIN MOHD NASIR MEMBER, UITM 5.WAHYU KUNTJORO (PROF. DR.) MEMBER, UITM 6.RAMZYAN BIN RAMLY MEMBER, UITM	01-08-2014	31-07-2016
COMBUSTION AND FLAME SPEEDS ANALYSIS ON HIGHER-LOWER MOLECULAR WEIGHT ALCOHOLS (PROJECT CODE: FRGS/1/2015/TK10/UITM/02/6)	MINISTRY OF HIGHER EDUCATION FRGS	130,200	1.NIK ROSLI BIN ABDULLAH (DR) LEADER ASSOC. PROFESOR, UITM 2.HELMISYAH BIN AHMAD JALALUDIN MEMBER, UITM 3.AMAN MOHD IHSAN BIN MAMAT (DR) MEMBER, UITM 4.IDRIS BIN SAAD MEMBER, UITM 5.BALJIT SINGH A/L BHATHAL SINGH (DR.) MEMBER,UITM	02-11-2015	01-11-2017

GRANT LESS THAN RM100, 000

TITLE	FUNDER	TOTAL (RM)	MEMBERS	START	EXPECTED TO FINISH
WASTE HEAT EXCHANGER OF ORGANIC RANKINE CYCLE (ORC) FOR ENGINE ENERGY RECOVERY IN INTERNAL COMBUSTION ENGINE (PROJECT CODE: 600-RMI/ERGS 5/3 (32/2013))	MINISTRY OF HIGHER EDUCATION ERGS	63,000	AMAN MOHD IHSAN MAMAT (DR) (LEADER) ; UITM , 2. PROF. MADYA DR. RIZALMAN MAMAT; MEMBER; UMP 3. DR WAN AHMAD NAJMI BIN WAN MOHAMED; UITM 4.PROF. MADYA DR NIK ROSLI BIN ABDULLAH; UITM	01-06-2013	31-05-2016
MEAN-LINE MODELLING OF ORGANIC RANKINE CYCLE (ORC) FOR WASTE EXHAUST ENERGY RECOVERY OF INTERNAL COMBUSTION ENGINE (PROJECT CODE: 600-RMI/DANA 5/3/RIF (608/2012))	UNIVERSITY (UITM) DANA RIF	32,000	AMAN MOHD IHSAN MAMAT (DR) (LEADER) UITM , 2. DR WAN AHMAD NAJMI BIN WAN MOHAMED; UITM	01-11-2012	31-10-2014
CHARACTERIZATION OF LEAN ANGLE FOR A MIXED-FLOW TURBINE PART 2 (PROJECT CODE: 600-RMI/DANA 5/3/PSI (21/2013))	UNIVERSITY (UITM) DANA PSI	60,000	1. AMAN MOHD IHSAN BIN MAMAT (DR) LEADER, UITM 2.AZLI BIN ABD RAZAK MEMBER , UITM 3.WIRACHMAN WISNOE (DR) MEMBER, UITM	01-12-2013	30-11-2015
APPLICATION OF NANOFUID AS COOLING MEDIUM IN A PROTON EXCHANGE MEMBRANE FUEL CELL SYSTEM FOR VEHICLES (PROJECT CODE: 600-RMI/LRGS 5/3 (4/2014))	MINISTRY OF HIGHER EDUCATION LRGS	60,000	1.WAN AHMAD NAJMI BIN WAN MOHAMED LEADER; 2.RAMLAN BIN ZAILANI MEMBER UITM 3. PROF. DR SAIDUR RAHMAN MEMBER; UM 4.AMAN MOHD IHSAN BIN MAMAT (DR) MEMBER; UITM 5.KHAIRUL IMRAN BIN SAINAN MEMBER; UITM 5.RIZALMAN MAMAT MEMBER; UMP	01-06-2014	31-03-2016
ENERGY BALANCE MODEL OF AN ELECTRIC HYDROGEN PROPULSION SYSTEM WITH ENERGY REGENERATION (PROJECT CODE: 600-RMI/RAGS 5/3 (217/2014))	MINISTRY OF HIGHER EDUCATION RAGS	80,000	1.HAZIMI BIN ISMAIL LEADR; UITM 2.AMAN MOHD IHSAN MAMAT (DR) ; UITM 3. DR WAN AHMAD NAJMI BIN WAN MOHAMED; UITM	01-12-2014	30-11-2016
ANALYSIS ON THE EFFECTS OF UPSTREAM IDEALIZED BUILDING ARRANGEMENT IN AN URBAN ENVIRONMENT (PROJECT CODE: 600-RMI/FRGS 5/3 (73/2013))	MINISTRY OF HIGHER EDUCATION FRGS	84,500	1.DR AZLI BIN ABD RAZAK LEADR; UITM 2.AMAN MOHD IHSAN MAMAT (DR) ; UITM 3. DR SHEIKH AHMAD ZAKI SHAIKH SALIM; MJIT-UTM 4.ROSNADIAH BINTI BAHSAN ; UITM	15-11-2013	14-11-2015

TITLE	FUNDER	TOTAL (RM)	MEMBERS	START	EXPECTED TO FINISH
ANALYSIS ON THE EFFECTS OF UPSTREAM IDEALIZED BUILDING ARRANGEMENT IN AN URBAN ENVIRONMENT PART 2 (PROJECT CODE: 600-RMI/DANA 5/3/PSI (25/2013))	UNIVERSITY (UITM) DANA PSI	60,000	1.DR AZLI BIN ABD RAZAK LEADR; UITM 2.AMAN MOHD IHSAN MAMAT (DR) ; UITM 3. DR SHEIKH AHMAD ZAKI SHAIKH SALIM; MJIT-UTM 4.ROSNADIAH BINTI BAHSAN; UITM	01-12-2013	30-11-2015
ANALYSIS ON THE EFFECTS OF UPSTREAM IDEALIZED BUILDING ARRANGEMENT IN AN URBAN ENVIRONMENT PART 2 (PROJECT CODE: 600-RMI/DANA 5/3/PSI (25/2013))	MINISTRY OF HIGHER EDUCATION FRGS	99,700	1.MUHAD ROZI BIN MAT NAWI (DR) LEADER; UITM 2.ALHASSAN SALAMI TIJANI (DR) ; UITM 3. AZLI BIN ABD RAZAK (DR);UITM 4.AMAN MOHD IHSAN BIN MAMAT (DR) ; UITM; 4. DR WAN AHMAD NAJMI BIN WAN MOHAMED, UITM	02-11-2015	01-11-2017
EXPERIMENTAL STUDY OF HEAT TRANSFER MECHANISM DURING POOL BOILING FOR ELECTRONICS COOLING APPLICATION (PROJECT CODE: 600-RMI/RAGS 5/3 (30/2015))	MINISTRY OF HIGHER EDUCATION RAGS	53,000	1.MUHAD ROZI BIN MAT NAWI (DR) LEADER; UITM 2.ALHASSAN SALAMI TIJANI (DR) ; UITM 3. AZLI BIN ABD RAZAK (DR);UITM 4.AMAN MOHD IHSAN BIN MAMAT (DR) ; UITM; 4. DR WAN AHMAD NAJMI BIN WAN MOHAMED, UITM	01-12-2015	30-11-2017
DESIGN PARAMETERS FOR THE DEVELOPMENT OF WING TEST RING FOR STATICTEST EXPERIMENT (PROJECT CODE: 600-RMI/ST/FRGS 5/3/FST (31/2008))	MINISTRY OF HIGHER EDUCATION FRGS	48,000	1.RAMZYZAN BIN RAMLY LEADER; UITM 2.WAHYU KUNTJORO (PROF. DR.) ; UITM 3. WIRACHMAN WISNOE (DR); UITM 4.AMAN MOHD IHSAN BIN MAMAT (DR) ; UITM; 4. RIZAL EFFENDY BIN MOHD NASIR, UITM	01-11-2008	30-04-2011 (COMPLETE D)
AERODYNAMICS OF BLENDED WING BODY (BWB) UNMANNED AERIAL VEHICLE USING COMPUTATIONAL FLUID DYNAMICS (CFD) (PROJECT CODE: 600-RMI/ST/FRGS 5/3/FST (31/2008))	MINISTRY OF HIGHER EDUCATION FRGS	40,000	1.WAHYU KUNTJORO (PROF. DR.)LEADER; UITM 2. WIRACHMAN WISNOE (DR); UITM 3.AMAN MOHD IHSAN BIN MAMAT (DR) UITM; 4. RIZAL EFFENDY BIN MOHD NASIR, UITM	01-01-2007	30-11-2010 (COMPLETE D)

B. A BRIEF SUMMARY OF FEW SELECTED PROJECTS

a. Aerodynamics analysis Using CFD for BWB UAV

This research aims to predict the aerodynamics properties such as lift coefficient, drag coefficient, pitching moment coefficient and center of pressure for Blended Wing Body (BWB) of Unmanned Aerial Vehicle (UAV). The aerodynamics analysis was used software (Fluent). The outcome of the research is the aerodynamics characteristics of the BWB. This research is a baseline research that has initiated the BWB project in UiTM

b. Test Jig For Solid Rocket Propellant

The objective of the research was to develop a simple test jig for solid rocket propellant. This test jig enables to calibrate the thrust of the solid rocket propellant. The expected outcome will be the thrust characteristics for various dimensions of solid rocket propellant.

c. Wind Tunnel Experiment of Blended Wing Body (BWB) of Unmanned Aerial Vehicle (UAV)

This RM 40,000 research was funded by MOHE-FRGS. The purpose of this research is to validate the aerodynamics data collected from Computational Fluid Dynamics study of Blended Wing Body (BWB) of Unmanned Aerial Vehicle (UAV). The result has increased the confidence of data that was studied before. The BWB UAV platform was optimized in order to find the best platform in terms of aerodynamics characteristics and flight dynamics behavior.

d. Mean-line Modeling of Organic Rankine Cycle (ORC) for Waste Exhaust Energy Recovery of Internal Combustion Engine

This project proposes to model the potential waste exhaust energy from internal combustion engine so that it can be converted into electrical energy. The main objective is to analyze the potential energy flow throughout internal combustion engine exhaust pipe using zero-dimensional mathematical modeling technique. The project methodology is to select suitable organic working fluid, to determine the waste energy architecture and to model and analyze waste heat exchanger (WHE). The project helps to design a future prototype of waste exhaust energy recovery to improve the internal combustion engine efficiency.

e. Waste heat exchanger of organic rankine cycle (orc) for engine energy recovery in internal combustion engine

Problem Statement: Organic Rankine Cycle (ORC) uses a similar principle as the thermodynamics cycle vapour power plant. Normally, an evaporator in the ORC system that is filled with an organic fluid such as Freon R11 (CCl_3F), R114 ($\text{C}_2\text{Cl}_2\text{F}_4$), Toluene ($\text{C}_6\text{H}_5\text{CH}_3$), Benzene (C_6H_6), and Fluorinil ($\text{FC}_3\text{CH}_2\text{OH}$) is located after the main turbocharger and recovers the exhaust thermal energy. As the heat exchanger is exposed to the exhaust gas temperatures, the organic fluid that enters as a compressed liquid has received the thermal energy and leaves as a superheated vapour. However, the main problem is the identification of suitable operating fluid is still undetermined by many research works due to the limitation of the exhaust thermal energy. The recovered energy can turn the operating fluid into high pressure superheated vapour that expands in the turbine to generate electric power.

Objective: This project proposes to explore the potential thermal waste energy from internal combustion engine so that it can be converted into electrical energy. The main objective is to analyze the potential energy flow throughout internal combustion engine exhaust pipe using a Waste Heat Exchanger (WHE). Numbers of research are done to evaluate the effectiveness of the WHE but none of them are considered as sole solution. This is due to several issues relating to the organic fluid selection and WHE design. The project is expected to develop a WHE. The sensitivity analysis of the WHE effectiveness for several types of organic fluid such as ammonia (NH_3), R134a and Benzene (C_6H_6) will be explored on a simulated heat source.

Methodology: The project is divided into two parts: one-dimensional mathematical solutions modeling of the WHE; three-dimensional Computational Fluid Dynamic Analysis (CFD) using commercial software to validate the modeling results of the recovered wasted enthalpy from the engine.

Expected Outcome: This exploration project is crucial before a future prototype of waste exhaust energy recovery system. The electrical energy is generated from the turbine output power. The significance is that it can be stored in energy storage system such as ultra-capacitor or battery so that it can be used as power-on-demand to assist the engine improving its efficiency.

f. Characterization of Lean Angle for a Mixed-Flow Turbine

Problem Statement: Turbine blade radial-fibre element presents the same cylindrical section at all radii to give no centrifugal bending stresses at higher loading. However, the air flow is not properly guided at all radii (mainly at the tip). Consequently the turbine aerodynamics efficiency is less. If the turbine blade tip is lean away from the radial direction; it will depart of the radial-fibre element and will give aerodynamic

advantages to the turbine blade. As a result, the turbine is operated at higher efficiency for wider operating range.

Objective: This project proposes to characterize the aero-thermodynamics effect of the non-radial fibre element in the mixed-flow turbine. Then, the flow field on the blade will be analyzed in CFD to understand the entropy generation. Finally, the CFD analysis will be compared to the experimental results.

Methodology: The project is divided into two parts: (1) Three-dimensional Computational Fluid Dynamic Analysis (CFD) using commercial software. (2) The turbine steady-state performance using cold flow test rig.

Expected Outcome: The performance maps of the turbine efficiency and swallowing capacity for the mixed flow turbine are expected to be produced and analyzed in this project. A patent is expected to be filed since this is a novel approach.

Significance Output: This fundamental analysis is crucial before a future prototype of a Low Pressure Turbine for electric turbocompounding application is developed to increase internal combustion engine efficiency. The findings and success of the proposed project enhance the energy recovery system for vehicle. It contributes to Malaysian sustainable energy development (high efficiency energy converter) that corresponds to the Energy Efficiency initiatives from KeTTHA under the first pillar of the Green Energy which is “Energy - Seek to attain energy independence and promote efficient utilization”.

C. Major research development, achievement and outcomes

	Research Themes & Progress	Date of Completion	Impact
1	Central Africa Traffic And Fleet Study	August 2003	Business analysis guideline for Airbus Industries to Penetrate Central Africa Market
2	Aerodynamics analysis of BWB UAV	2006	Preliminary design study of new concept of aircraft
3	Wind Tunnel Experiment of Blended Wing Body	2008	BWB experiment and CFD validation
4	Waste Exhaust Energy Recovery Using Low Pressure Turbine	2012	Energy Recovery for Internal Combustion Engine
5	Non-Radial Turbine Design	2015	High Performance Energy Recover

D. RESEARCH COLLABORATIONS

Research Collaborations	Year
1. Airbus Industries, Toulouse, France	2004
2. HyBoost Project, (Imperial Collge London, Ford UK, Ricardo Consulting, Valeo, CPT AEAELB)	2012

E. RESEARCH GRANTS, CONTRACTS AND PROJECTS

a. Completed Research Grants, Contracts and Projects

Title	Granting Agency	Amount	Chief researcher & members	Percent and nature of your contribution
Central Africa Traffic And Fleet Study	Airbus Industries	None	Ramon Dorrego de Carlos (Supervisor) Aman Mohd Ihsan B	Analysis, presentation show and report

Aerodynamics of Blended Wing Body (BWB) Unmanned Aerial Vehicle using Computational Fluid Dynamics (CFD)	UiTM-IRDC	RM 11,000	Mamat (member) Aman Mohd Ihsan Rizal Effendy Mohd Nasir Zulkifli Ngah	95% 50 % Report submitted to IRDC
Wind Tunnel Experiment of Blended Wing Body (BWB) of Unmanned Aerial Vehicle (UAV)	MOHE-FRGS	RM 40,000	Assoc. Prof Dr. Wirachman Wisnoe (CR) Prof. Dr. Wahyu Kuntjoro (m) Aman Mohd Ihsan (m) Rizal Effendy Mohd Nasir (m)	Report Submitted
Test jig for Solid Rocket Propellant	UiTM-IRDC	RM 13,000	Junaidah Rahmat (K) Aman Mohd Ihsan	Report Submitted
Design Parameters for the Development of Wing Test rig for Static Test Experiment	UiTM-IRDC	RM30,000	Ramzyzan Ramly Wahyu Kuntjoro Rizal Effendy Mohd Nasir Aman Mohd Ihsan	Report Submitted

b. Submitted or Planned Grants and Projects

Title	Granting Agency	Amount	Chief researcher & members	Percent and nature of your contribution
PROTOTYPE DEVELOPMENT OF ELECTRIC TURBOCOMPOUNDING FOR ENERGY RECOVERY	MOSTI- E-SCIENCE	RM 400,000	DR AMAN MOHD IHSAN DR. NIK ROSLI ABDULLAH DR ALESSANDRO ROMAGNOLI DR SRITHAR RAJOO DR WAN SAIFUL ISLAM WAN SALIM	75% (LITERATURE REVIEW, RESEARCH PROPOSAL, CYCLE)
PROTOTYPE DEVELOPMENT OF ELECTRIC TURBOCOMPOUNDING FOR ENERGY RECOVERY	PRGS – MINISTRY OF HIGHER EDUCATION	RM 250,000	DR AMAN MOHD IHSAN DR. NIK ROSLI ABDULLAH DR ALESSANDRO ROMAGNOLI DR SRITHAR RAJOO DR WAN SAIFUL ISLAM WAN SALIM	75% (LITERATURE REVIEW, RESEARCH PROPOSAL, CYCLE)

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- [6] Wisnoe W., Mohd Nasir R.E, Kuntjoro W., Bin Ramly, R. and Bin Mamat A.M.I , “Wind Tunnel Experiments of Blended Wing Body (BWB) Unmanned Aerial Vehicle (UAV) At Loitering Phase” In Proceedings of International Conference on Mechanical & Manufacturing Engineering (ICME2008), Faculty of Mechanical & Manufacturing Engineering, Universiti Tun Hussein Onn Malaysia (UTHM), 2008.

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- [1] Bin Mamat, A.M.I, Mohd Nasir, R.E, Kuntjoro, W, Wisnoe, W., Bin Ramly, R. And Ngah, Z., “Aerodynamics of Blended Wing Body (BWB) Unmanned Aerial Vehicle (UAV) Using Computational Fluid Dynamics (CFD)” Proceedings of Conference on Social & Scientific Research (CSSR 2006/2007), IRDC, UiTM, 2007

F. PATENT/INNOVATION/INVENTION

<i>Title/Product</i>	<i>Recognition/Award</i>	<i>Date</i>	<i>Percentage and type of contribution</i>
Low Pressure Turbine for Waste Exhasut Energy (UK Patent)	Worldwide/ US/ Europe/ China/ India & UK Patent	24/2/2011	33% File Number PCT/GB2012/000110)

G. CONSULTATION AND/OR EXPERTISE

a. Consultation (Registered/Approved By Institutions of Research UiTM)

Projects Title/Contract	Funding Institutions	Amount of Grant	Date of completion	Percentage and type of contribution
1. CAD Training for F1 in School Challenge	F1 in School	RM 1.2 Million	27 August 2007	Trainer (5 %)
2. Malaysia Airport Berhad Career Development Program	Malaysia Airport Berhad (MAB)	RM 1.2 Million	June 2008	Module 3 and 4 Coordinator for Corporate Diploma in Airport Engineering (10 %)
3. Malaysia Cities/Town Public Transport Study	Ministry of Transport Malaysia (MOT)	RM 2.75 Million	April 2008	Engineering Cluster
4. ENGINE DEVELOPMENT AND TESTING	Universiti Malaysia Pahang	RM 17,810	2015	Trainer
5. WEB PERFORMANCE	SDIT TRAINING &	RM10,200	2015	Trainer

ANALYSIS	CONSULTANCY			
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b. EXPERTISE

Appointments/Invitations	Universities/Government /Private Agencies/ Professional Bodies	Date(s)	
		from	until
COMMITTEE MEMBER FOR NATIONAL AEROSPACE POLICY	ANGKASA	2007 – 2008	
MSC THESIS EXAMINATION NAME : CHIONG MENG CHOUNG TITLE : SIMULATION STUDY THE EFFECT OF PASSIVE CONTROL TURBOCHARGING ON DIESEL ENGINE PERFORMANCE	UNIVERSITI TEKNOLOGI MALAYSIA	2014	
ICAME TECHNICAL PAPERS EDITOR	UNIVERSITI TEKNOLOGI MARA	2015	

H. CONFERENCES

Conference	Host/sponsors	Roles	Date
1. Inventions, Innovations and Design (IID) 2007	UiTM- IRDC	Poster Presentation	24 -25 January 2007
2. Conference of Social and Scientific Research (CSSR 2006/2007)	UiTM- IRDC	Oral Presentation	3 – 5 July 2007
3. PECIPTA 2007	MOHE	Poster Presentation	12 – 14 August 2007
4. Second Conference – Aerospace, Science, Technology and Industry (RC-ASTI)	Institut Teknologi Bandung, Bandung, Indonesia (International)	Oral Presentation	4 – 6 September 2007
5. International Conference of Mechanical And Manufacturing Engineering/ ICME 2008	UTHM/ Hotel Puteri Pan Pacific	Oral Presentation	21 – 23 May 2008
6. Turbo Expo 2010, Glasgow Scotland	American Society of Mechanical Engineers (ASME)	Oral Presentation	Jun 2010
7. Turbo Expo 2011, Vancouver, Canada	American Society of Mechanical Engineers (ASME)	Oral Presentation	Jun 2011
8. Gas Turbine Expo, Osaka, Japan	Gas Turbine Society	Oral Presentation	November 2011
9. International Conference on Turbochargers and Turbocharging, London, UK	IMechE	Oral Presentation	May 2012
10. ICAME 2013, Melaka, Malaysia	Faculty of Mechanical Engineering, UiTM	Oral Presentation Chairperson	August 2013
11. ICAME 2015, Bali, Indonesia	Faculty of Mechanical Engineering, UiTM	Oral Presentation Chairperson	August 2015

SERVICE TO THE UNIVERSITY & COMMUNITY

A. Service within Department/Faculty and the University

DATE	POSITION	DEPARTMENT/FACULTY/ COMMITTEE/ BODIES/ INSTITUTION	DESCRIPTION OF ROLE & CONTRIBUTION
July 2007 – current	Committee Member OBE UiTM	UiTM	<ol style="list-style-type: none"> 1. Committee members 2. Give input to UiTM management for OBE implementation 3. Contribute roadmap of OBE implementation 4. As a window person between the faculty and UiTM management 5. Give OBE training to academic staff
July 2007	Manager Thermodynamics Lab	FKM – UiTM	<ol style="list-style-type: none"> 1. Plan the budget for lab 2. Manage the lab operation 3. Supervise the technicians
Nov. 05	Residence Staf	Kolej Melati	<ol style="list-style-type: none"> 1. Manage college residence 2. Plan for residence activities 3. Monitor the safety and security of the residence 4. Support all college activities
1/9/'07	Coordinator OBE	Faculty of Mechanical Engineering	<ol style="list-style-type: none"> 1. Coordinate OBE implementation for Faculty of Mechanical Engineering 2. Give OBE training 3. Ensure all courses applying OBE
1/1/05 to 31/12/05	Committee Member	Faculty of Mechanical Engineering/ ISO 9000/2001 Mechanical Engineering	Prepare and Update PDCA for <ol style="list-style-type: none"> i. Internal audit on March 2005 ii. External audit on June 2005
1/7/05	Committee Member	Faculty of Mechanical Engineering/ Jawatankuasa 'Outcome Based Education' (OBE)	<ol style="list-style-type: none"> 1. Responsible for updating and formatting the course syllabus for Program EM220 and EM221 2. Advice all the academic staff for preparing course outline according to OBE requirement as required by EAC
15/2/05	Head Center of Studies	Faculty of Mechanical Engineering/ Pusat Pengajian Aerospace/ Aerodynamics & Propulsion	<ol style="list-style-type: none"> 1. Responsible for curriculum Development <ol style="list-style-type: none"> i. Introduction To Aircraft Schedule Maintenance (KJM594) ii. Aircraft Propulsion System (KJM595) 2. Final Exam Editor Panels 3. Staff planning distributing the ATA 4. Staff development
1/7/'06	Chairperson for Aerospace Curriculum Development	Faculty of Mechanical Engineering	<ol style="list-style-type: none"> 1. Lead the curriculum development 2. Prepare the working paper 3. Develop course outlines 4. Prepare program structure
1/12/'12	Quality Coordinator	Faculty of Mechanical Engineering	<ol style="list-style-type: none"> 1. Lead the Quality Management Unit for the faculty 2. Support accreditation process
12/11/'12	Committee Member for Faculty of	Faculty of Mechanical Engineering	<ol style="list-style-type: none"> 1. Responsible for technical Committee to evaluate technical equipments

DATE	POSITION	DEPARTMENT/FACULTY/ COMMITTEE/ BODIES/ INSTITUTION	DESCRIPTION OF ROLE & CONTRIBUTION
	Mechanical Engineering Technical Committee		purchasing 2. Evaluate the technical presentation for the proposed purchase
1/8/'13 - Current	Head of Postgraduate Center of Studies	Faculty of Mechanical Engineering	1. Managing Graduate Studies Student and Program for MSc and PhD 2. Evaluate student entry 3. Promote postgraduate program 4. Managing all applications from students 5. Give professional feedback to faculty and IPSis in postgraduate operation 6. Manage the viva voce process 7. Advice the PG supervisors

B. Community Services

PROFESSIONAL SERVICE	DATE	DESCRIPTION OF ROLE AND CONTRIBUTION
1. Teaching Facilitator for F1 in School CAD Training	May '07 – August '7	Teaching Facilitator (Trainer) for CAD (SolidEdge) Training
2 Teaching Facilitator for Malaysia Airport Career Development Program	August '07 – March '08	Develop syllabus for Malaysia Airport Training Program (Corporate Diploma in Airport Engineering) Teach 3 module3
3 Residence Staff for Kolej Melati, UiTM	1 November '06	1. Manage college residence 2. Plan for residence activities 3. Monitor the safety and security of the residence 4. Support all college activities
4 ASME Committee for Turbo Expo 2010	Jun 2010	Committee Members to organize the 2010 Turbo Expo in Glasgow, Scotland
5 Internal Auditor for Community Society of Taman Cahaya Alam, Shah Alam	2014 – Current	Internal Audit for 2 years
6 Vice – Secretary for SMACHIAN ALUMNI	2015	Assisting Secretary for SMACHIAN ALUMNI Society and organizing activities involving alumni and school
7 Secretary for SMACHIAN ALUMNI	2016	Secretary for SMACHIAN ALUMNI Society and organizing activities involving alumni and school.

C. Glorification and academic award

Awards Title	Confer by	Amount of Grant/Scholarship	Date
French Aeronautics and Space Industrial Awards	Institut de l'Aeronautique et Spatial	None	September 2004
Scholarship SLAB/SLAI	Ministry of Higher Education	Full Scholarship	Mac 2008
Staff Excellent Award	UiTM		2008
Staff Excellent Award	UiTM		2014