RAMLAN BIN ZAILANI

1- Address 1: Academic Affairs division,
Level 4, Canseleri Tuanku Syed Sirajuddin,
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2- Address 2: Faculty of Mechanical Engineering,
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3- Date of Birth : March 11, 1965

A- Education/Academic Qualification/Field/Institution And Years Of Award

1. PhD (Fuel and Energy) - University of Leeds, U. Kingdom (2008)
2. M.Eng (Mechanical Engineering) - Universiti Teknologi Malaysia (1996)
3. B.Eng (Hons) (Mechanical Engineering) - Universiy of Leeds, united Kingdom (1987)

B- Professional Qualification / Membership In Professional Bodies

1. Board of Engineer Malaysia
2. Institute of Energy, United Kingdom

C- Working Experience

a) ACADEMIC AFFAIRS DIVISION, UiTM

1. Head of Academic Development Unit (2011 – present)

b) FACULTY OF MECHANICAL ENGINEERING, UITM

1. Assoc. Professor / Lecturer (Jan1998 - present)
2. Deputy Dean (Academic) (2009 – 2011)
3. Head of Thermofluids Centre of Studies (2008-2009)
4. Head of Bachelor of Engineering Programmes (2000 –2003)

c) COLLEGE FOR PREPARATORY STUDIES, UiTM

1. Course Tutor and Coordinator of Engineering Department (1/7/1998 – 31/3/2000)
2. Lecturer (Nov1995 - Oct 1998) - *American Degree Bachelor of Engineering Program*
3. Lecturer & Core Person (Jan 1998 – July 1993). *U.Kingdom Advanced Level Programme (Physiscs)*

D- Research And Teaching Areas

Research Interests

- Sustainable Energy Technology
- Alternative Energy Resources
- Green Building
- Fuel & Combustion
- Carbon Footprints & Mitigation
- Engineering Education

Teaching Areas

1. Sustainable and Alternative Energy Technology
2. Thermodynamics & Heat Transfer
3. Fluid Mechanics
4. Mechanics
5. Computer Programming
6. General Engineering

Funded Researches (Grants)

Recent/Current Researches

	Research Project	Source	Total Funds (RM)	Position	Begin Year	End Year
1.	*Low Energy Solar Absorbtion Refrigeration*	RMI	32,000	Member	2012	2014
2.	*Structural Features And Fuel Properties of Bio-Chars From Carbonization of Biomass in Various Pyrolizing Environments and Gas Compositions*	FRGS	48,000	Principal Investigator	2010	2013
3.	*Application of nanofluid as cooling medium in a Proton Exchange Membrane Fuel Cell for vehicles*	LRGS	230,000	Member	2013	2015
4.	*Bio-hydrogen from catalytic thermal conversion of biomass*	FRGS	137,00	Principal Investigator	2013	2016

Completed Researches

1. Biomass Carbonization

2. Fuel Combustion in O_2/CO_2 Environments - *Carbon mitigation*

3. Energy From Solid Wastes - *Liquid Fuel from Carbonaceous Solid Wastes*.

4. Wood Energy - *Malaysian Representative to the "2nd Regional Training on Wood Energy" Organized by FAO-United Nations & RWEDP at The Asian Institute of Technology, Bangkok, Thailand.*

Supervision

(Ongoing and Completed)

1. PhD - 2 students
2. Master by Research – 3 Students
3. Undergraduate >25 Students

Selected Supervision of Projects Titles:

1. Heat pipes for solar collector application
2. Tracking mechanism for solar panels mounting
3. Temperature-controlled device utilizing solar-thermoelectric device.
4. Solar-TEC refrigeration system for vaccine storage application.
5. Solar absorbtion airconditioning system.
6. Solar PV energy application.
7. Energy audit in building.
8. Themochemical energy conversion from biomass.
9. Bio-hydrogen production.
10. Hydrodynamic of fluidized bed system

Reviewer (National/International)

1- ICAME 2015
2- PhD & Master thesis examiners (UTM, UiTM)
3- Jurnal Teknologi
4- BEIAC 2013
5- ICAME 2013
6- ISBEIA 2012
7- CUSHER 2012
8- IRIS 2011
9- ICAME 2010
10- JOURNAL UITM P.PINANG 2012

E- PUBLICATIONS

Thesis

- PhD Thesis: *Fuel Combustion in High CO2, Oxygen-enriched Environments*
  University of Leeds, United Kingdom (2008)
  Study of combustion and emission characteristics of pulverized fuel in CO_2 for atmospheric CO_2 mitigation through carbon capture and storage.

- Master Thesis : *Fluidized Bed Pyrolysis Of Organic Solid Wastes*

Universiti Teknologi Malaysia (1995)
The research involved fabrication and commissioning of a fluidized bed pyrolyzer unit, designed for the thermo-chemical processing of organic solid wastes to maximize the production of pyro-oil, and the chemical and physical fuel characterization of the oil.

Selected Journal Papers

1. Ramlan Zailani , Raja Razuan Raja Deris, Khudzir Ismail ,*Bio-Hydrogen From Low Temperature Thermo-Chemical Conversion Of Oil Palm EFB*, Jurnal Teknologi Vol . 76(5) pp 11-14.
2. Fairosidi Idrus, Nazri Mohamad, Ramlan Zailani , Wirachman Wisnoe, Mohd Zulkifly Abdullah , *Thermal Performance Of A Cylindrical Heat Pipe For Different Heat Inputs And Inclination Angles*, Applied Mechanics and Materials Vol. 661 (2014) pp 148-153
3. Fairosidi Idrus, Nazri Mohamad, Ramlan Zailani & Wirachman Wisnoe, *Experimental Model to Optimize the Design of Cylindrical Heat Pipes forSolar Collector Application*, Applied Mechanics and Materials Vol. 393 (2013) pp 735-740.
4. Ramlan Zailani, Halim Ghafar &M Sofian So'aib, *The Influence of Oxygen in the Carbonization of Oil Palm Shell on Bio-Char Yield and Properties*, Applied Mechanics and Materials Vol. 393 (2013) pp 499-504.
5. Wirachman Wisnoe, Ehan Sabah Shukri, Ramlan Zailani & Mohd Hafizie Che Mi, *Numerical Investigation of Temperature Distribution in a Diffuser Equipped with Helical Tape*, Applied Mechanics and Materials Vol. 393 (2013) pp 793-797.
6. H. Liu, R. Zailani & B. M Gibbs. *Comparison of Pulverized Coal Combustion in Air and CO_2/O_2 Mixtures,* Fuel. Vol 84.(7-8) (2005) pp. 833 – 840.
7. H. Liu, R. Zailani & B. M Gibbs *Pulverized Coal combustion in Air and CO_2/O_2 Mixtures with NOx Recycled*,Fuel Vol 84.(16) (2005), pp. 2019– 2115.
8. M.N Islam, R. Zailani & F.N.Ani. *Pyrolytic Oil From Fluidised Bed Pyrolysis Of Oil Palm Shell And Its Characterisation*. Renewable Energy : An International Journal, Vol 17(1)(1999), pp 73 – 85.
9. Ani F.N.H & Zailani R. *Characteristics Of Pyrolysis Oil From Palm Shells*. In "Developments in Thermochemical Biomass Conversions" (ed. A.V Bridgewater & D.G.B Boocock) Vol. 1,1996. pp 425-432.

Selected Conference Papers

1. Ramlan Zailani, Halim Ghafar, M. Sufian So'aib, *Effect of Oxygen on Biochar Yield and Properties. International Conference on Energy, Environment and Sustainable Development ICEESD2013,* (29-31/1/2013) *WASET, Dubai.*
2. Ramlan Zailani, Halim Ghafar, Sufian So'aib , Hasran Hussain, M. Syahar Syawal. *Effect of Oxygen on Biochar Yield from Pyrolysis of Mangrove Wood.* Sustainable Future Energy Coference 2012 and 10th SEE Forum, (21-22/11/2012), Brunei.

3. Ramlan Zailani, Liu. H. & B. M GIBBS . *Carbon-Capture and Storage Benefits: NOx Reduction in O_2/CO_2 Pulverized Fuel Combustion . IEEE 1st Conference on Clean Energy Technology Confrence*,(27-29/6/2011) *Kuala Lumpur*
4. Z. A. Kamarulbaharin, R. Zailani, M. F. M. Zaki & K.H.K. Hamid, *Low Viscosity Crude Palm Oil Fuel For Diesel Engines Via Centrifugation Technique.* International Conference On Sustainable Mobility ICSM2010, (1-3/12/2010), Kuala Lumpur
5. Z. A. Kamarul Bahrin, Ramlan Zailani, N. S. Burhanordin, K.H.K. Hamid. *Influence of Temperature on the Separation Ratio of Crude Palm Oil as Diesel Substitute through Cenrifugation Technique at 5000 rpm.* 2nd International Conference on Advances in Mechanical Engineering, ICAME2010, (Oct. 2010). Shah Alam
6. Ramlan Zailani, Liu. H. & B. M Gibbs. *Combustion and Emission Characteristics in O_2/CO_2 Mixtures.*International Conference on Advances in Mechanical Engineering, ICAME2009, (June 2009), Shah Alam.
7. Ramlan Zailani, Liu. H. & B. M Gibbs. *NO_x Emission and Reduction in O_2/CO_2 – Recycled Pulverized Fuel Combustion.* International Conference on Advances in Mechanical Engineering, ICAME2009, (June 2009), Shah Alam.
8. Z.Mohd Zain, R. Zailani & Lee Y. K, *Malaysian Aerospace Bluprint Vision and implementation.* 18th CAFEO, (November 2000), Hanoi
9. M.N Islam, R. Zailani & F.N Ani. *Pyrolysis Oil from Carbonaceous Solid Wastes in Malaysia.* World Renewable Energy Congress 99, (June 1999), Kuala Lumpur.
10. M.N Islam, F.N Ani & R. Zailani. *Effect Of Reaction Parameters On Liquid Product Yield From Fast Pyrolysis Of Oil Palm Shell*. International Conference And Exhibition On Village Electrification Through Renewable Energy, (1997), New Delhi, India.
11. ANI F.N & R. ZAILANI. *Pyro-Crude Oil From Waste Rubber Products* .The 6th JSPS-VCC Conference /Seminar on Integrated Engineering: Advanced Technologies for Clean Environment,(November 1996) Kyoto, Japan
12. F.N Ani & R. Zailani. *Characteristics Of Pyrolysis Oil And Char From Oil Palm Shells*.. Fourth International Conference on Thermochemical Biomass conversion: Development in Thermochemical Biomass Conversion, (May1996) , Banff, Canada.
13. F.N Ani & R. Zailani. *Liquid Fuel From Fast Pyrolysis of Scrap Tyre* Asia-Pacific Conference on Sustainable Energy and Environment Technology, (June1996), Singapore
14. F.N Ani & R. Zailani. *Activated Char From Oil Palm Shell Wastes*. The 6th International Energy Conference, (June1996), Beijing, China.
15. F.N Ani & R. Zailani. *Pyrolysis of Some Agricultural Residues to Liquid Fuel.*The 5th ASEAN Conference on Energy Technology, (April 1994), Bangkok, Thailand. (ASEAN SCNAR, KMIT)

Engineering Education Conference

1. Ramlan Zailani, N. Ain Rahman & Adam Tan. *Students' Ability in Applying the Concepts and Skills in Mathematics to Solve Problems in Engineering Courses*. National Seminar on Mathematics Application. (8-10/12/2010). Johor Bahru
2. Z.A Rahman & R. Zailani. *A First Course : Introduction to Engineering and problem Solving with Computer Application.*International Conference on Global Challenges in Engineering Education : Role of Islamic Countries(7/7/1997) Kuala Lumpur.