CURRICULUM VITAE

Personal Information

Name: Ahmad Hussein Bin Abdul Hamid

Address: Faculty of Mechanical Engineering,
Universiti Teknologi MARA, 40450,
Shah Alam, Selangor, Malaysia.

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Contact: +6019-3864356, +603-55436284

Academic Qualifications

Name of Degree: *Ph.D in Mechanical Engineering* (2016)
Institution: Department of Mechanical and Aerospace Engineering
Monash University, Melbourne, Australia

Name of Degree: *Master of Science in Mechanical Engineering* (2009)
Institution: Faculty of Mechanical Engineering
Universiti Teknologi MARA, Shah Alam, Malaysia

Name of Degree: *Bachelor of Engineering with Honours (Mechanical)* (2005)
Institution: Faculty of Mechanical Engineering
Universiti Teknologi MARA, Shah Alam, Malaysia

Experiences

1. Coordinator, Thermofluids and Energy (Apr 2021 – present)
2. Head, Centre of Studies (Thermofluids and Energy) (June 2017 – Mar 2021)
3. Associate, MTC-UiTM High Energy Material Research Lab (May 2019 – present)
4. Associate, Flight Technology and Test Centre (2017 – present)
5. Senior Lecturer, Faculty of Mechanical Engineering, UiTM, Shah Alam (Oct 2013 – present)
6. Affiliates, The Sheard Lab, Faculty of Engineering, Monash University (Nuclear fusion heat transfer) (June 2016 – present)
7. Coordinator, Master of Science in Mechanical Engineering (Mixed Mode), UiTM (August 2016 – May 2017)
8. Coordinator, Degree Advanced Courses, UiTM (August 2011 – July 2012)
9. Head of Program, Bachelor of Engineering (Honours) Mechanical, UiTM (April 2011 – August 2011)
10. Lecturer, Faculty of Mechanical Engineering, UiTM, Shah Alam (June 2008 – Oct 2013)
11. Consultant, Enproserve (M) Sdn. Bhd. (October 2009 – December 2009)
12. Trainer for Solid Edge Training at CADEM Centre, UiTM (May 2007 – September 2007). Responsible for training the secondary school teachers in Solid Edge software as part of the F1 in School project.
13. Research assistant, Faculty of Mechanical Engineering, UiTM, Shah Alam (February 2006 -June 2006). “The Design and Development of a Turbojet Combustion Chamber Equipped with Turbulence Chamber as Thrust Booster.”
14. Research assistant, Faculty of Mechanical Engineering, UiTM, Shah Alam (December 2005 -April 2006). “Direct Injection for Gasoline Engines Towards the fuel Economy and Minimum Pollution.”
15. Engineer at MPW Engineering Sdn. Bhd. (June 2005-September 2005). In charge in designing and fabricating an industrial machine.

Publications

Book Chapter

1. Ghaffar, Z A., Kasolang, S., & **Hamid, A.H.A.** 2017, *Jet-Swirl Injector Spray Characteristics in Combustion Waste of a Liquid Propellant Rocket Thrust Chamber*. Engineering and Technical Development for a Sustainable Environment, 185-1998.

International Journal

1. **A.H.A. Hamid**, Z. Salleh, A.T.A. Termizi, M.A. Muhammad (2021), "Performance Evaluation of Low-Thrust Rocket Nozzles of Various Geometries". Accepted for publication in Journal of Mechanical Engineering.
2. **A. H. A. Hamid**, M. A. Zaihan, Z. A. Ghaffar, Salmiah Kasolanga, A. M. Azmi, M. A. M. Sapardi (2021), Laminar Swirl Spray Emanating from Simplex Atomizers with Various Discharge Orifice Diameters. Accepted for publication in ARPN Journal of Engineering and Applied Sciences.
3. **A.H.A. Hamid**, Z. Salleh, A. M. I. A. Suloh, M. J. Sujana, M. S. S., M. I. Khamis (2021), "Evaluation of a Newly Designed Aerospike for Cloud Seeding Prototype Rocket Drag Reduction". Accepted for publication in Pertanika Journal of Science & Technology.
4. Baharin, N. M. K., Sapardi, M. A. M., Ab Razak, N. N., **Hamid, A. H. A.**, & Bakar, S. N. S. A. (2021). Study on Magnetohydrodynamic Flow Past Two Circular Cylinders in Staggered Arrangement. CFD Letters, 13(11), 65-77.
5. Baharin, N. M. K., Sapardi, M. A. M., **Hamid, A. H. A.**, & Bakar, S. N. S. A. (2021). Study on Flow Structure Behind Multiple Circular Cylinders in a Tandem Arrangement Under the Effect of Magnetic Field. CFD Letters, 13(11), 126-136.
6. M.H.M. Noh, **A.H.A. Hamid**, K. Mori (2021), "Vortex Suppression on High Subsonic Turbine Blade via Micro holes (30 Degree)". Accepted for publication in Journal of Mechanical Engineering.
7. Salleh, Z., **Hamid, A. H. A**., Mohamed, W. M. W., Tamimi, A., Sujana, M. J., & Ahmad, K. A. (2021). Chemical Composition of Igniter for Ignition System in Solid Rocket Motor.
8. Mohamed, WMW, Salleh, Z, **Hamid, AHA**, Muhammad, MA, Salleh, NA (2021), “Thermal Analysis on Solid Rocket Motor Casing”. International Transaction Journal Of Engineering Management & Applied Sciences & Technologies, 12(9), 12A9U, 1-13.
9. Ramli, N. A., Azmi, A. M., **Hamid, A. H. A.**, Baharin, Z. A. K., & Zhou, T. (2021). Effect of Cylinder Gap Ratio on The Wake of a Circular Cylinder Enclosed by Various Perforated Shrouds. CFD Letters, 13(4), 51-68.
10. Z. A. Ghaffar, S. Kasolang, **A.H.A. Hamid** (2021), "Characteristics of Spray Angle and Discharge Coefficient of Pressure-Swirl Atomizer". Journal of Advanced Research in Fluid Mechanics and Thermal Sciences85, Issue 2(2021) 107-114

11. T. B. Chiat, K. Osman, K. M. Isa, **A. H. A. Hamid**, Z. A. Ghaffar, "Impaction Pin Angle and Nozzle Orifice Dimension Design Effects In Spray Patterns For Gas Turbine Inlet Cooling". Journal of Built Environment, Technology and Engineering, Vol. 8, 26 – 32.
12. **A. H. A. Hamid**, M. H. M. Noh (2020). Laminar Flows Over Equilateral Triangular Cylinders in Tandem Arrangement. Journal of Mechanical Engineering, Vol. SI 9, 105-115.
13. **A.H.A. Hamid**, M.S.M Jali, A.M. Azmi and M.H.M. Noh (2020). Modification of a Square Cylinder Wake through a Secondary Upstream Cylinder. IOP Conf. Ser.: Mater. Sci. Eng. 834 012018.
14. M H M Noh, **A H A Hamid**, N Sawada and K Mori (2020). Simulation of thermal spray process of a three phase flow calculation with substrate temperature of 300K. IOP Conf. Ser.: Mater. Sci. Eng. 834 012031.
15. M. H. M. Noh, **A. H. A. Hamid** (2020). Two Equations Turbulent Model Simulation for Subsonic Turbine Blade. Journal of Mechanical Engineering, Vol. SI 9, 129-136.
16. Ghaffar, Z. A., Kasolang, S., **Hamid, A. H. A.**, & Rashid, M. S. F. M. (2020). Effect of Dimensionless Numbers on Air Core Diameter of Pressure-Swirl Atomizer. Applied Mechanics and Materials, 899, 22–28.
17. **A. H. A. Hamid**, L. H. Kamaruhen, M. H. M. Noh (2019). Collection Efficiency Enhancement of Cyclone Filtration System. International Journal of Recent Technology and Engineering, 8(4), 7018-7021.
18. Mohd Hafiz Mohd Noh, **Ahmad Hussein Abdul Hamid**, Kochi Mori (2019). Splat Behaviour Under Substrate Temperature Of 673K Via Coupling Simulation. International Journal of Recent Technology and Engineering, 8(4), 6886-6890.
19. M.R.A. Misman, A.M. Azmi, Z.A. Kamarulbaharin, **A.H.A. Hamid** (2019). The Effect of Slat Opening on Vortex Shedding Behind a Circular Cylinder. International Journal of Recent Technology and Engineering, 8(4), 6879-6885.
20. Kamariah, M. I., Kahar, O., Azli, Y., Zulkifli, A. G., **Ahmad Hussein, A. H.**, & Salmiah, K. (2019). Studies on the Spray Characteristics of Pressure-Swirl Atomizers for Automatic Hand Sanitizer Application. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 55(1), 51-64.
21. Hussam, W.K., **Hamid, A.H.A.**, Ng, Z.Y., Sheard, G.J. 2018, *Effect of vortex promoter shape on heat transfer in MHD duct flow with axial magnetic field*. International Journal of Thermal Sciences 134, 453-464.
22. **Hamid, A.H.A.**, Jamaludin, M.H., Noh, M.H.M., Sapardi, M.A.M. 2018, *Wake Modifications in Confined Flows Due to the Presence of a Downstream Cylinder in Staggered Arrangement*. International Journal of Engineering & Technology 7 (27), 132-136.
23. Noh, M. H. M., Ismail, A., **Hamid, A.H.A.** 2018, *The Effect of Palm Oil Fly Ash Reinforcement on Recycle Aluminium via Sand Casting*. International Journal of Engineering & Technology 7 (27), 162-164.
24. **Hamid, A.H.A.**, Ghaffar, Z.A., Rus, N.C. 2018, *Roles of Atomizing Gas in Swirl Effervescent Atomization*. International Journal of Engineering & Technology 7 (25), 24-28.

25. Ghaffar, Z.A., Kasolang, S., **Hamid, A.H.A.** 2018, *Spray Characteristics and Internal Flow Structures of Swirl Effervescent Atomizer*. International Journal of Engineering & Technology 7 (11), 58-61.
26. Noh, M. H. M., **Hamid, A.H.A.**, Mori, K. 2018, *The Length Scale Effect between Wall and Closes Field Point on a Single Turbine Blade Simulation*. Journal of Mechanical Engineering 5 (6), 155-166.
27. **Hamid, A.H.A.**, Kasolang, S., Ghaffar, Z.A., Noh, M.H.M. 2018, *On the Effect of Central Jet in Solid Cone Pressure-swirl Atomizers*. Journal of Mechanical Engineering 5 (3), 260-271.
28. **Hamid, A.H.A.**, Hussam, W.K. & Sheard, G.J. 2016, *Combining an obstacle and electrically driven vortices to enhance heat transfer in a quasi-two-dimensional MHD duct flow*. Journal of Fluid Mechanics 792, 364-396.
29. **Hamid, A.H.A.**, Hussam, W.K. & Sheard, G.J. 2016, *Heat transfer augmentation of a quasi-two-dimensional MHD duct flow via electrically driven vortices*. Numerical Heat Transfer Part A-Applications 70 (8), 847-869.
30. **Hamid, A.H.A.**, Hussam, W.K., Potherat, A. & Sheard, G.J. 2015, *Spatial evolution of a quasi-two-dimensional Karman vortex street subjected to a strong uniform magnetic field*. Physics of Fluids 27 (5), 053602.
31. Ghaffar, Z. A., Kasolang, S., **Hamid, A.H.A.**, Ow, C. S., Nik Roselina, N. R. 2015, *Design, Development and Performance Evaluation of New Swirl Effervescent Injector*. Jurnal Teknologi 75(1), 19-25.
32. Ghaffar, Z.A., Kasolang, S., **Hamid, A.H.A.**, Sheng, O.C., Bakar, M.A.A., *Effect of geometrical parameters interaction on swirl effervescent atomizer spray angle*, 2015, Jurnal Teknologi, 76 (9), pp. 63-67.
33. Ghaffar, Z. A., Kasolang, S., **Hamid, A.H.A.**, Ahmed, D. I., Sainan, K. I., Nik Roselina, N. R. 2015, *Gas Core Characteristics of Swirl Effervescent Atomizer*. Jurnal Teknologi 76(9), 57-62.
34. Ghaffar, Z. A., Kasolang, S., **Hamid, A.H.A.** 2014, *Characteristics of swirl effervescent atomizer spray angle*. Applied Mechanics and Materials 607, 108-111.
35. Noh, M.H.M., Lah, N.M.A.N., Rashid, H., **Hamid, A.H.A.**, Abdullah, A.H., Design and development of a portable superbike paddock stand using computer aided design and computer aided engineering tools, 2013, Advanced Science Letters, 19 (3), pp. 775-779.
36. **Hamid, A. H. A.**, Noh, M. H. M., Rashid, H., Abdullah, A. H., Wisnoe, W. and Kasolang, S., 2012, *Characteristics of Hollow Cone Swirl Spray at Various Nozzle Orifice Diameters*, Jurnal Teknologi, Vol. 58, Supp. 2, pp. 1-4.
37. Kasolang, S., Ahmad, M. A., Bakar, M. A. A. and **Hamid, A. H. A.**, 2012, *Specific Wear Rate of Kenaf Epoxy Composite and Oil Palm Empty Fruit Bunch (OPEFB) Epoxy Composite in Dry Sliding,* Jurnal Teknologi, Vol. 58, Supp. 1, pp. 85-88.
38. Rashid, H., Abdullah, A. H., Noh, M. H. M., **Hamid, A. H. A.** and Abidin, N. M. Z., 2012, *Design of a superbike paddock stand using CAD and CAE tools*, International Journal of Automotive and Mechanical Engineering (IJAME), Vol. 5, pp. 670-679.
39. Mohamed, W. A. N. W., Remeli, M. F. and **Hamid, A. H. A.**, 2012, *Thermal and Coolant Flow Computational Analysis of Cooling Channels for an Air-Cooled PEM*

Fuel Cell, Applied Mechanics and Materials, Vol. 110-116, pp. 2746-2753, part 1-7.

40. **Hamid, A. H. A.,** Atan R., Noh, M. H. M. and Rashid, H., 2011, *Spray cone angle and air core diameter of hollow cone swirl rocket injector,* IIUM Engineering Journal, Vol 12, No 3, pp. 1-9. ISSN: 1511-788X.
41. Noh, M. H. M., **Hamid**, **A. H. A.**, Atan, R. and Rashid, H., 2011, *Numerical investigation of chocked converging-diverging nozzles for thruster application*, IIUM Engineering Journal, Vol 12, No 3, pp. 1-9. ISSN: 1511-788X.
42. **Hamid**, **A.H.A.** and Atan, R., 2009, *Spray characteristics of jet–swirl nozzles for thrust chamber injector,* Aerospace Science and Technology, 13, pp. 192-196. doi: 10.1016/j.ast.2008.10.003.

International Conferences

1. **A. H. A. Hamid**, A. N. A. Omar, Z. Salleh, M. J. Sujana, M. A. Muhammad, M. S. Saad, M. I. Khamis, "CFD Analysis of Rocket Convergent-Divergent Nozzle with Swirl Vanes for Improved Stability ". Presented in the First International Seminar on Aeronautics and Energy (ISAE) 2021.
2. **A. H. A. Hamid**, M. A. M. Najib, R. E. M. Nasir , "Aerodynamic Characteristics of NACA0012 with Suction and Blowing slots at Various Angles of Attack". Presented in the First International Seminar on Aeronautics and Energy (ISAE) 2021.
3. **Hamid, A.H.A.**, Hussam, W.K. & Sheard, G.J. 2016, Current injection vortex promoter for heat transfer enhancement in a magnetohydrodynamic duct flow. In Proceedings of the 5th International Conference on Advances in Civil, Structural and Mechanical Engineering (ACSM) (Pub: The Institute of Research Engineers and Doctors, ISBN: 978-1-63248-105-4), ACSM-16-218. Conference: The Fifth International Conference on Advances in Civil, Structural and Mechanical Engineering - ACSM, Bangkok, Thailand, 25-26 September 2016.
4. **Hamid, A.H.A.**, Hussam, W.K. & Sheard, G.J. 2015, Heat transfer augmentation of MHD duct flow via current injection. In Proceedings of the 13th International Symposium on Fluid Control, Measurements and Visualization (Eds: Y. Haik, Pub: Qatar University), 277-286. Conference: The 13th International Symposium on Fluid Control, Measurements and Visualization (FLUCOME2015), Qatar University, Doha-Qatar, 15-18 November 2015.
5. **Hamid, A.H.A.**, Hussam, W.K. & Sheard, G.J. 2015, Convective heat transfer enhancement via electrically driven vortices in an MHD duct flow. In Proceedings of the Eleventh International Conference on Computational Fluid Dynamics in the Minerals and Process Industries (Eds: C.B. Solnordal, P. Liovic, G.W. Delaney, S.J. Cummins, M.P. Schwarz & P.J. Witt, Pub: CSIRO, Australia, ISBN: 978-1-4863-0620-6), 163HAM. Conference: The Eleventh International Conference on CFD in the Minerals and Process Industries, Melbourne Convention and Exhibition Centre, Melbourne, Australia, 7-9 December 2015.
6. **Hamid, A.H.A.**, Hussam, W.K. & Sheard, G.J. 2014, Vortex decay in quasi-2D MHD ducts: Application to Karman vortex streets behind turbulence promoters. In The Proceedings of the 19th Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 197. Conference: The 19th Australasian Fluid Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.

7. **Hamid, A.H.A.**, Hussam, W.K. & Sheard, G.J. 2014 Dynamics of a quasi-two-dimensional wake behind a cylinder in an MHD duct flow with a strong axial magnetic field. In the Proceedings of the 19th Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 198. Conference: The 19th AFMC, RMIT University, Melbourne, Australia, 8-11 December 2014.
8. Li, Y., **Hamid, A.H.A.**, Sapardi, A.M. & Sheard, G.J. 2014 Near-wall electrically induced vortices for quasi-2D MHD duct side-wall heat transfer enhancement. In the Proceedings of the 19th Australasian Fluid Mechanics Conference (Eds: H. Chowdhury & F. Alam, Pub: Australasian Fluid Mechanics Society, ISBN: 978-0-646-59695-2), Paper 304. Conference: The 19th Australasian Fluid Mechanics Conference, RMIT University, Melbourne, Australia, 8-11 December 2014.
9. Mohd Syazwan Firdaus Mat Rashid, **Ahmad Hussein Abdul Hamid**, Ow Chee Sheng and Zulkifli Abdul Ghaffar, 2012, *An Experimental Investigation on the Effect of Various Swirl Atomizer Orifice Geometries on the Air Core Diameter*, Accepted for an oral presentation in Conference on Recent Advances in Aerospace Technology, AEROTECH IV-2012, 21-22 November 2012.
10. Ghaffar, Z. A.**, Hamid, A.H.A.,** Rashid, M. S. F. M., 2012, *A review on spray characteristics of effervescent atomizer under various geometrical parameters and operating condition*, AIP Conference Proceedings 1440, 586.
11. Zulkifli Abdul Ghaffar, **Ahmad Hussein Abdul Hamid** and Mohd Syazwan Firdaus Mat Rashid, 2012, *A Review of Spray Characteristics on Swirl Effervescent Injector in Rocket Application*, Accepted for an oral presentation in Conference on Recent Advances in Aerospace Technology, AEROTECH IV-2012, 21-22 November 2012.
12. Firdaus, M. S., **Hamid, A. H. A.**, Sheng, O. C. and Ghaffar, Z. A., 2012, *Effect of Inlet Slot Number on the Spray Cone Angle and Discharge Coefficient of Swirl Atomizer*, Accepted for an oral presentation in 2012 International Symposium on Robotics and Intelligent Sensors, IRIS2012, 4-6 September 2012.
13. **Hamid, A. H. A.**, Rashid, H., Noh, M. H. M., Nayan, M. A. M., 2011, *Comparative Analysis of Straight-Bladed and Curved-Bladed Vertical Axis Wind Turbine,* International Journal Conference on Engineering and Technology (CET 2011), 134.
14. Noh, M. H. M., **Hamid, A. H. A.**, Rashid, H., Iskandar, M. F., 2011, *Numerical Investigation of Airfoil Louvers on the Air Duct Intake,* 2011 International Journal Conference on Engineering and Technology (CET 2011), 178.
15. Mohd Hafiz Mohd Noh, **Ahmad Hussein Abdul Hamid**, Helmi Rashid, Muhammad Izzuddin Ahmad Sfhafi, 2011, *Numerical Investigation on The Effect of Angle of Attack on the Square Ducting Design,* 2011 International Journal Conference on Engineering and Technology (CET 2011), 73.
16. H. Rashid, M. Azzeim, M. Hafiz, A. Halim, **A. Hussein**, Alias M. S.,M. Faridzul, A. Othman, 2011, *Computer Aided Design and Engineering Simulation Opportunity in Design Optimization of a Superbike Paddock Stand,* 2011 International Journal Conference on Engineering and Technology (CET 2011), 141.
17. Helmi Bin Rashid, **Ahmad Hussein Abdul Hamid**, Mohd Hafiz Bin Mohd Noh, Nursalbiah Nasir, 2011, *Study on The Possible Defects In Plastic Injection Molding For Different Designs of Studs for Football Boot Sole Using CAD and CAE*

Technologies and Applications, 2011 International Conference on Business, Engineering and Industrial Applications (ICBEIA2011), pp. 42-46.

18. **A. Hussein**, M. Hafiz, Helmi R., W. Wisnoe and Jasmi M., 2011, *Effect of Orifice Diameter on Characteristics of Hollow Cone Swirl Spray Emanating from Simplex Nozzles*, The 4th International Meeting on Advances in Thermofluids (4th IMAT 2011), pp. 444-449.
19. M. Hafiz, **A. Hussein**, Helmi R. and Aiman Hanan A.R., 2011, *Design optimization wind turbine blade design for low wind velocity condition*, The 4th International Meeting on Advances in Thermofluids (4th IMAT 2011), pp. 1324-1329.
20. Zulkifli Abdul Ghaffar, **Ahmad Hussein Abdul Hamid**, Mohd Syazwan and Firdaus Mat Rashid, 2011, *A review on spray characteristics of effervescent atomizer under various geometrical parameters and operating condition*, The 4th International Meeting on Advances in Thermofluids (4th IMAT 2011), pp. 64-68.
21. Mohd Syazwan Firdaus Mat Rashid, **Ahmad Hussein Abdul Hamid**, Zulkifli Abdul Ghaffar and Khairil Azizi Mohamad Zaki, 2011, *An Experimental Investigation on Spray Characteristics Emanating from Liquid–Liquid Coaxial Swirl Atomizer*, The 4th International Meeting on Advances in Thermofluids (4th IMAT 2011), pp. 111-115.
22. Mohd Hafiz Bin Mohd Noh, **Ahmad Hussein Abdul Hamid**, Rahim Atan, Helmi Bin Rashid, 2010, *Numerical Investigation of Chocked Converging-Diverging Nozzles for Thruster Application (Normal Shock Wave,* 2010 International Conference on Science and Social Research (CSSR 2010), pp. 1223-1227.
23. **Ahmad Hussein Abdul Hamid**, Rahim Atan, Mohd Hafiz Bin Mohd Noh, Helmi Bin Rashid, Mohd Suhairil Meon, 2010, *Effect of Tangential Port Number and Diameter on The Spray Cone angle and Break Up Length of the Spray Emanating From Hollow Cone Swirl Rocket Injector,* 2010 International Conference on Advances in Mechanical Engineering (ICAME2010), pp. 544-548.
24. Mohd Syazwan Firdaus Mat Rashid, **Ahmad Hussein Abdul Hamid**, Bulan Abdullah, Ow Chee Sheng, 2010, *A Review on Spray Characteristics Emanating from Swirl Atomizer,* 2010 International Conference on Advances in Mechanical Engineering (ICAME2010), pp. 532-539.
25. Mohd Hafiz Bin Mohd Noh, Helmi Bin Rashid, **Ahmad Hussein Abdul Hamid**, Mohd Musyrif Yusoff, 2010, *Numerical Investigation for Low Wind Speed Wind Turbine Blade (for wind speed 3 m/s),* 2010 International Conference on Advances in Mechanical Engineering (ICAME2010), pp. 568-573.
26. Helmi Bin Rashid, Mohd Hafiz Bin Mohd Noh, **Ahmad Hussein Abdul Hamid**, Muhammad Azziem Mat Jusoh, Nursalbiah Nasir, 2010, *Computer Simulation Prediction in Plastic Injection Molding of Addas DX-1 TRAXION SG Sole Design,* 2010 International Conference on Advances in Mechanical Engineering (ICAME2010), pp. 50-54.
27. **Ahmad Hussein Abdul Hamid**, Mohd Azizi Abd Malek, Rahim Atan, Mohd Hafiz Mohd Noh, Helmi Rashid, 2010, *Spray Cone Angle and Air Core Diameter of Hollow Cone Swirl Rocket Injector,* Conference on Aerospace and Mechanical Engineering, World Engineering Congress 2010 (WEC2010).

28. Mohd Hafiz Mohd Noh, **Ahmad Hussein Abdul Hamid**, Rahim Atan, SalmiahKasolang, Helmi Rashid, 2010, *Numerical investigation of chocked converging-diverging nozzles for thruster application,* Conference on Aerospace and Mechanical Engineering, World Engineering Congress 2010 (WEC2010).
29. H. Rashid, A.H Abdullah, M.H Mohd Noh, **A.H Abdul Hamid**, N.M Zainal Abidin, 2010, *Design of a superbike paddock stand using cad and CAE tools*, Conference on Aerospace and Mechanical Engineering, World Engineering Congress 2010 (WEC2010).
30. **Ahmad Hussein Abdul Hamid**, Rahim Atan, 2009, *Numerical Investigation of Supersonic Thruster Nozzles: Part 2,* International Conference on Advances in Mechanical Engineering (ICAME'09). ISBN: 978-967-305-355-1.
31. **Ahmad Hussein Abdul Hamid**, Rahim Atan, 2008, *Numerical Investigation of Supersonic Thruster Nozzles,* International Conference on Mechanical and Manufacturing Engineering 2008 (ICME 2008). ISBN: 97-98-2963-59-2.

Regional Conferences

1. **Ahmad Hussein Abdul Hamid**, Rahim Atan, 2007, *The Design and Development of a Cost-Effective Laboratory Thrust Chamber: Recent Progress,* 4th AEESEAP Regional Symposium on Engineering Education 2007. ISBN: 978-983-42035-3-5.

Periodical

1. Mohd Hafiz Mohd Noh, **Ahmad Hussein Abdul Hamid**, Helmi Rashid, Wirachman Wisnoe and Mohd Syahmi Nasir, 2012, *Wind Tunnel Experiment for Low Wind Speed Wind Turbine Blade*, Applied Mechanics and Materials Vols. 110-116, pp. 1589-1593. doi: 10.4028/www.scientific.net/AMM.110-116.1589

Research Funding

Internal funding (on-going)

1. *Development of Low Altitude Rocket Mission Tracker and Telemetry*

   Strategic Research Partnership Grant, MYR 100,000

   21 December 2020 – 20 December 2021

   Principal Researcher

2. *Flying Quality Evaluation of a Multi-Role, Fixed Wing-Multirotor Hybrid Unmanned Aerial Vehicle for Crop Spraying on Pineapple Farm*

   KEPU Grant, MYR 40,000

   15 Jul 2021 – 14 Jul 2023

   Co-Researcher

3. *Automated Multilevel Thresholding Technique of Non Rigid Object in High Speed Image Sequences Based on Predictor Corrector Scheme Pcs*

   MyRA Research Grant, MYR 20,000

   1 Sept 2021 – 31 Aug 2023

   Co-Researcher

4. *Development of Life-Size Flexible Jig for Handheld 3d Scanner*

   Strategic Research Partnership Grant, MYR 40,000

   21 December 2020 – 20 December 2021

   Co-Researcher

5. *Flow Induced Motion and Energy Conversion of A Two Interlocking Square Prism In The Transition Shear Layer 3 Regime*

   LESTARI Grant, MYR 20,000

   21 December 2020 – 18 June 2023

   Co-Researcher

6. *Development of Solid and Hybrid Propellant Rocket*

   Micro-Industrial Hub, MYR 150,000

   25 August 2020 – 14 August 2022

   Co-Researcher

7. *Thermal Analysis on Solid Rocket Motor Body*

LESTARI Grant, MYR 20,000

21 December 2020 – 20 December 2022

Co-Researcher

8. *Flow Induced Motion and Energy Conversion of a Two Interlocking Square Prism In The Transition Shear Layer 3 Regime*

   LESTARI Grant, MYR 20,000

   21 December 2020 – 20 December 2022

   Co-Researcher

9. *Development of Life-Size Flexible Jig for Handheld 3d Scanner*

   Strategic Research Partnership Grant, MYR 25,000

   12 December 2020 – 20 December 2021

   Co-Researcher

Internal funding (completed)

1. *Automotive Exhaust Heat Recovery Using Thermoelectric Generators*

   UiTM REI Fund, MYR 32,000

   1 February 2018 – 31 January 2020

   Co-Researcher

2. *Characterization of Sprays for Thermally Controlled Swirl Atomizer*

   UiTM LESTARI Fund, MYR 20,000

   1 July 2017 – 30 June 2019

   Principal Researcher

3. *Laboratory Simulation of a Free-Flowing River Water Powered Generator of 500 W*

   UiTM Excellent Fund, MYR 8,000

   1 January 2010 – 31 December 2010

   Co-Researcher

4. *Aerodynamic Analysis of Aerofoil of a Low Wind Speed Wind Turbine by Using CFD and Wind Tunnel Test*

   UiTM Excellent Fund, MYR 9,000

   1 January 2010 – 31 December 2010

   Co-Researcher

National funding

1. *Investigation of Regression Rate Enhancement in Hybrid Rocket Motor Utilizing High Entropy Alloys Energetic Additives*

   Fundamental Research Grant Scheme (FRGS),

   Malaysian Ministry of Higher Education, MYR 174,500

   1 September 2021 – 31 August 2024

   Co-Researcher

2. *Mechanisms of Destabilization and Disintegration of Pharmaceutical Aerosols Liquid Swirl Spray Through Heating and Effervescence*

   Fundamental Research Grant Scheme (FRGS),

   Malaysian Ministry of Higher Education, MYR 119,000

   1 September 2019 – 31 August 2021

   Principal Researcher

3. *Characterizing Vortex Dynamics and Momentum Transport in Porous Screen Wakes*

   Fundamental Research Grant Scheme (FRGS),

   Malaysian Ministry of Higher Education, MYR 119,000

   1 August 2016 – 31 January 2019

   Co-Researcher

4. *Swirl atomization under effervescing mode for rapid combustion in meso-scale rocket*

   Exploratory Research Grant Scheme (ERGS),

   Malaysian Ministry of Higher Education, MYR 90,000

   1 July 2011 - 30 June 2013

   Principal Researcher

5. *New Configuration of Meso-scale Hollow Cone Rocket Injectors for Improved Swirling Flow Characteristics*

   Fundamental Research Grant Scheme (FRGS),

   Malaysian Ministry of Higher Education, MYR 40,000

   1 March 2010 – 29 August 2012

   Principal Researcher

6. *New Technique in Micro Channel Geometry Optimization of an Air-Cooled Polymer Electrolyte Membrane Fuel Cell Bipolar Plate*

Fundamental Research Grant Scheme (FRGS),

Malaysian Ministry of Higher Education, MYR 48,000

1 March 2010 – 29 February 2012

Co-Researcher

7. *Performance Characteristics of Lubricant and Wear Characteristics in an Automatic Transmission (AT) System*

   Fundamental Research Grant Scheme (FRGS),

   Malaysian Ministry of Higher Education, MYR 48,000

   1 March 2010 – 29 February 2012

   Co-Researcher

Innovation Awards

1. *Energy-Efficient Pharmaceutical Inhaler Device* (Bronze Award)

   Invention, Innovation & Design Exposition (IIDEX2019), 10-15 September 2019, Dewan Agung Tuanku Canselor (DATC), UiTM.

2. *A New Design of a Superbike Paddock Stand* (**Silver medal**)

   Malaysia Technology Expo (MTE2011), 17-19 Feb 2011, Kuala Lumpur Convention Centre, Malaysia.

3. *A New Design of a Superbike Paddock Stand* (**Gold medal**-Design category)

   IID Competition 2010 SE, "Invigorating Innovation-Led Economy," Dewan Sri Budiman and Annexe, Universiti Teknologi MARA, Shah Alam, Malaysia, 12-14 October 2010.

4. *Green Technology Energy Saving: Stand Alone Room Lighting Powered By Indoor Wind Generation* (**Silver medal**- Innovation category)

   IID Competition 2010 SE, "Invigorating Innovation-Led Economy," Dewan Sri Budiman and Annexe, Universiti Teknologi MARA, Shah Alam, Malaysia, 12-14 October 2010.

5. *Rooftop Wind Turbine: An Alternative Power Generation for Rural Malaysians* (**Bronze medal**-Design category)

   IID Competition 2010, "Realising an Innovation Led Economy," Dewan Sri Budiman and Annexe, Universiti Teknologi MARA, Shah Alam, Malaysia, 12-14 Jan 2010.

6. *Free Flowing Water Turbine at UiTM Research Centre Ulu Keniyam* (**Bronze medal**-Innovation category)

   IID Competition 2010, "Realising an Innovation Led Economy," Dewan Sri Budiman and Annexe, Universiti Teknologi MARA, Shah Alam, Malaysia, 12-14 Jan 2010.

7. *Compact and Portable Local Exhaust Ventilation System (CP-LEV) for Welding Workshop* (**Bronze medal**)

   Malaysia Technology Expo 2009, Putra World Trade Centre, 19-21 Feb 2009.

8. *CP-LEV for welding workshop* (**Silver medal**- Innovation category)

   Invention, Innovation & Design 2009 (IID2009),

   "From Research & Innovation to Wealth," Dewan Sri Budiman and Annexe, Universiti Teknologi MARA, Shah Alam, Malaysia, 13-15 Jan 2009.

9. *Innovative fuel injector utilizing CASI technology for meso-scale rocket* (**Silver medal**-Innovation category)

   Invention, Innovation & Design 2009 (IID2009),

   From Research & Innovation to Wealth," Dewan Sri Budiman and Annexe, Universiti Teknologi MARA, Shah Alam, Malaysia, 13-15 Jan 2009.

10. *The Design and Development of a Laboratory Thruster* (**Bronze medal**-Design category), Invention, Innovation & Design 2008 (IID2008), "Generating World Class Innovations," Universiti Teknologi MARA, Shah Alam, Malaysia, 25-27 March 2008.

Consultancy

1. Bomb Delivery Rack Unit - 500 (bdru-500), 2021, RM 47,700.00
2. Program Coordinator, (International Networking) In The 4th International Exchange and Innovation Conference on Engineering & Science 2018 (IEICES 2018), 1/9/2018 – 14/1/2019
3. Head of Project, Thermal Energy Storage (TES) Spray System Testing, 18/12/2017 – 22/12/2017
4. Head of Project, Short Course on Atomization and Sprays, 27/9/2017
5. Training for Liquid Atomization Technique, 17/10/2016 – 17/12/2016.
6. Microchip Workshop & Seminar, Consultant for Cytron Technologies Sdn Bhd, April 2012.
7. Hydropower Energy Device 5kW System Project, January 2012.
8. Project member of High-End Industry Graduate Internship Programme (HEIGIP), Expertise services category, December 2011.
9. Microchip Workshop & Seminar, Consultant for Cytron Technologies Sdn Bhd, December 2011.
10. Trainer of "*CATIA V5 Fundamental Course*", July 2011.
11. Project leader of *"Tensile Strength and Flexural Strength of Fiberglass Reinforced Plastic",* November 2009. Client: Enproserve (M) Sdn. Bhd., Report no: 15512/GJHJL – 15
12. Project leader of *"Tensile Strength of Fiberglass Reinforced Plastic"*, December 2009. Client: Enproserve (M) Sdn. Bhd., Report no: 15512/GJHJL - 16

Position in Faculty

1. Coordinator, Center for Thermofluids and Energy, April 2021 – present
2. Head, Center for Thermofluids and Energy, 2017 – March 2021
3. Associate, MTC-UiTM High Energy Material Research Lab, 2019
4. Senior Lecturer (Thermofluids), 2013 – present
5. Associate, Alternative Energy Research Centre (AERC), 2008 – present
6. Associate, Flight Technology and Test Centre (FTTC), 2009 – present
7. Coordinator, Advanced Undergraduate Courses, 2011 – 2012
8. Head of Programme, Bachelor of Engineering (Hons) Mechanical, 2011
9. Laboratory Manager (Thermofluids Laboratory), 2008 – 2011
10. National Grant Coordinator (Research, Consultation and Publication Committee), 2011

Professional Societies / Activities

1. Professional Technologist, Malaysia Board of Technologists (MBOT)
2. Technical Committee, 2021 The 8th International Conference on Mechatronics and Mechanical Engineering (ICMME 2021)
3. Editorial Board Member, 2020 International Conference on Aerospace, Mechanical and Mechatronic Engineering (CAMME 2020)
4. Technical Committee, 2020 International Conference on Aerospace, Mechanical and Mechatronic Engineering (CAMME 2020)
5. Judging Committee, Final Year Project Competition, Department of Mechanical Engineering, Politeknik Sultan Salahuddin Abdul Aziz Shah.
6. Head, Program, Technical, Logistics & Awards, International Conference On Advances In Mechanical Engineering 2019 (ICAME2019)
7. International Scientific Committee Member, 2019 International Conference on Aerospace, Mechanical and Mechatronic Engineering (CAMME 2019)
8. International Scientific Committee Member, 2018 International Conference on Aerospace, Mechanical and Mechatronic Engineering (CAMME 2018)
9. Editorial Board Member, 2018 International Conference on Aerospace, Mechanical and Mechatronic Engineering (CAMME 2018)
10. Technical Committee Member, 2017 International Conference on Aerospace, Mechanical and Mechatronic Engineering (CAMME 2017)
11. Member, Australasian Fluid Mechanics Society (2014)
12. Reviewer, 2011 IEEE Symposium on Business, Engineering & Industrial Applications
13. Member, Malaysian Society for Engineering & Technology (mSET) (since July 2011)
14. Professional member, Society of Engineering Education Malaysia (since February 2010)
15. Member, International Association of Computer Science and Information Technology (since July 2009)
16. Member, International Association of Engineers (IAENG) (since July 2009)
17. Member, IAENG Society of Mechanical Engineering (since August 2009)
18. Graduate Engineer, Board of Engineers Malaysia (since May 2009)
19. Reviewer, International Journal of Engineering and Technology (IJET)

Links

1. UiTM Expert: https://expert.uitm.edu.my/profile.php?id=aM5fBsaqQfsGQx9ad/8Eh18MXrvdEozczdnVo/ioJVs=

2. Google Scholar: https://scholar.google.com/citations?user=HPiCmjgAAAAJ&hl=en&oi=ao

3. SCOPUS: https://www.scopus.com/authid/detail.uri?authorId=25928422700

4. Web of Science: https://publons.com/researcher/4056122/ahmad-hussein-abdul-hamid/

5. Research Gate: https://www.researchgate.net/profile/Ahmad-Hussein-Abdul-Hamid