

CURRICULUM VITAE



Abdul Majeed Muzathik

BSc. Eng. (Hons), MEng., PhD, CEng., CMarSci., MIE(SL), MIAE(SL), FIMarEST(UK)

Department of Mechanical Engineering
Faculty of Engineering
South Eastern University of Sri Lanka
Oluvil
Sri Lanka

Updated in May 2013

Head of the Department, Senior Lecturer and Lecturer (2000 to 2013)

In 2004, I was appointed as Senior Lecturer in the Department of Mechanical Engineering and Maritime Studies, Institute of Technology, University of Moratuwa, Sri Lanka and later appointed as the Head of the same department until 2008. Earlier I worked as Lecturer from 2000 to 2004 in Sri Lanka Advanced Technological Institute, attached to the Higher Education Ministry of Sri Lanka.

I have personally been actively involved in research projects and have prepared technical research proposals in Malaysia during the period from 2008 to 2011 (refer the research projects in the following pages). During this period I completed my PhD research degree in maritime technology at Universiti Malaysia Terengganu, Malaysia.

I have also participated in several conferences, workshops and training programs as a resource person and participant. We have recently commenced involvement in projects related to renewable energy, marine corrosion, ocean and coastal technology funded by the Malaysian Government to develop ocean renewable energy systems using in-situ measurements, hind-casting and forecasting data and numerical modelling.

Further, I participated in setting up of a wave data collecting platform located underwater at various water depths, off the shores of Terengganu, Malaysia. I was also involved in in-situ ocean current measurements at Merang Sea, Terengganu, Malaysia. I studied and reported the wave characteristics and extreme wave conditions in the South China Sea.

Recently (May, 2011), I became a Fellow Member of Institute of Marine Engineering, Science and Technology, UK and resided as a Chartered Marine Scientist with Science Council of UK.

During this period of more than 13 years, I was involved in teaching, research and administrative activities such as implementation of departmental rules and regulations to achieve the relevant objectives. During this period I was in-charge of maritime professional courses which come under the purview of IMO regulations. Further, I served as the institute representative for several governmental and professional bodies like Shipping Corporation of Sri Lanka, GlobalMET, etc.

During this period, I was also engaged in circular development of degree and higher diploma programs in universities and higher education institutes. In 2004, I became a Chartered Engineer attached to Institute of Engineers, Sri Lanka. Further, I received my Master of Engineering degree in Energy Technology in 2004 at University of Moratuwa, Sri Lanka. In 2007, I became a Cooperate Member of Institute Automotive Engineers, Sri Lanka.

Executive Engineer (1991 to 2000)

During my tenure as Executive Engineer, I was responsible for the day to day activities and reported to the Technical / Engineering Manager. In 1991, I was appointed as Mechanical Engineer in the Sevanagala Sugar Industries Limited, Sri Lanka.

Then, in 1993, I got a rare opportunity to work in the desalination plants in Kingdom of Saudi Arabia as Shift Charge Engineer. These desalination plants are situated on the eastern coast of Jubail, KSA.

On returning to Sri Lanka in 1995, I was appointed as Senior Executive Engineer in the Hingurana Sugar Industries Limited, Sri Lanka. As the Senior Executive Engineer, I was responsible for the smooth functioning of the plant and machineries. This involved the operation and maintenance of the plant, design modifications to improve the efficiencies and implementation of various labour and safety laws as also quality control procedures, technical and documentation procedures. The job also involved the effective management of a large number of human resources and inventory items. During this period, I gained rich experience in engineering application and management.

Instructor

(1990 to 1991)

I joined as an Instructor in the Department of Mechanical Engineering, University of Moratuwa, Sri Lanka immediately after my first graduation in Engineering from the same university in 1990.

I was responsible for the student laboratory works and tutorial classes for the Subjects of engineering drawing and thermodynamics in the Department of Mechanical Engineering. During this period from 1990 to 1991, I learned several academic and administrative skills from Professors and other academicians.

I was also involved in project proposal writing and research activities under senior staff members. I was extensively involved in preparing the laboratory sheets and conducting tutorial classes for engineering students.

During my employment, a significant work I was involved in was the research into the material science and Ocean science. My work included modelling and statistical analysis of measured data. This was to help me considerably in my later research work.

Personal Information

Name:	Abdul Majeed Muzathik
NIC No.:	642422650V
Sex:	Male
Date of Birth:	29.08.1964
Marital Status:	Married
Present Position:	Senior Lecturer (Grade I)
Specialization:	Mechanical, Marine Engineering and Renewable Energy
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Academic and Professional Qualifications

- PhD. in Renewable Energy, Maritime Technology, Universiti Malaysia Terengganu, Malaysia, 2011.
- MEng. in Energy Technology, University of Moratuwa, Sri Lanka, 2004.
- BSc (Engineering) (Hons) in Mechanical Engineering, University of Moratuwa, Sri Lanka, 1990.
- Licensed Chartered Engineer (C Eng.), Sri Lanka, 2004
- Chartered Marine Scientist (CMarSci), UK, 2011
- Fellow Member of the Institute of Marine Engineering, Science and Technology (IMarEST), UK
- Corporate Member of the Institute of Engineers (IESL), Sri Lanka, 2004.
- Corporate Member of the Institute of Automotive Engineers (IAESL), Sri Lanka, 2008.
- Energy Auditor, 2004.
- Certificate in Teaching in Higher Education (CTHE), University of Colombo, Sri Lanka, 2006.
- **SEDA** Certificate in Teaching, Learning and Assessing, UK, 2006.

Employment Records

- Senior Lecturer (Grade I), Department of Mechanical Engineering, Faculty of Engineering, South Eastern University of Sri Lanka, Oluvil, Sri Lanka, 2013 to date.
- Senior Lecturer, Department of Mechanical Engineering Technology and Maritime Studies, Institute of Technology, University of Moratuwa, Sri Lanka, 2004 to 2013.
- Student Counsellor, ITUM, University of Moratuwa, January to December, 2012.
- Researcher and Visiting Lecturer, Department of Maritime Technology, Universiti Malaysia Terengganu, Malaysia, 2008-2011.
- Head, Department of Mechanical Engineering Technology and Maritime Studies, Institute of Technology, University of Moratuwa, Sri Lanka, 2006-2008.
- Short Course Director, Maritime professional courses, Institute of Technology, University of Moratuwa, Sri Lanka, 2006-2008.
- Visiting Lecturer, Faculty Engineering, Open University of Sri Lanka, Sri Lanka, 2002-2008.
- Visiting Lecturer, Institute of Engineers, Sri Lanka, 2003-2008.
- Acting Head of the Department, Advance Technical Institute, Sri Lanka, 2001-2004.
- Lecturer, Advance Technical Institute, Colombo, Sri Lanka, 2001-2004.
- Visiting Lecturer, Technical College, Sammanthurai, Sri Lanka, 1999-2000.
- Executive Engineer, Hingurana Sugar Ind. Ltd., Sri Lanka, 1995-2001.
- Shift Charge Engineer, Al-Zamil operation and maintenance company, Kingdom of Saudi. Arabia, 1993-1995
- Executive Engineer, Sevenagala Sugar Ind. Ltd., Sri Lanka, 1991-1993.
- Instructor, Department of Mechanical Engineering, University of Moratuwa, Sri Lanka, 1990-1991.
- Trainee Engineer, Ceylon Government Railway, Sri Lanka, December 1986-February 1987.
- Trainee Engineer, Government Factory, Sri Lanka, December 1985-March 1986.

Areas of Research Specialization

- Renewable energy systems; wave, wind, Solar, etc.
- Renewable energy hydrogen system via water electrolysis and fuel cell technology.
- Design and fabricating of hybrid renewable energy hydrogen electrical system.
- Renewable energies assessment and characterization.
- Wave modelling.
- Coastal environmental studies.
- Marine corrosion.

Professional and Technical Committee Activities

- Adviser to Vice Chancellor of South Eastern University of Sri Lanka (SEUSL), assisting to establishment of Faculty of Engineering at SEUSL.
- Recourse person for curriculum development for newly established Engineering Faculty of South Eastern University of Sri Lanka.
- Co-Controlling Chief Examiner for GCE (A/L) Examination 2012.
- Chairman of the Technical Evaluation Committee (Bid No. 23) for Education for Knowledge Society Project (Funded by Asian Development Bank), Ministry of Education Sri Lanka.
- Chairman for Research Standing committee of ITUM, University of Moratuwa.
- Recourse person for Preparation of Curriculum Grid (Hard Technology Grade 12-13), National Institute of Education, Sri Lanka.
- Editorial Board Member of International Journal of Mechanic System Engineering (IJMSE).
- Member of Editorial Advisory of Journal of Asian Scientific Research (<http://www.aessweb.com/editorial-board.php?id=5003>).
- Editorial Board Member of Journal of Researches and Applications in Mechanical Engineering (RAME).
- Editorial Board Member of International Journal of Energy Engineering .
- Editorial Board Member of Science International Journal (ISSN 2305-1884) (<http://www.scienceinternational.com/e-board.php>)
- Reviewer of Journals of Energy Oil and Gas Research Papers.
- Reviewer of International Journal of Physical Sciences Papers.
- Scientific Committee Member, International Conference on “Emerging Trends in Scientific Research”, The Asian Economic and Social Society and Pak Publishing Group, on March 15-16, 2014 at Pearl International Hotel Kuala Lumpur, Malaysia.
- Mentor for junior Lectures and student programs.
- Books and Translation.
 - Book Chapters - Mechanical Engineering Technology for Advance Level (Year 13) in English / Sinhala
 - Book Chapters – Hard Technology for Advance Level (Year 12) in English / Sinhala
 - Book Translation and Language Editing – Hard Technology for Advance Level (Year 12) in Tamil
- Team Leader for preparation of Teacher’s Instructional Guides, Teacher Training and Evaluation work of newly introduced GCE Advanced Level Technology curriculum.
- Recourse person for National Institute of Education, Sri Lanka.
- Member of Panel of Setters of question paper for Hard Technology, GCE (Advance Level), Sri Lanka.

- DME 104 Workshop Technology I
- DME 202 Engineering Drawing & CAD
- DME 203 Engineering Mechanics & Machine Design
- DME 205 Manufacturing Technology
- DME 206 Mechanical Engineering Technology
- DME 209 Workshop Technology II
- KEJ 3104 Fluid Mechanics
- KEJ 3102 Engineering Materials
- TKJ 3103 Materials Science
- MTM 3101/MMT 3101 Engineering Design and Drawing
- MTM 3102/MMT 3102 Marine Fluid Power
- MTM 3103/MMT3103 Marine Technology Practices I
- MTM 3104 Marine Technology Practices II
- MTM 4299A & B Final Year Project A and B
- MMT 4302 Marine Air Conditioning and Refrigeration
- 104/215/216/315/316 Refrigeration & Air-conditioning
- 317 Design of Refrigeration and Air-conditioning System
- IESL 316 Building Services Engineering

Research Project Activities

- Development of solar thermal energy harnessing system for engineering application at Center for Instrument Development, Department of Physics, University of Colombo (2.9 million LKR).
- Modelling and characterization of ocean wave climate in the east coast of Peninsular Malaysia for potential ocean renewable energy and sites selection of mariculture farm (~US\$ 14 000.00, September 2010 - August 2012).
- Characteristics of underwater sound and noise in coastal waters (near island, commercial ports and shipping lanes) (~US\$ 28 000.00, September 2008 - December 2010).
- Development of environmentally safe bio-based hydraulic fluid by chemical modification techniques (~US\$ 47 000.00, December 2007- November 2009).
- Ozonolysis as alternative process in producing thermal and oxidative stable palm based hydraulic fluid (~US\$ 21 000.00, December 2006- March 2009).
- Fundamental study of lawsonia inermis extracts as environmental friendly inhibitor materials on the marine corrosion of aluminium alloy (~US\$ 14 000.00, September 2010 - August 2012).
- The establishment of mathematical model for environmental friendly hydrogen energy system in Malaysia (~US\$ 40 000.00, January 2008- December 2010).
- Development of numerical method for sand-mud mixture behaviour induced by tidal currents (~US\$ 16 500.00, September 2008 - September 2010).
- A comprehensive wind energy mapping for Malaysia (~US\$ 660 000.00, January 2010- December 2012).
- Characterisation of ocean wave energy power take-off system in the south China sea (~US\$ 60 000.00, 2 years from October, 2011).
- Feasibility study and the search for optimal parameters of photovoltaic-hybrid energy source in fish farming (~US\$ 58 000.00, 2 years from October, 2011).

Scholarship and Awards

- **Best research paper**, Ocean wave height prediction, Seminar Siswazah UMT 2010, 08 August, 2010, University Malaysia Terengganu, Malaysia.
- **Silver Medal** awarded at UMT Research Day 2011 for the Designing of Small Scale Wind Turbine for Low Wind Speed: Vertical Wind Turbine Rotor Balancing, Universiti Malaysia Terengganu. 24th January 2011.
- **Doctor of Philosophy**, Postgraduate Scholarship of Universiti Malaysia Terengganu.
- **Master of Engineering**, Asian Development Bank (ADB) Education Development Fund through the Ministry of Science and Technology of Sri Lanka.
- **Bachelor of Science (Engineering)**, Mahapola Scholarship, Ministry of Higher Education, Sri Lanka.
- **Who's Who in the World 2012.**
- **Leading Educators of the World 2013.**
- **Top 100 Educators 2013.**
- **2000 Outstanding Intellectuals of the 21st Century 2013.**

Publication in Journal, Proceeding and Workshop

1. **Muzathik, A.M.** Potential of global solar radiation in Terengganu, Malaysia. (2013). *International Journal of Energy Engineering*, 3(4), 130-136.
2. Ferry, M., **Muzathik, A.M.** Chan, M.Y., Samo, K.B. and Noor, C.W.M. (2013). Techno-Economic Study of Aluminium Alloy and Steel as Materials for Deckhouses of Offshore Support Vessels. *Indonesian Journal of Naval Architecture*, 1(1), 37-41.
3. **Muzathik, A.M.**, Mohd Nizam, Y.B. and Wan Nik, W.B. (2013). Effect of Boron on Friction and Temperature Characteristics of Brake Pad Materials. *Materials Science: An Indian Journal*, 9(12), 481-487.
4. Albani, A., Ibrahim, M.Z., Yong, K.H. and **Muzathik, A.M.** (2013). Wind Energy Potential Investigation and Micrositting in Langkawi Island, Malaysia. *Wind Engineering*, 37(1), 1-12.
5. **Muzathik, A.M.**, Sabri, H. And Noor, C.W.M. (2013). The Relationship Between Corrosion Rate of Aluminum (AA 5083) and Supply Electric Voltage in Seawater. *Environmental Science: An Indian Journal*, 8(1), 1-7.
6. **Muzathik, A.M.**, Ibrahim, M.Z., Samo, K.B. and Wan Nik, W.B. (2012). Assessment and Characterization of Renewable Energy Resources: A Case Study in Terengganu, Malaysia. *Journal of Sustainability Science and Management*, 7(2), 220-229.
7. Kon Chuen Kong, Mustafa bin Mamat, Mohd. Zamri Ibrahim and **Abdul Majeed Muzathik**. (2012) .New Approach on Mathematical Modeling of Photovoltaic Solar Pane. *Applied Mathematical Sciences*, 6(8), 381-401.
8. Wan Nik, W.B., Ibrahim, M.Z., Samo, K.B. and **Muzathik, A.M.** (2012). Monthly Mean Hourly Global Solar Radiation Estimation. *Solar Energy*. 86(1), 379-387.
9. **Muzathik, A.M.**, Ibrahim, M.Z., Samo, K.B., Zailan, R. and Wan Nik, W.B. (2011). Wind Characterization for Renewable Energy Applications. *Journal of Energy and Environment* 3(1), 12-17.
10. Wan Nik WB, Ahmad MF, Ibrahim MZ, Samo KB and **Muzathik AM**. (2011). Wind Energy Potential at East Coast of Peninsular Malaysia. *International Journal of Applied Engineering Research*, Dindigul, 2(2), 360-366.

11. **Muzathik, A.M.**, Wan Nik, W.B., Samo, K.B. and Ibrahim, M.Z. (2011). Ocean Wave Measurement and Wave Climate Prediction of Peninsular Malaysia. *Journal of Physical Science*. 22(1), 79-94.
12. **Muzathik, A.M.**, Wan Nik, W.B., Ahmad, M.F., Ibrahim, M.Z., Sharuddin, A.H. and Samo, K.B. (2011). Ocean Wave Properties of Terengganu for Renewable Energy Potential. *Journal of Applied Sciences*, 11(11), 1895-1903.
13. **Muzathik, A.M.**, Ibrahim, M.Z., Samo, K.B. and Wan Nik, W.B. (2011). Estimation of Global Solar Irradiation on Horizontal and Inclined Surfaces Based on the Horizontal Measurements. *Energy*, 36(2), 812-818.
14. Ahmad, M.F., Mamat, M., Rizki, S., Mohd, I., Samo, K.B. and **Muzathik A.M.** (2011). Long-Term Simulation of Cross Shore Sediment Transport of Submerged Mudbank Induced by Tidal Current: A Parametric Study. *World Applied Sciences Journal*, 12(6), 783-791.
15. Wan Nik, W.B., Sulaiman O. Rosliza R, Prawoto Y and **Muzathik, A.M.** (2011). Wave Energy Resource Assessment and Review of the Technologies. *International Journal of Energy and Environment*, 2(6), 1101-1112.
16. **A.M. Muzathik**, Y.B. Mohd Nizam Y. Prawoto, M.F. Ahmad and W.B. Wan Nik. (2010). Friction Coefficients of Boron Mixed Brake Pads. *World Journal of Engineering*, 7(3sup), 839-840.
17. **Muzathik, A.M.**, Wan Nik, W.B., Ibrahim, M.Z., Samo, K.B., Sopian K. and Alghoul, M. (2010). Daily Global Solar Radiation Estimate Based on Sunshine Hours. *International Journal of Mechanical. and Materials Engineering*.6(1), 75-80.
18. **Muzathik, A.M.**, Wan Nik, W.B., Samo, K.B. and Ibrahim M.Z. (2010). Hourly Global Solar Radiation Estimate on a Horizontal Plane. *Journal of Physical Science*, 21(2), 51-66.
19. Mohd Zamri Ibrahim, Roziah Zailan, Marzuki Ismail and **Abdul Majeed Muzathik**. (2010). Pre-Feasibility Study of Hybrid Hydrogen Based Energy Systems for Coastal Residential Applications. *Energy Research Journal*, 1(1), 13-22.
20. **Abdul Majeed Muzathik**, Wan Mohd Norsani Bin Wan Nik, Khalid Bin Samo and Mohd Zamri Ibrahim. (2010). Reference Solar Radiation Year and Some Climatology Aspects of East Coast of West Malaysia. *American Journal of Engineering and Applied Sciences*, 3(2), 293-299.
21. **Muzathik, A.M.**, Wan Nik, W.B., Ibrahim M.Z. and Samo, K.B. (2010). Wave Energy Potential of Peninsular Malaysia. *ARPJ Journal of Engineering and Applied Sciences*, 5(7), 11-23.
22. Ibrahim, M.Z., Zailan, R., Ismail, M., Lola, M.S. and **Muzathik, A.M.** (2010). Time Series ARIMA Modelling of Fossil Fuel and Electricity Conservation Challenge for Malaysia. *International Energy Journal* 11(2), 81-92.
23. Wan Nik, W.B., **Muzathik, A.M.**, Samo K.B. and Ibrahim, M.Z. (2009). A Review of Ocean Wave Power Extraction; the Primary Interface. *International Journal of Fluid Machinery and Systems*, 2(2), 156-164.
24. Mohd Zamri Ibrahim, Kamaruzzaman Sopian, Roziah Zailan and **Abdul Majeed Muzathik**. (2009). The Potential of Small Scale Environmental Friendly Renewable Hybrid Photovoltaic and Wind Energy Generated System at Terengganu State Coastal Area. *International Energy Journal*, 10(2), 81-92.
25. Rosliza, R., Senin, H.B., **Muzathik A.M.** and Wan Nik W.B. (2009). Natural Honey as Corrosion Resistant for Aluminium Alloy, *American Institute of Physics Journal*, CP 1150, 270-273.

26. **Muzathik, A.M.**, Wan Nik, W.B., Ibrahim, M.Z. and Samo, K.B. (2009). Wind Resource Investigation of Terengganu in the West Malaysia. *Wind Engineering*, 33(4), 389-402.
27. **Muzathik, A.M.**, Sabri H., Noor C.W.M. and Ranasiri K.M. (2012). The Effect of Electric Voltage on the Corrosion Rate of Aluminum (AA 5083) Plate in Seawater, 2nd International Symposium, South Eastern University of Sri Lanka, Oluvil, Sri Lanka, (Paper ID: 2.43, pp 149-151), 25th-27th May 2012.
28. **Muzathik A.M.**, Ahmad M.F., Kamales B. and Wan Nik W.B.(2012). Sodium Benzoate as Corrosion Inhibitor for Aluminium Alloy AA 7618 in Tropical Sea Water. MARTEC 2012, International Conference on Marine Technology, Kuala Terengganu, Malaysia, 20-22 October 2012, Paper ID: UMT/FMSM/MARTEC/MTP-107.
29. **Muzathik A.M.**, Ferry M., Chan M.Y., Samo K.B. and Noor C.W.M. (2012). Comparison of Aluminium Alloy and Steel Materials as Deckhouse for Offshore Support Vessels. MARTEC 2012, International Conference on Marine Technology, Kuala Terengganu, Malaysia, 20-22 October 2012, Paper ID: UMT/FMSM/MARTEC/MTP-106.
30. Ferry M., Wan Nik W. B., Fitriadhy A., Amaheka S. and **Muzathik A. M.** (2012). Efficient and Pollution Free Electric Catamaran Ferry for Kuala Terengganu River. MARTEC 2012, International Conference on Marine Technology, Kuala Terengganu, Malaysia, 20-22 October 2012, Paper ID: UMT/FMSM/MARTEC/MTP-90.
31. Mohd Sukarnoor N. I., Wan Nik W. B., Syahrullail S., **Muzathik A.M.** and Manuhutu M. (2012). Effect of High Concentration on Corrosion Performance of Aluminium Alloy Inhibited by Henna. (2012). MARTEC 2012, International Conference on Marine Technology, Kuala Terengganu, Malaysia, 20-22 October 2012, Paper ID: MTP-56.
32. **A.M. Muzathik**, Y.B. Mohd Nizam Y. Prawoto, M.F. Ahmad and W.B. Wan Nik. (2011). Friction Coefficients of Boron Mixed Brake Pads. "General Applications and Processing of Materials", International Conference on Composites or Nano Engineering, ICCE-19, July 24-30, 2011, Shanghai, China.
33. K.H Yong, M.Z Ibrahim, M.Ismail, A.Albani and **A.M Muzathik** (2011). Wind Mapping In Malaysia Using Inverse Distance Weighted Method. 10th UMT International Annual Symposium on Empowering Science, Technology and Innovation Towards a Better Tomorrow, 11-13 July 2011, University Malaysia Terengganu, Malaysia, Conference Proceeding, 60-67, E015.
34. M.F. Ahmad, M.F. Mohamad Yusof, M.L. Hussain, W.M.N. Wan Nik and **A.M. Muzathik**. (2011). An Investigation of Boat Wakes Wave Energy A Case Study of Kemaman River Estuary, 10th UMT International Annual Symposium on Empowering Science, Technology and Innovation Towards a Better Tomorrow, 11-13 July 2011, University Malaysia Terengganu, Malaysia, Conference Proceeding, 907-913, E 010.
35. **A.M Muzathik**, K. B Samo, M.Z ibrahim, and W.B Wan Nik. (2011). Estimating Photovoltaic Modules Operating Temperatures for Renewable Solar Energy Application, 10th UMT International Annual Symposium on Empowering Science, Technology and Innovation Towards a Better Tomorrow, 11-13 July 2011, University Malaysia Terengganu, Malaysia, Conference Proceeding, EP010.
36. Che Wan Mohd Nor, Khalid Samo, Nurazila, M. Azlan Musa and **Abdul Majeed Muzathik**. (2011). The Effect of Arc Voltage and Welding Current On Mechanical and Microstructure Properties of 5083-Aluminium Alloy Joints Used in Marine Applications, 10th UMT International Annual Symposium on Empowering Science,

Technology and Innovation Towards a Better Tomorrow, 11-13 July 2011, University Malaysia Terengganu, Malaysia, Conference Proceeding, 169-178, EP011.

37. Ahmad, A.F., Mamat, M., Rizki, S., Mohd, I., Wan Nik, W.B., Samo, K.B., **Muzathik, A.M.**, Sulaiman, O., Othman, C.W. and Musa, M.A. (2011). Mathematical Approach for Shock Wave Problem: A Case Study of Hydrodynamic Flow for Two-dimensional Dam-break Problems. UMT Research Day 2011, Universiti Malaysia Terengganu, Malaysia. 24th January 2011, Poster # 65.
38. Albani, A., Ibrahim M.Z. and Muzathik, A.M. (2011). Designing of Small Scale Wind Turbine for Low Wind Speed. UMT Research Day 2011, Universiti Malaysia Terengganu, Malaysia. 24th January 2011, Poster # 113.
39. **Muzathik, A.M.**, Samo, K.B., Ibrahim M.Z. and Wan Nik, W.B. (2010). Wave Climate Assessment in the Coast of Merang - Energy and Mariculture Perspective. 9th UMT International Annual Symposium on Sustainability Science and Management, 8-11 May 2010, Universiti Malaysia Terengganu, Malaysia, Conference Proceeding, Vol. 1, pp, 31-36.
40. Aslan Musa M., Samo, K.B., Wan Nik, W.B. and **Muzathik, A.M.** (2010). Feasibility of Using Solar Assisted Rigid Wind-Sail as a Power Saving Device on Boats. 9th UMT International Annual Symposium on Sustainability Science and Management, 8-11 May 2010, University Malaysia Terengganu, Malaysia, Conference Proceeding, Vol. 1, pp, 48-54.
41. **Muzathik, A.M.**, Wan Nik, W.B., Ibrahim M.Z. and Samo, K.B. (2010). Ocean Wave Energy Along Terengganu Coast of Malaysia. 2nd ICPER2010, 15-17 June 2010, University Technology PETRONAS, Malaysia. Conference Proceeding, # 1569272753.
42. **Muzathik, A.M.**, Ibrahim, M.Z., Samo, K.B., Azizi, A. and Wan Nik, W.B. (2010). Ocean Wave Height Prediction. Seminar Siswazah UMT 2010, 08 August, 2010, University Malaysia Terengganu, Malaysia.
43. Ferry, M., Wan Nik, W.B., Samo, K.B. and **Muzathik, A.M.** (2010). Hybrid Electric Catamaran for Inter-Island Sea Activities. SAIL BANDA 2010 Conference (KOVAS VII), 6-10 August 2010, University Pattimura, Ambon, Indonesia.
44. Che Wan, M.N., **Muzathik, A.M.**, Ahmad, M.F., Wan Nik, W.M.N., Samo, K.B. and Balaji, R. (2010). Prediction of Manoeuvring Behaviour of an Offshore Supply Vessel by Using Simulation Program. The International Conference on Marine Technology (MARTEC 2010), 11-12 December 2010, BUET, Dhaka, Bangladesh. Conference Proceedings, pp, 227-232.
45. Azlan Musa, M., Iimin, S.S., Wan Nik, W.B. and **Muzathik, A.M.** (2010). Study of Incorporating Kite or Balloon Technology to UMT Research Boat. The International Conference on Marine Technology (MARTEC 2010), 11-12 December 2010, BUET, Dhaka, Bangladesh. Conference Proceedings, pp, 407-411.
46. Rosliza, R., Senin, H.B., **Muzathik A.M.** and Wan Nik W.B. (2009). Natural Honey as Corrosion Resistant For Aluminium Alloy, 3rd International Meeting on Frontiers of Physics (IMFP 2009), 12-16 January 2009, Kuala Lumpur, Malaysia, Conference Proceedings, pp. 270-273.
47. Ibrahim M.Z., **Muzathik, A.M.**, Wan Nik, W.B. and Samo, K.B. (2009). Investigation of Wind Characteristics and Wind Energy Utilization of Kuala Terengganu, Peninsular Malaysia. International Seminar on Advances in Renewable Energy Technology, ISARET2009, April 28-29 2009, Uniten, Malaysia, Conference Proceeding, pp 143-151 (ISARET2009-23).

48. **Muzathik, A.M.**, Wan Nik, W.B., Ibrahim M.Z. and Samo, K.B. (2009), Wind Energy at Kuala Terengganu, Malaysia., 8th UMT International Annual Symposium on Sustainability Science and Management, 3-4 May 2009, University Malaysia Terengganu, Malaysia, Conference Proceeding, pp 297-303.
49. **Muzathik, A.M.**, Wan Nik, W.B., Samo, K.B. and Ibrahim M.Z. (2009). Hourly Global Solar Radiation for Kuala Terengganu of Malaysia. Seminar Siswazah UMT 2009, 10 October, 2009, Universiti Malaysia Terengganu, Malaysia.
50. **Muzathik, A.M.**, Wan Nik, W.B., Ibrahim M.Z. and Samo, K.B. (2009). Measurement of Global Solar Radiation in Terengganu State, Malaysia. Environmental Science and Technology Conference, ESTEC 2009, 7-8 December 2009, Universiti Malaysia Terengganu, Malaysia, Conference Proceeding, pp 426-431.
51. Roziyah Zailan, Mohd Zamri Ibrahim, Marzuki Ismail and **Muzathik, A.M.** (2009). Pre-Feasibility Study of Hybrid Hydrogen Based Energy Systems for Applications in East Coast Area of Malaysia. Environmental Science and Technology Conference, ESTEC 2009, 7-8 December 2009, Universiti Malaysia Terengganu, Malaysia, Conference Proceeding, pp, 494-507.
52. **Muzathik, A.M.**, Wan Nik, W.B., Ibrahim M.Z., Samo, K.B. and Senin H.B. (2008). Planning and Development of Ocean Wave Energy Conversion. 7th UMT International Symposium on Sustainability Science and Management, 8-10 June 2008, Universiti Malaysia Terengganu, Malaysia.
53. Wan Nik, W.B., **Muzathik, A.M.**, Samo, K.B., Ibrahim M.Z. and Mohd Hafizi Said. (2008). Ocean Wave Energy Potential and Extraction Technologies. 6th Marine Technology Conference, 26-27 August 2008, University of Indonesia, Indonesia.
54. Wan Nik, W.B., **Muzathik, A.M.**, Samo, K.B. Ibrahim M.Z. and Senin H.B. (2008). Study on the Use of Ocean Wave as Renewable Energy. 3rd Brunei International Conference on Engineering and Technology, 3–5 November 2008, Institute Technology Brunei, Brunei Darussalam.

Conferences, Workshops and Professional Training

- Training Program on Outcome Based Education (OBE) to Engineering Faculties conducted by UGC and IESL, 23 – 24 August 2013, Colombo.
- Awareness Session on European Union FP7 Programme on Research and Technological Development at Sri Lanka Foundation Institute, Colombo-7, 14th September 2012.
- 2nd International Symposium, South Eastern University of Sri Lanka, Oluvil, Sri Lanka, 25th-27th May 2012.
- Staff Training Workshop for University Academic Staff, “System, Processes and Practices for Developing Learning and Teaching in Our Higher Education System”, Staff Development Centre, University of Colombo, 6th January 2012.
- Staff Training Workshop for University Academic Staff, “Practices for Enhancing Student Learning Within Our Discipline-Based Teaching”, Staff Development Centre, University of Colombo, 21st December 2011.
- Capacity Building Training Programme on Cleaner Production for University Academics, National Cleaner Production Centre, Sri Lanka, 31st October to 4th November 2011.

- Research Workshop FMSM 2011 by Faculty of Maritime Studies and Marine Science, University Malaysia Terengganu, Malaysia at Residence Resort, Paka, Terengganu, Malaysia, 17-19 February 2011.
- Project management programme and tutorial guidance on use of MS Project 2007, by OMAHAMS CORP, at University Malaysia Terengganu, Malaysia, 23-24 October 2010.
- UMT Postgraduate Seminar 2010, Graduate School, University Malaysia Terengganu, Malaysia, 3rd August 2010.
- Three Days Comprehensive and Customized Course on Occupational Safety and Health, NZS Training and Management, Malaysia, 27-29 August 2010.
- 9th International Annual Symposium on Sustainability Science and Management (UMTAS 201009), Towards a Healthier and Sustainable Future, Institute of Marine Biotechnology, University Malaysia Terengganu, Malaysia, 8-11 May 2010.
- World Engineering, Science and Technology Congress: Towards Sustainability, Bridging Engineering, Technology and Humanities, 2nd ICPER2010, University Technology PETRONAS, Malaysia, 15-17 June 2010.
- Environmental Science and Technology Conference (ESTEC 2009), Faculty of Science and Technology, University Malaysia Terengganu, Malaysia, 7-8 December 2009.
- Scientific Publishing: An Editor's Perspective, Institute of Tropical Aquaculture, University Malaysia Terengganu, Malaysia, 28-29 October 2009.
- Biotech Talk Series 7, Bio processing: Bridging Nature to Shelves, Institute of Marine Biotechnology, University Malaysia Terengganu, Malaysia, 13 October 2009.
- Workshop: Scientific Writing for International Journals, Institute of Oceanography, University Malaysia Terengganu, Malaysia, 18 March 2009.
- Maxsurf Training, by CAIDMARK, at Faculty of Maritime Studies and Marine Science, University Malaysia Terengganu, Malaysia, 11-12 October 2009.
- UMT Postgraduate Seminar 2009, Graduate School, University Malaysia Terengganu, Malaysia, 10 October 2009.
- Cracking the Code: In induction Workshop for Master/PhD Students 2008, Graduate School, University Malaysia Terengganu, Malaysia, 2-3 August 2008.
- Publishing Workshop for Postgraduates 2008, Graduate School, University Malaysia Terengganu, Malaysia, 14-15 August 2008.
- 7th UMT International Symposium on Sustainability Science and Management (UMTAS 2008), University Malaysia Terengganu, Malaysia, 8-10 June 2008.
- UMT 8th International Symposium on Sustainability Science and Management (UMTAS 2009), Hotel Primula Beach Resort, Kuala Terengganu, Malaysia, 3-4 May 2009.
- International Student Carnival 2008, Ministry of Higher Education Malaysia, Sunway University College, Malaysia, 8-9 August 2008.
- Workshop in Upgrading the Course in Curricular for National Diploma in Engineering Sciences, National Apprentice and Industrial Training Authority, Sri Lanka, 2008.
- GlobalMET's Board of Directors and Annual General Meetings and GlobalMET's 11th Annual conference with the theme of Maritime Manpower Challenges in the 21st Century in cooperation with Malaysian Maritime Academy (ALAM), Kuala Lumpur, Malaysia, October 31 - November 2, 2007.
- Training Programme on ISO 9001:2000 Standard and the Preparation of Quality Manual, Sri Lanka Standards Institution, Sri Lanka, 29-30 January 2007.

- Training Programme on internal Quality Auditing as per ISO 9001:2000 Quality Management System, Sri Lanka Standards Institution, Sri Lanka, 18-19 January 2007.
- Workshop on Student Counselling, Staff Development Centre, University of Moratuwa, Sri Lanka, 16th November 2006.
- Seminar on Industrial Training, Institute of Technology, University of Moratuwa, Sri Lanka, 3 February 2006.
- Certificate in Teaching in Higher Education, University of Colombo, Sri Lanka, 2006.
- SEDA Certificate in Teaching, Learning and Assessing (UK), University of Colombo, Sri Lanka, 2006.
- Workshop on Engineering Future, Faculty of Engineering, University of Moratuwa, Sri Lanka, 12-14 July 2005.
- Training on ME10 2D-CAD Design-Software, KRAMSKI LANKA (Pvt.) Ltd. In Collaboration GTZ (Germany), 13th October 2003 to 10th December 2003.
- Short Term Training Programme on Fundamentals of HVAC, ASHRAE with University of Moratuwa, Sri Lanka, June-July 2003.
- Training Programme on Visual DOE Energy Simulation Software, Moratuwa, Sri Lanka, 2002-2003.
- Computer Hardware Engineering Course, Raytronics Computer Systems (Pvt) Ltd., Sri Lanka, 2000.
- Course in Internet and e Mail Creation of Website Using Dynamic Technology, Internet Telephony Systems and Wap Technology on Web, Asian Computer Systems, Colombo, Sri Lanka, 2-3 September 2000.

Thesis Supervision

As a supervisor for postgraduate and undergraduate candidates I have guided the following work. I had also served as an external examiner for other universities.

- Development of a solar thermal energy harnessing system for engineering application (In progress - PDC Kumara) [with Prof. TR Ariyaratne, University of Colombo]
- To study the ocean wave characteristic due to coastal structure (NS. Lim)
- A study effect of arc on the welding voltage and current on mechanical properties and microstructure of aluminium alloy-5083, (AR. Nurazilla)
- Optimization of fuel consumption rate for tugboat in relation to engine performance, (K. Gopala)
- Study of induced wave along west coast Peninsular Malaysia during tsunami 2004 event (AM. Shahrul)
- Study of henna (*lawsonia inermis*) as natural corrosion inhibitor for aluminium alloy in seawater (JL. Goh)
- The effect of electric voltage on the corrosion rate of aluminium AA5083 (H. Sabri)
- Boat generated noise at varying cruising speeds (J. Norzahidah)
- Oxidation stability of palm methyl ester which affecting its corrosiveness (HD. Tan)
- Hydrodynamic study due to coastal structure (KG. Yap)
- Wave energy potential along coastal of Terengganu (MF. Chang)
- Feasibility study of using self-propelled barge at Terengganu river.(HM. Hafizuddin)
- Development of laboratory scale ROV for marine application (CMD. Amanda)
- A preliminary design of catamaran as fishing boat for east coast Malaysia (HN. Atika)

- An investigation of boat wakes wave energy and bed river shear stress : a case study of kemaman estuary (MYM. Firdaus)
- Feasibility study of wind and solar hybrid power for double hull catamaran (DD. Danver)
- Study of material characteristic on available fender in the market (SM. Sabri)
- Boat wake wave characteristics: a case study at Kemaman river estuary (SM. Miqdad)
- Effect of packing density and temperature on the oil sorption capacity of packed kapok fibre as oil spill absorbent (MM. Nadzri)
- The feasibility study of using solar energy as a supporting power for marine vessel auxiliaries (KM. Sahabullah)
- Effect of propeller position on ship design (Mustofa Ahyar)
- Effect of shaft misalignment to ship propulsion system (S. Nasruddin)
- Study of corrosion on metal joints (welding Types Layers) (EHM. Izzat)
- Study on power consumption of marine air conditioning system by using solar energy (SRM. Khairillah)
- Improving the casting yield for gray cast iron products at private casting industries (KM. Ranasiri)
- The application of GIS assisted approach to locating wind farms in Peninsular Malaysia (M. Razif)

(A.M. Muzathik, PhD, FIMarEST)