

BRIEF CV



Dr. Muhamad Zuhairi Bin Sulaiman

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Universiti
Malaysia
PAHANG
Engineering • Technology • Creativity

Academic Qualifications

1. Ph.D (Mechanical Engineering), The University of Electro-communications, Tokyo, Japan
2. M.Eng. (Mechanical), Universiti Teknologi Malaysia
3. B.Eng. (Hons) Mechanical & Manufacturing Engineering, Universiti Malaysia Sarawak

Brief Profile

M. S. Zuhairi is a senior lecturer at Faculty of Mechanical Engineering in Universiti Malaysia Pahang. He obtained PhD degree in Mechanical Engineering from The University of Electro-communications, Tokyo, Japan. His master degree (Mechanical) from University Teknologi Malaysia and bachelor degree from Universiti Malaysia Sarawak (UNIMAS) in Mechanical and Manufacturing Engineering.

Working Experiences / Appointment

1. Dec 2008 ~ Present Lecturer, FKM, Universiti Malaysia Pahang.
 *April 2014 ~ Mac 2015 Lecturer (part-time), The University of Foreign Studies, Tokyo.
2. Nov 2007~ Dec 2008 Tutor, FKM, Universiti Malaysia Pahang.
3. April 2005 ~ June 2005 Material Control, Panasonic HA Air-Conditioning (M) Sdn Bhd (PHAAM)
4. November 2004 ~ April 2005 Trainee, MAS Engineering & Maintenance, Subang.

Expert Area

Boiling Heat Transfer, Nanofluids Engineering, Multiphase flow, Bubble dynamics, Computational Fluid Dynamics (CFD) and Renewable Energy.

Research Area / Research Interest

Boiling Heat Transfer, Nanofluids Engineering, Multiphase flow, Bubble dynamics, Computational Fluid Dynamics (CFD) and Renewable Energy.

Professional Qualification / Membership / Affiliation / Experience

B) Membership of Professional Body

1. BEM (68339A)
2. IEM (48887)
3. JSME (1213411)
4. ASME (100226107)

Teaching Experience

1. **DEC 2008/2009**
 BMM1553 Dynamics, 3 credits (226 Students)
 BMM3912 Final Year Project 1, 2 credits (7 Students)
 BMM4999 Industrial Training (5 students)

JULY 2009/2010

BMM 4924 Final Year Project 2, 4 credits (11 Students)
 BMM 3521 Engineering Fluid Mechanics Lab (229 Students)

DEC 2009/2010

BMM1553 Dynamics, 3 credits (100 Students)
 BMM 4924 Final Year Project 2, 4 credits (1 Student)
 BMM 3912 Final Year Project 1, 2 credits (4 Students)
 BMM 3531 Eng Thermodynamics Lab (220 Students) - Coordinators
 BMM 3993 Industrial Training (4 Students)

JULY 2010/2011

DMM 2523 Dynamics, 3 credits (42 Students) - Coordinators
 BMM 4924 Final Year Project 2, 4 credits (4 Students)
 BMM 4723 Mechanism Design, 3 credits (32 Students) -
 BMM 3521 Engineering Fluid Mechanics Lab, 1 credits (215 students) - Coordinators
 DMM 3993 PTA, 3 credits (1 student)

DEC 2010/2011

DMM 2543 Fluid Mechanics, 3 credits (42 students)
 BMM 3531 Eng Thermodynamics Lab (220 Students) - Coordinator
 DMM2523 Dynamics (2 students) - Coordinators
 BMM 3993 Industrial Training (7 Students)

APRIL 2011/2012

BMM 3993 Industrial Training (7 Students)

FEB 2016

BMM2543 Fluid Mechanics II (44 Students)
 BMM1811 Engineering Mechanical Lab (20 Students)
 BMM 3994 Industrial Training (8 Students)

SEPTEMBER 2016

BMM2543 Fluid Mechanics II (111 Students)
 DMM1543 Engineering Drawing & CAD (25 Students)

FEB 2017

BMM2543 Fluid Mechanics II (121 Students) Coordinator
 BMM1821 Engineering Mechanical Lab (21 Students)
 BMM 3521 Engineering Fluid Mechanics Lab (22 Students)
 BMM 3994 Industrial Training (6 Students)

SEPTEMBER 2017

BMM2543 Fluid Mechanics II (149 Students) - Coordinator
 DMM1543 Engineering Drawing & CAD (25 Students)

FEBRUARI 2018

BMM2543 Fluid Mechanics II (151 Students) - Coordinator
 BMM3521 Fluid Mechanics Lab (20 Students)

SEPTEMBER 2019

BMM2543 Fluid Mechanics II - Coordinator
 DMM1543 Engineering Drawing & CAD

Supervision

Master of Science

No.	Academic Year	Name of Student	Title of Project
1	2017 – ongoing	Muhamad Hadie Aizzat Bin Asli	Investigation of boiling heat transfer in nanofluids
2	2018 – ongoing	Hazirah binti Ismail	Investigation of quenching heat transfer in nanofluids

Bachelor Degree

No.	Academic Year	Name of Student	Title of Project
1	2008 – 2009	Lee Wen Yin	Design and Optimization of Small Scale Factory Manufacturing System
2	2008 – 2009	Mohd Zulfadhli Abdul Wahab	Human Airway flow Studies using Computational Fluid Dynamics (CFD)– Case 1
3	2008 – 2009	Nik Muqaffi Nik Jaafar	Investigation of Flow in Elbow Pipe Using Lattice Boltzmann Method
4	2008 – 2009	Jeffry Ahmad	Human Airflow Studies using Computational Fluid Dynamics (CFD)– Case 2
5	2008 – 2009	Mohd Hanapi Sakirin	Secondary Flow Study Along the Elbow Using Computational Fluid Dynamics (CFD) and Various Turbulence Model
6	2008 – 2009	Muhammad Hilmi Azahar	Flow Around a Pair Of Side-By-Side Square Cylinders Using Lattice Boltzmann Method
7	2008 – 2009	Mohd Shaifullah Shahrudin	Aerodynamic Behavior of Persona Car Using Computational Fluid Dynamics (CFD)
8	2008 – 2009	Siti Aisyah – <u>Awanis</u> Mohd	Finite Difference of Thermal Lattice Boltzmann Scheme for Natural Convection
9	2008 – 2009	Pylliscia Sumbok Adan	Evaluation of two different types D2Q4 Microscopic Lattice Boltzmann for Natural Convection
10	2008 – 2009	Shaifulnizam Sharif	Investigation of flow around Bluff Body using Lattice Boltzmann Method
11	2008 – 2009	Abang Ma'aruf Abang	Numerical Simulation of Flow Pattern and Heat Transfer in Cross Flow
12	2009 - 2010	Mohd Syazrul Shafiq Saad	Study Of F1 Car Front Wing Aerodynamics using CFD
13	2009 – 2010	Mohd Shahmal Mohd Shahid	Study Of F1 Car Rear Wing Aerodynamics using CFD
14	2009 – 2010	Wan Mohamad Dasuqi Wan ma'sor	Simulation Of Bubbles Rise Using Meso-scale Technique
15	2009 - 2010	Mohd Qairul Mohd Bokhari	Study Of Particles Transport Along Human Airways Using CFD
16	2016 – 2017	Ammar Husaini Ramdzan	Simulation of nucleate boiling in subcooled and saturated ethanol
17	2016 – 2017	Abdul Wafi	Simulation of nucleate boiling in subcooled and saturated water
18	2016 – 2017	Tay Say Young	Investigation of Heat Transfer Coefficient in
19	2017 - 2018	Mohd Adham Mat Ali	Investigation of Heat Transfer Coefficient in Nanofluids Pool Boiling Quenching Nanofluids
20	2018 – ongoing	Nurul Adilah Abu Siroh	Surfactant effect of Heat Transfer Coefficient in Quenching Nanofluids
21	2018 – ongoing	Chandraka Subramanian	Surfactant effect of Heat Transfer Coefficient in Nanofluids Pool Boiling
22	2018 - ongoing	Ain Nadhirah Buhari	Investigation of drying performance for small IKS solar dryer

Diploma Degree

No.	Academic Year	Name of Student	Title of Project
1	2016	Muhammad Hazwan	Design and Fabricate a Coconut Peeler: An Upper segment
2	2016	Siti Noradila	Design and Fabricate a coconut Peeler: A Lower Segment
3	2016	Danial Aiman	Design & Fabricate a Machine for Preparing the Heater with Different Surface Morphology
4.	2017	Muhammad Nasuha	Design and Fabrication of Automatic Voltage Regulator Frame
5.	2017	Muhammad Shaiful Bashir Mohd Azli	Design and fabrication of solar dryer collector
6.	2017	Mohamad Zul Irfani Mohd Kusaini	Design and fabrication of solar dryer chamber for fish cracker
7.	2018	Radenku Siti Diyanah Binti Johari	Fabrication of solar heat collector for a food dryer
8.	2018	Muhammad Afif Izzuddin bin Ramli	Fabrication of solar dryer chamber

Publication

A) International and National Journal

1. A. R. M. Rosdzimin, **S. M. Zuhairi** and N.A.C. Sidik, "Simulation of mixed Convection Heat Transfer using Lattice Boltzmann Method", *International Journal of Automotive & Mechanical Engineering*, 2, 130-143
2. K.V.Sharma, W.H.Azmi, Rizalman Mamat, **S. M. Zuhairi**, K.Kadirgama, R.A.Bakar, "Thermal conductivity estimation of oxide nanofluid in water-influence of particles properties", ICNT22, SIRIM.
3. **Muhamad Zuhairi Sulaiman**, Masahiro Takamura , Kazuki Nakahashi, Tomio Okawa, "Boiling heat transfer and critical heat flux enhancement of upward- and downward-facing heater in nanofluids", *J. Eng. Gas Turbines Power* 135(7), 072901 – ASME.
4. **Muhamad Zuhairi Sulaiman**, M., Matsuo, D., Enoki, K., & Okawa, T. (2016). Systematic measurements of heat transfer characteristics in saturated pool boiling of water-based nanofluids. *International Journal of Heat and Mass Transfer*, 102, 264–276.

B) International and National Conference Papers

5. **M. S. Zuhairi**, C. S. N. Azwadi, N. M. Akmal , "Simulations of Two Bubbles Rise in Cavity With Lattice Boltzmann Method", International Graduate Conference on Engineering and Sciences (IGCES 08), 23-24 December, UTM, Johor, Malaysia, 46, 2008.
6. N. M. Akmal, C. S. N. Azwadi, **M. S. Zuhairi**, "Laminar Flow through a Double Elbow Geometry with Lattice Boltzmann method", International Graduate Conference on Engineering and Sciences (IGCES 08), 23-24 December, UTM, Johor, Malaysia, 46, 2008.
7. **S. M. Zuhairi**, A. R. M. Rosdzimin and N. A. C. Sidik , "Study of Plume Behaviour Two Heated Cylinders at High Rayleigh Number Using Lattice Boltzmann Method", The 10th Asian International Conference on Fluid Machinery, 21st – 23rd October 2009, Kuala Lumpur Malaysia.
8. **Zuhairi Sulaiman**, Nasrul Hadi, Kahar Osman, "Computational Fluid Dynamics Simulations of Stenosis in Upper Human Airways", International Meeting of Advanced Thermofluid (IMAT2009), Bogor, Indonesia.
9. W. H. Azmi, K.V.Sharma, Rizalman Mamat, **S. M. Zuhairi**, M. A. Hisham, "Estimation of Forced Convection Heat Transfer Coefficient of Nanofluids using The Concept of Colburn Analogy", Proceeding NCMER2010, 3 – 4 December, UMP, Pekan, Pahang, 2010
10. **Muhamad Zuhairi Sulaiman**, Nik Izual Nik Ibrahim, Nor Azwadi Che Sidik, "Numerical Investigation Of Thermal Fluid Flow In An Inclined Square Cavity", 7th International Conference On Computational Heat And Mass Transfer, July 18-22, 2011, Istanbul, Turkey
11. **Muhamad Zuhairi Sulaiman**, Masahiro Takamura , Kazuki Nakahashi, Tomio Okawa, "Boiling heat transfer and critical heat flux enhancement of upward- and downward-facing heater in nanofluids", International Conference on Nuclear Engineering (ICONE20-POWER2012), July 30 - August 3, 2012, Anaheim, California, USA
12. **Muhamad Zuhairi Sulaiman**, Tomio Okawa, "Heat flux effects on nanofluid boiling surface to the CHF enhancement", The 18th National Symposium on Power and Energy Systems (SPES2013), 20-21 June 2013, Chiba, Japan.
13. Daisuke Matsuo, **Muhamad Zuhairi Sulaiman**, Tomio Okawa, "Effects of particle dispersion on boiling heat transfer in nanofluids", The 63rd Japan National Congress for Theoretical and Applied. 26 - 28 Sept 2014.
14. Tomio Okawa, **Muhamad Zuhairi Bin Sulaiman**, Daisuke Matsuo, "Experimental study on the critical heat flux and heat transfer coefficient in nanofluid pool boiling", 10th International Topical Meeting on Nuclear Thermal Hydraulics, Operation and Safety (NUTHOS10), 14 - 18 Dec 2014.

1. Fundamental Research Grant Scheme (FRGS 2017 - 2019) – MOHE (Malaysia) “Elucidation of boiling heat transfer mechanism by parametric approach using nanofluids ” – (**Project leader**, 2017 – ongoing)
2. UMP Short Grant 2016-2018 “Investigation on boiling heat transfer and critical heat flux in nanofluids pool boiling”, (**Project Leader**, 2016 – ongoing)
3. UMP Short Grant 2017-2018 “Solar Dryer Machine for SMEs”, (**Project leader**, 2017 – ongoing)
4. UMP Short Grant 2017-2019 “Development of Ignition Mechanism Through Transient Species Analysis (Project member, 2017 – ongoing).
5. UMP Flagship Grant 2017-2020 “Investigation On Thermal Management Of CI Engine Operating With Biofuel” (Project member, 2017 – ongoing).
6. Fundamental Research Grant Scheme (FRGS 2010) – MOHE (Malaysia) “Mixture Formation and Combustion Characteristics of Diesel-Hydrogen Dual Fuel Engine (Team member)” – Completed
7. UMP Short Grant 2010/2011, “Determination of certain thermo-physical properties of nano-fluid useful in the estimation of heat transfer coefficient (**Project leader**)” – Completed
8. UMP Short Grant 2010/2011, “Model development of modular wind turbine system” (Project member) – Completed
9. UMP Short Grant 2009/2010, “Developments of aneurysm rupture prediction method using fracture mechanics analysis (Project member)”- Completed