

ZULKEPLI BIN HJ MUHAMAD

FACULTY OF MECHANICAL ENGINEERING
UNIVERSITI TEKNOLOGI MALAYSIA
81310 UTM SKUDAI, JOHOR



Date of birth : 26th of May 1964

Place of birth : Kubang Pasu, Kodiang, Kedah

Objective:

A brief c.v. in fulfilling the request for --general

PROFESSIONAL EXPERIENCES

Universiti Teknologi Malaysia (UTM)

Johor Bahru, Johor.

Academician , Senior Lecturer

Dec, 1997 to present date

Universiti Teknologi Malaysia (UTM)

Johor Bahru, Johor.

IT Manager.

Involved in IT Lab Management, development,

Curriculum planning and staff development.

Aug 2012 to Jul 2015

Universiti Teknologi Malaysia (UTM)

Kuala Lumpur, & Johor Bahru, Johor.

Academician, Assistant lecturer A.

May, 1989 to Dec, 1997

Universiti Teknologi Malaysia (UTM)

Kuala Lumpur, & Johor Bahru, Johor.

**Head of Laboratory :Welding and Fabrication
Workshop.**

*Involved in workshop development, lab. Curriculum planning and staff
development.*

June 1989 to Jan 1992

Universiti Teknologi Malaysia (UTM)

Johor Bahru, Johor.

Laboratory Coordinator: Metrology Lab.

*Involved in workshop development, lab. Curriculum planning and staff
development.*

Feb 2015 to Jan 2016

Universiti Teknologi Malaysia (UTM)

Johor Bahru, Johor.

Laboratory Coordinator: Foundry Shop.

Involved in workshop development, lab. Curriculum planning and staff development

Feb 2016 to Jan 2017

Universiti Teknologi Malaysia (UTM)

Johor Bahru, Johor.

Head of Laboratory:

Machine Shop.

*Involved in workshop development, lab. Curriculum planning and staff
development.*

Jan 1998 to Dec 1999

Universiti Teknologi Malaysia (UTM)

Kuala Lumpur.

July 1988 to May 1989

Research Assistant

The Low Cost Technology for The Treatment of Rubber Mill Effluent Involved in designing, fabricating and data sampling of the Rotating Bio-Drum pilot plant. This is a joint effort project between UTM and RRIM

Hong Kong Polytechnic

Nov 1991 (1 month)

Commonwealth Industrial Training & Experience Programme, CFTC.

Industrial training programme in computer aided design & computer aided manufacturing (CAD/CAM)

Universiti Teknologi Malaysia (UTM)

Dec 1987 to May 1989

Kuala Lumpur.

Academician, Lecturer (part time)

Subjects duty - Production Technology / Manufacturing Processes and lab duties (Production and Metrology lab.)

Lembaga Akreditasi Negara (LAN)

2000-2002

LAN evaluation panel member

Involve in evaluating courses for colleagues

E D U C A T I O N

Universiti Teknologi Malaysia (UTM)

1982/83 to 1986/87

B.Eng (HONS) -MECHANICAL

Universiti Teknologi Malaysia (UTM)

1992/93 to 1994/95

M.Eng. (Mechanical) Foundry Engineering

O R G A N I Z A T I O N S

Universiti Teknologi Malaysia (UTM)

1989

JOHOR BAHRU, JOHOR, MALAYSIA

Academician, ASSIATANT LECTURER

Universiti Teknologi Malaysia (UTM)

Dec 1997

JOHOR BAHRU, JOHOR, MALAYSIA

Academician, Senior LECTURER

S U P E R V I S O R Y

Undergraduate Project. (Selected)...

- Design and fabricating of an abrasive jet machine (AJM) - 1990/91
- Development of the squeeze casting machine (electrical and hydraulic control system development)- 1995/96
- Propeller development and manufacturing (a finite element modeling of Bahtera vessel propeller)- 1995/96

- Casting design (The filling behavior of molten metal in a horizontal sand mould arrangement)- 1995/96
- Safety fire grille (design and development of a safety fire grille for housing estates to prevent thieves and counter fire event)- 1997/98
- A development of a shell casting machine (design and fabrication of shell casting machine by induction heating principle)- 1998/99
- Development of a wax injection mould for small propeller (design and fabricate of a wax injection mould using CAD generation model)- 1998/99
- Development of spinning tool dynamometer (design and fabricate a mechanical type spinning tool dynamometer for shearing spinning process)- 1998/99
- Microscopic analysis of squeeze casting (an experimental study to determine the relationship of the squeeze casting process control to the metal alloy structure formation)- 1998/99
- Low cost friction stir welding (a development of a friction stir welding station using radial drilling machine including fabrication of fixture & tooling and retrofitting the radial drilling machine for the above purpose)- 1998/99
- Wax injection mould for small propeller -1999/2000
- Evaporative pattern casting process (development of polystyrene pattern equipment)- 1999/2000
- Finite element analysis of modular communication post- 1999/2000
- Work improvement through the use of jigs and fixtures (a study for MADETILL (M) SDN. BHD.)-1999/2000
- Process planning (improvement of process planning for MADETILL (M) SDN. BHD.)- 1999/2000
- Development of Evaporative Pattern Casting (EPC) Facility-2012/2013
- Feasibility Study of Local Resources Mold Material For use In The Green Sand Mold Production-2 Projects of different river-2011/2012
- Tilting Casting Process Modelling and Simulation-2011/2012
- High Pressure Die Casting Process Modelling and Simulation- 2011/2012
- High Pressure Die Casting (HPDC) Die Design And Modelling—2011/2012
- Development of Web-Based Education Networking—2010/2011
- Automation in numerical control (NC) code generation for non-rectangular pocket— 2004/2005
- Development of computerized maintenance management system (CMMS) for small and medium industries (SMI)—2013/2014
- Web-based attendance system—2013/2014
- Web-based loan and inventory information system—2013/2014
- Investment casting process modeling and simulation—2010/2011
- Pressure die casting process simulation and DOE approach-2010/2011
- Development of spin casting mould for ring type casting using non-ferrous material- 2010/2011
- Simulation of sand casting of automotive part using Anycasting and DOE approach
- Simulation of high pressure die casting of gearbox housing using anycasting and DOE approach-2010/2011
- Tilting casting process modeling and simulation-2010/2011
- Semi-centrifugal technique for small casting manufacturing-2009/2010
- Semi-centrifugal technique for small propeller manufacturing -2009/2010
- Spin casting machine of an aluminum alloy-2008
- Development of pre-expanded polystyrene pattern apparatus-2008
- Evaporative pattern casting process-development of polystyrene pattern facility-2006
- Development of computer based training (CBT) for arc welding processes-2010
- Spin casting of an aluminum alloy-2004
- Computer based training (CBT) module for metal forming process-2010
- Development of pre-expanded polystyrene facility-2010
- Design and development of portable spin casting machine-2008
- Pembangunan mesin suntikan wax-2004

- Development of small wax injection machine: heat distribution analysis-2007
- Development of small wax injection machine-2007
- Project management simulation game-2006
- Pengurusan project berbantu computer untuk dandang bio-drum-2006
- The sand casting process modeling-2008
- The gravity die casting process modeling -2008
- Development of computer based training (CBT) module for semiconductor manufacturing-2007
- Development of computer based training (CBT) module for casting process-2007
- Development of computer based training (CBT) module for rolling process-2007
- Reclaiming of investment casting mould materil-2007
- Low pressure die casting of partially liquid state binary aluminum alloy-2005
- Sand casting of magnesium alloys -2001
- Tuangan dai gravity bagi aloi magnesium-2001
- Reclamation of carbon dioksid moulding sand -2007/2008
- Formability of a construction steel in shape winding -2007

Postgraduate Project.

- Business Process Improvement in library loan services – 2014/2015
- Business Process Improvement (BPI) In An Enterprise Company-2013/2014
- Evaluation on the effect of the support parameters and slice thickness on the prototype quality in the fused deformation modeling-2005/2006
- Study on implementation of step AP224 in process planning-2002
- Performance evaluation of rapid prototyping process -2000/2001
-

R E S E A R C H

A. International:

1. Eurasian Network for Product Lifecycle Suuport and Training (EAPSTRA) – (Grant: European Commission Contract Number ASIA IT7C/ASI b7-301/71548 (3152-094), 2004 to 2006) - Vot 68401, EURO 385,524.00 (RM 1,590,303.00)
2. Advanced Product Support Technologies (APOST) – Design, CAD/CAM, Rapid Prototyping and Virtual Manufacturing (Grant: European Commission Project Contract Number ASI/B7-3 01/97/0126-15, 2001 to 2003) – Vot 68858, EURO 372,516.00 (RM 1,1,627,895.00),

B. Local:

1. Low cost technology for the treatment of rubber mill effluent. (1988-1989)
A cooperate research project with Rubber Research Institute of Malaysia (RRIM) under the mechanism of IRPA, to design, fabricate and device the potential technology for the rubber effluent treatment.
2. Vacuum forming machine (VFM) –(1992)
A group effort of local staffs (UTM) to design and fabricate a VFM for the small and medium scale packaging industries.
3. Development of the squeeze casting machine.
The development project involves the development of press machine control system including electrical and hydraulic control.
4. Propeller development and manufacturing.
A joint project with 'high speed vessel group' covers the area of design, simulation, and production of propeller using various manufacturing techniques.

5. Squeeze Casting Process Control and Modelling – (1993)
The hybrid metal forming and casting process that manipulating pressure to form articles from semi-solid liquid metal.
6. Formability of construction steel in shape winding -2007

Industrial Training (Selected)..

1. Faculty of Mechanical Engineering, Kuala Lumpur. (1983).
Exposure to workshop training that covered fabrication (welding and sheet metal practices), machining and casting operations.
2. Public Work Department, JKR Perlis. (1984).
Exposure to the regular work such as light and heavy vehicles maintenance, diesel and petrol engines and parts calibration, design and fabrication, domestics water supply sources, treatments and piping systems, and air condition practices.
3. Telekom, Penang. (1985)
The training covers mechanical workshop practices, radio and t.v transmission and tele-signals mechanism which cover under sea cable, line and parabolic. It also includes electric and electronic control project for competition 'buzzer'.
4. Faculty of Mechanical Engineering, Kuala Lumpur. (1986)
Exposure to computerized drafting software –AutoCAD- to be introduced as a part of faculty new curriculum design.
5. Hong Kong Polytechnic. (1991).
A month training period under the Colombo Plan mechanism. The exposure to the CAD-CAM-CNC theories and practices. The introduction of new package of CAD and CAM program demonstrates the usefulness of this recent technology for the industrial development toward industrialization nation.
6. UTM, Johor. (1992)
The extension of in-house course in CAD-CAM-CNC to enhance the application of the technology for industries in general and as an option subject for the students.
7. Singapore, 1992
Training program on CAE Software (C-Flow, C-View & C-Design) by Advance CAE Technology, Pacific, Inc & CIM System (Singapore) Pte Ltd.
8. Johor, 1991
Symposium on Wohlhaupter advance tooling systems by GTS German Tooling Systems
9. Universiti Teknologi Malaysia, Johor, 2000
MK Vacuum Casting System Operation & Basic Soft Tooling Application Course by MK Technology GmbH St. Augustin, Germany
10. Universiti Teknologi Malaysia, Johor, 2000
Stratasys FDM 2000 Rapid Prototyping Course on ABS, Elastomer & Investment Casting Wax application and Quickslice software operation by SiberHegner.

P U B L I C A T I O N

1. Pengurusan air dan airsisia. National seminar (1989), UTM, Kuala Lumpur.
2. A binding report of 'Vacuum Forming Machine' to the Research and Development Unit, UTM. (1994).
3. A binding report of 'The Development of Squeeze Casting Machine-- to the Research and Development Unit, UTM. (1995).
4. A report of 'Propeller Development and Manufacturing – to the Research and Development Unit, UTM. (1995).
5. Nur Fazidah Elias, Safian Sharif and Zulkepli H. Muhamad “Performance Evaluation of Rapid Prototyping Process”, The 3rd International Conference on Advances in Strategic Technologies (ICAST 2003), Volume 1, August 12-14 UKM, pp 349-352.
6. Ahmad Faizal Salleh, Shah Fenner Khan, Safian Sharif, Zulkepli Muhamad and Zulkifli A.Rashid and Muhamad Nasir Murad, “Preliminary Study on the Influence of Slice Thickness and Support Parameters on Part Defects of FDM Prototype”, Proceedings of the Malaysian Technical Universities Conference on Engineering and Technology (MUCET 2006), December 2006
7. Ahmad Faizal Salleh, Shah Fenner Khan, Safian Sharif, Zulkepli Muhamad, Zulkifli A. Rashid and Muhamad Nasir Murad, “A Study of Effect in Slices and Support Parameters on Dimensional Accuracy for FDM Prototypes”, Proceedings of the Malaysian Technical Universities Conference on Engineering and Technology (MUCET 2006), December 2006
8. Ahmad Faizal Salleh, Shah Fenner Khan, Safian Sharif, Zulkepli Muhamad, Zulkifli A. Rashid and Muhamad Nasir Murad, “A Preliminary Study on FDM Prototype Surface Roughness”, Proceedings of the Malaysian Technical Universities Conference on Engineering and Technology (MUCET 2006), December 2006
9. Azwan Iskandar Azmi, Zulkepli H Muhamad, Feature Extraction from STEP AP 224 file sets, Jurnal Mekanikal, 2003, eprints.utm.my

<more>

Article reviewer/evaluator

1. Article reviewer/evaluator for Jurnal Mekanikal – “ Effect on Adhersion Quality of Hydroxyapatite on Investment Casting Mould”- July, 2011
2. Article reviewer/evaluator for Jurnal Mekanikal – “Heuristic Reasoning to Recognise Orthogonal and Non-Orthogonal Inner Loop Features from Boundary Representation (B-Reps) Parts” – April, 2011
3. ..<more>

Administrative Experiences and other responsibilities (selected..)

Jawatankuasa e-portfolio, UTM, 2017-2019

Pengerusi Badan Kebajikan, FKM, UTM, 2017-2018

Jawatankuasa Teknikal e-Learning UTM, 2015-2017

Timbalan Pengerusi Badan Kebajikan FKM, UTM, 2015-2017

Pengurus Teknologi Maklumat, Fakulti Kejuruteraan Mekanikal, UTM, 1 August, 2012 to 31 Julai 2014

Jawatankuasa Teknikal e-Learning UTM – Feb, 2013 – Feb, 2015

Jawatankuasa Pengurusan Fasiliti FKM – Julai, 2013 – Julai, 2015

Jawatankuasa Ad-Hoc Festival Inovasi & Kreativiti , 2013

Jawatankuasa Akademik FKM – August, 2012 – August, 2014

Jawatankuasa Perlaksanaan ICT Universiti, UTM

Jawatankuasa Penilaian Teknikal Perolehan ICT Universiti, UTM

Jawatankuasa Penilaian Tidak Langsung dan Analisis Data - 2013

Jawatankuasa Induk 5S FKM – April, 2013 – April, 2015

Penyelaras Pusat Pengajian Separuh Masa UTM SPACE-Teknologi Maklumat & Peperiksaan, 2012,2013,2014

AJK Ad-Hoc Penyediaan SAR FKM—2013

Penyelaras Matapelajaran sem II, sesi 2012/2013—Project Management & Maintenance – 2013

AJK Task force penyediaan akreditasi FKM – Mac,2013 – Mac, 2015

Organising Committee, 1st International Materials, Industrial, and Manufacturing Engineering Conference (MIMEC 2013)

Examiner – Master project – Master of Engineering – Advance Manufacturing Technology 2011/2012-1 – session 1 & session 3

Examiner – Master project – Master of Engineering – Advance Manufacturing Technology 2010/2011-11 – session 2 & session 5

Examiner – Master project – Master of Engineering – Advance Manufacturing Technology 2011/2012-111 – session 1

Professional Courses and Workshops

Taklimat Projek Sarjana Muda (PSM) dan e-Learning FKM – Penceramah – Nov, 2013

E-learning Help Desk, UTM – Peserta– Sept, 2013

Kursus mandatori Lembaga Jurutera Malaysia : Engineering Management Practice -
Peserta -April 2013

Kursus mandatori Lembaga Jurutera Malaysia: Safety & Health at workplace – Peserta –
May, 2013

Kursus mandatori Lembaga Jurutera Malaysia : Code of Ethics/Regulation – Peserta-
Sept, 2013

Kursus integrasi e-Learning dan UTMSHare, -Peserta -Jan, 2013

Bengkel perancangan 5S (Persekitaran berkualiti), FKM – Peserta – June, 2013

Bengkel pemurnian course outline dan pemetaan course learning outcome- program
outcome FKM – Peserta – Feb, 2013

Pra Bengkel dan Bengkel Pemantapan Kurikulum FKM, Peserta – Feb, 2013

Bengkel pemurnian system pengurusan program pengajian separuh masa, pejabat
program luar, FKM –Peserta – April, 2013

Bengkel Pemantapan Pelaksanaan OBE (Siri II), FKM – Peserta - August, 2013

Bengkel penyediaan SAR program sarjana muda FKM – Peserta – August, 2013

Bengkel Perancangan Strategik FKM 2011, Port Dickson - July, 2011

Advance Course for High Pressure Die Casting – FKM – July, 2011
Colloquium

<more>