

Dr. Firoz Alam, Ph.D., FIEAust, CPEng

Visiting Professor

School of Science and Engineering

Educational Background

- **Ph.D.** in Vehicle Aerodynamics and Aero-acoustics, Department of Mechanical and Manufacturing Engineering, RMIT University, Melbourne, Australia, 2000.
- **M.Sc.** (combined with **Bachelor** degree) in Aeronautical Engineering with **1st class Honours (First Class First)**, Riga Civil Aviation Engineers Institute, Latvia, 1991.
- **Diploma** in Russian Language, Riga Civil Aviation Engineers Institute, Latvia, 1991.
- **HSC** from Dawood Public School and College, Jessore, Bangladesh, 1983 (**4th** in the combined merit list of the Board of Intermediate and Secondary Education, Jessore, Bangladesh).
- **SSC** from Dawood Public School and College, Jessore, Bangladesh, 1981 (Star & Letter Marks in Five Subjects), Board of Intermediate and Secondary Education, Jessore, Bangladesh.

Positions Held

Professor and Program Director, Offshore Mechanical Engineering, School of Aerospace, Mechanical and Manufacturing Engineering, RMIT University, Melbourne, Australia from Jan 2016 to Date.

Associate Professor and Program Director, Offshore Mechanical Engineering, School of Aerospace, Mechanical and Manufacturing Engineering, RMIT University, Melbourne, Australia from Jul 2013 to Dec 2015.

Associate Professor and Deputy Head of School (Learning & Teaching), School of Aerospace, Mechanical and Manufacturing Engineering, RMIT University, Melbourne, Australia from Jan-2012 to June 2013.

Senior Lecturer and Program Director, School of Aerospace, Mechanical and Manufacturing Engineering, RMIT University, Melbourne, Australia from Jan-2007 to Dec-2011.

Lecturer, School of Aerospace, Mechanical and Manufacturing Engineering, RMIT University, Melbourne, Australia from Jan-2002 to Dec-2006.

Post-Doctoral Research Fellow, Department of Mechanical and Manufacturing Engineering, RMIT University, Melbourne, Australia from Jan-2001 to Dec 2001.

Research Engineer and Ph.D. Studies, Department of Mechanical and Manufacturing Engineering, RMIT University, Melbourne, Australia from Jan-1997-Dec 2000.

Honours and Awards

- **Institution of Engineers Australia Award** for Engineering Education Research Design, 2017
- **RMIT University Teaching Award** (by Vice Chancellor) for Highest Quality Teaching, 2004.
- Pro Vice Chancellor's **Award for Quality Teaching**, RMIT University, 2004.
- Faculty of Engineering **Dean's Award** (RMIT University) for best research publication from the Faculty of Engineering, RMIT University, 1998.
- **Australian Postgraduate Award** (APA Scholarship for Ph.D. research), 1997.
- **Riga Aviation University Award** for postgraduate research, 1992.
- **Vice Chancellor's (Rector's) Award** for excellent academic performance (Top Graduate Award), Riga Aviation University, 1991.
- **Latvian Education Minister's Award** for excellent academic performance, 1988.
- Former **USSR Scholarship Award** for undergraduate studies, 1985.
- **Government of Bangladesh Talent Pool Scholarship** (for securing 4th position in the combined merit list in HSC examination of the Board of Intermediate and Secondary Education, Jessore), 1983.

Services

External Competitive Research Grants Reviewer:

- Australian Research Council (ARC) Discovery, Linkage, Fellowships, Infrastructure since 2006
- European Research Council (ERC) since 2014
- Netherlands Research Council since 2019

Scientific Journal Administration:

- **Editor in Chief** for MIST International Journal of Science and Technology
- **Editorial Board Member** for:
 - Journal of Nonlinear Engineering
 - Aerospace Engineering- An International Journal
 - International Journal of Engineering Materials and Manufacture
 - Journal of Acoustics
 - Journal of Sports Engineering
 - Journal of Sustainability
 - KES Journal (International Journal of Knowledge-Based and Intelligent Engineering Systems)
 - Mechanical Engineering Research Bulletin

International Conference Advisory Board:

- International Advisory Committee Member of ICMERE2015, ICMERE2013, ICTE2014, ICTE2012, ICTE2018, ICMIEE2014, ICMIEE2012, ICMIME2013, ICMIME2015, ICMIME2017, ICMIME2019, APM-IEB2015, APM-IEB2014, IEOM2013, IEOM2012, ICBE2016, ICMIEE2018, ICME2019, ICSED2020

International Conference Organising Chair/Co-Chair:

- APCST2003 (Melbourne), APCST2007 (Singapore), APCST2009 (Honolulu), APCST2011 (Melbourne), APCST2015 (Barcelona)
- AFMC2014 (Melbourne)
- ICTE2008 (Dhaka), ICTE2016 (Dhaka)
- ICEP2016 (Melbourne), ICEP2018 (Sydney), ICEP2021 (Chiang Mai)
- WEES2020 (Durgapur)

Invited Keynote Presentation:

- 13th International Conference on Mechanical Engineering (ICME2019), BUET, 18-20 December, 2019, Dhaka
- 4th International Conference on Mechanical, Industrial and Materials Engineering (ICMIME2019), 17-19 December 2019, RUET, Rajshahi
- 2nd International Conference on Advancements in Engineering Education (iCAEED 2018), 3-5 December, 2018, Sydney
- 5th International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE2018), KUET, 23-24, December, Khulna
- 5th International Conference of Bionic Engineering (ICBE2016), Nottingham University China Campus, 21-24 June, 2016, Ningbo, China
- 11th International Conference on Mechanical Engineering (ICME2015), BUET, 18-20 December, 2015, Dhaka
- IEB National Seminar on Engineering Education and Quality Assurance Processes, 20 December 2014, Dhaka
- 2nd International Conference on Mechanical Engineering and Renewable Energy (ICMERE2013), 26-27 December, 2013, Chittagong
- 1st International Conference on Mechanical, Industrial and Materials Engineering (ICMIME2013), 1-3 November, 2013, Rajshahi
- International Conference on Vehicle Technologies and Integration (VTI2012), 16-18 July 2012, Chanchun, China
- 6th World Congress of Biomechanics, 1-6 August, 2010, Singapore
- 3rd Asia Pacific Congress on Sports Technology (APCST2007), 23-26 September, 2007, Singapore

Publications

Scholarly Book:

- 1) **Alam, F.** and Kootsookos, A. (2020), Accreditation of Engineering Education and Global Mobility, (in press), Taylor & Francis, UK, p. 200, ISBN-13: 978-0815396017.
- 2) **Alam, F.** (editor) (2014), Using Technology Tools to Innovate Assessment, Reporting, and Teaching Practices in Engineering Education, IGI Global, New York, p.409, ISBN13: 9781466650114.

Book Chapters:

- 3) Alam, Q. and **Alam, F.** (2020), Power generation and regional collaboration in South Asia, in: Managing Change for Better Public Service Delivery (eds., Alam, M.A., Alam, Q., Khair, R. & Karim, M.R.), Routledge (Oxon, UK), ISBN 978-0-367-47242-9, p. 277-316.
- 4) **Alam, F.** and Alam. Q. (2020), Power Generation and Regional Development in South Asia, in: The Economic Development of Bangladesh in the Asian Century (eds., Alam, Q., Rahman, A. and Islam, S.R.U.), Routledge (Oxon, UK), ISBN 978-0-367-528768 p. 240.
- 5) Chowdhury, H., Loganathan, B., Mustary, I., **Alam, F.**, and Mobin, S.M.A. (2019), Algae for biofuels: the third generation of feedstock, in: Second and Third Generation of Feedstocks: The Evolution of Biofuels (eds., Basile, A. & Dalena, F.), Elsevier, ISBN: 978-0-12-815162-4, p. 460.
- 6) Hartman, J.C., Marzbani, H., **Alam, F.**, Fard, M., Jazar, R.N. (2018), Friction coefficient of pneumatic tires and bitumen roads, in: Nonlinear Approaches in Engineering Applications: Energy, Vibrations, and Modern Applications (ed., Jazar, R.N.), Springer, ISBN: 978-331969480-1, p. 209-276.
- 7) Mobin, S. and **Alam, F.** (2017), A review of microalgal biofuels, challenges and future directions in: Application of Thermo-fluid Processes in Energy Systems: Key Issues and Recent Developments for a Sustainable Future (ed. Khan, MMK., Chowdhury, A. & Hassan, NMS.) Springer, Singapore, ISBN: 9811006954, October, p.323.
- 8) Aldawi, F and **Alam F.** (2015), Thermal performance of residential building envelope in: *Thermofluid Modeling for Energy Efficiency Applications*, (ed. Khan MMK and Hassan, NMS), in press, Academic Press (Elsevier), ISBN-13: 978-0128023976.
- 9) Khan, I and **Alam F.** (2015), Effects of Ambient Temperature Rise on Power Generation in Australia in: *Thermofluid Modeling for Energy Efficiency Applications*, (ed. Khan MMK and Hassan, NMS), in press, Academic Press (Elsevier), ISBN-13: 978-0128023976.
- 10) **Alam, F.**, Hadgraft, R. and Subic, A. (2014), Technology Enhanced Laboratory Experiments in Learning and Teaching, in: *Using Technology Tools to Innovate Assessment, Reporting, and Teaching Practices in Engineering Education*, (ed. Alam F), IGI Global, New York, p.409, ISBN13: 9781466650114.
- 11) **Alam, F.**, Hadgraft, R. and Alam, Q. (2014), eLearning – Challenges and Opportunities, in: *Using Technology Tools to Innovate Assessment, Reporting, and Teaching Practices in Engineering Education*, (ed. Alam F), IGI Global, New York, p.409, ISBN13: 9781466650114.
- 12) **Alam, F.** and Mobin, S. (2013), Biofuel from algae- its current status, challenges and future, in: *Advances in Biofuel Production: Algae and Aquatic Plants*, in press, ed. Gikonyo B. CRC Press/Apple Academic Press (Taylor & Francis), Ney Jersey, USA
- 13) Subic, A., **Alam, F.**, Troynikov, O. and Brownlie, L. (2013), Sports Apparel, in: *Routledge Handbook of Sports Technology and Engineering*, Eds: Fuss FK, Subic A, Strangwood M, Mehta R. Routledge / Taylor & Francis, London.
- 14) Subic, A., **Alam, F.** and Takla, M. (2013), Sports Helmets, in: *Routledge Handbook of Sports Technology and Engineering*, Eds: Fuss FK, Subic A, Strangwood M, Mehta R. Routledge / Taylor & Francis, London.
- 15) **Alam, F.**, Fuss, F.K. and Subic, A. (2013), Oval Shaped Sports Balls: Aerodynamics, Friction and Bounce, in: *Routledge Handbook of Sports Technology and Engineering*, Eds: Fuss FK, Subic A, Strangwood M, Mehta R. Routledge / Taylor & Francis, London.
- 16) **Alam, F.**, Fuss, F.K., Mehta, R. and Subic, A. (2013), Aerodynamics and Court Interaction of Tennis Balls, in: *Routledge Handbook of Sports Technology and Engineering*, Eds: Fuss FK, Subic A, Strangwood M, Mehta R. Routledge / Taylor & Francis, London.
- 17) **Alam, F.**, Asai, T., Mehta, R. and Subic, A. (2013), Aerodynamics and Construction of Modern Soccer Balls, in: *Routledge Handbook of Sports Technology and Engineering*, Eds: Fuss FK, Subic A, Strangwood M, Mehta R. Routledge / Taylor & Francis, London.

- 18) **Alam, F.**, Subic, A., Plumb, G., Shortis, M. and Chandra, R. (2012), An innovative offshore delivery of an undergraduate mechanical engineering program in *Developments in Engineering Education Standards: Advanced Curriculum Innovations* (edited by M. Rasul), ISBN 978-1-4666-0951-8, IGI Global, 233-245, USA
- 19) **Alam, F.**, Subic, A., Watkins, S. and Smits, A. J. (2010). Aerodynamics of an Australian Rules Foot Ball and Rugby Ball in *Computational Fluid Dynamics for Sport Simulation* (edited by M. Peters), ISBN 13: 978-3-642-04465-6, 103-127. Springer, Germany
- 20) **Alam, F.**, Subic, A. and Akbarzadeh, A. (2008). Aerodynamics of Bicycle Helmets in *The Engineering of Sport* (edited by Estivalet, M. and Brisson, P.), 337-344, Springer, Paris. ISBN 13: 978-287-09410-1.
- 21) **Alam, F.**, La Brooy, R., Subic, A. and Watkins, S. (2008). Aerodynamics of Cricket Ball – an Effect of Seams in *The Engineering of Sport* (edited by Estivalet, M. and Brisson, P), 345-352, Springer, Paris. ISBN-13: 978-287-09410-1.
- 22) **Alam, F.**, Subic, A., Akbarzadeh, A. and Watkins, S. (2007). Effects of Venting Geometry on Thermal Comfort and Aerodynamic Efficiency of Bicycle Helmets in *The Impact of Technology on Sport 2* (edited by F. K. Fuss, A. Subic and S. Ujihashi), 773-780, ISBN 13: 978-0-415-45695-1, Taylor & Francis, London.
- 23) **Alam, F.**, La Brooy, R. and Subic, A. (2007). Aerodynamics of Cricket Ball – An Understanding of Swing in *The Impact of Technology on Sport 2* (edited by F. K. Fuss, A. Subic and S. Ujihashi), 311-316, ISBN 13: 978-0-415-45695-1, Taylor & Francis, London.
- 24) **Alam, F.**, Tio, W., Subic, A. and Watkins, S. (2007). An Aerodynamics and Computational Study of Tennis Ball Aerodynamics in *The Impact of Technology on Sport 2*(edited by F. K. Fuss, A. Subic and S. Ujihashi), 437-442, ISBN 13: 978-0-415-45695-1, Taylor & Francis, London.
- 25) Jaitlee, R., **Alam, F.** and Watkins, S. (2007). Pressure Fluctuations on Automotive Rear-View Mirrors in *Vehicle Aerodynamics 2007*, SP-2066, pp 183-193, ISBN 13: 978-0-7680-1856-1, Michigan, USA.
- 26) **Alam, F.**, Subic, A. and Watkins, S. (2006). A Study of Aerodynamic Drag and Thermal Efficiency of a Series of Bicycle Helmets in *The Engineering of Sport 6* (edited by E. Moritz and S. Haake), Vol. 1, ISBN 0-387-317773-2, Springer, New York
- 27) **Alam, F.**, We, P. C., Subic, A. and Watkins, S. (2006). A Comparison of Aerodynamic Drag of a Rugby Ball using EFD and CFD in *The Engineering of Sport 6* (edited by E. Moritz and S. Haake), Vol. 2, ISBN 0-387-34678-3, Springer, New York
- 28) **Alam, F.**, Subic, A. and Watkins, S. (2005). An experimental study of spin effects on tennis ball aerodynamic properties in *The Impact of Technology on Sport 1* (edited by A. Subic and S. Ujihashi), ISBN 0-646-45025-5, Tokyo, Japan
- 29) **Alam, F.**, Subic, A. and Watkins, S. (2005). Measurements of aerodynamic drag forces of a rugby ball and Australian rules football in *The Impact of Technology on Sport 1* (edited by A. Subic and S. Ujihashi), ISBN 0-646-45025-5, Tokyo, Japan
- 30) Murad, N., Naser, J., Alam, F. and Watkins, S. (2004). Simulation of Vehicle A-pillar Aerodynamics using Various Turbulence Models in *Vehicle Aerodynamics 2004*, SP-1874, ISBN 0-7680-1410-7, Michigan, USA.

Journal Articles

- 31) **Alam, F.**, Chowdhury, H., Basu, A., Sarkar, R., Paul, A.R. and Chattopadhyaya, S. (2019), Effect of South Asian road trucks on energy efficiency and safety, *Journal of Mechanical Engineering*, Vol. 49 (2): 33-41
- 32) Paul, A.R., Jain, A. and **Alam, F.** (2019), Drag reduction of a passenger car using flow control techniques, *International Journal of Automotive Technology*, Vol. 20 (2): 397-410.
- 33) Woo, T.T. and **Alam, F.** (2018), Comparative aerodynamics of synthetic badminton shuttlecocks, *Sports Engineering*, Vol. 21 (1): 21-29
- 34) Paul, A.R. and **Alam, F.** (2018), Compliance of Boiler Standards and Industrial Safety in Indian Subcontinent, *International Journal of Engineering Materials and Manufacture*, Vol. 3(4) 182-189. <https://doi.org/10.26776/ijemm.03.04.2018.02>
- 35) Aldawi, F., Moria, H., Mohamad, T. I. and **Alam, F.** (2016), Comparison between Two Insulating Materials Used in House Wall System for Thermal Performance, *Journal of Scientific and Engineering Research*, Vol 3 (6): 312-317
- 36) Crispin, S., Hancock, P., Male, S., Baillie, C., MacNish, C., Leggoe, J., Ranmuthugala, D. and **Alam, F.** (2016), Threshold capability development in intensive mode business units, *Education and Training*, Vol. 58 (5): 521-539

- 37) Hartman, J. and **Alam, F.** (2014), The Effects of Velocity on the Friction Coefficient of Motor Vehicle Tyres and Paired Road Surfaces, *Nonlinear Engineering Nonlinear Engineering*, Vol. 3 (2): 71-79
- 38) Pevitt, C. and **Alam, F.** (2014), Static computational fluid dynamics simulations around a specialised delta wing, *Computers and Fluids*, Vol. 100 (3): 155-164
- 39) Chowdhury, H. and **Alam, F.** (2014), An experimental study on aerodynamic performance of time trial bicycle helmets, *Sports Engineering*, Vol. 17 (3): 165-170
- 40) Chowdhury, H. and **Alam, F.** 2014, An experimental investigation on aerodynamic drag coefficient and surface roughness properties of sport textiles. *Journal of The Textile Institute*, Routledge, United Kingdom, Vol. 105 (4): 414-422
- 41) Liu, J., Wang, Y.-S., Ke, L.-L., Yang, J., **Alam, F.** (2014), Dynamic instability of an elastic solid sliding against a functionally graded material coated half-plane, *International Journal of Mechanical Sciences*, Vol. 89, pp. 323-331
- 42) Murad, N., Naser, J., **Alam, F.** and Watkins, S. (2013), Computational fluid dynamics study of vehicle A-pillar aero-acoustics, *Applied Acoustics*, Vol. 74 (6): 882-896
- 43) Aldawi, F., **Alam, F.**, Date, A., Alghamdi, M. and Aldhawi, F. (2013), A New House Wall System for Residential Buildings, *Energy and Buildings*, Vol. 67: 403-418
- 44) Aldawi, F., Date, A., **Alam, F.**, Khan, I. and Alghamdi, M. (2013), Energy efficient residential house wall system, *Applied Thermal Engineering*, Vol. 58 (1-2): 400-410
- 45) Aldawi, F. **Alam, F.** and Moria, H. (2013), Energy efficient house wall system for arid and moderate climatic region, *Yanbu Journal of Engineering and Science*, Saudi Arabia, Vol. 6: 79-90 ISSN: 1658-5321
- 46) Khan, I., **Alam, F.** and Alam, Q. (2013), The global climate change and its effect on power generation in Bangladesh, *Energy Policy*, Vol 61: 1460–1470
- 47) Murad, N.M., Naser, J., **Alam, F.** and Watkins S. (2013), A computational fluid dynamics study of crosswind effects on vehicle A-pillar aero-acoustics, *Int. Journal of Vehicle Noise and Vibration*, Vol.9, No.3/4, pp.147 - 170
- 48) Liu, J., Ke, L.-L., Wang, Y.-S., Yang, J. and **Alam, F.** (2012), Thermoelastic frictional contact of functionally graded materials with arbitrarily varying properties, *Int. Journal of Mechanical Sciences*, Vol. 63 (1), 86-98
- 49) Ke, L., Wang, Y., Yang, J., Kitipornchai, S. and **Alam, F.** (2012), Nonlinear vibration of edged cracked FGM beams using differential quadrature method, *Science China: Physics, Mechanics and Astronomy*, Vol. 55 (11), pp. 2114-2121
- 50) Chowdhury, H. and **Alam, F.** (2012), Engineering Education in Bangladesh - an indicator of economic development, *European Journal of Engineering Education*, Vol. 37 (2), 217-228
- 51) Chowdhury, H. and **Alam, F.** (2012), Bicycle aerodynamics: an experimental evaluation methodology, *Sports Engineering*, Vol. 15 (2), 73-80
- 52) Khan, K., Chowdhury, H., **Alam, F.** and Kumar, A. (2012), Sustainable Design of Ship Breaking Industry in Developing Countries, *Asian Journal of Water, Environment and Pollution*, Vol. 9 (1), 1-11
- 53) Pevitt, C. and **Alam, F.** (2012), A study of non-linear dynamic aerodynamic behaviour of a specialised delta wing, *Modern Applied Science*, Vol. 6 (6), 18-30
- 54) Chowdhury, H. and **Alam, F.** (2012), Bicycle aerodynamics - an experimental evaluation methodology, *Sports Engineering*, Vol. 15 (2), 73-80
- 55) Chowdhury, H., Moria, H., **Alam, F.** and Subic, A. (2012), Aerodynamics of ski jumping suits, *Sports Technology*, available on line from September, DOI:10.1080/19346182.2012.725411
- 56) Moria, H., Chowdhury, H., **Alam, F.** and Subic, A. (2012), Aerodynamic behaviour of stretchable sports fabrics suits, *Sports Technology*, available on line from September, DOI:10.1080/19346182.2012.725412
- 57) Chowdhury, H., **Alam, F.** and Khan, I. (2011), An experimental study of bicycle aerodynamics, *Int. J. of Mechanical Engineering and Materials Science*, Vol. 6 (2), 269-274
- 58) Moria, H. Chowdhury H. and **Alam, F.** (2011), Aero/Hydrodynamics Study of Speedo LZR, TYR Sayonara and Blueseventy Pointzero3 Swimsuits, *Jordan Journal of Mechanical and Industrial Engineering*, Vol. 5 (1), 83-88
- 59) Moria, H., Chowdhury, H., **Alam, F.** and Subic, A. (2010), Comparative aerodynamic analysis of commercial swimsuits, *Sports Technology*, Vol. 3 (4), 261-267
- 60) **Alam, F.**, Chowdhury, H., Theppadungporn, C., Subic, A. and Khan M.M.K (2009), Aerodynamic Properties of Badminton Shuttlecock, *Int. Journal of Mechanical Engineering and Materials Science*, Vol. 4 (3), 266-272.

- 61) Kianifar, A., Ghafoorianfar, N., Kianifar, M.R., **Alam, F.** and Akbarzadeh, A. (2009), Numerical Combustion Modelling of a Gas-Burner, *Int. Journal of Mechanical Engineering and Materials Science*, Vol. 4 (3), 211-219.
- 62) Oggiano, L., Konopov, I., Troynikov, O., **Alam, F.**, Subic, A. and Sætran, L. (2009), Aerodynamic behaviour of single sport jersey fabrics with different roughness and cover factors, *Sports Engineering*, Vol. 12 (1), 1-12.
- 63) Chowdhury, H., **Alam, F.**, Mainwaring, D., Subic, A., Tate, M. and Forster, D. (2009), Wind Tunnel Testing Methodologies for Evaluating Aerodynamic Characteristics of Different Fabrics, *Sports Technology*, Vol. 2 (3-4), 81-86.
- 64) **Alam, F.**, Khan, M.M.K. and Rasul, M. G. (2008), A Comparative Study of Residential Household Energy Consumption in Australia and USA, *Int. Journal of Mechanical Engineering and Materials Science*, Vol. 3 (2), 127-132.
- 65) Mehta, R., **Alam, F.** and Subic, A. (2008). A Review of Aerodynamics of Tennis Balls. *Sports Technology*, Vol. 1 (1), 7-16.
- 66) **Alam, F.**, Subic, A., Watkins, S., Naser, J. and Rasul, M. G. (2008). An Experimental and Computational Study of Aerodynamic Properties of Rugby Balls. *WSEAS Transactions on Fluid Mechanics*, Vol. 3 (3), 279-286
- 67) **Alam, F.**, Subic, A., Watkins, S., Naser, J., Rasul, M. G. and Khan, M. K. (2008). A Study of Spin Effects on Tennis Ball Aerodynamics. *WSEAS Transactions on Fluid Mechanics*, Vol. 3 (3), 271-278.
- 68) Naser, J., **Alam, F.** and Khan, M. (2008), Evaluation of a proposed and an existing dust ventilation/collection system in an underground mine crushing plant. *WSEAS Transactions on Fluid Mechanics*, Vol. 3 (3), 244-249.
- 69) **Alam, F.** and Subic, A. (2008). Measurements of Aerodynamic Properties of Tennis Balls. *Journal of the Institution of Engineers Bangladesh*. Vol. 33 (1), 101-112.
- 70) **Alam, F.**, Dilla, E., Subic, A. and Tu, J. (2007). A three-step teaching and learning method in laboratory experiments for a thermal fluid course. *World Transactions of Engineering and Technology Education*. Vol. 6 (1), 13-18.
- 71) **Alam, F.**, Tang, H. and Tu, J. (2004). The development of an integrated experimental and computational teaching and learning tool for thermal fluid science, *World Transactions on Engineering and Technology Education*, Vol. 3 (2), 249-252.
- 72) **Alam, F.** and Watkins, S. (2004). Aerodynamics of Trucks and Drag Reducing Devices, *Journal of Mechanical Engineering*, Vol. 8 (1), 20-40
- 73) **Alam, F.**, Zimmer, G. and Watkins, S. (2003). Mean and time-varying flow measurements on the surface of a family of idealized road vehicles, *Experimental Thermal and Fluid Sciences*, Vol. 27 (5): 639-654
- 74) **Alam, F.** and Watkins, S., "Aerodynamics of Trucks and Drag Reducing Devices", *Journal of Mechanical Engineering*, Vol. 8, No. 1, Khulna University of Engineering and Technology, 2004.
- 75) Watkins, S., Mousley, P. D., Milbank, J. and **Alam, F.**, "Aeroacoustic Noise and the Motor Vehicle: Research at RMIT University", *Acoustics Australia (Journal of the Australian Acoustical Society)*, Vol. 29, No. 3, PP 111-115, December, 2001.

Peer-Reviewed Special Publications¹

- 76) Murad, N., Naser, J., Alam, F. and Watkins, S., "Simulation of Vehicle A-pillar Aerodynamics using Various Turbulence Models", *SAE World Congress, Detroit, Michigan, USA, SAE 2004-01-0231 in Vehicle Aerodynamics 2004, SP-1874, ISBN 0-7680-1410-7, 8-11 March, 2004.*
- 77) Alam, F., Watkins, S., Zimmer, G. and Humphris, C., "Effects of Vehicle A-Pillar Shape on Local Flow Properties with Particular Relevance to Flow Induced Noise", *SAE World Congress, Detroit, Michigan, USA, SAE 2001-01-1086 in Vehicle Aerodynamics – Design and Technology, SP-1600, ISBN 0-7680-0747-X, 6-9 March, 2001.*
- 78) Zimmer, G., Alam, F., Watkins, S. and Peric, C., "Comparison of a High Blockage Wind Tunnel, an Open Jet Tunnel and On-Road Testing", *SAE World Congress, Detroit, Michigan, USA, SAE Paper 2001-01-1087/1086 in Vehicle Aerodynamics – Design and Technology, SP-1600, ISBN 0-7680-0747-X, 6-9 March, 2001.*

¹These are selected from less than 10% of peer-reviewed papers in the Society of Automotive Engineers International World Congress (Detroit) and are sold as books by SAE-International, see for example www.sae.org

Peer-Reviewed Conference Papers

- 79)** Tan, A.M., Weizman, Y., Alam, F. and Fuss, F.K. (2020), Coefficient of Friction of Soccer Balls, *Proceedings*, 49(1), 92; <https://doi.org/10.3390/proceedings2020049092>.
- 80)** Verma, S., Paul, A.R. and Alam, F. (2020), Investigation of aeroelasticity in HAWT blade with winglet, *Proceedings of International Conference on Energy and Sustainable Development (ICESD-2020)*, 14-15 February 2020, Jadavpur University and The Institution of Engineers (India), Kolkata, Paper ID: 142, pp. 477-480, ISBN: 978-83660-56-8.
- 81)** Zaid, M., Chowdhury, H., Loganathan, B., Waleed, M., Alam, F., Sultan, I. and Paul, A.R. (2020), CFD analysis of a vertical axis wind turbine, *Proceedings of International Conference on Energy and Sustainable Development (ICESD-2020)*, 14-15 February 2020, Jadavpur University and The Institution of Engineers (India), Kolkata, Paper ID: 143, pp. 481-484, ISBN: 978-83660-56-8.
- 82)** Alam, Q., Alam, F., Chowdhury, H., Sarkar, R. and Paul, A.R. (2019), A review on the regional collaboration of power utilisation in South Asia, *Energy Procedia*, Vol. 160, pp. 11-17, Elsevier
- 83)** Alam, F., Sarkar, R. and Chowdhury, H. (2019), Nuclear power plants in emerging economies and human resource development: A review, *Energy Procedia*, Vol. 160, pp. 3-10, Elsevier.
- 84)** Alam, F., Saleque, K., Alam, Q., Mustary, I. and Chowdhury, H. (2019), Indigenous and imported natural gas and the economic growth of Bangladesh: The challenges ahead, *Energy Procedia*, Vol. 160, pp. 18-25, Elsevier.
- 85)** Alam, F., Saleque, K., Alam, Q., Mustary, I., Chowdhury, H. and Jazar, R. (2019), Dependence on energy sources in South Asia and the need for a regional solution, *Energy Procedia*, Vol. 160, pp. 26-33, Elsevier.
- 86)** Chowdhury, H., Juwono, R., Islam, R., Zaid, M., Loganathan, B. and Alam, F. (2019), An experimental study on of the effect of various deflectors used for light trucks in Indian subcontinent, *Energy Procedia*, Vol. 160, pp. 34-39, Elsevier.
- 87)** Chowdhury, H., Islam, R., Hussein, M., Zaid, M., Loganathan, B. and Alam, F. (2019), Design of an energy efficient car by biomimicry of a boxfish, *Energy Procedia*, Vol. 160, pp. 40-44, Elsevier.
- 88)** Zaid, M., Yazdanfar, Z., Chowdhury, H. and Alam, F. (2019), A review on the methods used to reduce the scouring effect of bridge pier, *Energy Procedia*, Vol. 160, pp. 45-50, Elsevier.
- 89)** Zaid, M., Yazdanfar, Z., Chowdhury, H. and Alam, F. (2019), Numerical modeling of flow around a pier mounted in a flat and fixed bed, *Energy Procedia*, Vol. 160, pp. 51-59, Elsevier.
- 90)** Aldiab, A., Chowdhury, H., Kootsookos, A., Alam, F. and Allhibi, H.S. (2019), Utilization of Learning Management Systems (LMSs) in higher education system: A case review for Saudi Arabia, *Energy Procedia*, Vol. 160, pp. 731-737, Elsevier.
- 91)** Allhibi, H.S., Chowdhury, H., Zaid, M., Aldiab, A., Loganathan, B. and Alam, F. (2019), Prospect of wind energy utilization in Saudi Arabia: A review, *Energy Procedia*, Vol. 160, pp. 756-751, Elsevier.
- 92)** Mobin, S.M.A., Chowdhury, H. and Alam, F. (2019), Commercially important bioproducts from microalgae and their current applications – A review, *Energy Procedia*, Vol. 160, pp. 752-760, Elsevier.
- 93)** Alam, F., Chowdhury, H. and Moria, H. (2019), A review on aerodynamics and hydrodynamics in sports, *Energy Procedia*, Vol. 160, pp. 798-805, Elsevier.
- 94)** Chowdhury, H., Alam, F. and Mustary, I. (2019), Development of an innovative technique for teaching and learning of laboratory experiments for engineering courses, *Energy Procedia*, Vol. 160, pp. 806-811, Elsevier.
- 95)** Loganathan, B., Chowdhury, H., Mustary, I., and Rana, M.M. and Alam, F. (2019), Design of a micro wind turbine and its economic feasibility study for residential power generation in built-up areas, *Energy Procedia*, Vol. 160, pp. 812-819, Elsevier.
- 96)** Loganathan, B., Chowdhury, H., Allhibi, H.S., Mustary, I., Sony, S.M. and Alam, F. (2019), Design of a hybrid household power generation system for a coastal area: A case study for Geraldton, Australia, *Energy Procedia*, Vol. 160, pp. 820-826, Elsevier.
- 97)** Loganathan, B., Chowdhury, H., Mustary, I., Sony, S.M., Rana, M.M. and Alam, F. (2019), Design of a hybrid household power generation system for a rural area: A case study for Oodnadatta, Australia, *Energy Procedia*, Vol. 160, pp. 827-833, Elsevier.
- 98)** Alam, F. (2018), An Innovated Three-Step Teaching and Learning Approach for Laboratory Experiments of Thermal Fluids Courses, *Proceedings of the 2nd International Conference on Advancements in Engineering Education (iCAEED 2018)*, 3-5 December 2018, Sydney, Australia, pp. 1-6.

- 99) Alam, F., Chowdhury, H. and Moria, H. (2018), Aerodynamics and Hydrodynamics in Sports, Proceedings of the 5th International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE2018), 23-24 December, Khulna, pp. 1-6.
- 100) Paul, A.R. and Alam, F. (2018), Compliance of Boiler Standards and Industrial Safety in Indian Subcontinent, INCOM18: Proceedings of the 1st International Conference on Mechanical Engineering, Jadavpur University, Kolkata, India, January 4 – 6, Paper No. INCOM18-258, pp.1-4
- 101) Mobin, S. and Alam, F. (2017), Some promising micro-algal species for commercial applications: A review, Energy Procedia, Vol. 110: 510-517, Elsevier
- 102) Alam, F., Alam, Q., Reza, S., Khurshid-ul-Alam, S.M., Saleque, K. and Chowdhury, H. (2017), A Review of Hydropower Projects in Nepal, Energy Procedia, Vol. 110: 581-585, Elsevier
- 103) Alam, F., Alam, Q., Reza, S., Khurshid-ul-Alam, S.M., Saleque, K. and Chowdhury, H. (2017), Sourcing Green Power in Bhutan: A Review, Energy Procedia, Vol. 110: 586-591, Elsevier
- 104) Mustary, I., Chowdhury, H., Loganathan, H. and Alam, F. (2017), Development of a mathematical model for optimal sourcing of LNG, Energy Procedia, Vol. 110: 597-603, Elsevier
- 105) Kootsookos, A., Alam, F., Chowdhury, H. and Jollands, M. (2017), Offshore engineering education: Assuring quality through dual accreditation, Energy Procedia, Vol. 110: 537-542, Elsevier
- 106) Aldiab, A., Chowdhury, H., Kootsookos, A. and Alam, F. (2017), Prospect of eLearning in higher education sectors of Saudi Arabia: A review, Energy Procedia, Vol. 110: 574-580, Elsevier
- 107) Thebuwana, H., Hadgraft, H. and Alam, F. (2017), Addressing graduate competencies: Understanding the contextual factors impacting the engineering discipline, Energy Procedia, Vol. 110: 359-364, Elsevier
- 108) Thebuwana, H., Hadgraft, H. and Alam, F. (2016), Transitioning into Professional Practice: The Employer Perspective, Proceedings of the 27th Australasian Association for Engineering Education (AAEE) Conference, 4-7 December, Coffs Harbour, Australia.
- 109) Alam, F., Alam, Q., Reza, S., Alam, K., Saleque, S. and Ahsan, S. (2016), Liquefied Natural Gas (LNG) market and Australia, Proceedings of the 7th International Conference on Thermal Energy (ICTE2016), 22-24 December, Dhaka
- 110) Male, S., Alam, F., Baillie, C., Crispin, S., Hancock, P., Leggoe, J., MacNish, C., and Ranmuthugala, D. (2016), Students' experiences of threshold capability development with intensive mode teaching, Proceedings of the 39th Annual Conference of the Higher Education Research and Development Society of Australasia (HERDSA), 4-7 July, Perth, Australia.
- 111) Alam, F., Chowdhury, H., Loganathan, B. and Mustary, I. (2016), A study of aerodynamic drag of contemporary footballs, Procedia Engineering, Vol. 147: 81 – 86, Elsevier
- 112) Chowdhury, H., Loganathan, B., Wang, Y., Mustary, I. and Alam, F. (2016), A Study of Dimple Characteristics on Golf Ball Drag, Procedia Engineering, Vol. 147: 87 – 91, Elsevier
- 113) Alam, F., Chowdhury, H. Mustary, I. and Loganathan, B. (2015), Aerodynamic study of FIFA-approved footballs, Procedia Engineering, Vol. 105, pp. 317-322, Elsevier
- 114) Alam, F., Chowdhury, H. Kootsookos, A. and Hadgraft, R. (2015), Scoping e-portfolios to engineering and ICT education, Procedia Engineering, Vol. 105, pp. 852-857, Elsevier
- 115) Alam, F., Mobin, S. and Chowdhury, H. (2015), Third generation biofuel from algae, Procedia Engineering, Vol. 105, pp. 763-768, Elsevier
- 116) Ali, A., Chowdhury, H. Loganathan, B. and Alam, F. (2015), An aerodynamic study of a domestic scale horizontal axis wind turbine with varied tip configurations, Procedia Engineering, Vol. 105, pp. 757-762, Elsevier
- 117) Chowdhury, H., Mustary, I. Loganathan, B. and Alam, F. (2015), Adjacent wake effect of a vertical axis wind turbine, Procedia Engineering, Vol. 105, pp. 692–697, Elsevier
- 118) Kozlov, A. Chowdhury, H. Mustary, I. Loganathan, B. and Alam, F. (2015), Bio-inspired design: aerodynamics of boxfish, Procedia Engineering, Vol. 105, pp. 323-328, Elsevier
- 119) Loganathan, B. Chowdhury, H. Mustary, I. and Alam, F. (2015), An experimental study of a cyclonic vertical axis wind turbine for domestic scale power generation, Procedia Engineering, Vol. 105, pp. 763-768, Elsevier
- 120) Alam, F., Chowdhury, H., Wei, H.Z., Mustary, I. and Zimmer, G. (2014), Aerodynamics of Ribbed Bicycle Racing Helmets, Procedia Engineering, Vol. 72: 691–696, Elsevier
- 121) Alam, F., Chowdhury, H., George, S., Mustary, I., and Zimmer, G. (2014), Aerodynamic drag measurements of FIFA-approved footballs, Procedia Engineering, Vol. 72: 703-708, Elsevier
- 122) Watkins, S. and Alam, F. (2014), The Turbulent Flow Field Relevant to Outdoor Sports, Procedia Engineering, Vol. 72: 792-797, Elsevier

- 123) Alam, F. and Watkins, S. (2013), Implication of vehicle aerodynamics on fuel savings and the environment, Proceedings of the International Conference on Mechanical, Industrial and Materials Engineering (ICMIME2013), 1-3 November, RUET, Rajshahi, Bangladesh, pp 071-082, ISBN: 978-984-33-7879-8.
- 124) Alam, F., Chowdhury, H., Husnia, N. and Smith, L. (2013), An Experimental Study of Baseballs and Softballs, *Procedia Engineering*, Vol. 60, 467–472, Elsevier
- 125) Alam, F., Chowdhury, H., Guillaume, E., Yang, J. and Zimmer, G. (2013), On-road and Wind Tunnel Aerodynamic Study of Human Powered Vehicles, *Procedia Engineering*, Vol. 60, 473–478, Elsevier
- 126) Chowdhury, H., Alam, F., Arena, S. and Mustary, I. (2013), An Experimental Study of Airflow Behaviour around a Standard 2-man Bobsleigh, *Procedia Engineering*, Vol. 60, 479–484, Elsevier
- 127) Chowdhury, H., Alam, F., Muscara, A. and Mustary, I. (2013), An Experimental Study of New Rule Javelins, *Procedia Engineering*, Vol. 60, 485–490, Elsevier
- 128) Hata, K., Shionoya, A., Moria, H., Chowdhury, H. and Alam, F. (2013), Evaluation of Aerodynamic Drag Utilizing a Viscoelastic Model, *Procedia Engineering*, Vol. 60, 378–384
- 129) Alam, F., Alam, Q. and Rasul, M.G. (2013), A Pilot Study on Postgraduate Supervision, *Procedia Engineering*, Vol. 56: 875-881, Elsevier
- 130) Alam, F., Alam, Q., Chowdhury, H. and Steiner, T. (2013), Transnational Education: Benefits, Threats and Challenges, *Procedia Engineering*, Vol. 56: 870-874, Elsevier
- 131) Chowdhury, H., Alam, F., Biswas, S.K., Islam, M.T. and Islam A.K.M. S. (2013), Quality Assurance and Accreditation of Engineering Education in Bangladesh, *Procedia Engineering*, Vol. 56: 864-869, Elsevier
- 132) Chowdhury, H., Moria, H., Ali, A., Khan, I., Alam, F. and Watkins, S. (2013), A Study on Aerodynamic Drag of a Semi-trailer Truck, *Procedia Engineering*, Vol. 56: 201-205, Elsevier
- 133) Moria, H., Chowdhury, H., Aldawi, F and Alam, F. (2013), A Cylindrical Methodology for the Study of Fabric Aerodynamics, *Procedia Engineering*, Vol. 56: 297-302, Elsevier
- 134) Aldawi, F., Alam, F., Khan, I. and Alghamdi, M. (2013), Effect of Climates and Building Materials on House Wall Thermal Performance, *Procedia Engineering*, Vol. 56: 661-666, Elsevier
- 135) Alam, F. and Golde, S. (2013), An Aerodynamic Study of a Micro Scale Vertical Axis Wind Turbine, *Procedia Engineering*, Vol. 56: 568-572, Elsevier
- 136) Khan, I., Chowdhury, H., Aldawi, F. and Alam, F. (2013), The Effect of Climate Change on Power Generation in Australia, *Procedia Engineering*, Vol. 56: 656-660, Elsevier
- 137) Alam, F., Ali, A., Khan, I. and Mobin, S. (2012), Status of Power Generation by Domestic Scale Wind Turbines in Australia, *Procedia Engineering*, Vol. 49, 205-212, Elsevier, London.
- 138) Khan, I., Chowdhury, H., Rasjidin, R., Alam, F., Islam, T. and Islam, S. (2012), Review of Wind Energy Utilization in South Asia, *Procedia Engineering*, Vol. 49, 213-220, Elsevier, London.
- 139) Ali, A., Golde, S., Alam, F. and Moria, H. (2012), Experimental and Computational Study of a Micro Vertical Axis Wind Turbine, *Procedia Engineering*, Vol. 49, 254-262, Elsevier, London.
- 140) Date, A., Alam, F., Khaghani, A. and Akbarzadeh, A. (2012), Investigate the potential of using trilateral flash cycle for combined desalination and power generation integrated with salinity gradient solar ponds, *Procedia Engineering*, Vol. 49, 42-49, Elsevier, London.
- 141) Watkins, S. and Alam, F. (2012), Future vehicle thermal cooling and aerodynamic drag savings: where will they come from? Proceedings of 2012 International Conference on Advanced Vehicle Technologies and Integration, China Machine Press, pp. 775-782, 17-20 July, Changchun, China
- 142) Aldawi, F., Alam, F., Date, A., Kumar, A. and Rasul, M. (2012), Thermal Performance Modelling of Residential House Wall Systems, *Procedia Engineering*, Vol. 49, 161-168, Elsevier, London.
- 143) Date, A., Date, Ash., Akbarzadeh, A. and Alam, F. (2012), Examining the Potential of Split Reaction Water Turbine for Ultra-Low Head Hydro Resources, *Procedia Engineering*, Vol. 49, 197-204, Elsevier, London.
- 144) Alam, F., Date, A., Rasjidin, R., Mobin, S., Moria, H. and Baqui, A. (2012), Biofuel from Algae- Is It a Viable Alternative? *Procedia Engineering*, Vol. 49, 221-227, Elsevier, London.
- 145) Chowdhury, H., Alam, F., Khan, I., Djamovski, V. and Watkins, S. (2012), Impact of Vehicle add-ons on Energy Consumption and Greenhouse Gas Emissions, *Procedia Engineering*, Vol. 49, 294-302, Elsevier, London.
- 146) Rasjidin, R., Kumar, A., Alam, F. and Abosuliman, S. (2012), A System Dynamics Conceptual Model on Retail Electricity Supply and Demand System to Minimize Retailer's Cost in Eastern Australia, *Procedia Engineering*, Vol. 49, 330-337, Elsevier, London.
- 147) Alam, F., Silva, P. and Zimmer, G. (2012), Aerodynamic study of Human Powered Vehicles, *Procedia Engineering*, Vol. 34, 9-14, Elsevier, London.

- 148) Chowdhury, H., Alam, F., Mainwaring, D., Beneyto-Ferre, J. and Tate, M. (2012), Rapid prototyping of high-performance sportswear, *Procedia Engineering*, Vol. 34, 38-43, Elsevier, London.
- 149) Moria, H., Alam, F., Chowdhury, H., and Subic, A. (2012), The compression effect on aerodynamic properties of sports fabrics, *Procedia Engineering*, Vol. 34, 56-61, Elsevier, London.
- 150) Djamovski, V., Rosette, P., Chowdhury, H., Alam, F. and Steiner, T. (2012), A comparative study of rugby ball aerodynamics, *Procedia Engineering*, Vol. 34, 74-79, Elsevier, London.
- 151) Alam, F., Ho, H., Smith, L., Subic, A., Chowdhury, H. and Kumar, A. (2012), A study of baseball and softball aerodynamics, *Procedia Engineering*, Vol. 34, 86-91, Elsevier, London.
- 152) Alam, A., Smith, S., Chowdhury, H. and Moria, H. (2012), Aerodynamic drag measurement of American footballs, *Procedia Engineering*, Vol. 34, 98-103, Elsevier, London.
- 153) Djamovski, V., Pateras, J., Chowdhury, H., Alam, F. and Steiner, T. (2012), Effects of seam and surface texture on tennis balls aerodynamics, *Procedia Engineering*, Vol. 34, 140-145, Elsevier, London.
- 154) Alam, F., Chowdhury, H., Stemmer, M., Wang, Z. and Yang, J. (2012), Effects of surface structure on soccer ball aerodynamics, *Procedia Engineering*, Vol. 34, 146-151, Elsevier, London.
- 155) Pevitt, C., Chowdhury, H., Moria, H. and Alam, F. (2012), A Computational Simulation of Aerodynamic Drag Reductions for Heavy Commercial Vehicles, *Proceedings of 18th Australasian Fluid Mechanics Conference*, 3-7 December, Launceston.
- 156) Alam, F., Djamovski, V., Chowdhury, H., Smith, L.V., Watkins, S. and Subic, A. (2012), A Comparative Study of Baseball and Softball Aerodynamics, *Proceedings of 18th Australasian Fluid Mechanics Conference*, 3-7 December, Launceston.
- 157) Alam, F., Djamovski, V., Smith, S., Chowdhury, H., Watkins, S. and Subic, S. (2012), Aerodynamics of Oval Shaped Sports Balls, *Proceedings of 18th Australasian Fluid Mechanics Conference*, 3-7 December, Launceston.
- 158) Moria, H., Chowdhury, H., Alam, F., Pevitt, C., Aldawi, F., Jadhav, A., Warnakula, M. and Padhye, R. (2012), An experimental study of knitted fabrics used in elite sports, *Proceedings of 18th Australasian Fluid Mechanics Conference*, 3-7 December, Launceston.
- 159) Alam, F. and Jazar, R. (2011), An Experimental Study of Acid Exposed Fibre Reinforced Plastic Gratings, *Proceedings of the 2011 ASME International Mechanical Engineering Congress & Exposition (IMECE2011)*, Paper No. 64152, 11-17 November, Denver.
- 160) Aldawi, F., Alam, F., Moria, F., Date, A. and Akbarzadeh, A. (2011), A Smart House Wall Energy Performance Study for Arid Climatic Region, *Proceedings of the Jordan International Energy Conference (JIEC2011)*, 20-22 September, Amman
- 161) Chowdhury, H., Alam, F. and Mainwaring, D. (2011), A full scale bicycle aerodynamics testing methodology, *Procedia Engineering*, Vol. 13, 94-99, Elsevier, London.
- 162) Alam, F., Chowdhury, H., Moria, H., Fuss, F.K., Khan, I., Aldawi, F. and Subic, A. (2011), Aerodynamics of contemporary FIFA soccer balls, *Procedia Engineering*, Vol. 13, 188-193, Elsevier, London.
- 163) Alam, F., Ho, H., Chowdhury, H. and Subic, A. (2011), Aerodynamics of baseball, *Procedia Engineering*, Vol. 13, 207-212, Elsevier, London.
- 164) Alam, F., Steiner, T., Chowdhury, H., Moria, H., Khan, I., Aldawi, F. and Subic, A. (2011), A study of golf ball aerodynamic drag, *Procedia Engineering*, Vol. 13, 226-231, Elsevier, London.
- 165) Chowdhury, H., Alam, F. and Mainwaring, D. (2011), Aerodynamic study of ski jumping suits, *Procedia Engineering*, Vol. 13, 376-381, Elsevier, London.
- 166) Le Personnic, J., Alam, F., Le Gendre, L., Chowdhury, H. and Subic, A. (2011), Flight trajectory simulation of badminton shuttlecocks, *Procedia Engineering*, Vol. 13, 344-349, Elsevier, London.
- 167) Alam, F., Smith, S., Djamovski, V., Mainuddin, G., Yang, J., Ehsan, S. and Kumar, A. (2011), A study of aerodynamic drag of American footballs, *Proceedings of the International Conference on Mechanical Engineering (ICME2011)*, Dhaka, Bangladesh, pp. 1-6
- 168) Aldawi, F., Moria, H., Alam, F. and Akbarzadeh, A. (2011), A smart house wall energy performance study for arid climatic region, *Proceedings of Jordan International Energy Conference 2011*, Amman.
- 169) Ali, A., Alam, F., Djamovski, V. and Watkins, S. (2011), A review of power generation from wind in Australia, *Proceedings of International Conference on Mechanical Engineering (ICME2011)*, pp. 1-6, Dhaka.
- 170) Chowdhury, H., Khan, I., Alam, F., Farabi, R. and Mustary, I. (2011), Effects of vehicle add-ons on greenhouse gas emission, *Proceedings of the International Conference on Mechanical Engineering and Renewable Energy 2011 (ICMERE2011)*, pp. 1-6, Chittagong.

- 171) Djamovski, V. and Alam, F. (2011), An experimental aerodynamic study of a series of rugby balls, Proceedings of International Conference on Mechanical Engineering (ICME2011), pp. 1-6, Dhaka.
- 172) Ehsan, S., Mo, J., Kumar, A., Khan, I. and Alam, F. (2011), Sustainability initiative at RMIT University, Proceedings of the International Conference on Mechanical Engineering and Renewable Energy 2011 (ICMERE2011), pp. 1-6, Chittagong.
- 173) Pevitt, C., Alam, F. and Ong, R. (2011), Feasibility of static computational fluid dynamics simulations around a specialised delta wing configuration, Proceedings of the International Conference on Mechanical Engineering and Renewable Energy 2011 (ICMERE2011), pp. 1-6, Chittagong.
- 174) Pevitt, C. and Alam, F. (2011), Computation of non-linear dynamic derivatives around a specialised delta wing configuration, Proceedings of International Conference on Mechanical Engineering (ICME2011), pp. 1-7, Dhaka.
- 175) Alam, F., Chowdhury, H., Subic, A. and Fuss, F. C. (2010), A Comparative Study of Football Aerodynamics, Procedia Engineering, Vol. 2 (2), 2443-2448, Elsevier, Vienna.
- 176) Chowdhury, H., Alam, F. and Subic, A. (2010), Aerodynamics of Textiles in High Performance Sports, Procedia Engineering, Vol. 2 (2), 2517-2522, Elsevier, Vienna.
- 177) Alam, F., Chowdhury, H., Theppadungporn, C. and Subic, A. (2010), Measurements of aerodynamic properties of badminton shuttlecocks, Procedia Engineering, Vol. 2 (2), 2487-2492, Elsevier, Vienna.
- 178) Konopov, I. Oggiano, L., Chinga-Carrasco, G., Troynikov, O., Sætran, L. and Alam, F. (2010), Aerodynamic and Comfort Characteristics of a Double Layer Knitted Fabric Assembly for High Speed Winter Sports, Procedia Engineering, Vol. 2 (2), 2837-2843, Elsevier, Vienna.
- 179) Alam, F., Chowdhury, H., Elmir, Z., Sayogo, A., Love, J. and Subic, A. (2010), An Experimental Study of Thermal Comfort and Aerodynamic Efficiency of Recreational and Racing Helmets, Procedia Engineering, Vol. 2 (2), 2413-2418, Elsevier, Vienna.
- 180) Moria, H., Chowdhury, H., Alam, F., Subic, A., Smits, A. J., Jassim, R. and Bajaba, N. S. (2010), Contribution of Swimsuits to Swimmer's Performance, Procedia Engineering, Vol. 2 (2), 2505-2510, Elsevier, Vienna.
- 181) Troynikov, O., Ashayeri, E., Burton, M., Subic, A., Alam, F. and Marteau, S. (2010), Factors influencing the effectiveness of compression garments used in sports, Procedia Engineering, Vol. 2 (2), 2823-2829, Elsevier, Vienna.
- 182) Alam, F., Faheem, A., Jazar, R. and Smith, L. V. (2010), A Study of Vehicle Ride Performance using a Quarter Car Model and a Half Car Model, Proceedings of the ASME 2010 International Mechanical Engineering Congress & Exposition (IMECE2010, Paper No. IMECE2010-39887, November 12-18, 2010, Vancouver.
- 183) Chowdhury, A. A., Rasul, M. G., Khan, M. M. K. and Alam, F. (2010), Performance Analysis of a Novel Building Material to Achieve Superior Thermal Comfort and Energy Efficiency in Arid Climate, Proceedings of the International Engineering Conference on Hot Arid Regions (IECHAR 2010), March 1-2, 2010, Al-Ahsa, KSA.
- 184) Alam, F., Akbarzadeh, A., Dixon, C. and Theos, T. (2010), Thermal Performance of Residential House Envelopes, Proceedings of the International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE2010), Paper MIE10-158, ISBN: 978-984-33-2300-2, 23-24 December, Khulna.
- 185) Alam, F., Chowdhury, H., Moria, H., Mazumdar, H. and Subic, A. (2010), Aerodynamics of FIFA World Cup Footballs and Effects of Altitude, Proceedings of the International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE2010), Paper MIE10-123, ISBN: 978-984-33-2300-2, 23-24 December, Khulna.
- 186) Moria, H., Chowdhury, H., Alam, F., Subic, A. and Smits, A. J. (2010), Aerodynamics of Modern Swimsuits, Proceedings of the International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE2010), Paper MIE10-122, ISBN: 978-984-33-2300-2, 23-24 December, Khulna.
- 187) Chowdhury, H., Alam, F. and Subic, A. (2010), A Full Scale Experimental Study of Bicycle Aerodynamics, Proceedings of the International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE2010), Paper MIE10-124, ISBN: 978-984-33-2300-2, 23-24 December, Khulna.
- 188) Alam, F., Chowdhury, H., Moria, H., Steiner, T. and Subic, A. (2010), A Comparative Study of Golf Ball Aerodynamics, Proceedings of the 17th Australasian Fluid Mechanics Conference (AFMC), 5-9 December, Auckland.
- 189) Chowdhury, H., Alam, F., Mainwaring, D., Forster, D., Beneyto-Ferre, J., Tate, M. and Subic, A. (2010), Experimental Evaluation of Ski Suit Performance, Proceedings of the 17th Australasian Fluid Mechanics Conference (AFMC), 5-9 December, Auckland.

- 190)** Alam, F., Chowdhury, H., Moria, H., and Subic, A. (2010), A Comparative Study of Rugby Ball Aerodynamics, Proceedings of the 13th Asian Congress of Fluid Mechanics (ACFM2010), ISBN: 978-984-33-22214-2, 216-219, 17-21 December 2010, Dhaka
- 191)** Chowdhury, H., Alam, F., Mainwaring, D. and Subic, A. (2010), Ski Suit Performance Evaluation Methodology, Proceedings of the 13th Asian Congress of Fluid Mechanics (ACFM2010), ISBN: 978-984-33-22214-2, 154-157, 17-21 December 2010, Dhaka.
- 192)** Alam, F., Chowdhury, H. and Watkins, S. (2009), Aerodynamics of Vehicle Add-ons, Proceedings of the 8th International Conference on Mechanical Engineering (ICME2009), Paper No. FM-27 (pp 1-6), 26-28 December, Dhaka.
- 193)** Alam, F., Chowdhury, H., Theppadungporn, C. and Subic, A. (2009), A Study of Badminton Shuttlecock Aerodynamics, Proceedings of the 8th International Conference on Mechanical Engineering (ICME2009), Paper No. FM-17 (pp 1-6), 26-28 December, Dhaka
- 194)** Chowdhury, H., Alam, F., Mainwaring, D., Beneyto-Ferre, J., Tate, M., Forster, D. and Subic, A. (2009), Aerodynamics of Textiles for Elite Cyclist, Proceedings of the 8th International Conference on Mechanical Engineering (ICME2009), Paper No. FM-20 (pp 1-6), 26-28 December, Dhaka
- 195)** Alam, F., Rasul, M.G., Saman, W., Theos, T. Khan, M.M.K. and Akbarzadeh, A. (2009), Residential House Energy Rating in Australia, Central Region Engineering Conference (CREC), CQ University, ISBN 1-921047-62-3, pp 1-6, 14-15 August, Rockhampton.
- 196)** Alam, F., Subic, A. and Watmuff, J. (2009), A Comparative Study of Aerodynamic Forces of Time Trial Bicycle Helmets in The Impact of Technology on Sports III, ISBN 13: 978-1-921426-39-1, pp 119-123, Honolulu
- 197)** Zimmer, G. and Alam, F. (2009), The Effects of Aerodynamic Design on Lightweight Human Powered Vehicles in The Impact of Technology on Sports III, ISBN 13: 978-1-921426-39-1, pp 125-129, Honolulu
- 198)** Chowdhury, H., Beneyto-Ferre, J., Tate, M., Alam, F., Mainwaring, D, Forster, D. and Subic, A. (2009), Effects of Textile and Garment Design on Aerodynamic Characteristics Applied to Cycling Apparel in The Impact of Technology on Sports III, ISBN 13: 978-1-921426-39-1, pp 131-136, Honolulu
- 199)** Alam, F., Theppadungporn, C., Chowdhury, H. and Subic, A. (2009), Aerodynamics of Badminton Shuttlecock in The Impact of Technology on Sports III, ISBN 13: 978-1-921426-39-1, pp 239-243, Honolulu
- 200)** Brooy, R. L., Alam, F. and Watmuff, J. (2009), New Methods of Initiating Reverse Swing on a Cricket Ball in The Impact of Technology on Sports III, ISBN 13: 978-1-921426-39-1, pp 275-279, Honolulu
- 201)** Alam, F., Naser, J. and Subic, A. (2009), Aerodynamics of Australian Rules Foot Ball-An Experimental and Computational Study in The Impact of Technology on Sports III, ISBN 13: 978-1-921426-39-1, pp 395-399, Honolulu
- 202)** Oggiano, L., Konopov, I., Troynikov, O., Alam, F., Subic, A. and Sætran, L. (2009), Aerodynamic and Comfort Properties of Single Jersey Textiles for High Speed Sports in The Impact of Technology on Sports III, ISBN 13: 978-1-921426-39-1, pp 533-537, Honolulu
- 203)** Alam, F. and Theos, T. (2008), A New Generation Energy Efficient Residential House in Australia, Proceedings of the 4th BSME-ASME International Thermal Engineering Conference (ICTE2008), ISBN 984-300-002844-0, Vol. 2, pp 710-718, 27-29 December, Dhaka.
- 204)** Chowdhury, H., Alam, F., Mainwaring, D., Subic, A., Tate, M. and Forster, D. (2008), Aerodynamic Testing Methodology for Sports Garments, Proceedings of the 4th BSME-ASME International Thermal Engineering Conference (ICTE2008), ISBN 984-300-002844-0, Vol. 1, pp 409-414, 27-29 December, Dhaka.
- 205)** Chowdhury, H., Alam, F., Biswas, S. K. and Islam, T. (2008), Engineering Education in Bangladesh, Proceedings of the 4th BSME-ASME International Thermal Engineering Conference (ICTE2008), ISBN 984-300-002844-0, Vol. 2, pp 933-946, 27-29 December, Dhaka.
- 206)** Chowdhury, H., Alam, F., Wood, D. and Islam, M. T. (2008), Effects of Towers on Aerodynamic Performance of Windmill, Proceedings of the 4th BSME-ASME International Thermal Engineering Conference (ICTE2008), ISBN 984-300-002844-0, Vol. 1, pp 431-440, 27-29 December, Dhaka.
- 207)** Alam, F., Subic, A., Plumb, G., Shortis, M. and Chandra, R. P. (2008), Off Campus Engineering Education, Proceedings of the 4th BSME-ASME International Thermal Engineering Conference (ICTE2008), ISBN 984-300-002844-0, Vol. 2, pp 947-953, 27-29 December, Dhaka.
- 208)** Alam, F. and Cape, R. (2008), Vibration Effects of Goods Trains on their Freight, Proceedings of the 4th BSME-ASME International Thermal Engineering Conference (ICTE2008), ISBN 984-300-002844-0, Vol. 2, pp 954-962, 27-29 December, Dhaka.

- 209)** Alam, F., Knight, A. and Subic, A. (2008), Aerodynamics of Time Trial Bicycle Helmets, Proceedings of the 4th BSME-ASME International Thermal Engineering Conference (ICTE2008), ISBN 984-300-002844-0, Vol. 1, pp 254-262, 27-29 December, Dhaka.
- 210)** Alam, F., Tio, W., Watkins, S., Subic, A. and Naser, J. (2007), Effects of Spin on Tennis Ball Aerodynamics: An Experimental and Computational Study, Proceedings of the 16th Australasian Fluid Mechanics Conference, ISBN 978-1-864998-94-8, pp 324-327, 3-7 December, Gold Coast.
- 211)** Alam, F., and Watkins, S. (2007), Effects of Crosswinds on Double Stacked Container Wagons, Proceedings of the 16th Australasian Fluid Mechanics Conference, ISBN 978-1-864998-94-8, pp 758-761, 3-7 December, Gold Coast.
- 212)** Alam, F., Jaitlee, R. and Watkins, S. (2007), Aerodynamic Effects on an Automotive Rear Side View Mirror, Proceedings of the 16th Australasian Fluid Mechanics Conference, ISBN 978-1-864998-94-8, pp 762-765, 3-7 December, Gold Coast.
- 213)** Naser, J., Alam, F. and Khan, M. (2007), Evaluation of a Proposed Dust Ventilation/Collection System in an Underground Mine Crushing Plant, Proceedings of the 16th Australasian Fluid Mechanics Conference, ISBN 978-1-864998-94-8, pp 1411-1414, 3-7 December, Gold Coast.
- 214)** Alam, F., Subic, A., Plumb, G. and Shortis, M. (2007), Offshore Mechanical Engineering Program- a Development of Partnership for World Graduates, Proceedings of the Partnerships for World Graduates Conference, 28-30 November, Melbourne.
- 215)** Alam, F. and Watkins, S. (2007), Lateral Stability of a Double Stacked Container Wagon under Crosswinds, Proceedings of the 7th International Conference on Mechanical Engineering (ICME2007), Paper No. ICME07-FL-16 (pp 1-6), 29-31 December, Dhaka.
- 216)** Alam, F., La Brooy, R., Watkins, S. and Subic, S. (2007), An Experimental Study of Cricket Ball Aerodynamics, Proceedings of the 7th International Conference on Mechanical Engineering (ICME2007), Paper No. ICME07-FL-17 (pp 1-6), 29-31 December, Dhaka.
- 217)** Alam, F. and Watkins, S. (2006), Crosswinds Effects on High Cube Freight Trains, Proceedings of the 3rd BSME-ASME Thermal Engineering Conference (ICTE2006), Paper AU-002, pp 7-12, ISBN 984-32-3815-X, 20-22 December, Dhaka.
- 218)** Alam, F. (2006), A Study of Flexural Strength of Fluosilicic Acid Exposed Fibre Reinforced Plastics Grating, Proceedings of the 3rd BSME-ASME Thermal Engineering Conference (ICTE2006), pp 13-20, ISBN 984-32-3815-X, 20-22 December, Dhaka.
- 219)** Faheem, A., Alam, F. and Thomas, V. (2006), The Suspension Dynamic Analysis for a Quarter Car Model and Half Car Model, Proceedings of the 3rd BSME-ASME Thermal Engineering Conference (ICTE2006), pp 57-63, ISBN 984-32-3815-X, 20-22 December, Dhaka.
- 220)** Alam, F., Watkins, S., Akbarzadeh, A. and Subic, A. (2006), A Study of Thermal Comfort of a Series of Bicycle Helmets”, Proceedings of the 3rd BSME-ASME Thermal Engineering Conference (ICTE2006), ISBN 984-32-3815-X, 20-22 December, Dhaka.
- 221)** Alam, F., Watkins, S. and Zimmer, G. (2005), Flow Measurements in the A-pillar Regions of a Series of Idealised Passenger Cars, Proceedings of the 6th International Conference on Mechanical Engineering (ICME2005), FL-10 (1-6), ISBN 984-32-2846-4, 28-30 December, Dhaka.
- 222)** Alam, F., Watkins, S. and Subic, A. (2005), Aerodynamic Efficiency and Thermal Comfort of Bicycle Helmets, Proceedings of the 6th International Conference on Mechanical Engineering (ICME2005), FL-08 (1-6), ISBN 984-32-2846-4, 28-30 December, Dhaka.
- 223)** Alam, F., We, P. Watkins, S. and Subic, A. (2005), Drag Measurements of a Rugby Ball Using EFD and CFD, Proceedings of the 6th International Conference on Mechanical Engineering (ICME2005), FL-09 (1-6), ISBN 984-32-2846-4, 28-30 December, Dhaka.
- 224)** Jaitlee, R., Alam, F. and Watkins, S. (2005), Vibration of Automobile Side View Mirror due to Aerodynamic Inputs, Proceedings of the 6th International Conference on Mechanical Engineering (ICME2005), FL-11 (1-6), ISBN 984-32-2846-4, 28-30 December, Dhaka.
- 225)** Zimmer, G., Alam, F. and Watkins, S. (2005), The Relevance of the External Rear View Mirror for Wind Tunnel Testing, Proceedings of the 6th International Conference on Mechanical Engineering (ICME2005), FL-12 (1-5), ISBN 984-32-2846-4, 28-30 December, Dhaka.
- 226)** Alam, F., Watkins, S. and Subic, A. (2004). The Aerodynamic Forces of a Series of Tennis Balls, The 15th Australasian Fluid Mechanics Conference, Sydney.
- 227)** Alam, F., Watkins, S. and Subic, A. (2004), The Effects of Surface Structures on Aerodynamic Properties of Tennis Balls, 2nd BSME-ASME International Conference on Thermal Engineering, Dhaka.

- 228) Alam, F., Watkins, S. and Subic, A. (2004), Aerodynamic Forces on Rugby and Australian Rules Footballs, The 5th International Colloquium on Bluff Body Aerodynamics and Applications (BBAA5). Ottawa.
- 229) Subic, A., Hong, G. and Alam, F. (2004), Virtual Design of a Polycarbonate Face Guard for Cricket, The 5th ISEA International Conference on the Engineering of Sport, UC Davis, San Francisco.
- 230) Alam, F., Subic, A. and Watkins, S. (2004). Effects of Spin on Aerodynamic Properties of Tennis Balls, The 5th ISEA International Conference on the Engineering of Sport, Davis, San Francisco.
- 231) Jaitlee, R., Alam, F. and Watkins, S. (2004), Pressure Measurements on an Automobile Side Rear View Mirror, Proceedings of the 15th Australasian Fluid Mechanics Conference, 13-17 December, University of Sydney, Sydney.
- 232) Murad, M. N., Naser, J., Alam, F. and Watkins, S. (2004), Simulation of Vehicle A-pillar Aerodynamics of Various Yaw Angles, Proceedings of the 15th Australasian Fluid Mechanics Conference, 13-17 December, University of Sydney, Sydney.
- 233) Alam, F., Watkins, S. and Subic, A. (2004), The Aerodynamic Forces on a Series of Tennis Balls”, Proceedings of the 15th Australasian Fluid Mechanics Conference, 13-17 December, University of Sydney, Sydney.
- 234) Alam, F., Zimmer, G. and Watkins, S. (2004), A Study of Hydrodynamic Pressure in the A-pillar Regions of Idealised and Production Cars, Proceedings of the 2nd BSME-ASME International Conference on Thermal Engineering, Vol. 1, pp 421-426, ISBN: 984-32-1003-4, 2-4 January, Dhaka.
- 235) Tan, B and Alam, F. (2004), Finite Element Analysis of a VLOM Deepwell Handpump, Proceedings of the 2nd BSME-ASME International Conference on Thermal Engineering, Vol. 1, pp 522-527, ISBN: 984-32-1003-4, 2-4 January, Dhaka.
- 236) Alam, F., Zimmer, G. and Watkins, S. (2003), A Study of the A-Pillar Vortex of a Passenger Car, Proceedings of the 5th International Conference on Mechanical Engineering (ICME2003), ICME03-FL-08, pp 1-5, ISBN: 984-32-1042-5, 26-28 December, Dhaka.
- 237) Alam, F., Subic, A. and Watkins, S. (2003), An Experimental Study of Aerodynamic Drag of a Series of Tennis Balls, International Congress on Sports Dynamics, Melbourne.
- 238) Alam, F., Watkins, S. and Subic, A. (2003), A Study of Aerodynamic Properties of a Rugby Ball and an Australian Rules Football, International Congress on Sports Dynamics, Melbourne.
- 239) Alam, F., Watkins, S. and Subic, A. (2003), Aerodynamics of a Rugby Ball and Australian Rules Football, 5th International Conference on Mechanical Engineering, Dhaka.
- 240) Murad, N. M., Naser, J., Alam, F., and Watkins, S. (2002), CFD Modelling of vehicle A-Pillar Aerodynamics, The 2nd International Conference on Computational Fluid Dynamics, University of Sydney, 15-19, July, Sydney.
- 241) Alam, F., Zimmer, G. and Watkins, S. (2001), Surface Pressure Measurements on a Group of Idealised Road Vehicle Models, Proceedings of the 14th Australasian Fluid Mechanics Conference, Vol. 1, PP 95-98, 10-14 December, Adelaide.
- 242) Zimmer, G., Alam, F. and Watkins, S. (2001), The Contribution of the A-pillar Vortex to Passenger Car In-Cabin Noise, Proceedings of the 14th Australasian Fluid Mechanics Conference, Vol. 1, PP 111-114, 10-14 December, Adelaide.
- 243) Alam, F. (2000), Flow and Flow Induced Noise Measurements on a Series of Idealised Road Vehicle Models, Proceedings of the Young Engineers Conference, SAE-Australasia, 5-6 October, Melbourne.
- 244) Alam, F., Watkins, S., Song, B., Steiner, T. and Humphris, C. (1998), The Flow Around a Car A-Pillar, Proceedings of the 13th Australasian Fluid Mechanics Conference, Vol. 2, PP 461-464, 13-18 December, Melbourne.

Teaching Interest

- Engineering Dynamics
- Mechanics of Machines
- Fluid Mechanics 2
- Sports Aerodynamics and Hydrodynamics)
- Motor Vehicles and Society

Research Interest

- Aircraft and road vehicle aerodynamics (using experimental and computational fluid dynamics)

- Aerodynamics of freight trains and passenger trains
- Applied and computational thermodynamics and heat transfer
- Thermal performance of buildings
- Noise, Vibration & Harshness (NVH)
- Wind engineering (wind effects on buildings, bridges and structures)
- Effects of atmospheric turbulence on vehicles and structures including building and bridges
- Acoustic signal processing
- Structural vibration analysis and control
- Sports Engineering (tennis, cricket, rugby, football (Australian, American & soccer), golf aerodynamics, thermal comfort and aerodynamics of bicycle and motor cycle helmets, ski jumping and cycling aerodynamics, high performance textile aerodynamics)
- Conventional and renewable energy, energy policy
- Engineering education and pedagogy, engineering accreditation, transnational education
- Evaluation and benchmarking of projects, reports and theses

Postgraduate Research Supervision (to completion)

PhD: 10 (principal supervisor), 6 (2nd supervisor), Master by Research: 6 (principal supervisor)

Membership of Professional Bodies

- **Fellow**, Institution of Engineers Australia (F IEAust)
- **Member**, American Society of Mechanical Engineers, USA (M ASME)
- **Member**, Society of Automotive Engineers, USA (M SAE)
- **Member**, Australasian Society of Automotive Engineers (M SAE-A)
- **Member**, American Institute of Aeronautics and Astronautics (M AIAA)
- **Member**, Royal Society of Victoria (M RSV)
- **Member**, International Society of Bionic Engineering (M ISBE)
- **Member**, Australasian Fluid Mechanics Society (M AFMS)