

# Wan Ahmad Najmi bin Wan Mohamed

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Alternative Energy Research Centre (AERC)  
Faculty of Mechanical Engineering  
Universiti Teknologi MARA  
40450 Shah Alam.

+603 55436277 / +6012 2981756  
[wanaajmi@salam.uitm.edu.my](mailto:wanaajmi@salam.uitm.edu.my) / [wanjerm3@yahoo.com.my](mailto:wanjerm3@yahoo.com.my)

<http://fkm.uitm.edu.my/v1/contact?id=61&task=view>

[http://www.researchgate.net/profile/Wan\\_Ahmad\\_Najmi\\_Wan\\_Mohamed](http://www.researchgate.net/profile/Wan_Ahmad_Najmi_Wan_Mohamed)

<http://uitm.academia.edu/WanAhmadNajmiWanMohamed>

## EDUCATION

### Universiti Teknologi MARA, MALAYSIA

2012

PhD. In Mechanical Engineering (Thermofluids and Energy)

“SOLID-STATE THERMAL ANALYSIS OF AIR-COOLED POLYMER ELECTROLYTE MEMBRANE FUEL CELLS WITH PREDICTIVE EMPIRICAL PROFILING”

### Universiti Teknologi Malaysia, MALAYSIA

2002

MEng. in Mechanical Engineering (Energy Systems)

“DEVELOPMENT AND PERFORMANCE OF A CASCADING HEARTH WITH SECONDARY SWIRL COMBUSTOR FOR SOLID WASTE (PALM SHELLS)”

### Universiti Teknologi Malaysia, MALAYSIA

1998

BEng. (Hons.) in Mechanical Engineering

## CURRENT ACADEMIC POSITION

### Senior Lecturer

Faculty of Mechanical Engineering, UiTM Malaysia

### AREAS OF INTEREST

- Hydrogen Fuel Cell Design and Application
- Nanofluid Coolants
- Clean Automotive Power Plant Engineering
- Biomass Combustion and Gasification
- Heat Sinks using Porous Materials
- Engineering Education

### POST-GRADUATE SUPERVISION

1. **Khairul Imran b. Sainan (MSc. in Mechanical Eng.) 2009-2011**

*Transparent hydrogen fuel cell design for water management*

2. **Muhammad Rizuwan b. Mustaffa (Msc in Mechanical Eng.) 2010-2015**

*Hydrogen fuel cell power plant modeling and performance for vehicles*

3. **Ramlan b. Kasiran (PhD. in Mechanical Eng.) 2012-2015**

*Fuel cell vehicle power plant response optimization*

4. **Mohd Hardie Hidayat b. Mohyi (PhD. in Mechanical Eng) 2012-2015**

*Multiple hydrogen inlet fuel cell design optimization*

5. **Suhadiyana Hanapi (PhD. in Mechanical Eng) 2013-2016**

*Energy efficiency optimization of a Fuel Cell vehicle*

6. **Irnle Azni bt. Zakaria (PhD. in Mechanical Eng) 2013-2016**

*Nanofluid coolants for PEM fuel cell thermal management*

7. **Mohd. Tzhaquib Fadhlullah bin Tamarallah (MSc in Mechanical Eng) 2014 –**

*Thermal analysis of porous copper heat sinks*

8. **Siti Fatimah Abdul Talib (MSc in Mechanical Eng)**

2014 – *Development of fuel cell cooling system using nanofluid coolants*

9. **Muhammad Saufi b. Sulaiman (MSc in Mechanical Eng)** 2014 – *Fuel cell waste heat recovery using thermoelectric generators*

**LIST OF PUBLICATIONS**  
(UPDATED OCTOBER 2015)

1. Zakaria, I. , Mohamed, W. , Azmi, W. (2015). 'Thermal Analysis on Heat Transfer Enhancement and Fluid Flow for Al<sub>2</sub>O<sub>3</sub> Water-Ethylene Glycol Nanofluid in Single PEMFC Mini Channel'. World Academy of Science, Engineering and Technology, International Science Index 105, International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering, 9(9), 1496 - 1501.
2. Wan Ahmad Najmi bin Wan Mohamed and Rahim Atan, Experimental Thermal Analysis on Air Cooling for Closed Cathode Polymer Electrolyte Membrane Fuel Cells, Int. J. Hydrogen Energy 40 (33) (2015) pp. 10605-106026.
3. Irmie Azlin Zakaria, Wan Azmi Wan Husin, Rizalman Mamat, G. Najafi and Wan Ahmad Najmi bin Wan Mohamed, Experimental investigation of thermal conductivity and electrical conductivity of Al<sub>2</sub>O<sub>3</sub> Nanofluid in Water-Ethylene Glycol Mixture for Proton Exchange Membrane Fuel Cell Application, International Communications in Heat and Mass Transfer 61 (2015) pp. 61-68.
4. Irmie Zakaria, Z. Michael, W.A.N.W. Mohamed, A.M.I. Mamat, W.H. Azmi, R. Mamat and R. Saidur, A Review of Nanofluid Adoption in Polymer Electrolyte Membrane (PEM) Fuel Cells as an Alternative Coolant, J. of Mechanical Engineering and Sciences 8 (2015), pp. 1351-1366.
5. S. Hanapi, M.H.A Mohd Fakharuzi, A.H. Abdol Rahim, AlHassan Salami Tijani, K.I. Sainan and W.A.N. Wan Mohamed, Effect of Gear Ratio on the DC Motor Efficiency of a Mini-Fuel-Cell Vehicle Cruising at Constant Speeds, J. of Mechanical Engineering and Sciences 8 (2015), pp. 1460-1471.
6. Muhammad Zuhaili Bin Razali, Abdul Rahim Bin Abdullah, Wan Ahmad Najmi Wan Mohamed and Mohd Shahril Ahmad Khair, Effect of Hydrogen Inlet Pressure Analysis on open Voltage of Proton Exchange Membrane (PEM) Fuel cell by using Periodogram, Aust. J. Basic & Appl. Sci., 9(12): 86-92, 2015.
7. Suhadiyana Hanapi, Alhassan Salami Tijani, A. H. Abdol Rahim and W. A. N. Wan Mohamed, Exergy efficiency profile of a 1 kW open cathode fuel cell with pressure and temperature variations, Energy Procedia, 2015 International Conference on Alternative Energy in Developing Countries and Emerging Economies (AEDCEE).
8. Suhadiyana Hanapi, S. M. H Syed Omar, Alhassan Salami Tijani, A. H. Abdol Rahim and W. A. N. Wan Mohamed, Comparison of a prototype PEM fuel cell powertrain power demand and hydrogen consumption based on inertia dynamometer and on-road tests, Energy Procedia, 2015 International Conference on Alternative Energy in Developing Countries and Emerging Economies (AEDCEE).
9. Siti Fatimah Abu Talib, Wan Azmi Wan Hamzah, Irmie Zakaria, W. A. N. Wan Mohamed, A.M.I. Mamat, H. Ismail and Wan Ramli Wan Daud, Thermophysical Properties of Silicon Dioxide (SiO<sub>2</sub>) in Ethylene Glycol/Water (EG/W) Mixture for Proton Exchange Membrane Fuel Cell Cooling Application, Energy Procedia, 2015 International Conference on Alternative Energy in Developing Countries and Emerging Economies (AEDCEE).
10. Irmie Zakaria, W.A. Najmi W. Mohamed, A.M.I Bin Mamat, R.Saidur, Wan Azmi Wan Hamzah, Rizalman Mamat, and S.F.A Talib, Experimental Investigation of Al<sub>2</sub>O<sub>3</sub> - Water Ethylene Glycol

- Mixture Nanofluid Thermal Condition in A Single Cooling Plate For PEMFC Application, Energy Procedia, 2015 International Conference on Alternative Energy in Developing Countries and Emerging Economies (AEDCEE).
11. Irnie Azlin Zakaria, Zeno Michael and Wan Ahmad Najmi Wan Mohamed, Nanofluid as Cooling Medium In Polymer Electrolyte Membrane (PEM) Fuel Cell: A Study On Potentials And Possibilities, *Advanced Materials Research* Vol. 1109 (2015) pp 319-323.
  12. Suhadiyana Hanapi, Firdaus Othman and W. A. Najmi Wan Mohamed, Efficiency of electric motor on PEM fuel cell urban car, *Proc. Int. Conf. on Applied Sciences & Industrial Technology (ICASIT) 2015*.
  13. Siti Fatimah Abu Talib, Irnie Azlin Zakaria, Wan Azmi Wan Hamzah, W. A. Najmi Wan Mohamed, Experimental Investigation of Viscosity of Silicon Dioxide (SiO<sub>2</sub>) in Water Ethylene Glycol Base Fluids for Proton Exchange Membrane Application, *Int. Conf. on Applied Sciences & Industrial Technology (ICASIT) 2015*.
  14. Irnie Azlin Zakaria, Wan Ahmad Najmi Wan Mohamed, Aman Mohd Ihsan Mamat, Khairul Imran Sainan and Siti Fatimah Abu Talib, Thermal Performance of Al<sub>2</sub>O<sub>3</sub> In Water - Ethylene Glycol Nanofluid Mixture As Cooling Medium in Mini Channel, *Int. Conf. on Applied Sciences & Industrial Technology (ICASIT) 2015*.
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15. Aman Mohd Ihsan Mamat, Wan Ahmad Najmi Wan Mohamed, Rosnadiyah Bahsan, Zeno Micheal, Nazri Mohamad, Mohd Hanif Mat@Muhammad, Malaysia Assessment of Complex Engineering Problem in Thermal Engineering Course, 6th IEEE International Conference on Engineering Education (ICEED) 2014 Kuala Lumpur.
  16. Wan Ahmad Najmi Wan Mohamed, Cooling channels design analysis with chaotic laminar trajectory for closed cathode air-cooled PEM fuel cells using non-reacting numerical approach, *IOP Conf Series: Material Science and Engineering*, 7th Int. Conf. on Cooling and Heating Technologies (ICCHT) 2014.
  17. A.H. Abdul Rahim, Alhassan Salami Tijani, W. A. N. W. Mohamed, S. Hanapi and K.I. Sainan, An overview of hydrogen production from renewable energy source for remote application, *Applied Mechanics and Materials*, Vol. 699, pp. 474-479, 2014.
  18. Mohamad Tzhaquib Fadhullah Thafarallah, Wan Ahmad Najmi Wan Mohamed and Nor Amalina Nordin, High Resolution Micro-Computed Tomography Imaging and Modelling of Porous Copper Sample, *Proceedings - 4th IEEE International Conference on Control System, Computing and Engineering, ICCSCE 2014*. 7072764, pp. 466-471.
  19. Wan Ahmad Najmi Wan Mohamed, Irnie Azlin Zakaria, Zeno Michael and Aman Mohd Ihsan Mamat, Thermal and Electrical Experimental Characterization of Ethylene Glycol and Water Mixture Nanofluids for a 400W Proton Exchange Membrane Fuel Cell, *Proceedings - 4th IEEE International Conference on Control System, Computing and Engineering, ICCSCE 2014*, 7072797, pp. 641-646.
  20. Irnie Azlin Zakaria, Wan Ahmad Najmi Wan Mohamed, Muhammad Zuhaili Razali and Mohd Shahril Ahmad Khair, Effect of Temperature towards Electrical Conductivities of Low Concentration of AL<sub>2</sub>O<sub>3</sub> Nanofluid in Electrically Active Cooling System, *Proceedings - 4th IEEE International Conference on Control System, Computing and Engineering, ICCSCE 2014*, 7072760 pp. 444-448.
  21. Wan Ahmad Najmi Bin Wan Mohamed and Rahim Atan, Experimental Cooling Mode Variation of an Air-Cooled PEM Fuel Cell using Second-Order Thermal Analysis, *Journal of Mechanical Engineering* 10 (2), 2014, pp. 55-78.
  22. Suhadiyana H., M. A. A. Zambri, M. H. A. Mohd Fakharuji, A. H. Rahim, K. I. Sainan, and W.A.N. W. Mohamed, Data acquisition system for on-track performance analysis of a mini fuel cell vehicle, *IEEE 3rd IET International Conference on Clean Energy and Technology (CEAT 2014)*. DOI:10.1049/cp.2014.1501
  23. Irnie Azlin Zakaria, Muhammad Rizuwan bin Mustaffa, Aman Mohd Ihsan bin Mamat and Wan Ahmad Najmi Wan Mohamed, Steady-State Potential Energy Recovery Modeling of an Open Cathode PEM Fuel Vehicle, *Applied Mechanics and Materials*, vol 465-466 (2014) pp. 114-119.

24. Wan Ahmad Najmi Wan Mohamed, Cooling effectiveness of cooling fan coupling on polymer electrolyte membrane fuel cell stacks with varied channel aspect ratios and air humidity, 20th World Hydrogen Energy Conference (WHEC) 2014, vol. 3, pp 1969-1976.
25. Irmie Azlin Zakaria, Zeno Michael and Wan Ahmad Najmi bin Wan Mohamed, Nanofluid as Cooling Medium in PEM Fuel Cells, Malaysia-Japan International Conference on Nanoscience, Nanotechnology and Nanoengineering 2014 (NANO-SciTech 2014 & IC-NET 2014), Shah Alam.

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26. Wan Ahmad Najmi bin Wan Mohamed and R. Atan, Stack Cooling Profile of an Air-Cooled 3-Cell Polymer Electrolyte Membrane Fuel Cell Stack, Applied Mechanics and Materials: Advances in Manufacturing and Mechanical Engineering Vol. 393, 2013, pp. 774-780.
  27. Aman M.I Bin Mamat and Wan Ahmad Najmi Bin Wan Mohamed, Thermal Analysis of Heat Recovery Unit to Recover Exhaust Energy using an Organic Rankine Cycle, Applied Mechanics and Materials: Advances in Manufacturing and Mechanical Engineering Vol. 393, 2013, pp. 781-786.
  28. Khairul Imran Sainan and Wan Ahmad Najmi Bin Wan Mohamed, Operating Condition Optimization of PEMFC via Visualization Technique, Applied Mechanics and Materials: Advances in Manufacturing and Mechanical Engineering Vol. 393, 2013, pp. 787-792.
  29. Wan Ahmad Najmi bin Wan Mohamed and Yiap Tea Sin, Industrial and academic collaboration strategies on hydrogen fuel cell technology development in Malaysia, Procedia-Social and Behavioral Sciences 90, 2013, pp. 878-888.
  30. Muhammad Rizuwan bin Mustaffa and Wan Ahmad Najmi bin Wan Mohamed, Testing of Lightweight Fuel Cell Vehicles System at Low Speeds with Energy Efficiency Analysis, IOP Conf. Series: Material Science and Engineering 53(1), 012040. (5th International Conference on Mechatronics (ICOM), Kuala Lumpur, Malaysia, 2-4 July 2013).

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31. Wan Ahmad Najmi bin Wan Mohamed and R. Atan, Temperature profiles of an air-cooled PEM fuel cell stack under active and passive cooling operation, Procedia Engineering vol 41, pp 1735-1742, 2012.
  32. Wan Ahmad Najmi bin Wan Mohamed and R. Atan, Analysis of Stack Heating on the Thermal and Electrical Resistance Characteristics of Polymer Electrolyte Membrane Fuel Cell, International Journal of Automotive and Mechanical Engineering (IJAME), vol. 5, pp. 648-659, Univ. Malaysia Pahang, 2012.
  33. Wan Ahmad Najmi bin Wan Mohamed and R. Atan, Thermal and Coolant Flow Computational Analysis of Cooling Channels for Air-Cooled PEM Fuel Cell, Applied Mechanics and Materials: Mechanical and Aerospace Engineering, vol 110-116, pp. 2746-2753, 2012.
  34. Muhammad Rizuwan bin Mustaffa and Wan Ahmad Najmi bin Wan Mohamed, Analytical Approach to Predict Hydrogen Consumption of a Lightweight Fuel Cell Vehicle, Proceedings - 2012 IEEE International Conference on Control System, Computing and Engineering, ICCSCE 2012, 6487195, pp. 489-494.

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35. Wan Ahmad Najmi b. Wan Mohamed and R. Atan, Experimental Heat Transfer of A Chaotic Flow Cooling Channel For An Air-Cooled PEM Fuel Cell Stack, 3rd International Conference on Fuel Cell & Hydrogen Technology (ICFCHT 2011), KL, 2011.
  36. K.I. Sainan, Wan Ahmad Najmi b. Wan Mohamed and R. Atan, Development of Single Cell Transparent Visualization Test Rig for Two-Phase Flow Analysis of a PEM Fuel Cell, 3rd International Conference on Fuel Cell & Hydrogen Technology (ICFCHT 2011), KL, 2011
  37. Muhammad Rizuwan bin Mustaffa, Wan Ahmad Najmi b. Wan Mohamed and R. Atan, Single Seated Fuel Cell Vehicle Simulation for Power Requirements Based on Variable Driving Conditions,

- 3rd International Conference on Fuel Cell & Hydrogen Technology (ICFCHT 2011), KL, 2011.
38. Zulizwan Hamdan, Wan Ahmad Najmi b. Wan Mohamed and R. Atan, Computational Investigation of Counter-Flow Reactants Using CFD Ace+ With Experimental, 3rd International Conference on Fuel Cell & Hydrogen Technology (ICFCHT 2011), KL, 2011
39. K.I. Sainan, Wan Ahmad Najmi b. Wan Mohamed and R. Atan, Computational Model Analysis on a Bipolar Plate Flow Field Design of a PEM Fuel Cell, 2011 5th International Power Engineering and Optimization Conference, PEOCO 2011-Program and Abstracts, 5970420, pp. 133-138.
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40. Wan Ahmad Najmi b. Wan Mohamed, Abbas Ismail and R. Atan, Heat transfer simulation of a single-channel air-cooled Polymer Electrolyte Membrane fuel cell stack with extended cooling surface, CSSR 2010 - 2010 International Conference on Science and Social Research, 5773920 pp. 91/96.
41. Wan Ahmad Najmi b. Wan Mohamed and R. Atan, Computational Analysis on Thermal Performance and Coolant Flow of an Air-Cooled PEM Fuel Cell, Journal of Mechanical Engineering, UiTM, Vol.7 (2), 2010.
42. K.I. Sainan, Wan Ahmad Najmi b. Wan Mohamed and R. Atan, Analysis of PEM Fuel Cell Flow Field Design and Operation for Effective Water Removal, International Conference on Advances in Mechanical Engineering (ICAME 2010), Shah Alam, 2010
43. Muhammad Rizuwan bin Mustaffa, Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Preliminary Analysis on Fuel Cell Power Plant Design for Racing Vehicles, International Conference on Advances in Mechanical Engineering (ICAME 2010), Shah Alam, 2010
44. Zulizwan Hamdan, Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Non-reacting Gas Pressure Analysis of Bipolar Plate Polymer Electrolyte Membrane Fuel Cell Flow Field Designs Using CFD, International Conference on Advances in Mechanical Engineering (ICAME 2010), Shah Alam, 2010.
45. M. Fairuz Remeli, Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Cooling Mechanisms and Contribution Analysis of an Experimental Polymer Electrolyte Membrane Fuel Cell System, 2nd Engineering Conference (ENCON) 2010, Kuching, 2010.
46. Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Micro-Channel Optimization For An Air-Cooled Polymer Electrolyte Membrane Fuel Cell by CFD, 2nd Engineering Conference (ENCON) 2010, Kuching, 2010.
47. Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Thermal Engineering Performance Evaluation of a Polymer Electrolyte Membrane Fuel Cell Stack at Partial Load, Regional Conference on Mechanical and Aerospace Technology 2010, Bali, 2010.
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48. Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Optimizing Air Cooling Capability of Polymer Electrolyte Membrane Fuel Cells through Case-by-Case Cooling Channel Analysis, International Conference on Advances in Mechanical Engineering (ICAME), Shah Alam, 2009.
49. Azli Abdul Razak, Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Effect of Channel Inclination on Cooling Capability of an Air-Cooled PEM Fuel Cell Plate using CFD, International Conference on Advances in Mechanical Engineering (ICAME), Shah Alam, 2009
50. Wan Ahmad Najmi B. Wan Mohamed and Yiap Tea Sin, Current and Possible Future Applications of Hydrogen Fuel Cells in Malaysia, International Conference on Advances in Mechanical Engineering (ICAME), Shah Alam, 2009.
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51. Wan Ahmad Najmi B. Wan Mohamed and Nik Rosli Abdullah, Combustion Characteristics of Palm Shells and Palm Fibres using an Inclined Grate Combustor, Journal of Mechanical Engineering, UiTM, Vol.5 (1), 2008
52. Arhosazani M. and Wan Ahmad Najmi B. Wan Mohamed, Comparison of Combustion Performance

Between Natural Gas and Medium Fuel Oil at Different Firing Settings for Industrial Boilers ,  
International Conference On Mechanical And Manufacturing Engineering (ICME), Johor Bharu, 2008.

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53. Wan Ahmad Najmi B. Wan Mohamed, Performance Analysis of an Inclined Grate Combustor for Solid Biomass Wastes, International Networking of Young Scientist in Renewable Energy (INYSRE), Bangi, 2007.
  54. Azhan M. Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Horse Power Analysis of a Spark Ignition Internal Combustion Engine with Variable Ignition Strength and Timing at Stoichiometric Air-Fuel Ratio, Conference of Scientific and Social Research (CSSR), Sunway, 2007.
  55. Nor Amalina Nordin, Noraini Wahab, Wan Ahmad Najmi b. Wan Mohamed and M. Hussain Ismail, Vertical Tube "Heat and Drop" Furnace from Jominy End Quench Test, Proc. of National Metallurgical Conference, 2007.
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56. Hazran Husain and Wan Ahmad Najmi B. Wan Mohamed, Energy Consumption of Thermal Energy Storage at UiTM Based on Actual Building Load Profile, International Conference on Energy and Environment (ICEE), Bangi, 2006
  57. Wan Ahmad Najmi B. Wan Mohamed, Nik Rosli Abdullah and M.S. Izat, Combustion Characteristics of Palm Kernel Shells Using an Inclined Grate Combustor, International Conference on Energy and Environment (ICEE), Bangi, 2006.
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58. Azhan M., Wan Ahmad Najmi B. Wan Mohamed and R. Atan, Power Output Analysis of an Internal Combustion Engine with Variable Ignition Strength and Timing, National Seminar on Advances in Mechanical Engineering (NAME), Kuala Lumpur, 2005
  59. Wan Ahmad Najmi B. Wan Mohamed and Shahrani Anuar, Factors Influencing the Design of a Fluidized Bed Parts-Cleaning System, National Seminar on Advances in Mechanical Engineering (NAME), Kuala Lumpur, 2005.
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60. Wan Ahmad Najmi B. Wan Mohamed, Emission Characteristics of Palm Oil Shell in a Cascading Hearth Staged Combustor, Journal of Faculty of Mechanical Engineering, UiTM, Vol.1 (1), 2004.
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61. Wan Ahmad Najmi B. Wan Mohamed, Sequential Control of Cascading Hearth Staged Combustor Using Programmable Logic Controllers, Seminar on Research and Consultancy (SERAC) FKM UiTM 2003.
  62. Wan Ahmad Najmi B. Wan Mohamed and Shahrani Anuar, Parts Cleaning Using Fluidized Bed Heat-Cleaning System, Seminar on Research and Consultancy (SERAC) FKM UiTM 2003.
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63. Wan Ahmad Najmi B. Wan Mohamed and Farid Nasir Ani, The Effect of Fuel Feed Rate on Temperature Profiles of a Cascading Hearth with Secondary Swirl Combustor, Jurnal Mekanikal UTM, vol 13, pp. 75-88, 2002.

## AWARDS

1. Anugerah Cendekia Bitara 2015 dari Univ. Malaysia Pahang (UMP) untuk penerbitan kertas kerja Q1 "Experimental investigation of thermal conductivity and electrical conductivity of Al<sub>2</sub>O<sub>3</sub> Nanofluid in Water-Ethylene Glycol Mixture for Proton Exchange Membrane Fuel Cell Application" di Int. Communications of Heat and Mass Transfer.
2. Best Paper Award at the Int. Conf. on Applied Sciences and Industrial Technology (ICASIT) 2015: Thermal Performance of Al<sub>2</sub>O<sub>3</sub> In Water - Ethylene Glycol Nanofluid Mixture As Cooling Medium In Mini Channels.
3. Bronze Medal for Innovation of "Fuel Cell Educational Kit" at the International Innovation, Invention and Design Competition and Conference (ICON) 2014, Terengganu.
4. Silver Medal for the Innovation of "Solarized Fuel Cell Trainer Kit" at the Invention, Innovation and Design Exhibition IIDEX 2014, Shah Alam.
5. Gold Medal for the Innovation of "Fuel Cell Trainer Kit" at the Innovation Platform 2012, Kedah.
6. Best Concept Paper 6th Int. Conf. on University Learning and Teaching (InCULT) 2012: Industrial and academic collaboration strategies on hydrogen fuel cell technology development in Malaysia.
7. Anugerah Khidmat Cemerlang UiTM 2006.

## EXPERIENCE & ACHIEVEMENT HIGHLIGHTS

1. Selected as Judge for the F1 in Schools National Finals in 2007 – 2015.
2. Invited Speaker for the Multi Media University MESCORP Conference 2014 - Hydrogen Fuel Cell: The Future of Clean and Efficient Energy in Malaysia.
3. Invited Speaker for the ILQaM Module on PhD on time: Pre-PhD preparation – Selection of Project Title (2014).
4. Formerly served as Head for the Thermofluids and Energy Centre of Studies at the Faculty of Mechanical Engineering, UiTM (2011-2013).
5. Formerly served as Head of the Alternative Energy Research Centre (AERC), a Special Interest Group (SIG) under the Faculty of Mechanical Engineering, UiTM (2013-2015).
6. Currently serving as Advisor to Engine Union, a student society in UiTM (2015-2016).
7. Currently serving as Advisor to Green Tech Society, a student society in UiTM (2013- ).
8. Head and Advisor for team ADROIT which competed in the Shell Eco-Marathon Asia 2012 under the category of Hydrogen Fuel Cells.
9. Research collaboration with UKM, UTM, UPM and Uniten on Hydrogen Fuel Cell vehicle development through LRGS research grant (2013 – 2016).
10. Research collaboration with UMP on nanofluid coolants for fuel cell thermal management (2013-2016).
11. Research collaboration with UTeM on signal processing for fuel cell operational diagnostics (2014-2016).
12. Established the first Hydrogen Fuel Cell research lab and research project in UiTM (2008).
13. Established the first nanofluids lab and research project in UiTM (2013).
14. Formerly served as Advisor to Persatuan Siswa Siswi Kejuruteraan Mekanikal (PSSKM), a student society in UiTM (2003-2006)