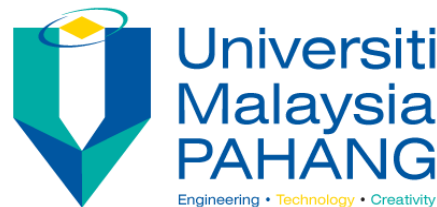


## BRIEF CV



### **Mohamed Reza Zalani Mohamed Suffian**

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### Academic Qualifications

1. M.Eng. UM, 2008.
2. B.Eng. (Hons) Mech. Engineering (USM), 2004

### Brief Profile

Currently, M.S. Reza is a lecturer at Faculty of Mechanical Engineering in Universiti Malaysia Pahang. He graduated from University Malaya with a Master of Engineering (Manufacturing) in 2008. After his first degree in 2004, he works at Negeri Sembilan Cement Industries Sdn Bhd, Bahau, Negeri Sembilan, Malaysia for about 1 year with last position as Maintenance Engineer. He has published several papers in international and local scholarly conferences and journals. His research interests are in materials processing, laser surface modification, coating and non-conventional machining.

### Working Experiences / Appointment

1. June 08~ to date Lecturer, Faculty of Mechanical Engineering (FKM), Universiti Malaysia Pahang.
2. May 05~ May 08 Tutor, Faculty of Mechanical Engineering (FKM), Universiti Malaysia Pahang.
3. March 04~Apr 06 Maintenance Engineer, Negeri Sembilan Cement Industries, Bahau, Negeri Sembilan

### Expert Area

Plasma Spray Coating, CAD/CAM, EDM machining

### Research Area / Research Interest

Coating, EDM Machining, Optimization using statistical tools

### Professional Qualification / Membership / Affiliation / Experience

1. Graduate Engineer, Board of Engineer, Malaysia (BEM)

### Teaching Experience

1. SEPT 2017/2018  
Mechanical Technology Laboratory 2 (120 students)  
Mechanical Design (120 students)  
Final Year Project 1 (3 students)
2. FEB 2017/2018  
Mechanical Technology Laboratory 1 (60 students)  
Manufacturing Process Lab (120 students)  
Final Year Project 2 (2 students)
3. SEPT 2016/2017  
Mechanical Technology Laboratory 2 (60 students)  
Manufacturing Process Lab (120 students)  
Final Year Project 1 (2 students)
4. MAY 2016/2017  
Mechanical Technology Laboratory 1 (60 students)  
Manufacturing Process Lab (120 students)

5. SEPT 2011/2012  
Finite Element Method, 3 credits (60 students) Mechanical Laboratory 2 (30 students)  
CNC Technology (38 students)
6. MARCH 2010/2011  
Industrial Training (5 students)
7. DEC 2010/2011  
CAD/CAM, 3 credits, (repeated student) & CAE and Failure Analysis (60 Students) Final Year Project 1, 2 credits (1 student)  
Final year Project 2, 2 credits (1 student)
8. JULY 2010/2011  
Plastics Injection Technology, 3 credits (60 Students) & CNC Technology (30 students) Final Year Project 1, 2 credits (10 Students)  
Industrial Training (5 students)
9. DEC 2009/2010  
CAD/CAM, 3 credits (34 Students) & CAE and Failure Analysis (30 Students) Final Year Project 2, 2 credits (6 Students)  
Industrial Training (5 students)
10. JULY 2009/2010  
Plastics Technology, 3 credits (60 Students) CNC Technology, 3 credits (30 students) Final Year Project 2, 4 credits (10 Students) Industrial Training (5 students)
11. DEC 2008/2009  
CAD/CAM, 3 credits (34 Students)  
Final Year Project 1, 2 credits (5 Students) Industrial Training (5 students)
12. JULY 2008/2009  
Plastics Technology, 3 credits (60 Students) Final Year Project 2, 4 credits (10 Students)
13. DEC 2007/2008  
Strength of Materials, 3 credits (180 Students) Final Year Project 1, 2 credits (8 Students) Industrial Training (8 students)

### Degree Final Year Project Supervision

No	Academic Year	Name of Student	Title of Project
1	2016/2017	Mohd Hazim	Characterisation of plasma sprayed laser modified H13 steel
2	2016/2017	Mohd Aliff	Surface characteristics of plasma sprayed laser modified H13 steel
3	2010/2011	Wan Mohd Arif	Single objective optimization of control parameters in EDM machining of titanium workpiece with copper tool
4	2010/2011	Mohd Alif	Multi-objective optimization of control parameters in EDM machining of titanium workpiece with copper tool
5	2010/2011	Wan Ahmad	Single objective optimization of control parameters in EDM machining of titanium workpiece with brass tool
6	2009/2010	Sahwal Waty Marno	Effect of Hole Taper on Tungsten Carbide Machining using Electrical Discharge Machining (EDM) Injection Flushing
7	2009/2010	Mohamad Suffi Kamari	Surface Integrity of Tungsten Carbide in Wire Electrical Discharge Machining (EDM)
8	2009/2010	Muhamad Haniffah Ghafar	Surface Integrity of Tungsten Carbide in Die-Sinking Electrical Discharge Machining (EDM)

9	2009/2010	Abdul Rahim Asas	Optimization of Electrical Discharge Machining (EDM) on Tungsten Carbide Workpiece using Grey Relational Analysis (GRA)
10	2009/2010	Mohd Amir Firdaus Salleh	Optimization of Electrical Discharge Machining (EDM) On Tungsten Carbide using Response Surface Method (RSM)
11	2009/2010	Aida Azwa A Halim	Surface Integrity of Titanium Alloy in Turning Operation Using Tin Coated Cutting Tool
12	2009/2010	Asmalina Mohamad	Taguchi Approach and Experimental Investigation on Surface Integrity of Titanium Alloy in Milling Operation
13	2009/2010	Lai Si Ying	Optimization of Molding Parameter Effect to Warpage based on Plastic Flow Simulation Software (Case 1)
14	2009/2010	Mohd 'Afif Abd Aziz	Optimization of Molding Parameter Effect to Warpage based on Plastic Flow Simulation Software (Case 2)
15	2009/2010	Mohd Norhafizi Rohaizat	Optimization of Molding Parameter Effect to Warpage based on Plastic Flow Simulation Software (Case 3)
16	2008/2009	Hassan Muda	Effect of Electric Discharge Machining (EDM) Jet Flushing Setting on the Machining of Tool Steel Workpiece
17	2008/2009	Ahmad Fadzil Mohamad	Effect of Gap Distance and Polarity Parameters on the Machining of Tool Steel Workpiece Using Electric Discharge Machining (EDM)
18	2008/2009	Muhamad Mubarak Ab Rahman	Experimental Investigation of Tool Wear in Electric Discharge Machining (EDM)
19	2008/2009	Mohd Nazri Ismail	Optimization of Molding Parameter Effect to Warpage of Cardoor Holder Based on Plastic Flow Simulation Software.
20	2008/2009	Abdul Azwan Abdol Zahar	Cutting Path Strategies Effects on Surface Roughness of Pocket Milling of Aluminium T6 6061
21	2007/2008	Nor Farhanah	Effects of Hole Taper on High Speed Steel Workpiece using EDM Injection Flushing
22	2007/2008	Mohd Khairul Anuar b. Mohd Idris	Effects of Machining Characteristics on Electrical Discharge Machining using different electrode materials.
23	2007/2008	Mohd Abd Latif bin Abd Ghani.	Effects of Surface Roughness on Electrical Discharge Machining Using Different Electrodes
24	2007/2008	Muhammad Asyraf bin Abd Talib	A Study of Surface Crack Elimination using Heat Treatment on AISI 1018 Mild Steel
25	2007/2008	Mohd Rafa"at bin Mohd Ibrahim	A Study of the Spot Welding Time on Joining Strength of the Mild Steel Plates
26	2007/2008	Rohani Bt Daud	Fatigue Behaviour on Riveted Joints in Similar and Dissimilar Sheet Materials
27	2007/2008	Walther bin Jenis	Effects of Welding Nugget Diameter on the Fatigue Strength of the Resistance Spot Welded Joints of the Same Sheets Metal
28	2007/2008	Maimunah binti Mohd Sham @ Munusamy	A Study to achieve Fine Surface finish in Wire-EDM

### Diploma Final Year Project Supervision

1	2010/2011	Yusri bin Yusof	Design and Analysis of solar car body
2	2010/2011	Idham Ariff bin Mat Ali	Design and Analysis of solar car chassis

## 2007 International and National Conference Papers

1. M. A. Azmir, A. K. Ahsan, A. Sulaiman, M. S. Reza, "Abrasive water jet machining parameters optimization of glass/epoxy composite laminates", Proceedings in International Conference on Mechanical Engineering (**ICME 2007**), Dhaka, Bangladesh, 28 ~ 30 December 2007.

## 2008 International and National Conference Papers

1. M. Hamdi, M. A. Azmir, M. S. Reza, H. Mas Ayu, "Multi-objective Optimization of Injection Flushing Type of Electrical Discharge Machining Process", Proceedings 9th Asia Pasific Industrial Engineering & Managements System 2008 Conference (**APIEMS 2008**), Nusa Dua, Bali Indonesia, 2~ 6 December 2008.
2. Mohamed Reza Zalani bin Mohamed Suffian, "Optimization of control parameters in injection flushing type of EDM on stainless steel workpiece with copper tools", **Master Dissertation, University Malaya**, June 2008.
3. A.N.M. Rose, M.M. Noor, M.M. Rahman, M.R.M. Rejab, M.S. Reza, M. Khairif, "Polypropylene reinforced with recycle Polyethylene terephthalate as an alternative material for new plastic product", Proceedings 7<sup>th</sup> UMT International Symposium on Sustainability Science and Management (**UMTAS**) 2008 (8-10 June, 2008), ISBN 978-983-2888-72-7.
4. M. A. Azmir, A. K. Ahsan, M. S. Reza, "Multi-objective optimization of abrasive water jet machining of glass/epoxy composite laminate", Proceedings in International Conference on Mechanical & Manufacturing Engineering (**ICME 2008**), Johor Bahru, Malaysia, 21~23 May 2008.
5. M. S. Reza, "Optimization of control parameters in injection flushing type of EDM on stainless steel workpiece with copper tools", Proceedings in Prime Colloquium of Mechanical Engineering Faculty, University Malaysia Pahang, 9 April 2008.
6. J. G. Joseph, M. A. Azmir, Julie J. Mohamed and M. S. Reza, "The Effect of Feed Rate and Cutting Speed on the Surface Finish of Heat-treated Aluminium Alloy during Face Milling", Proceedings in Malaysian Technical Universities Conference on Engineering and Technology (**MUCET08**), Kangar, Putra Palace, Malaysia, 15~16 March 2008.

## 2009 International and National Conference Papers

1. M. S. Reza, Nor Farhanah, S. H. Tomadi, M.A. Hassan, W. S. W. Harun, Effects Of Hole Taper On High Speed Steel Workpiece Using EDM Injection Flushing, 11<sup>th</sup> International Conference on Optimum Design of Structures and Materials in Engineering (**OPTI09**), 8-10 June, Algarve, Portugal, 2009.
2. S. H. Tomadi, R. Daud, M. A. Hassan, M. S. Reza, Z. Hamedon, M.F. Wahab, Optimum Parameters For Surface Roughness Evaluation In Milling Processess, 11<sup>th</sup> International Conference on Optimum Design of Structures and Materials in Engineering (**OPTI09**), 8-10 June, Algarve, Portugal, 2009.
3. M. S. Reza, K.A. Idris, S. H. Tomadi, M.A. Hassan, W. S. W. Harun, Effects Of Machining Characteristics On Electric Discharge Machine Using Different Electrode Materials, , International Conference on Advance Mechanical Engineering (**ICAME09**), 22~25 Jun, Concorde Hotel, Shah Alam, Selangor, 2009.
4. S. H. Tomadi, M. A. Hassan, M. S. Reza, Z. Hamedon, R. Daud, M. A. A. Ismail, Surface Roughness Evaluation Of Tungsten Carbide As Electrode In EDM Processess, International Conference on Advance Mechanical Engineering (**ICAME09**), 22~25 Jun, Concorde Hotel, Shah Alam, Selangor, 2009.

## 2010 International and National Conference Papers

1. Zamri Mohamed, Mohd Yusof Taib, M. S. Reza, "Assessment Method for Course Outcome and Program Outcome in Outcome Based Education (OBE)", Malaysian Technical Universities Conference on Engineering and Technology (**MUCET 2010**).
2. M. S. Reza, M. A. Azmir, S. H. Tomadi, M. A. Hassan, R. Daud, "Effects of Polarity Parameter on the Machining of Tool Steel Workpiece Using Electrical Discharge Machining", National Conference in Mechanical Engineering for Research & Postgraduate Students 2010, UMP (**NCMER 2010**).
3. M. S. Reza, M. Hamdi, M. A. Azmir, "Optimization of EDM Injection Flushing Type Control Parameters using Grey Relational Analysis on AISI 304 Stainless Steel Workpiece", National Conference in Mechanical Engineering for Research & Postgraduate Students 2010, UMP (**NCMER 2010**).
4. M.S. Reza, Zamri Mohamed, M. Fikri, A.R. Ismail, "Stress Analysis Of Solar Car Chassis Using Finite Element Method" , 2<sup>nd</sup> National Conference in Mechanical Engineering for Research & Postgraduate Students 2010, UMP (**2<sup>nd</sup> NCMER 2010**).
5. M.S. Reza, A.R. Ismail, M. Hamdi, "Optimization of control parameters for EWR in injection flushing type of EDM on stainless steel 304 workpiece", International Conference on Manufacturing Systems Engineering 2010 (**ICMSE 2010**).

## 2011 International and National Conference Papers

1. M.S. Reza, M. Hamdi, A.S. Hadi, "Optimization of control parameters for MRR in injection flushing type of EDM on stainless steel 304 workpiece", International Conference on Mechanical, Aeronautical and Manufacturing Engineering (**ICMAME 2011**).
2. Zamri Mohamed, M. S. Reza, M. Fikri, "Computational Fluid Dynamic Analysis of a solar car body", Auto Inexss Article, Issue 4: July 2011, Automotive Engineering Centre, Universiti Malaysia Pahang (**Auto Inexss**).
3. Ahmad Razlan Yusoff, Nafrizuan Mat Yahaya, Mohamed Reza Zalani Mohamed Suffian, Improvement of milling tool geometry optimization using a refined differential evolution algorithm for chatter avoidance, 26<sup>th</sup> International Conference of CAD/CAM, Robotics & Factories of the Future 26-28 July 2011, Kuala Lumpur, Malaysia.
4. M.S. Reza, A.R. Yusoff, M.A. Shaharun, Nafrizuan Mat Yahaya Optimization of EDM Machining Parameters on AISI 1020 Carbon Steel Workpiece using Grey Relational Analysis", incoming Malaysian Technical Universities International Conference on Engineering and Technology (**MUICET 2011**).
5. A.H.Ahmad, S.Sahudin, M.S.Reza Effects of Degassing Agent to Mechanical Properties and Microstructure of Aluminium Silicon Alloys, 1st International Conference of Mechanical Engineering Research (**ICMER 2011**).
6. M.S. Reza\*, A. R. Yusoff, M.A. Shaharun, Optimization of control parameters for SR in EDM injection flushing type on stainless steel 304 workpiece", 1st International Conference of Mechanical Engineering Research (**ICMER 2011**).

## 2010 International and National Journal Papers

1. M.S. Reza, A.R. Ismail, M. Hamdi, "Optimization of control parameters for EWR in injection flushing type of EDM on stainless steel 304 workpiece", proceedings of World Academy of Science, Engineering and Technology (**WASET**), Scopus, 72, pp. 386-388.

## 2011 International and National Journal Papers

1. M.S. Reza, M. Hamdi, A.S. Hadi, "Optimization of control parameters for MRR in injection flushing type of EDM on stainless steel 304 workpiece", proceedings of World Academy of Science, Engineering and Technology (**WASET**), Scopus, 76, pp. 399-401.
2. Ahmad Razlan Yusoff, Mohamed Reza Zalani Mohamed Suffian and Mohd Yusof Taib, Literature review of optimization technique for chatter suppression in machining, Journal of Mechanical Engineering and Sciences (**JMES**) e-ISSN: 2231-8380; Volume 1, pp. 47-61, December 2011.
3. M.S. Reza, A. R. Yusoff, M.A. Shaharun, Optimization of control parameters for SR in EDM injection flushing type on stainless steel 304 workpiece", submitted under review to Materials Science and Engineering (**MSE**).
4. M.S. Reza\*, A. R. Yusoff, M.A. Shaharun, Prediction of electrode wear ratio (EWR) and Material Removal Rate (MRR) in Electrical Discharge Machining of FW 4 Welded Steel Workpiece, submitted under review to International Journal of Automotive and Mechanical Engineering (**IJAME**).

## 2013 International and National Journal Papers

1. M. S. Reza, S. N. Aqida, M Toff, M Radzi, D Brabazon, Thermal Barrier Coatings on Laser Surface Modified AISI H13 Tool Steel Using Atmospheric Plasma Spray Technique, Key Engineering Materials 554, 603-610.

## 2014 International and National Journal Papers

1. M. S. Reza, S. N. Aqida, M. R. Mohd Toff, An investigation of phase crystallinity in laser modified Ytria Stabilized Zirconia (YSZ) thermal barrier coating, Key Engineering Materials

## 2016 ISI Paper

1. M.S. Reza, S. N. Aqida, I. Ismail, Interface bonding of NiCrAlY coating on laser modified H13 tool steel surface, Applied Physics A122 (6), 611

## 2017 ISI Paper

1. Microstructural Evolution and Phase Transformation in Laser Cladding of Cr and Mo Powder on Grey Cast Iron: Mixture Design of Experiment (DOE), AR Zulhishamuddin, MS Reza, SN Aqida, MM Rashidi Materials Research, 0-0
2. Effect of Different Cooling Rates Condition on Thermal Profile and Microstructure of Aluminium 6061 B Benjunior, AH Ahmad, MM Rashidi, MS Reza, Procedia Engineering 184, 298-305

## List of Research / Project

1. "Investigation of NiCrAlY coating characteristics on laser surface modified H13 steel for automotive die application", as project leader, RDU 1703218, grant amount RM 22,500 (June 2017 – June 2019).
2. "Design and Fabrication of Solar Car Body and Chassis", as project leader, RDU 100362, grant amount RM 36,000 (July 2010 – July 2011).
3. "Design and Fabrication of Solar Car Power and Drive System", RDU 100324, as project researcher, grant amount RM 40,000 (May 2010 – May 2011).
4. "Modelling of Thermal Comfort and Productivity in Automotive Industries", RDU100351, grant amount RM 40,000 (July 2010 – July 2011).
5. "Development of Micro-EDM with Microactuator Feed Control System", RDU090367, grant amount RM 40,000 (April 2010 – April 2010).
6. "Wire Electrical Discharge Machining of Low Electrical Conductive Materials", RDU080326, as project researcher, grant amount of RM 18,000. (April 08" – Mac "09).

## Awards Achieved

1. Bronze Medal for the invention/innovation of Solar – CITREX 2011 held at Universiti Malaysia Pahang, Malaysia.

## Reviewer

1. Manuscript review of paper titled "Mathematical Model to Characterize the Surface Roughness of Titanium Alloy (Ti-6AL-4V) In EDM," for Journal of Mechanical Engineering & Sciences, JMES.

## Examiner

1. Examiner panel for Diploma Student Innovation Competition, POLITEKNIK SULTAN MIZAN ZAINAL ABIDIN, Dungun, Terengganu, Nov 2011.