



CURRICULUM VITAE



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Education

1. PhD. In Aeronautical Engineering, 2006, Queen's University of Belfast, United Kingdom
2. MSc. In Aerospace Dynamics (Aerodynamics), 2002, Cranfield University, United Kingdom
3. BEng. In Aerospace Engineering, 2001, Universiti Sains Malaysia, Malaysia

Areas of Interest

1. **Aerodynamics:** Aircraft and Automotive Aerodynamics, Flow Control via Vortex Generators, Wind Tunnel Testing (component balance, PIV), Rocket Technology (solid propellant, rocket body and recovery)
2. **Computational Fluid Dynamics:** Fluid Structure Interaction (FSI) simulations, CFD in Biomedical Engineering, Laminar and Turbulence Flow Modeling, Internal and External Flow Modeling

Professional and Practical Experience

Date	Designation	Remarks
March 2012-Present	Associate Professor	Department of Aerospace Engineering, Engineering Faculty, Universiti Putra Malaysia
Oct 2012-August 2015	Research Coordinator	Department of Aerospace Engineering, Engineering Faculty, Universiti Putra Malaysia
Oct 2012-Present	Research Associate	Malaysian Aerospace Research Center, Engineering Faculty, Universiti Putra Malaysia
August 2008-March 2012	Senior Lecturer	School of Aerospace Engineering, Universiti Sains Malaysia
Dec 2006-July 2008	Lecturer	School of Aerospace Engineering, Universiti Sains Malaysia
Jan 2010-Dec 2011	Deputy Dean	School of Aerospace Engineering, Universiti Sains Malaysia

Nov 2007-Dec 2009	Program Chairman	School of Aerospace Engineering, Universiti Sains Malaysia
Jan 2006-June 2006	Research Assistant	Centre of Integrated Aircraft Technology (CIAT) Northern Ireland, UK
Jan 2003-Dec 2005	Lab Demonstrator	School of Aerospace & Mechanical Engineering, Queen's University of Belfast, UK

Teaching Experiences

Course	Year	Remark
Aircraft Aerodynamics	2006-2008	Undergraduate Students, USM
Thermodynamics	2006-2008	Undergraduate Students, USM
Aerodynamics	2006-2008	Undergraduate Students, USM
Gas Dynamics	2006-2012	Undergraduate Students, USM
Aircraft Design I & II	2009-2012	Undergraduate Students, USM
CFD	2009-2012	Undergraduate Students, USM
CFD	2012-present	Postgraduate, UPM
Aerodynamics 1	2012-present	Undergraduate Students, UPM
Aerothermodynamics	2013-present	Undergraduate Students, UPM
CFD	2013-present	Undergraduate Students, UPM

Undergraduate and Postgraduate Supervision

PhD Supervision

1. Muhammed Zubair: An investigation of the Nasal Cavity Airflow (Main Supervisor) – USM	2009-2012 (Graduated)
2. Lee Chih Fang: The Mucous effects on the Nasal Cavity Airflow (Main-Supervisor) – USM	2010-2013 (Graduated)
3. Muhammad Khalil Abdullah: An investigation on the piezo-eletric cooling performance (Co-supervisor) - USM	2008-2012 (Graduated)
4. Hamid Yusoff: An investigation on the aerodynamics performance of the flapping wings (Co-supervisor)- USM	2009-2012 (Graduated)
5. Lim Chong Lye: CFD simulation and experiments studies for design and develop a pilot manufacturing plant for vacuum insulated pipe for liquid nitrogen (Co-supervisor)- UPM	2012-present
6. Mohammed W. Muhieldeen Al-Gailani: Make Comfortable Environment of the Lecture Hall in Tropic Climate by Using Polyethylene single bubble (Co-supervisor)- UPM	2012-present

7. Mohd Firdaus Abas: Investigation on the aerodynamics of flapping MAV (Main-supervisor)- UPM	2013-present
8. Syed Mohammed Aminuddin Aftab: Flow control aerodynamics (Main-supervisor)- UPM	2013-present (Write-up)
9. Vizy Nazira Riazuddin: Nanoparticle in Nasal Airflow (Main-supervisor)- UPM	2013-present
10. Adi Azriff Basri: Experimental and Numerical Investigations of the heart valve (Main-supervisor)- UPM	2013-present
11. Mohamad Shukri Bin Zakaria – Cartesian Mesh Approach for FSI in Heart Valve problem (Main-supervisor)- UPM	2014-present

Master (Research) Supervision

1. Abdul Rashid Bin Haji Serakawi: Experimental Investigation on the oscillating SBVG effects on separated diffuser flow (Main Supervisor) - USM	2008-2011 (Graduated)
2. Ang Kiang Long: Designing, fabricating, and testing of solid propellant rocket motor (Main Supervisor) - USM	2008-2011 (Graduated)
3. Vizy Nazira Bt Riazuddin: A Numerical Investigation on the Nasal Airflow(Main Supervisor) - USM	2009-2011 (Graduated)
4. Nur Faraihan Bt Zulkefli: Numerical Investigation on the oscillating SBVG on wing's flap(Main Supervisor) - USM	2009-2011 (Graduated)
5. Khairul Ikhsan Bin Yahaya: Conceptual Design of UAV (Main Supervisor) - USM	2009-2011 (Graduated)
6. Mohd Sharizal Bin Abdul Aziz: Investigation on the effects of membrane on the aerodynamics performance of wings (Co-Supervisor) - USM	2009-2011 (Graduated)
7. Fauzi B Husin: Experimental Investigation on the oscillating SBVG on wing's flap(Main-Supervisor) - USM	2009-2014 (Graduated)
8. Afilda Bt Hashim: Tailles UAV (Co-Supervisor) - USM	2010-2013 (Graduated)
9. Babak Mahjoub: Control of Laminar Separation Bubble, and Its Effect on Aerodynamic Coefficients (Main Supervisor)- UPM	2012- 2015 (Graduated)
10. Pauline Epsiha: Investigations on the turbine blades, (Main Supervisor)- UPM	2013-present
11. Hayder Abdullah Luaibi Alrazeb- CFD Simulation of Piston Engine, (Main Supervisor)- UPM	2014-2015 (Graduated)

Master (Mixed-Mode) Supervision



1. Mohd Faizal Bin Halim: CFD simulation of Passive VG on separated flow diffuser (Main Supervisor) – UPM	2012-2013 (Graduated)
2. Nur Marini Zainal Abidin: Design of safety mechanism for metal cutting machine (Main Supervisor) – UPM	2012-2013 (Graduated)
3. Mohd Salahuddin Mohd Basri: An Aerodynamics Study of Bicycle Helmet (Main Supervisor) – UPM	2012-2013 (Graduated)
4. Farah Diana Ishak-Cooling system for car, (Main Supervisor) – UPM	2013-2014 (Graduated)
5. Rosree Kamarudin – CFD simulation of water nozzle - UPM	2013-2014 (Graduated)
6. Nurain Hashim – Piezo-electric based for energy harvesting system – UPM	2013-2014 (Graduated)

Research Funding

National Level Grants:

1. Modelling of Bubble Rising In a Vertical Column With Different Liquid Viscosity (RU USM), RM99,999.00, 2008-2011 (Member) (Completed)
2. Hand Pack Unmanned Aerial Vehicle (UAV) “Agrotech 2020” for agriculture application (RU USM), RM 485,000, 2007-2011 (Member) (Completed)
3. Development of CFD method to study the effect of an oscillating sub-boundary layer vortex generator (SBVG) on the turbulent boundary layer (USM Short Term Grant), RM19,890.00, 2007-2010 (Project Leader)(Completed)
4. An experimental study of unsteady vortex/turbulent boundary layer interactions (FRGS), RM 60,000, 2007-2010 (Project Leader)(Completed)
5. Design, Fabricate, and Test a Solid Propellant Rocket Motor(USM Short Term Grant), RM33,054.00, 2008-2011 (Project Leader)(Completed)
6. A study of the application of oscillating sub-boundary layer vortex generators (ScienceFund), RM240,000, 2008-2011 (Project Leader)(Completed)
7. Construction, Analyze & Flight Test the Experimental Kit Aircraft (RU USM), *RM474,756.58*, 2008-2012 (Project Leader)(Completed)
8. Computational Fluid Dynamics And particle Image Velocimetry Studies On Nasal Airflow At Pre-Operative Nasal Surgery 3-D Models (RU USM), *RM 170,000*, 2010-2013(Project Leader)(Completed)
9. Numerical Investigation of the Airflow on the Pre- and Post-Operatives Diseased Nasal Cavity (RU UPM), *RM 93,400*, 2013-2015 (Project Leader)(Completed)
10. Fundamental Numerical and Experimental Investigations on the Impact of Vortex Shedding to Aerodynamics Objects (FRGS), RM 105,000, 2014-2015(Project Leader)(On-going)
11. Experimental and Numerical Study for Implementing Humpback Whale Leading Edge Tubercles on Wing of ALUDRA MK-1 Unmanned Aerial Vehicle (ScienceFund), RM 394,500, 2015-2016(Project Leader)(On-going)

Publications

Selected Citation (ISI Thompson) Index Journal Papers



1. M.K. Abdullah, M.Z. Abdullah, C.Y. Khor, Y. Ooi, M.V. Ramana, **K.A. Ahmad**, Z. Mohd Ripin, M.A. Mujeebu "Numerical and Experimental Investigations on the Effect of Fan Height on the Performance of Piezoelectric Fan in Microelectronic Cooling", International Communications in Heat and Mass Transfer, 36(2009) 51-58 (**ISI Impact Factor : 0.945**)
2. S. Yusoff, M. Mohamed, **K.A. Ahmad**, M.Z. Abdullah, M.A. Mujeebu, Z. Mohd Ali, F. Idrus and Y. Yaakob "3-D Conjugate Heat Transfer Analysis of PLCC Packages Mounted In-line on a Printed Circuit Board" International Communications in Heat and Mass Transfer 36 (2009), pp. 813-819, (**ISI Impact Factor : 0.945**)
3. M. Khalil Abdullah, M. Z. Abdullah, M. A. Mujeebu, Z. M. Ariff and **K. A. Ahmad**, "Three-Dimensional Modelling on Effect of Multi Die-Stacking Shape in Mould Filling during Encapsulation of Microelectronic Chips", IEEE Transactions on Advanced Packaging, Vol. 33, No. 2, May 2010 (**ISI Impact Factor : 1.12**)
4. M.K. Abdullah, M.Z. Abdullah, . Gitano, R. Razali, **K. A. Ahmad**, "Three-Dimensional Modelling to Study the Effects of Die-Stacking Shape on Mould Filling During Encapsulation of Microelectronic Chips", ASME: Journal of Electronic Packaging, March 2010, Vol. 132 (**ISI Impact Factor : 0.782**)
5. Mohammed Zubair, Vizzy Nazira Riazuddin, Mohammed Zulkifly Abdullah, Rushdan Ismail, Ibrahim Lutfi Shuaib, Suzina Abdul Hamid, **Kamarul Arifin Ahmad**, "Airflow inside the nasal cavity: visualization using computational fluid dynamics", Asian Biomedicine Vol. 4 No. 4 August 2010; 657-661 (**ISI Impact Factor : 0.333**)
6. Mohammed Zubair, Riazuddin Vizzy Nazira, Mohammed Zulkifly Abdullah, Rushdan Ismail, Ibrahim Lutfi Shuaib, A.H.Suzina, **Kamarul Arifin Ahmad**, "Numerical Study of Inspiratory and Expiratory Flow in a Human Nasal Cavity", Journal of Medical and Biological Engineering 31(3), 201-206, 2011 (**ISI Impact Factor : 0.4**)
7. T. K. Zhen, M.Zubair, **K. A. Ahmad**, "Experimental and Numerical Investigation of the Effects of Passive Vortex Generators on Aludra UAV Performance", Chinese Journal of Aeronautics, 24(5), 577-583, 2011 (**ISI Impact Factor : 0.3**)
8. M. K. Abdullah, B. H. Murni, M. Z. Abdullah, M. A. Mujeebu, F. Hussin, H. Yusoff, N.C. Ismail, **K. A. Ahmad**, and Z. Mohd Ripin, "Heat transfer enhancement using piezoelectric fan in electronic cooling - Experimental and numerical observations" Journal of Thermal Science and Technology, 32(1), 2012 (**ISI Impact Factor : 0.178**)
9. H. Yusoff, M. Z. Abdullah, M. Abdul Mujeebu and **K. A. Ahmad**, "Development of Flexible Wings and Flapping Mechanism with Integrated Electronic Control System, for MAV Research", Experimental Techniques, 37(4), 25-37, 2013 (**ISI Impact Factor : 0.5**)
10. K.L.Ang, M. Zubair, **K.A.Ahmad**, "Static Thrust Measurement of Two Types of Perforated Solid Propellant Grain Configurations", Journal of Aerospace Engineering, 25(4), 653-659, 2011 (**ISI Impact Factor : 0.42**)
11. A.R. Serakawi and **K.A. Ahmad**, "An Experimental Study of Half Delta Wing Vortex Generator for Flow Separation Control", Journal of Aircraft, 49(1), 76-81, 2012 (**ISI Impact Factor : 0.5**)
12. M. Zubair, M. Z. Abdullah, R. Ismail, I. L. Shuaib, S. A. Hamid, **K. A. Ahmad**, "Review: A Critical Overview of Limitations of CFD Modelling in Nasal Airflow and its Corrective Approach", Journal



of Medical and Biological Engineering (SCIE) 32 (2), 77-84, 2012 (**ISI Impact Factor : 1.75**)

13. M. K. Abdullah, N. C. Ismail ,M. Z. Abdullah , M. Abdul Mujeebu ,**K. A. Ahmad**, M. Hussaini, M.N.A. Hamid, “Optimum Tip Gap and Orientation of Multi-Piezofan for Heat Transfer Enhancement of Fin Heat Sink in Microelectronic Cooling”, *International Journal of Heat and Mass Transfer*, 55(21), 5514-5525, 2012 (**ISI Impact Factor : 2.47**)
14. S. F. Shaker M.Z. Abdullah, Mujeebu, **K.A. Ahmad**, ‘Study on the Effect of Number of Film Cooling Rows on the Thermal Performance of Gas Turbine Blade’, *Journal of Thermal Science and Technology*, ISSN 1300-3615 2012 (**ISI Impact Factor : 0.178**)
15. M. K. Abdullah, N. C. Ismail ,M. Z. Abdullah , M. Abdul Mujeebu ,**K. A. Ahmad**, Z. Mohd Ripin, “Effects of tip gap and amplitude of piezoelectric fans on the performance of heat sinks in microelectronic cooling”, *Heat Mass Transfer*, 48(6), 893-901, 2012, (**ISI Impact Factor : 0.667**)
16. C. F. Lee, **K. A. Ahmad**, R. Ismail, S. A. Hamid, “Numerical Study of Mucous Layer Effects on Nasal Airflow”, *Biomedical Engineering: Applications, Basis and Communications (BME)*, 24(04), 327-332, 2012, (**ISI Impact Factor : 0.18**)
17. Zubair, M., Riazuddin, V.N., Abdullah, M.Z., Rushdan, I., Shuaib, I.L., **Ahmad, K.A.** , “Computational fluid dynamics study of pull and plug flow boundary condition on nasal airflow”, *Biomedical Engineering - Applications, Basis and Communications* 25 (4) , 1350044, 2013 (**ISI Impact Factor : 0.18**)
18. Zubair, M., Abdullah, M.Z., **Ahmad, K.A.**, “Hybrid mesh for nasal airflow studies”, *Computational and Mathematical Methods in Medicine* , art. no. 727362, 2013, (**ISI Impact Factor : 0.6**)
19. Lee, C.F., Abdullah, M.Z., **Ahmad, K.A.**, Lutfi Shuaib, I., “Standardization of Malaysian adult female nasal cavity”, *Computational and Mathematical Methods in Medicine*, art. no. 519071, 2013 (**ISI Impact Factor : 0.6**)
20. Lee, C.F., Abdullah, M.Z., **Ahmad, K.A.**, Shuaib, I.L., “Analytical comparisons of standardized nasal cavity”, *Journal of Medical Imaging and Health Informatics*, 4 (1), pp. 14-20, 2014, (**ISI Impact Factor : 0.3**)
21. Hamdan, A., Mustapha, F., **Ahmad, K.A.**, Mohd Rafie, A.S., “A review on the micro energy harvester in Structural Health Monitoring (SHM) of biocomposite material for Vertical Axis Wind Turbine (VAWT) system: A Malaysia perspective”, *Renewable and Sustainable Energy Reviews*, 35, pp. 23-30, 2014, (**ISI Impact Factor : 2.3**)
22. M. Zubair, M. Z. Abdullah, R. Ismail, I. L. Shuaib, S. A. Hamid, **K. A. Ahmad** “Computational fluid dynamics study on the effect of posture on the airflow characteristics inside the nasal cavity”, *Asian Biomedicine* 7(6), 835-840, 2013, (**ISI Impact Factor : 0.256**)
23. B. Raghuvir Pai, V. R. K. Rao, Anurag Ayachit, S. Ganesh Kamath, S. M. Abdul Khader, P. D. Gupta, **K. A. Ahmed**, “Effect of postural changes on normal and stenosed common carotid artery using FSI”, *Australasian Physical & Engineering Sciences in Medical*, 2014, 37:139-152, (**ISI Impact Factor : 0.7**)
24. Yusoff, H., Abdullah, M.Z., Abdul Mujeebu, M., **Ahmad, K.A.** , “Effect of skin flexibility on aerodynamic performance of flexible skin flapping wings for micro air vehicles”, *Experimental*



25. H Djodjodhardjo, M Jafari, S Wiriadidjaja, **KA Ahmad**, "Active Vibration Suppression of an elastic piezoelectric sensor and actuator fitted cantilevered beam configurations as a generic smart composite structure" *Composite Structures* 132, 848-863, 2015 , (**ISI Impact Factor : 3.3**)
26. H. A. Alrazen, A. Rahim, **K. A. Ahmad**, "A two-component CFD studies of the effects of H₂, CNG, and diesel blend on combustion characteristics and emissions of a diesel engine' *International Journal of Hydrogen Energy*, DOI 10.1016/j.ijhydene.2015.07.097, 2015 (**ISI Impact Factor : 2.93**)
27. M Zubair, **KA Ahmad**, MZ Abdullah, SF Sufian, " Characteristic Airflow Patterns During Inspiration and Expiration: Experimental and Numerical Investigation" , *Journal of Medical and Biological Engineering* 35 (3), 387-394, 2015 (**ISI Impact Factor : 1.75**)
28. H. A. Alrazen, A. Rahim, Adnan R., **K. A. Ahmad**, "A review of the effect of hydrogen addition on the performance and emissions of the compression - Ignition engine", *Renewable and Sustainable Energy Reviews*, Volume 54, 1 February 2016, Pages 785-796 (**ISI Impact Factor : 5.9**)
29. A Hamdan, F Mustapha, **KA Ahmad**, AS Mohd Rafie, MR Ishak, AE Ismail, "The effect of customized woven and stacked layer orientation on tensile and flexural properties of woven kenaf fibre reinforced epoxy composites" *International Journal of Polymer Science* 2016, Accepted (**ISI Impact Factor : 1.0**)
30. A Hamdan, F Mustapha, **KA Ahmad**, AS Rafie, MR Ishak, AE Ismail, "The bonded macro fiber composite (MFC) and woven kenaf effect analyses on the micro energy harvester performance of kenaf plate using modal testing and Taguchi method.", *Journal of Vibroengineering* 18 (2) 2016 Accepted (**ISI Impact Factor : 0.6**)
31. SMA Aftab, ASM Rafie, NA Razak, **KA Ahmad**, "Turbulence Model Selection for Low Reynolds Number Flows", *PloS one* 11 (4), e0153755 2016 Accepted (**ISI Impact Factor : 3.1**)
32. SMA Aftab, ASM Rafie, NA Razak, **KA Ahmad**, "Mimicking The Humpback Whale: An Aerodynamic Perspective", *Progress in Aerospace Sciences*. 2016 Accepted (**ISI Impact Factor : 2.1**)
33. M. F. Abas, A. S. M. Rafie, H. Yusoff, K. A. Ahmad, "Flapping Wing Micro-Aerial-Vehicle: Kinematics, Membranes, and Flapping Mechanisms of Ornithopter and Insect Flight", *Chinese Journal of Aeronautics*, 2016 Accepted (**ISI Impact Factor : 1.1**)
34. M. S. Zakaria, F. Ismail, M. Tamagawa, A. F. A. Aziz, S. Wiriadidjaya, A. A. Basri, K. A. Ahmad, "Numerical Analysis Using a Fixed Grid Method for Cardiovascular Flow Application", *Journal of Medical Imaging and Health Informatics*, Vol. 6, 1–5, 2016 (**ISI Impact Factor : 0.877**)
35. V. N. Riazuddin, M. Zubair., M. Ahmadi, M. Tamagawa, N. H. A. Rashid, N. Mazlan, K. A. Ahmad "Computational Fluid Dynamics Study of Airflow and Microparticle Deposition in a Constricted Pharyngeal Section Representing Obstructive Sleep Apnea Disease", *Journal of Medical Imaging and Health Informatics*, Vol. 6, 1–5, 2016 (**ISI Impact Factor : 0.877**)

36. A. A. Basri, M. Zuber, M. Tamagawa, M. S. Zakaria, E. I. Basri, R. M. Ali, A. F. A. Aziz, K. A. Ahmad "The Hemodynamic Effects of Paravalvular Leakage Using Fluid Structure Interaction; Transcatheter Aortic Valve Implantation Patient", Journal of Medical Imaging and Health Informatics, Vol. 6, 1–5, 2016 (**ISI Impact Factor : 0.877**)

Selected Citation (Scopus) Index Journal Papers

1. **K. A. Ahmad**, "Numerical Study on Effect of Reduced Frequency on a Vortex Induced by an Oscillating Sub Boundary Layer Vortex Generator", International Journal of Mechanical and Materials Engineering (IJMME) , 6 (3), pp. 317-325, 2011
2. M.M. Zihad, **K.A. Ahmad** and A.H. Kadarman , "Computer Aided Design, Analysis and Prototype Development of 2-Axis Stabilized Aerial Image Capturing", Applied Mechanics and Materials, 2012, **225**, pp. **310-314**, 2012
3. S.M. Abdul Khader, Anurag Ayachit, Raghuvir Pai, Md. Zubair, **K.A. Ahmed** and V.R.Rao "Study of the influence of Normal and High Blood pressure on normal and stenosed Carotid Bifurcation using Fluid-Structure Interaction", Applied Mechanics and Materials Vol. 315 (2013) pp 982-986, 2013
4. Hamdan, A., Mustapha, F., **Ahmad, K.A.**, Sultan, M.T.H., Ishak, M.R., "A review on the self energize structural health monitoring (SHM) in vertical axis wind turbine (VAWT) system", Applied Mechanics and Materials 564, pp. 157-163, 2014,
5. Marzuki, O.F., Mohd Rafie, A.S., Romli, F.I., **Ahmad, K.A.**, "Document An experimental investigation on the effect of surface roughness on the performance of Magnus wind turbine", ARPN Journal of Engineering and Applied Sciences, 10 (20), pp. 9725-9729, 2015
6. Marzuki, O.F., Mohd Rafie, A.S., Romli, F.I., **Ahmad, K.A.**, "Document Torque performance study of Magnus Wind Turbine", International Review of Mechanical Engineering, 9 (1), pp. 38-42, 2015
7. Rowshanaie, O., Mustapha, S., **Ahmad, K.A.**, Rowshanaie, H., "Document Simulation of organic rankine cycle through fluegas to large scale electricity generation purpose", Jurnal Teknologi, 77 (27), pp. 9-18, 2015
8. Aftab, S.M.A., Ahmad, K.A., "NACA 4415 wing modification using tubercles - A numerical analysis", ", Applied Mechanics and Materials, 629, pp. 30-35, 2014
9. Abdul Aziz, M.S., Abdullah, M.Z., Ahmad, K.A., "Numerical investigations of membrane surface effects on NACA 643-218 airfoil", Applied Mechanics and Materials, 564, pp. 60-65, 2014
10. Jafari, M., Djodjodhardjo, H., Ahmad, K.A., "Document Vibration analysis of a cantilevered beam with spring loading at the tip as a generic elastic structure", Applied Mechanics and Materials, 629, pp. 407-413, 2014

11. Zubair, M., Ahmad, K.A., Riazuddin, V.N., "Document A review on the impact of aircraft cabin air quality and cabin pressure on human wellbeing", Applied Mechanics and Materials, 629, pp. 388-394, 2014
12. Yusoff, H., Abdullah, M.Z., Ahmad, K.A., Abdullah, M.K., Suhaimi, S., "Document Experimental study on the effect of skin flexibility on aerodynamic performance of flapping wings for micro air vehicles", Applied Mechanics and Materials, 629, pp. 18-23, 2014
13. Hamdan, A., Mustapha, F., Ahmad, K.A., Rafie, A.S.M., Sultan, M.T.H., Ishak, M.R., "A review on the self energize structural health monitoring (SHM) in vertical axis wind turbine (VAWT) system," Applied Mechanics and Materials, 564, pp. 157-163, 2014
14. B. Mahjoub, K. A. Ahmad and S. Wiriadidjaja, "Flow Modification around a Circular Cylinder Applying Splitter Plates", Journal of Science & Technology (JST) , Pertanika, Vol. 24, No. 2, Jul 2016
15. Abas, M. F., Aftab, S. M. A., Rafie, A. S. M., Yusoff, H. and Ahmad, K. A. "Flapping Membrane Wing: A Prediction towards Inter-Domain Flight", Journal of Science & Technology (JST) , Pertanika, Vol. 24, No. 2, Jul 2016
16. Pauline Epsipha, Mohammad, Z. and K. A. Ahmad, "CFD Investigation of Transonic Axial Compressor Rotor Blade at Various Off-Design Conditions", Journal of Science & Technology (JST) , Pertanika, Vol. 24, No. 2, Jul 2016

Refereed Journal Publications

1. **K.A.Ahmad**, M. Z. Abdullah, J. K., Watterson " CFD simulations of vibrating sub-boundary layer vortex generators for diffuser flow separation control", International Journal of Engineering Science and Technology, Vol 5, 2008, pp. 32-42 , **ISSN 1823-1039**
2. N.F.Zulkefli, E.N.Tai, M.A. Mujeebu, M.Z.Abdullah, **K.A.Ahmad**, "Numerical and experimental Investigations of Passive Flow Control Devices on a Backward Facing Step", International Journal of Engineering Science and Technology, Vol. 6, No. 2, PP 21-29 2009 **ISSN 1823-1039**
3. N.F.Zulkefli, F. Hussin, M.Z.Abdullah, **K.A.Ahmad**, "Numerical Investigations of Flow Field Structure Induced by Sub-Boundary Layer Vortex Generators (SBVG)", International Review of Aerospace Engineering (IREASE), Vol. 3 N. 1, February 2010, **ISSN 1973-7459**
4. **K.A.Ahmad**, M.Z.Abdullah and J.K. Watterson, "Numerical Modelling of a Pitching Airfoil", Jurnal Mekanikal June 2010, No. 30 pp 37-47
5. N.F.Zulkefli and **K.A. Ahmad**, "Numerical Simulation of the Effect of Streamwise Vortices on Turbulent Flow Structure", International Journal of Engineering and Technology **ISSN 1823-1039**
6. S. M. Abdul Khader, Anurag Ayachit, Raghuvir Pai, **K. A. Ahmed**, V. R. K. Rao, S. Ganesh Kamath "Haemodynamics Study in Subject Specific Carotid Bifurcation Using FSI", International

Books

1. Zuber, Mohammad and Ahmad, Kamarul Arifin (2014) Airflow inside the nasal cavity: treatment planning and diagnosis using CFD. LAP Lambert Academic Publishing, Germany. ISBN 3659115584/9783659115585.
2. Abdul Rahim Abu Talib,..., Kamarul Arifin Ahmad (2010), "Laporan Kajian Halatuju Program Aeroangkasa Institut Pengajian Tinggi 2010-2020", Penerbit UPM ISBN 978-983-3663-43-9
3. R. Varatharajoo, ..., K. A. Ahmad, (2012) "AEROTECH IV: Recent Advances in Aerospace Technologies", Trans Tech Publication, ISBN 12 978-3-03785-506-5
4. R. Varatharajoo, ..., K. A. Ahmad, (2014) "AEROTECH V: Progressive Aerospace Research", Trans Tech Publication, ISBN 978-3-03835-232-7

Scientific Conference Papers

1. **Ahmad, K.A.**, McEwan, W., Watterson, J.K., Cole, J.S., "Numerical Study of a Vibrating sub-boundary layer vortex generator", **AIAA 2005-4648**
2. **Ahmad, K.A.**, Watterson, J.K., Cole, J.S., Briggs, I., "Sub-boundary Layer Vortex Generator Control of a Separated Diffuser Flow", **AIAA 2005-4650**
3. **Ahmad, K.A.**, McEwan, W., Watterson, J.K., Cole, J.S., "RANS turbulence models for pitching airfoil", Moving Boundaries 2005, 21-23 Sept 05, La Coruna, Spain
4. Mustafa, Z., Pilidis, P., Teixeira, J.A., **Ahmad, K.A.**, "CFD Aerodynamics investigation of air-water trajectories on rotor-stator blade of an axial compressor", ASME Turbo Expo 2006: Power for Land, Sea and Air, May 8-11, 2006, Barcelona Spain (**Scopus Indexed**)
5. **Ahmad, K.A.**, Razali R. "Influence of Sub-boundary Layer Vortex Generators (SBVG) on Wall Shear Stress", Proceedings of AEROTECH-II 2007 conference on Aerospace Technology of XXI Century, 20-21 June 2007, Kuala Lumpur
6. **Ahmad, K.A.**, Abdullah M.Z., Mustafa Z. "Use of Sub-boundary layer vortex generator for diffuser flow separation control", Proceedings of AEROTECH-II 2007 conference on Aerospace Technology of XXI Century, 20-21 June 2007, Kuala Lumpur
7. **Ahmad, K.A.**, Watterson J. K., "Use of vibrating sub-boundary layer vortex generator for diffuser flow separation control", International Conference on Adaptive Modeling and Simulations, October 22-24 2007, Goteborg Sweden
8. **Ahmad, K. A.** "Potential of CFD usage in understanding the airflow of photovoltaics application", 9th Mechanical and Aeronautical Engineering Field-Wise Seminar on New/Renewable Energy, Sept 3-4 2007, Phnom Penh, Cambodia
9. **Ahmad, K.A.**, Razali R. "The use of moving mesh to study the effect of pitching aerofoil" Conference on Design, Simulation, Product Development and Optimization (PRODUCT & DESIGN 2007), 10-11 December 2007, Batu Feringghi, Penang
10. A. R. Serakawi, **K. A. Ahmad** "A Conceptual Design of Remote Control (RC) Wing-In-Ground-Effect (WIG) Aircraft", Conference on Design, Simulation, Product Development and Optimization (PRODUCT & DESIGN 2007), 10-11 December 2007, Batu Feringghi, Penang
11. CFD Aerodynamic Investigation of Air-Water Trajectories on Rotor-Stator Blade of an Axial Compressor for Online Washing, Z. Mustafa, P. Pilidis, J. A. Amaral Teixeira and **K. A. Ahmad**, IntEC2007, 2nd International Engineering Convention 2007 - Globalisation in Growing Economies - Building Capacity, Jeddah, Saudi Arabia, 10th-14th March 2007
12. N. F. Zulkefli, T. E. Nar, **K. A. Ahmad**, "A Study of Novel Concept of Flow Control", 2nd Regional Conference on Vehicle Engineering and Technology Kuala Lumpur 15-17 July 2008
13. A.T. Kamaruddin, M. B. Hashim, **K. A. Ahmad**, "Fabrication and Testing a Do-It-Yourself (DIY) Solid Propellant Rocket", 2nd Regional Conference on Vehicle Engineering and Technology Kuala Lumpur 15-17 July 2008
14. **Ahmad K. A.** "CFD Simulations of Oscillating Sub-Boundary Layer Vortex Generator (SBVG)",

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 19. M.K. Abdullah, M.B. Hashim, M.Z. Abdullah, M.A. Mujeebu, F.Hussin, H.Yusoff, N.C. Ismail, **K.A. Ahmad**, “Experimental and Numerical Investigation on Effect of Piezoelectric Fan Locations/Arrangement with Simple Heat Sink for Microelectronics Cooling”, the 11th EMAP Conference, Penang 2nd -3rd Dec 2009
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 23. Mohammed Zubair, Vizzy Nazira Riazuddin, Mohammed Zulkifly Abdullah, Rushdan Ismail, Ibrahim Lutfi Shuaib, Suzina Abdul Hamid, **Kamarul Arifin Ahmad**, “Use of Numerical Methods in Determining the Airflows Dynamics and Impedance within the Nasal Cavity”, Conference on Aerospace and Mechanical Engineering, World Engineering Congress 2010, Kuching 2-5-August 2010
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 27. M.Zubair, M.Z.Abdullah, Suzina A. H, I.Rushdan, I.L. Shuaib, **K.A. Ahmad**, “Numerical study on the role of inferior turbinates inside the nasal cavity” . The 5th WACBE World Congress on Bioengineering.Tainan, Taiwan. August 18-21, 2011.
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 29. Chih Fang Lee, **Kamarul Arifin Ahmad**, Rushdan Ismail, Suzina Abdul Hamid, “Mucous Layer Effects towards Nasal Airflow” International conference on Biomedical Engineering, 27-28 Feb 2012, Penang Malaysia
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 31. Rajanikanth Rao Vedula, S.M. Abdul Khader, Raghuvir Pai.B, Anurag Ayachit, **K.A. Ahmad**, I. L Shuaib, “Patient specific flow analysis of cerebral aneurysm using CFD”, Proceeding of IASTED International Conference on Biomechanics, Pittsburg, Nov:7-9, 2011, USA. (**Scopus Indexed**)

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33. M.M. Zihad, K.A. Ahmad and A.H. Kadarman "Computer Aided Design, Analysis and Prototype Development of 2-Axis Stabilized Aerial Image Capturing", Aerotech IV, 21-22 Nov. 2012, Furama Kuala Lumpur
34. M.S. Abdul Aziz, M.Z Abdullah and **K.A. Ahmad** "Numerical Investigations of Membrane Surface Effects on NACA 643- 218 Airfoil", Applied Mechanics and Materials 2013
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38. Hamdan, A., Mustapha, F., Ahmad, K.A., Rafie, A.S.M., Sultan, M.T.H., Ishak, M.R., "A review on the self energize structural health monitoring (SHM) in vertical axis wind turbine (VAWT) system", Applied Mechanics and Materials, 564, pp. 157-163 2014
39. Zubair, M., Ahmad, K.A. , Riazuddin, V.N. , "A review on the impact of aircraft cabin air quality and cabin pressure on human wellbeing" Aerotech V conference, Oct. 2014, Furama Kuala Lumpur
40. Jafari, M., Djojodihardjo, H., Ahmad, K.A., "Vibration analysis of a cantilevered beam with spring loading at the tip as a generic elastic structure" , Aerotech V conference, Oct. 2014, Furama Kuala Lumpur
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Professional Involvement

Keynotes/Invited Speakers

1. **Invited Speaker** for Workshop on Rocket Propulsion Technology "Malaysia Current and Future Needs",PICC Putrajaya. Angkasa Mosti, 2009
2. **Invited Speaker** at the Department of Automobile and Aeronautical Engineering, 2013
3. **Invited Keynote Speaker**, International Conference on Environment and Sustainable Technologies (iCEST-2014), Manipal 2014
4. **Invited Speaker** "Biomedical research in Department of Aerospace Engineering, UPM", Kyushu Institute of Technology (KIT), Japan 2015
5. **Invited Keynote Speaker**, Pre-Conference Workshop on Computational Methods for Interdisciplinary Research, Manipal 2015
6. **Invited Keynote Speaker**, International Conference on Computational Methods in Engineering and Health Sciences, Manipal 2015

Committee/Panel/Auditors

1. **Joint Chairman** "3rd International Conference on Computational Methods in Engineering and Health Sciences", 17-18 Dec 2016



2. **Chairman** "2nd International Conference on Computational Methods in Engineering and Health Sciences", 18-19 Dec 2015
3. **Committee** "11th International Conference on Electronic Material and Packaging", 1-3 December 2009
4. **Committee** "Conference on Aerospace and Mechanical Engineering of WEC 2010", 2-5 August 2010
5. **Committee** "Malaysian Aerospace Dean Council", July 2009-June 2011
6. **Committee** "Conference of AEROTECH IV: Recent Advances in Aerospace Technologies", 2012
7. **Treasurer Committee** "Conference on AEROTECH V: Progressive Aerospace Research", 2014
8. **External Examiner** for Bachelor Degree Program offered at Universiti Tun Hussein Onn Malaysia (UTHM), 2013-present
9. **Advisor** for CH750 Kit Aircraft Project at Universiti Sains Malaysia (USM), 2012-2013

Journal Editor

1. **Editor in Chief** for International Journal of Fluids and Heat Transfer (IJFHT), e-ISSN 0127-5690, (2015-present)
2. **Editor** for ASEAN Engineering Journal (2014-present)
3. **Editor** for Asian Pacific Journal of Tropical Biomedicine (2011-2013)

Consultancy

1. Vibration Study of C-130 Aircraft Consultation Work for TUDM R&D (2008)
2. Hair Dryer CFD Simulation, (2011)
3. USAINS Technical Consultant (2011)
4. Consultant for Aeronautical Research Center SUDAN (2012-2015)
5. Consultant for Focus Advanced Technologies Sdn Bhd (2012-2016)
6. Consultant for Might-Meteor (2013)

Research and Innovation Product Exhibitions

1. Silver Award in ITEX 2009 for **Solid Propellant Rocket Motor** product
2. Silver Award in ITEX 2010 for **Solid Propellant Rocket Based for Civilian Usage** product

Thesis Examiners

	Name of Student	Examination	Appointment	Year
1.	Rahim B Muhammad	MSc	Internal-USM	2008
2.	Siti Nur Mariani bt Mohd Yunos	MSc	External-UTHM	2011
3.	Soo Poey Lam	MSc	External-UTHM	2011
4.	Amir Sari Navaei	MSc	External-Uniten	2012
5.	Ezanee Bin Gires	MSc	Internal-UPM	2012
6.	Mohsen Goleskardi	MSc	External-Uniten	2012
7.	Navin Raja A/L Kuppusamy	MSc	External-Uniten	2013
8.	Ahsan Nur Mubarak Zahari	MSc	Internal-UPM	2013
9.	Che Rafidah Mat Taib	PhD	Internal-UPM	2013
10.	Ramies A/L Govindasamy	MSc	External-Uniten	2013
11.	Athirah Binti Abdul Aziz	MSc	External-Uniten	2014
12.	Mohd Amirul Abd Rahman	MSc	Viva Chairman-UPM	2014
13.	Mohd yusoff Mohd Haris	MSc	Viva Chairman-UPM	2014
14.	Norshazlin Sazali	MSc	Viva Chairman-UPM	2014
15.	Abdullah Saad	MSc	Internal-UPM	2014
16.	Mohd Ridwan Abu Bakar	MSc	External-UTHM	2014
17.	Izadi Najafabadi	MSc	Internal-UPM	2014
18.	Tuqa Abdul Razzaq Flayyih	PhD	Internal-UPM	2015
19.	Tabrej Khan	MSc	Internal-UPM	2015
20.	Yong Thian Haw	MSc	Internal-UPM	2015
21.	Athirah Bt Abdul Aziz	MSc	External-Uniten	2015
22.	Ahmed Jassim Shkarah	PhD	External-UTEM	2015
23.	Kueh Tze Cheng	M.Eng.Sc.	External-MMU	2016
24.	Mohammed Serdah Al Khaldi	PhD	Internal UPM	2016
25.	Parnia Zakikhani	PhD	Viva Chairman-UPM	2016
26.	Fatimah Binti Mohamed	PhD	External-UTHM	2016
27.	Ali Mohamed Wahhad	PhD	Internal UPM	2016

References



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