

Curriculum Vitae

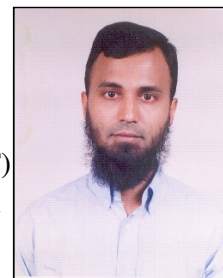
Personal Detail:

Name: Mohammad Arif Hasan Mamun

Present position: Professor, Department of Mechanical Engineering
& Director, Institute of Appropriate Technology (I.A.T)
Bangladesh University of Engineering and Technology
(BUET), Dhaka-1000, Bangladesh.

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Academic Qualifications:

Degree/ Examination	Institution (University / College / School / Department)	Class/Division/GPA	Year
Ph. D. ¹	University of Waterloo, Canada	Successfully completed	2003
M. Sc. Engg. ² (Mechanical)	Bangladesh University of Engineering and Technology, Dhaka	Successfully completed	1999
B. Sc. Engg. ³ (Mechanical)	Bangladesh University of Engineering and Technology, Dhaka	First Class First (Awarded the Dr. V.G. Desa Gold Medal)	1997
H. S. C.	Dhaka College, Dhaka	First Class	1990
S.S.C.	Govt. Laboratory School, Dhaka	First Class	1988

¹Specialization: Heat Transfer, Fluid Mechanics, Experimental Technique for measurement of Heat Transfer, Laser Based Technique for measurement of Fluid Flow (PIV, LDA), Computational Fluid Dynamics (CFD) and Computational Heat Transfer (CHT).

Ph. D. Thesis title: **Natural Convection Heat Transfer and Flow Field inside a Cubical Cavity**

(Under Commonwealth Scholarship Program, Awarded from 2000 to 2003)

Courses completed: (a) Heat Conduction, (b) Convective Heat Transfer, (c) Radiation Heat Transfer, (d) Experimental Laser Based Measuring Technology.

Non Course Milestones: Workplace Hazardous Materials Information System

²Specialization: Experimental Methods for Heat Transfer & Enhancement of Heat Transfer, Renewable Energy

M. Sc. Thesis title: **Pressure Drop and Heat Transfer in an Internally Finned Tube**

Courses completed: (a) Advanced Convection Heat Transfer, (b) Advanced Heat Transfer, (c) Advanced Numerical Analysis, (d) Mechanics of Inviscid Incompressible Fluid, (e) Wind Power, (f) Theory of Plasticity.

³Project title: **Study of Solar Powered Photovoltaic Pumping System**

Major courses completed: (a) Thermal Engineering, (b) Basic Thermodynamics, (c) Engineering Mechanics, (d) Strength of Materials, (e) Machine Design, (f) Heat and Mass Transfer, (g) Theory of Machine, (h) Fluid Mechanics, (i) Applied Thermodynamics, (j) Fluid Machines, (k) Aerodynamics, (l) Production Planning and Control, (m) Machine Tools, (n) Industrial Management, (o) Air-Conditioning and Refrigeration, (p) Control Engineering, (q) Renewable Energy, etc.

Experiences (start from present):

Position	Organization	Duration
Director	Institute of Appropriate Technology (I.A.T), BUET, Dhaka	16 th July 2017 to date
Professor	Dept. of Mech. Engg., BUET, Dhaka	21 st September 2011 to date
Associate Professor	Dept. of Mech. Engg., BUET, Dhaka	1 st September 2007 to 20 th September 2011
Post-Doctoral Research Fellow	Institute of Ocean Energy, Saga University, Japan	1 st October 2009 to 31 st Dec.2010 (on leave from BUET)
Assistant Professor	Dept. of Mech. Engg., BUET, Dhaka	2 nd January 2000 to 30 th August 2007
Lecturer	Dept. of Mech. Engg., BUET, Dhaka	17 th September 1997 to 1 st January 2000

Membership / Fellowship of Learned Societies, Professional Institutions and Other Noteworthy Affiliations, etc.:

- (1) Association of Energy Engineer (AEE)'s Authorized Trainer for Certified Energy Auditor (CEA) program.
- (2) Certified Energy Auditor (CEA) through the Association of Energy Engineer (AEE)'s offered CEA course under CCEB-USAID program.
- (3) Member of Alumni of University of Waterloo, Canada.
- (4) Member of Alumni of Bangladesh University of Engineering and Technology, BUET, Dhaka-1000.
- (5) Member of Bangladesh Society of Mechanical Engineers.
- (6) Member of Institute of Engineers, Bangladesh.

Professional Awards / Honors Received:

- (1) **Asia Subcontinent Region Energy Professional Development Award for 2016** from the Association of the Energy Engineers (AEE).
- (2) **Techfair-A Manifestation of Novelty Adjudicator's Award 2016** from The Institute of Engineers, Bangladesh.
- (3) Awarded "**Commonwealth Scholarship**" for Research Student, Ph. D. Programs (2000-2003)
- (4) **International Graduate Student Bursary** from University of Waterloo, 2000-2003.
- (5) **Teaching Assistantship** from Department of Mechanical Engineering, University of Waterloo, 2002-2003.
- (6) Awarded "**Dr. V.G. Desa Gold Medal**" for the First position with honors in the B.Sc. Engineering.
- (7) Awarded "**Dean's Scholarship**" for four years while studying B. Sc. Engineering in the Department of Mechanical Engineering, BUET.
- (8) Awarded "**Merit Scholarship**" for four years while studying B. Sc. Engineering in the Department of Mechanical Engineering, BUET.
- (9) District level "**Talent Pool Scholarship**" for good result in the combined exam of grade 8
- (10) District level "**Scholarship**" for good result in the combined exam of grade 5.

Professional Work at National and International Levels:

(i) Academic/Research:

- (1) Session Chair of a Technical Session (Wind Energy) of 4th International Conference on the Developments in Renewable Energy Technology, ICDRET 2016 (7-9 January) at United International University, Dhanmondi, Dhaka- 1209.
- (2) Reviewer, Proceedings of the Eleventh International Conference on Mechanical Engineering, 18-20th December 2015, BUET, Dhaka, Bangladesh.
- (3) Session Chair of a Technical Session of the Eleventh International Conference on Mechanical Engineering, 18-20th December 2015, BUET, Dhaka, Bangladesh.

- (4) Supervised a graduate research project entitled “Forced Convection Heat Transfer With Nanofluids in Flat Plate Solar Collector” funded by BUET, completed in August, 2015.
- (5) Reviewer, Proceedings of the Tenth International Conference on Mechanical Engineering, 20-21 June 2014, Dhaka, Bangladesh.
- (6) Session Chair of a Technical Session (Wind Energy) of 3rd International Conference on the Developments in Renewable Energy Technology, ICDRET 2014 (9-11 January) at United International University, Dhanmondi, Dhaka- 1209.
- (7) Supervised a graduate research project entitled “Mixed Convection in Trapezoidal Cavity at Various Aspect Ratios with a Moving Lid” funded by BUET, completed in July, 2009.
- (8) Supervised a graduate research project entitled “Natural Convection in a Trapezoidal Enclosure with Magneto-hydrodynamic Effect” funded by BUET, completed in September, 2007
- (9) Co-Supervised a graduate research project entitled “Numerical Study of Radiation on Natural Convection Flow on a Sphere with Heat” funded by BUET, completed in January, 2007.
- (10) Supervised a graduate research project entitled “Natural Convection Heat Transfer from Discrete Heat Sources in a three Dimensional Enclosure” funded by BUET, completed in January, 2005.
- (11) Reviewer, International Journal of Green Energy, Taylor & Francis.
- (12) Reviewer, Heat Transfer Engineering Journal, Taylor & Francis.
- (13) Reviewer, Journal of Computational and Applied Mathematics, Elsevier.
- (14) Reviewer, Journal of Mechanical Engineering, the Institute of Engineers, Bangladesh.
- (15) Reviewer, Journal of Naval Architecture and Marine Engineering, Department of Naval Architecture and Marine Engineering, BUET, Dhaka-1000, Bangladesh.
- (16) Member Secretary, Specialized Package Course Offered to Bangladesh Navy Officers Organized by Department of Mechanical Engineering, BUET, Dhaka-1000, for 2005 & 2006.
- (17) Reviewer, Proceedings of the Ninth International Conference on Mechanical Engineering, 18-20th December 2011, Dhaka, Bangladesh.
- (18) Reviewer, Proceedings of the Eight International Conference on Mechanical Engineering, 26-28 December 2009, Dhaka, Bangladesh.
- (19) Reviewer, Proceedings of the Seventh International Conference on Mechanical Engineering, 29-31 December 2007, Dhaka, Bangladesh.
- (20) Reviewer, Proceedings of the 3rd BSME-ASME International Conference on Thermal Engineering 20-22 December, 2006, Dhaka, Bangladesh.
- (21) Reviewer, Proceedings of the Sixth International Conference on Mechanical Engineering, 28-30 December 2005, Dhaka, Bangladesh.
- (22) Member, Publication Committee, “Sixth International Conference on Mechanical Engineering”, 28-30 December 2005, Dhaka, Bangladesh.

- (23) Member, Publication Committee, “Third International Conference on Fluid Mechanics and Heat Transfer”, BUET, Dhaka, Bangladesh, December 15-16, 1999.
- (24) Member, Research project, “Study of Damage and Productivity loss in Engineering /Manufacturing Industries during 1998 Flood” as a Co-Worker of the Flood Research Team of BUET, January, 1999.
- (25) Member, Publication Committee, “Second International Seminar on Fluid Mechanics and Heat Transfer”, BUET, Dhaka, Bangladesh, December 17-18, 1997.
- (26) Supervised a Young Scientist (Md. Ahsan Habib Chowdhury, S/O: Azad Chowdhury, Vill.: 1/3 College Road, P.O.: Gaibandha and District: Gaibandha) for a design work entitled “Urea-Fertilizer Seeding Machine” funded by National Museum of Science and Technology, Agargaon, Sher-E-Bangla Nagar, Dhaka 1207, Bangladesh, 2004-2005.

(ii) Technical Consultancy and Testing:

- (1) Worked as a Consultant of “Determination of Energy Efficiency of Boiler, Generator, Heat Setting, Stanton and Drier of GMS Composite Knitting Ind. Ltd., Kashimpur, Gazipur”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2015-2016.
- (2) Worked as a Consultant of "Verification of Energy Audit Report of Ayman Group, Kaliakoir, Gazipur”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2015-2016.
- (3) Worked as a Consultant of "Design of Energy Efficient Kiln for Zazira Limes, Narayangonj”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2015-2016.
- (4) Worked as a Consultant of "Turnkey construction and implementation of common tannery effluent treatment plant including collection and conveyance system, Common Chrome Recovery Unit, Solid Waste Dumping Yard and Central Laboratory” for Bangladesh Small and Cottage Industries Corporation (BSCIC), a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2014-2016.
- (5) Worked as a Consultant of “Development of Renovation of Airconditioning System of TB-1 at Hazrat Shahjalal International Airport”, for Civil Aviation Authority of Bangladesh (CAAB) Dhaka, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2014-2016.
- (6) Worked as a Consultant of “Verification/ Certification of Lithium Bromide (LiBr) is a Integral Part of a Chiller of Mega Yarn Dying Mills Limited, Gazipur”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2013.
- (7) Worked as a Consultant of “Preliminary Technical Feasibility Checking of Grid-Tie Solar Panel for Bangabandhu Sheikh Mujibur Rahman Novo-theatre, Dhaka”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2013.
- (8) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts for Complete Humidification Plant of Rahmat Spinning Mills Ltd., Gazipur”, a

consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2013.

- (9) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts for Auxiliary Equipment Systems for Refrigeration Production Line System of Butterfly Manufacturing Co. Ltd., Valuka, Mymensingh”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2013.
- (10) Worked as a Consultant of “Performance Testing of New 300 TR Centrifugal Chiller and Cooling Tower Installed at Janata Bank Limited, Head Office”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2012.
- (11) Worked as a Consultant of “Technical Evaluation of Power Generation from Rice Husk for AKW Agro & Food Industries Ltd.”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2011.
- (12) Worked as a Consultant of “Technical Feasibility Checking of Power Generation from Coal Gas for M/S Jamir Ali Spinning Mills Ltd., Narayanganj”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2011.
- (13) Worked as a Consultant of “Preliminary Technical Feasibility Checking of 20-MW Solar Thermal Power Plant of Solarium Power Ltd.”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2011
- (14) Worked as a Consultant of “Checking the Design and Load Calculations of the Central Air-conditioning system, of National Crime Control & Operation Monitoring (NCCOM) Centre Bldg. at Police Head Quarter Premises, Fulbaria, Dhaka”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2011.
- (15) Working as a Consultant of “Design of the Lifts and Fire fighting system for the 18th Floor Tower Building for BUET Employees (Class III and IV), BUET”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2011.
- (16) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts of Akij Ceramic Industries Ltd., Mymensingh”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2011.
- (17) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts of B.H Specialized Cold Storage Pvt. Ltd., Naogaon”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2011.
- (18) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts of ACI Pure Flour Limited, Narayanganj”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2011.
- (19) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts for Beverage Industry Beverage Filling Line of Partex Beverage Ltd., Gazipur”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2011.
- (20) Worked as a Consultant of “Feasibility Study of Sugar Refinery and Co-Generation Power Generation to Existing Sugar Mills for BSFIC”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2009.

- (21) Worked as a Consultant of “Checking the Design and Load Calculations of the Central Air-conditioning system, Lifts and Fire fighting system of Bangladesh Bank, Barisal”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2009.
- (22) Worked as a Consultant of “For the work of Purchasing and Installing a New Chiller at Janata Bank Limited, Head Office”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2009.
- (23) Worked as a Consultant of “Checking the Design and Load Calculations of the Central Air-conditioning system, Lifts and Fire fighting system of Bangladesh Bank, Rangpur”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2008.
- (24) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts of Ifad Flour Mill”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2008.
- (25) Worked as a Consultant of “Checking the Design and Load Calculations of the Lift, Fire fighting and Ventilation system of City Heart Building, Dhaka City Corporation”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2007.
- (26) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts for Biological Waste Water Treatment Plant of IRIS Fabrics Limited, Gazipur”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2007.
- (27) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts for Pre-fab Cold Storage of M/S Golden Harvest Sea Food & Fish Processing Ltd.”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2007.
- (28) Worked as a Consultant of “Viability of the Revised Development Project Proposal(RDPP) of incorporating a 125 bpm 1 Litre PET bottle line alongside the existing 500 bpm RGB of Tabani Beverage Company Ltd., Mirpur”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2007.
- (29) Worked as a Consultant of “Feasibility of Installation of Centrifugal pump instead of Screw Pump for Condensate at Ashugonj”, A consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Zicom Equipment and Rupantorit Praketik Gas Company Limited RPGCL, 2006.
- (30) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts of Jahanara Cold Storage Ltd.”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2005.
- (31) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts of M.M. Salt Industries Ltd.”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2005.
- (32) Worked as a Consultant of “Verification of Installation of Capital Machinery / Spare Parts of N.R.G Spinning Mills Ltd.”, a consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Bangladesh Customs, 2005.
- (33) Worked as a Consultant of "Surveying and Upgradation of Salt Iodization Plant (SIP) in Narrayangoj Zone", Sponsored by UNICEF in Collaboration with BSCIC, 2005-2006.

(34) Worked as a Consultant of “To Calculate the Cooling Capacity of a Truck Mounted Air-Conditioning Van”, A consultancy work carried out by the Dept. of Mech. Engg., BUET, in association with Biman Bangladesh Airlines, 2004.

(35) Involved in various testing conducted by the Dept. of Mech. Engg., BUET, Dhaka, according to International Standards for different organizations throughout the country, which include:

Test of various Mechanical properties for Elastomeric Bearing Pad; Test of various Mechanical properties of Prestressed High Tension Steel Strands, High Tension Steel Wires, Mild Steel Deformed Bars; Test of Spring Stiffness and Toe Load of the Elastic Rail Clips under dynamic loading; Dimension and Hydrostatic Pressure test of Ductile Iron and PVC Pipes; Test of Load capacity of different components of hanging Cranes in Biman Hangar Complex, Performance Test of Various type of Pumps, IC Engines, Testing of Fuels, Lubricants and Chemicals, Calibration of Different type of measuring Instruments etc.

Participation in National Commissions, Committees, etc. commissioned by the Government of Bangladesh and Govt. Institution / Organizations:

- (1) Member, Boiler Inspector Examination Committee, Chief Boiler Inspector Office, Shilpa Bhaban, Dhaka.
- (2) Member, Selection Board for the appointment of the Director (Technical) of the Rural Power Company Ltd. (RPCL).
- (3) Electro-mechanical Engineering Adviser, Jibon Bima Corporation, Dhaka-1000.
- (4) Member, Pre-shipment Inspection Committee of the Greater Rangpur Agriculture & rural Development Project, Department of Agriculture Extension (DAE), Khamarbari, Dhaka-1215.
- (5) Member, Tender Evaluation Committee (Technical) of the CID Police, Dhaka, Bangladesh.
- (6) BUET Delegate (Mechanical), Dhaka City Corporation, Dhaka-1000.

Supervision Thesis / Design Project at undergraduate Level since the last appointment:

Title of the Thesis	Year
<ol style="list-style-type: none"> 1. Effect of Radiation on Free Convection Flow on a Sphere with Isothermal Surface and Uniform Surface Heat Flux. 2. Thermal Conductivity Measurement of Insulating Material and Error Minimization 3. Design and Fabrication of a Constant Temperature Bath 4. Moisture Permeability Measurement 5. Effect of Channel Inclination Angle on Natural Convection Heat Transfer 	2007
<ol style="list-style-type: none"> 6. Mixed Convection in a Rectangular Cavity with Backward Facing Step. 7. Micro Fluid Dynamics in Two Dimensional Engineered Cell Systems in Bioreactors. 8. Analysis of Propeller Fan In Compartment of Household Refrigerator 9. CFD Analysis of Effect of Height of North Wall and Width and Length on Evaporation in a Solar Still. 10. Computational Analysis of an Airfoil in Ground Effect 	2008
<ol style="list-style-type: none"> 11. Atmosphere Reentry Simulation of Space Shuttle 12. Interaction between Natural Convection and Radiation in Circular and Arc Cavity 13. Numerical Analysis of Pulsating Blood Flow in a Human Coronary Artery 14. Modeling of Blood Flow and Heat Transfer Trough Human Vein 15. Numerical Analysis of Micro Heat Pipe 16. Load Alleviation on Wind Turbines in Variable Flow and Different Airfoil Geometry 17. Analysis of Propeller Fan in Compartment of Household Refrigerator 18. Passive Shroud Cooling Concept For HP Turbine CFD Based Approach 19. Numerical Study of Evaporation Heat Transfer Characteristics of 	2009

<p>Refrigerant R-134a in Horizontal Small Tube.</p> <p>20. CFD Analysis of Free Convection and Mass Transfer Flow Near a Vertical Plate</p>	
<p>21. Design of a Micro Fluidic Cooling system.</p> <p>22. Numerical analysis of pulsatile blood flow and vessel wall mechanics in different degrees of stenoses.</p> <p>23. Experimental Analysis of Savonius Rotor with four twisted blades: Performance & Aerodynamic characteristics.</p>	2012
<p>24. Design of a Micro Fluidic Cooling system.</p> <p>25. Numerical analysis of pulsatile blood flow and vessel wall mechanics in different degrees of stenoses.</p> <p>26. Experimental Analysis of Savonius Rotor with four twisted blades: Performance & Aerodynamic characteristics.</p>	2013
<p>27. Study of Magneto-hydrodynamic Pump: Analytical Approach</p> <p>28. Constant Pitch Propeller Design for low Subsonic Airplane</p> <p>29. CFD Analysis of an Aero plane Wing of NACA 4412 Aerofoil</p>	2014
<p>30. Biogas Production from Tannery Wastage using Mesophilic Anaerobic Digestion Process.</p> <p>31. Measurement of Calorific values of Tannery Wastages Containing low and high chromium and raw fleshy Wastages using Bomb Calorimeter.</p> <p>32. Optimizing the Ventilation m using Numerical Analysis to Ensure Desired Temperature and Waste Heat Recovery in Large Industrial Hall.</p>	2015
<p>33. Numerical Study of Nanofluid Mixed Convection in Two Sided Lid Driven Cavity Including Discrete Heat Sources and a Rotating Cylinder.</p> <p>34. Numerical Study of Magneto-Hydrodynamic Mixed Convection of Nanofluid (Cu-Water) in Lid Driven Skewed Enclosure with Circular Rotating Element Inside.</p> <p>35. Mixed Convection & MHD Effect Analysis in Lid-Driven Cavity with Sinusoidally Curved Bottom Wall Using CNT-Water Nanofluid in a Porous Medium.</p>	2016

Supervision of Completed Graduate Research Work:

Level (Masters / Ph.D.)	Thesis Title	Year
M. Sc. Engg.	Forced Convection Heat Transfer With Nanofluids in Flat Plate Solar Collector	2015
M. Sc. Engg.	Mixed Convection in Trapezoidal Cavity at Various Aspect Ratios with a Moving Lid	2009
M. Sc. Engg.	Natural Convection in a Trapezoidal Enclosure with Magneto-hydrodynamic Effect	2007
M. Phil. (Mathematics) *	Numerical Study of Radiation on Natural Convection Flow on a Sphere with Heat Generation	2007
M. Sc. Engg.	Natural Convection Heat Transfer from Discrete Heat Sources in a three Dimensional Enclosure	2005

* As a Co-Supervisor

LIST OF PUBLICATIONS

(a) Book Chapter:

- (1) **M. A. H. Mamun**, T. R. Tanim, M. M. Rahman, R. Saidur and Shuichi Nagata, “*Analysis of Mixed Convection in a Lid Driven Trapezoidal Cavity*”, **Convection and Conduction Heat Transfer**, INTECH Open Access Publisher, Croatia, 2011, ISBN 978-953-307-582-2, Chapter 3, pp. 55-82.

(b) Journal Publications:

- (1) Mojumder, S., Saha, S., Saha, S. & **Mamun, M. A. H.** "Combined effect of Reynolds and Grashof numbers on mixed convection in a lid-driven T-shaped cavity filled with water- Al_2O_3 nanofluid", Journal of Hydrodynamics, Vol. 27(5), pp. 782-794, 2015.
- (2) Md. Rumman ul Ahsan, Protyasha Prachurja, Abu Rayhan Md. Ali, **Mohammad Arif Hasan Mamun** “*Determination of Effect of Elliptic Notches and grooves on Stress Concentration Factors on Notched Bar in Tension and Grooved Shaft Under Torsion*”, Journal of Naval Architecture and Marine Engineering, Vol.10, No: 1, 2013.
- (3) M. Rahman, **M. A. H. Mamun**, and R. Saidur “*Analysis of Magnatohydrodynamic Mixed Convection and Joule Heating in Lid-driven Cavity Having a Square Block*”, Journal of the Chinese Institute of Engineers, **Taylor and Francis**, Vol. 34, No. 5, pp. 585-599, July 2011.
- (4) **M. A. H. Mamun**, M. M. Rahman, M. M. Billah, R. Saidur, “*A Numerical Study on the Effect of a Heated Hollow Cylinder on Mixed Convection in a ventilated Cavity*”, International Communications in Heat and Mass Transfer, **Elsevier**, Vol. 37, Issue: 9, pp. 1326-1334, 2010.
- (5) M. Miraj, M.A. Alim, and **M.A.H. Mamun**, “*Effect of radiation on natural convection flow on a sphere in presence of heat generation*”, International Communications in Heat and Mass Transfer, **Elsevier**, Volume: 37, Issue: 6, pp. 660 - 665, July 2010.
- (6) **M. A. H. Mamun**, T. R. Tanim, M. M. Rahman, R. Saidur and S. Nagata, “*Mixed Convection Analysis in Trapizoidal Cavity with a Moving Lead*” International Journal of Mechanical and Materials Engineering (IJMME), Vol. 5, No. 1, pp. 18-28, 2010.
- (7) K. Y. Leong, R. Saidur, S. N. Kazi and **A.H. Mamun**, “*Performance investigation of an automotive car radiator operated with nanofluid-based coolants*”, Applied Thermal Engineering, **Elsevier**, Vol. 30, Issues: 17-18, pp. 2685-2692, 2010.
- (8) **Mohammad Arif Hasan MAMUN**, Shuichi NAGATA, Kazutaka TOYOTA, Yasutaka IMAI and Toshiaki SETOGUCHI, “*Hydrodynamic Analysis of Wave – induced Nonlinear Motion of Backward Bent Duct Buoy by the Use of the Particle Method*”, OTEC (ISSN 0916-2429), Vol. 15, pp. 27-31, 2010.

- (9) Yasutaka IMAI, Shuichi NAGATA, Kazutaka TOYOTA, and **Mohammad A. H. MAMUN**, “*Duc Extension Effect on the Primary Conversion of a Wave Energy Converter Bacward Bent Duct Buoy*”, OTEC (ISSN 0916-2429), Vol. 15, 2010, pp. 33-36.
- (10) **Mohammad Arif Hasan Mamun**, Md. Tofiqul Islam and Md. Mustafizur Rahman, “*Natural Convection in a Porous Trapezoidal Enclosure with Magneto-hydrodynamic Effect*”, Lithuanian Association of Nonlinear Analysts, Nonlinear Analysis: Modelling and Control (LANA), 2010, Vol. 15, No. 2, 159–184.
- (11) M. M. Rahman, **M. A. H. Mamun**, M. M. Billah, and R. Saidur, “*Natural Convection Flow in a Square Cavity with Internal Heat Generation and a Flush Mounted Heater on a Side Wall*”, Journal of Naval Architecture and Marine Engineering, Vol. 7, Issues: 1, 2010, pp. 37-50.
- (12) R. Saidur, E.A. Abdelaziz, M. Hasanuzzaman, and M. A. H. Mamun, “*A Study of Energy Efficiency, Economic and Environmental Benefits of a Cooling Tower*”, International Journal of Mechanical and Materials Engineering (IJMME), Vol. 5, 2010, No. 1, pp. 87-94.
- (13) M. M. Rahman, M. M. Billah, **M. A. H. Mamun**, R. Saidur and M. Hasanuzzaman, “*Reynolds and prandtl numbers effects on MHD mixed convection in a lid-driven cavity along with joule heating and a centered heat conducting circular block*”, International Journal of Mechanical and Materials Engineering (IJMME), Vol. 5 (2010), No. 2, pp. 163-170.
- (14) M. M. Rahman, **M. A. H. Mamun**, R. Saidur and Shuichi Nagata, “*Effect of a Heat Conducting Horizontal Circular Cylinder on MHD Mixed Convection in a Lid-Driven Cavity along with Joule Heating*”, International Journal of Mechanical and Materials Engineering (IJMME), Vol. 4 (2009), No. 3, pp. 256-265.
- (15) Md. M. Rahman, M.A. Alim, **M.A.H. Mamun**, “*Finite Element Analysis of Mixed Convection in a Rectangular Cavity with a Heat-Conducting Horizontal Circular Cylinder*”, Lithuanian Association of Nonlinear Analysts, Nonlinear Analysis: Modelling and Control (LANA), 2009, Vol. 14, No. 2 pp.217-247.
- (16) Md. Tofiqul Islam, Sumon Saha, Goutom Saha, Md. Mustafizur Rahman, **Md. Arif Hasan Mamun** and Md. Quamrul Islam, “*Numerical Simulation on Mixed Convection in a Parallelogrammic Ventilated Enclosure*”, Ganit Journal. Bangladesh Math. Soc., 2008, Vol. 28, pp. 45-58.
- (17) **M.A.H. Mamun**, D.A. Johnson, K.G.T. Hollands, and W.H. Leong, “*PIV Measurements of the Flow Field inside an Enclosed Cubical Cavity in Natural Convection*”, Experiments in Fluids, **Springer**, Volume: 44, Issue: 4, April 2008, pp. 647 - 659.
- (18) Md. Tofiqul Islam, Sumon Saha, **Md. Arif Hasan Mamun** and Mohammad Ali, “*Two Dimensional Numerical Simulation of Mixed Convection in a Rectangular Open Enclosure*”, Fluid Dynamics and Materials Processing, **Tech Science**

Press, vol.4, no.2, pp.125-137, 2008.

- (19) Sumon Saha, **Md. Arif Hasan Mamun**, M Zakir Hossain and A.K.M Sadrul Islam, “*Mixed Convection in an Enclosure with Different Inlet and Exit Configurations*”, Journal of Applied Fluid Mechanics, Vol. 1, No. 1, 2008, pp. 78-93.
- (20) Goutam Saha, Sumon Saha and **Md. Arif Hasan Mamun**, “*A Finite Element Method for Steady-State Natural Convection in a Square Tilt Open Cavity*”, ARPN Journal of Engineering and Applied Sciences, Vol. 2, No. 2, April 2007, pp. 41-49.
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- (22) Md. Tofiqul Islam, Sumon Saha and **Md. Arif Hasan Mamun** and Goutam Saha, “*Natural Convection in an Inclined Square Enclosure Containing Internal Energy Sources*”, Journal of Mechanical Engineering, The Institution of Engineers, Bangladesh, Vol. ME37, June 2007, pp. 24-32.
- (23) Sumon Saha, Md. Tofiqul Islam, Mohammad Ali, **Md. Arif Hasan Mamun** and M. Quamrul Islam, “*Effect of Inlet and Outlet Locations on Transverse Mixed Convection Inside a Vented Enclosure*”, Journal of Mechanical Engineering, The Institution of Engineers, Bangladesh, Vol. ME36, December 2006, pp. 27-37.
- (24) **M.A.H. Mamun**, W.H. Leong, K.G.T. Hollands, & D.A. Johnson, “*Cubical-Cavity Natural Convection Benchmark Experiments: An Extension*”, International Journal of Heat and Mass Transfer, Vol. 46, pp. 3655-3660, 2003.
- (25) Shohel Mahmud, Syeda Humaira Tasmin, **Mohammad Arif Hasan Mamun**, “*Thermodynamic Analysis of Mixed Convection in a Channel with Transverse Hydromagnetic Effect*”, International Journal of Thermal Science, Vol. 42, pp. 731-740, 2003.
- (26) S. Mahmud, **M.A.H. Mamun**, & A.K.M. Sadrul Islam, “*Separation Characteristics of Fluid Flow in a Pipe with Wavy Surface*”, International Journal of Applied Mechanics and Engineering, Vol. 7, No. 4, pp. 1263-1278, 2002.
- (27) Syeda Humaira Tasmin, Mahmud Shohel, **Mohammad Arif Hasan Mamun**, “*Entropy Generation in a Porous Channel with Hydromagnetic Effect*” Exergy, an International Journal, Vol. 2, pp. 300-308, 2002.
- (28) Shohel Mahmud, A. K. M. Sadrul Islam, **Mohammad Arif Hasan Mamun**, “*Separation Characteristics of Fluid Flow Inside Two Parallel Plates with Wavy Surface*” International Journal of Engineering Science, Vol. 40, pp. 1495-1509, 2002.

(c) Elsevier Procedia:

- (1) Mojumder, S., Saha, S., Saha, S. & **Mamun, M. A. H.**, "*Effect of magnetic field on natural convection in a C-shaped cavity filled with ferrofluid*", *Procedia Engineering*, 105 (2015), pp. 96-104.
- (2) Md. Jane Alam Khan, Md. Rakibul Hasan, **Md. Arif Hasan Mamun**, "*Flow behavior and temperature distribution in micro-channels for constant wall heat flux*", *Procedia Engineering*, Science Direct, 56 (2013) 350-356, Published by Elsevier Ltd.

(d) Conferences (national and international conferences):

- (1) **Mohammad Arif Hasan Mamun**, "*Optimization of Energy Efficiency: A pre-condition to achieve Green Environment for our Planet*", 2nd Anniversary-2016 Publication of Sustainable and Renewable Energy Development Authority (SREDA), Power Division, Ministry of Power, Energy, and Mineral.
- (2) Md. Naim Jahangir, Siduzzaman Khan, Ayesha Kabir Mila, Mohidus Samad Khan, **Mohammad Arif Hasan Mamun**, "*Biogas Production from Tannery Wastage Using Mesophilic Anaerobic Digestion Process*", *Proceedings of the International Conference on Mechanical Engineering (ICME2015)* 18-20 December 2015, Dhaka, Bangladesh (Paper ID. 199).
- (3) Mohiemnul Islam Khan, Khan Md. Rabbi, Saadbin Khan and **M.A.H. Mamun**, "*Mixed Convection Analysis in Lid-driven Cavity with Sinusoidally Curved Bottom Wall Using CNT-Water Nanofluid*", *Proceedings of the International Conference on Mechanical Engineering (ICME2015)* 18-20 December 2015, Dhaka, Bangladesh (Paper ID. 384).
- (4) **Mohammad Arif Hasan Mamun**, Mohammad Jane Alam Khan, "*Study of Mixed Convection in a Ventilated Square Enclosure with a Heated Hollow Cylinder*", *Proceedings of the 14th Asia Congress of Fluid Mechanics - 14th ACFM* October 15 - 19, 2013; Hanoi and Halong, Vietnam.
- (5) KM. Rafidh Hassan, **Mohammad Arif Hasan Mamun**, "*Influence of Different Degrees of Stenosis and Time Period on the Flow Behavior Through Affected Artery and Stress Distribution on Vessel Wall*", *Proceedings of the 14th Asia Congress of Fluid Mechanics - 14th ACFM* October 15 - 19, 2013; Hanoi and Halong, Vietnam.
- (6) Sanchita Amin, Dipak Kanti Das, **Arif Hasan Mamun**, "*Wake induced unsteadiness on flat plate boundary layer*", *Proceedings of the 14th Asia Congress of Fluid Mechanics - 14th ACFM* October 15 - 19, 2013; Hanoi and Halong, Vietnam.
- (7) M. Jane Alam Khan, **Md. Arif Hasan Mamun**, "*Study of Micro-channel Heat-exchanger For Improved Heat Transfer and Flow Behavior*," *Proceedings of the*

International Conference on Mechanics and Fluid Engineering (ICMFE- 2013), June 29-30, 2013, Bangkok.

- (8) **Md. Arif Hasan Mamun**, Md. Rakibul Hasan, Mohammad Jane Alam Khan, “*Design of A Micro-Fluidic Cooling System*”, Proceedings of the International Conference on Mechanical Engineering and Renewable Energy 2011 (ICMERE2011) 22- 24 December 2011, Chittagong, Bangladesh.
- (9) **Md. Arif Hasan Mamun**, Mohammad Jane Alam Khan, Md. Rakibul Hasan, “*Analysis of A Micro-Channel Heat Exchanger*”, Proceedings of the International Conference on Mechanical Engineering 2011 (ICME2011) 18-20 December 2011, Dhaka, Bangladesh (ICME11-RT-040).
- (10) Shuichi Nagata, Kazutaka Toyota, Yasutaka Imai, Toshiaki Setoguchi, **M. A. H. Mamun**, and Hiroyuki Nakagawa, “*Numerical Analysis on Primary Conversion Efficiency of Floating OWC-type Wave Energy Converter*”, Proceedings of the Twenty-first (2011) International Offshore and Polar Engineering Conference, Maui, Hawaii, USA, June 19-24, 2011, Copyright © 2011 by the International Society of Offshore and Polar Engineers (ISOPE)
- (11) **Mohammad Arif Hasan Mamun**, Shuichi Nagata, Kazutaka Toyota, Yasutaka Imai and Toshiaki Setoguchi, “*Analysis of Backward Bent Duct Buoy by Moving Particle Semi-implicit Method*”, Proceedings of the International Conference on Mechanical, Industrial and Energy Engineering 2010, 23-24 December, 2010, Khulna, Bangladesh.
- (12) **Mohammad Arif Hasan Mamun**, Shuichi Nagata, Kazutaka Toyota, Yasutaka Imai and Toshiaki Setoguchi, “*Numerical Simulation of Backward Bent Duct Buoy by Moving Particle Semiimplicit Method*,” Proceedings of the 13th Asian Congress of Fluid Mechanics, 17-21 December 2010, Dhaka, Bangladesh
- (13) **Mohammad Arif Hasan Mamun**, Shuichi Nagata, Kazutaka Toyota, Yasutaka Imai and Toshiaki Setoguchi, “*Wave Energy Utilization: Recent Trend*,” Proceedings of the 13th Asian Congress of Fluid Mechanics, 17-21 December 2010, Dhaka, Bangladesh
- (14) M. M. Rahman, Saidur Rahman and **M. A. H. Mamun**, “*Effect of Nanofluid on Mixed Convection in a Ventilated Enclosure*,” Proceedings of the 13th Asian Congress of Fluid Mechanics, 17-21 December 2010, Dhaka, Bangladesh
- (15) A.B.M. Toufique Hasan, Sumon Saha, Md. Tarekul Alam, Md. Nasim Hasan, **Md. Arif Hasan Mamun** and A.K.M. Sadrul Islam, “*A Numerical Study on the Physiologically Realistic Pulsatile Flow through an Eccentric Arterial Stenosis*”, 17th Australasian Fluid Mechanics Conference Auckland, New Zealand, 5-9 December 2010.
- (16) **Mohammad Arif Hasan Mamun**, Shuichi Nagata, Kazutaka Toyota, Yasutaka Imai and Toshiaki Setoguchi, “*Hydrodynamic Analysis Of Backward Bent Duct Buoy By Moving Particle Semi-Implicit Method*”, Proceedings of the 2010 International Ocean Energy Symposium & 9th joint Young Reasearcher Forum, August 30-September 1, 2010, Busan, Korea.

- (17) Mohammad Mamunur Rahman, Farzana Rahman, Aktaruzzaman, **Mohammad Arif Hasan Mamun**, “*Robotic Arm*”, Proceedings of the International Conference on Magnetism and Advanced Materials (ICMAM-2010), 03-07 March 2010, Dhaka, Bangladesh.
- (18) **M. A. H. Mamun**, M. M. Rahman, and Shuichi Nagata, “*Effect of Conduction on Combined Free and Forced Convection in a ventilated Cavity with a Heat-Generating Solid Circular Body*”, Proceedings of the 8th International Conference on Mechanical Engineering, 26-28 December, 2009, Dhaka, Bangladesh (ICME09-TH-21).
- (19) Md. N. H. Khan Chowdhury, Sumon Saha and **Md. A. Hasan Mamun**, “*Mixed Convection Analysis in a Lid Driven Trapezoidal Cavity with Isothermal Heating at Bottom for Various Aspect Angels*” Proceedings of the 8th International Conference on Mechanical Engineering, 26-28 December, 2009, Dhaka, Bangladesh (ICME09-TH-10).
- (20) Naheed Ferdous, Md. Tofiqul Islam, **Md. A. Hasan Mamun**, “*Natural Convection and Radiation in Circular and Arc Cavity*”, Proceedings of the 8th International Conference on Mechanical Engineering, 26-28 December, 2009, Dhaka, Bangladesh (ICME09-TH-02).
- (21) M.N. Hossain, **M.A.H. Mamun** and S. Saha, “*Mixed Convection in a Trapezoidal Cavity with Moving LID on Top wall and Heating from Below*”, Proceedings of the International Conference on Chemical Engineering 2008, ICCHE 2008, 29-30 December, Dhaka, Bangladesh
- (22) **M. A. H. Mamun**, M. T. Islam and A. K. M. S. Islam, “*Effect of MHD on Natural Convection In A Trapezoidal Enclosure*”, Proceedings of the 12th Asian Congress of Fluid Mechanics, 18-21 August 2008, Daejeon, Korea.
- (23) M. H. Banna, **M. A. H. Mamun** and A. K. M. Sadrul Islam, “*Effect of Aspect Ratio on Mixed Convection in a Microstructure Filled Vented Cavity*”, Proceedings of the 12th Asian Congress of Fluid Mechanics 18-21 August 2008, Daejeon, Korea.
- (24) Rahman, M. M., Alim, M. A., Saha, S. and **Mamun, M. A. H.**, “*Mixed Convection in a Vented Enclosure with an Adiabatic Arc Shaped Baffle*”, published on the book of abstracts in 15th Mathematics Conference, Bangladesh Mathematical Society, University of Dhaka, Dhaka, Bangladesh, December 29-31, 2007.
- (25) **M. M. Rahman**, M. A. Alim and M. A. H. Mamun, “*Mixed Convection in a Square Cavity with a Heat-Conducting Horizontal Circular Cylinder*”, 7th International Conference on Mechanical Engineering, 29-31 December, 2007, Dhaka, Bangladesh (Paper No. 208).
- (26) M. M. Rahman, S. Saha, M. A. Alim, **M. A. H. Mamun**, “*Effects of Duct Velocity Profile and Entry Length for Mixed Convection in a Horizontal Channel with an Open Cavity*”, Proceedings of the 11th Annual Paper Meet, APM 25-26 December

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- (27) Sumon Saha, Mohammad Ali, **Md. Arif Hasan Mamun** and M. Quamrul Islam, “*Effect of Corrugation Frequency on Mixed Convection In A Vented Enclosure of Vee-Corrugated Vertical Walls*”, Proceedings of the 3rd BSME-ASME International Conference on Thermal Engineering 20-22 December, 2006, Dhaka, Bangladesh.
- (28) Abu Bakar Siddique, **Md. Arif Hasan Mamun**, C. M. Feroz, A. K. M Sadrul Islam, “*Natural Convection in a Triangular Enclosure*” , Proceedings of the 3rd BSME-ASME International Conference on Thermal Engineering 20-22 December, 2006, Dhaka, Bangladesh.
- (29) Md. Tofiqul Islam, Sumon Saha, **Md. Arif Hasan Mamun** and C M Feroz, “*Computational Analysis of Mixed Convection Heat Transfer in A Ventilated Enclosure*” , Proceedings of the 3rd BSME-ASME International Conference on Thermal Engineering 20-22 December, 2006, Dhaka, Bangladesh
- (30) S. Saha, M. M. Rahman, M. A. Alim, **M. A. H. Mamun** and A. K. M. S. Islam, “*Opposing Mixed Convection in a Vented Enclosure: Effects of Inlet Port Location and Prandtl Number*”, Proceedings of the International Conference on Fluid and Thermal Energy Conversion 2006© FTEC 2006, Jakarta, Indonesia, December 10 – 14, 2006.
- (31) **Arif Hasan Mamun**, Tawhid Ezaz and A.K.M.Sadrul Islam, “*Natural Convection Heat Transfer from discrete Heat Sources in a Three Dimensional Enclosure*”, Proceedings of The Eleventh Asian Congress on Fluid Mechanics (11ACFM), 22nd -25th May, 2006, Kuala Lumpur, Malaysia, Organized by –The Institution of Engineers, Malaysia.
- (32) A.K.M.Sadrul Islam, Tawhid Ezaz and **Arif Hasan Mamun**, “*Effect of the size of Heated Strip on Natural Convection in a 3D Enclosure with Uniform Heat Input in One Side and Isothermal Wall on Other-Side*”, Proceedings of The Eleventh Asian Congress on Fluid Mechanics (11ACFM), 22nd -25th May, 2006, Kuala Lumpur, Malaysia, Organized by –The Institution of Engineers, Malaysia.
- (33) Mohammad Ahsan Habib, Md.Rafiqul Islam and **M. Arif Hasan Mamun**, “*Power Generation from Tidal Energy in the Coastal Area of Bangladesh*”, 5th International Mechanical Engineering Conference and 10th Annual Paper Meet, 30 Sept.-2nd October 2005, Dhaka, Bangladesh, Organized by – Mechanical Engineering Division, The Institution of Engineers, Bangladesh.
- (34) Sanchita Amin, Susanjib Sarkar and **Arif Hasan Mamun**, “*Design and Manufacture of Vertical Tube Evaporator for Water Treatment*”, 5th International Mechanical Engineering Conference and 10th Annual Paper Meet, 30 Sept.-2nd October 2005, Dhaka, Bangladesh, Organized by – Mechanical Engineering Division, The Institution of Engineers, Bangladesh
- (35) Tawhid Ezaz, **Arif Hasan Mamun** and Shohel Mahmud, “*Numerical Study of Natural Convection in an Annular Space Bounded by a circular and Elliptical Isothermal Cylinder*”, 4th International Mechanical Engineering Conference, 28-31

December 2004, Dhaka, Bangladesh.

- (36) **M. A. H. Mamun**, D. A. Johnson , K. G. T. Hollands, & W. H. Leong, “*PIV Measurement of the Flow Field inside an Enclosed Cubical Cavity in Natural Convection*”, Proceedings of the 12th International Symposium on Applications of Laser Techniques to Fluid Mechanics, 12-15 July 2004, Lisbon, Portugal.
- (37) **M. A. H. Mamun**, W. H. Leong, K. G. T. Hollands, & D. A. Johnson, “*Natural Convection Benchmark Experiments Across a Cubical Cavity*”, 2nd BSME-ASME International Conference on Thermal Engineering, 2-4 January 2004, Dhaka, Bangladesh.
- (38) **Md. Arif Hasan Mamun**, D. A. Jhonson and K. G. T. Hollands, “*Natural Convection Heat Transfer and Flow Measurement Across a Cubical Cavity*” Canadian Society of Mechanical Engineering Forum, 2002, May 21-24 (CSME Forum 2002), Queens University, Kingston, Ontario, Canada.
- (39) S. Mahmud and **Md. Arif Hasan Mamun**, “*Buoyancy Induced Flow and Heat Transfer Inside an Inclined Wavy Enclosure*” Canadian Society of Mechanical Engineering Forum, 2002, May 21-24 (CSME Forum 2002), Queens University, Kingston, Ontario, Canada.
- (40) **Md. Arif Hasan Mamun** and A. M. Aziz-Ul Huq, “*Pressure Drop and Heat Transfer in an Internally Finned Tube*”, Third International Conference on Fluid Mechanics and Heat Transfer, December 15-16, 1999, Dhaka, Bangladesh.
- (41) **Md. Arif Hasan Mamun**, A. M. Aziz-Ul Huq and M. A. Rashid Sarkar, “*Global Solar Radiation on Horizontal Surface in Dhaka*” 2nd International Seminar on Renewable Energy for Poverty Alleviation (ISRERA’99), 26-27 November, 1999, Dhaka, Bangladesh.
- (42) **Md. Arif Hasan Mamun**, Md. Jalal Uddin and A. M. Aziz-Ul Huq, “*Analysis of Pressure Drop Characteristics and Heat Transfer performance in A Tube Having Internal Fins*”, 5th Annual Paper Meet, Mechanical Engineering Division, 5-7 November, 1998, Organized by – Chittagong Centre, Institution of Engineers, Bangladesh.
- (43) Md. Jalal Uddin, **Md. Arif Hasan Mamun** and A. M. Aziz-Ul Huq, “*Study of Pressure Drop Characteristics and Heat Transfer performance in A Tube Having Internal Fins*”, Presented in ‘20th Bangladesh Science Conference’ 25-28 October, 1998, Organized by – Bangladesh Association for the Advancement of Science (BAAS) and Bangladesh University of Engineering and technology (BUET), Dhaka-1000, Bangladesh.
- (44) **Md. Arif Hasan Mamun**, A. M. Aziz-Ul Huq and A. R. Sarkar, “*Performance of a Solar P-V Water Pumping System for Small Scale Irrigation*”, International Conference on Role of Renewable Energy Technology for Rural Development (RETRUD-98), 12-14 October, 1998 Kathmandu, NEPAL, Organized by – Alternative Energy Promotion Centre, Institution of Engineers, Tribhuvan University, Nepal Solar Energy Society.

- (45) A. M. Aziz-ul Huq and **Md. Arif Hasan Mamun**, “*Analysis of Global solar Radiation on Horizontal Surface in Dhaka*”, International Conference on Role of Renewable Energy Technology for Rural Development (RETRUD-98), 12-14 October, 1998 Kathmandu, NEPAL, Organized by – Alternative Energy Promotion Centre, Institution of Engineers, Tribhuvan University, Nepal Solar Energy Society.
- (46) **Md. Arif Hasan Mamun**, Ashraful Haque, Khandaker Nazmul Haque, & A. M. Aziz-Ul Huq, “*Study of Solar Powered Photovoltaic Pumping System*”, Fourth Annual Paper Meet, Mechanical Engineering Division, 23-25 October, 1997, Khulna, Organized by – Khulna Centre, Institution of Engineers, Bangladesh.
- (47) **Md. Arif Hasan Mamun**, A. M. Aziz-Ul Huq and A. R. Sarkar, “*Performance of A P-V Water Pumping System For Small Scale Use*”, National Seminar on Renewable Energy for Poverty Alleviation, 21-23 October, 1997, Dhaka, Bangladesh, Organized by – Dhaka Centre, Institution of Engineers, Bangladesh, Ramna, Dhaka.

(e) Training/ Short Course/ Workshop attended (as a Resource Person):

- (1) **Mohammad Arif Hasan Mamun**, "*Energy Efficiency: What we can do to make our Environment Green*" International Green Conference 2016 on "Green Banking for Green Industry and Green Energy" Jointly Organized by Institute of Energy, University of Dhaka and Green Tech Foundation Bangladesh on 9th April 2016 at Senate Bhaban, University of Dhaka, Bangladesh.
- (2) **Mohammad Arif Hasan Mamun**, Resource person of the "*Certified Energy Auditor (CEA) Certification Course*" through the Association of Energy Engineer (AEE) - Jointly organized by USAID-CCEB and AEE Bangladesh Chapter, 29 March -2 April, 2016, at CCEB Office, Gulshan, Dhaka, Bangladesh.
- (3) **Mohammad Arif Hasan Mamun**, Panelist of the Plenary Discussion on "*Modalities of Financing Water & Energy Efficiency in the Textile Sector*" Water & Energy Efficiency Financing Workshop - Organized by International Finance Corporation, World Bank Group at the Westin Dhaka on 28th February 2016.
- (4) **Mohammad Arif Hasan Mamun**, "*Efficient Operation of Refrigeration and HVAC Systems*", Short course on Energy Efficiency for the Officers of Sustainable Renewable Energy Development Authority (SREDA), January, 2016, organized by Centre for Energy Studies, BUET.
- (5) **Mohammad Arif Hasan Mamun**, "*Energy Efficiency and Its impact on Environment*" , Seminar on "Use of Renewable Energy and Energy Efficiency for Economic Development: Impact on Environment" at University of Dhaka on 19th December, 2015.
- (6) **Mohammad Arif Hasan Mamun**, Coordinator and main Resource person of the Training on Energy Management System organized by Small & Medium

Enterprise (SME) Foundation, Royal Tower, Panthapath, Dhaka, 14-18 November 2015.

- (7) **Mohammad Arif Hasan Mamun**, Participate Focus Group Consultation Meeting on "USAID/Bangladesh Country Development Cooperation Strategy (CDCS) Consultation Meeting" Organized by USAID/Bangladesh's Economic Growth Office, U.S. Agency for International Development, U.S. Embassy, Madani Avenue, Baridhara, Dhaka-1212, Bangladesh on 17th August 2015.
- (8) **Mohammad Arif Hasan Mamun**, Resource person of the "*Certified Energy Auditor (CEA) Certification Course*" through the Association of Energy Engineer (AEE) - Jointly organized by USAID-CCEB and AEE Bangladesh Chapter, 28 April-2 May, 2015, at CCEB Office, Gulshan, Dhaka, Bangladesh.
- (9) **Mohammad Arif Hasan Mamun**, Resource person of the "*Certified Energy Auditor (CEA) Certification Course*" through the Association of Energy Engineer (AEE) - Jointly organized by USAID-CCEB and AEE Bangladesh Chapter, 3-6 December 2014, at CCEB Office, Gulshan, Dhaka, Bangladesh.
- (10) **Mohammad Arif Hasan Mamun**, Coordinator and main Resource person of the Training on Energy Management System organized by Small & Medium Enterprise (SME) Foundation, Royal Tower, Panthapath, Dhaka, 26-30 November 2014.
- (11) **Mohammad Arif Hasan Mamun**, "*Efficient operation of refrigeration units in Frozen Food Plants*", Workshop on Technical Best Practices in Industrial Energy Efficiency for Frozen Foods Plants organized by USAID-CCEB, Lakeshore, Gulshan, Dhaka, 3rd September 2014.
- (12) **Mohammad Arif Hasan Mamun**, "*Efficient Operation of Furnaces in Steel Plants*", Workshop on Energy Efficiency in Steel Re-rolling Plants organized by USAID-CCEB, Lakeshore, Gulshan, Dhaka, 18 June 2014.
- (13) **Arif Hasan Mamun**, "*Recent Development on Wave Energy Utilization*", Short Course on Renewable Energy Technologies for Sustainable Environment, Organized By Department of Mechanical & Chemical Engineering, Islamic University of Technology, Gazipur, Bangladesh, 20-23 November, 2011,.
- (14) **Arif Hasan Mamun**, "*Appropriate Renewable Energy Technology Options for Bangladesh*", Training on Renewable Energy Technology Application and Operation, Organized By Rural Electrification Board, 3-5 September, 2006, Islamic University of Technology, Gazipur, Bangladesh.
- (15) **Arif Hasan Mamun**, "*Procedure for Creating Complex 3D Parts*", Short Course on Engineering 3D CAD with Solid Works and Finite Elements Analysis (FEA) with ANSYS, Organized By Directorate of Continuing Education, 4-6 October, 2004, Bangladesh University of Engineering & Technology, Dhaka-1000, Bangladesh.

(f) Poster Presentation:

- (1) Md. Naim Jahangir, Ayesha Kabir Mila, Siduzzaman Khan, **Mohammad Arif Hasan Mamun**, “*Measurement of Calorific Values of Tannery Wastages Containing Low and High Chromium and Raw Fleshy Wastages Using Bomb Calorimeter*”, International Conference on Mechanical Engineering (ICME2015) 18-20 December 2015, Dhaka, Bangladesh (Paper ID. 229).
- (2) M. Ijaz Ahmad Saadi, Sujoy talukder, Shuvra Dey, **Mohammad Arif Hasan Mamun**, “*Optimizing the Ventilation System using Numerical Analysis to Ensure Desired Temperature and Waste Heat Recovery in Large Industrial Halls*”, International Conference on Mechanical Engineering (ICME2015) 18-20 December 2015, Dhaka, Bangladesh (Paper ID. 264).

(f) Others:

- (1) **Mohammad Arif Hasan Mamun**, “Natural Convection Heat Transfer and Flow Field inside a Cubical Cavity”, Ph. D. Thesis, University of Waterloo, Canada, 2003.
- (2) **Mohammad Arif Hasan Mamun**, “Pressure Drop and Heat Transfer in an Internally Finned Tube”, M. Sc. Engg. Thesis, Bangladesh University of Engineering and Technology, 1999.
- (3) A.M. Azizul Huq, Md. Imtiaz Hossain, A.K.M. Sadrul Islam, **Md. Arif Hasan Mamun**, Mosfequr Rahman, “Study of Damage and Productivity loss in Engineering /Manufacturing Industries during 1998 Flood” Report submitted to the Department of Mechanical Engineering, Bangladesh University of Engineering and Technology, 1997.
- (4) **Mohammad Arif Hasan Mamun**, “Study of Solar Powered Photovoltaic Pumping System”, B. Sc. Engg. Thesis, Bangladesh University of Engineering and Technology, 1997.

Training/ Short Course/ Workshop attended:

- (1) Workshop on "*Bangladesh Energy Efficiency Improvement Program in Industries*", Jointly organized by World Bank and Sustainable and Renewable Energy Development Authority (SREDA) at the Multipurpose Conference Hall, IEB Building, Ramna, Dhaka on 12th June 2016.
- (2) Roundtable on "*Centralized Energy Efficiency Data Repository (CEEDR)*" Jointly organized by World Bank, USAID-CCEB & SREDA at Bijoy Hall, Biddut Bhavan, Abdul Gani Road, Dhaka-1000 on 16 November, 2015,
- (3) Association of Energy Engineer (AEE) Authorized Train-The-Trainer (TTT) course for the Energy Auditor Certification program under CCEB-USAID, 24-27 Aug, 2013, Dhaka, Bangladesh.

- (4) Energy Auditor Certification Program through the Association of Energy Engineer (AEE) under CCEB-USAID, 19-21 Aug, 2013, Dhaka, Bangladesh
- (5) Short Course on "Signal Analysis with Application in Sound and Vibration", Organized by BUET-SIDA Project 14-15th June, 2011, BUET, Dhaka-1000.
- (6) Workshop on Numerical Weather Prediction, 12-15th December, 1998, BUET, Dhaka-1000.
- (7) Workshop on Prospect of Small Hydropower Generation in Bangladesh, 18-19th May, 1998, BUET, Dhaka-1000.

Present Research Activities:

(a) On-going Ph.D. / M.Sc. Engg. Thesis:

Level (Masters / Ph.D.)	Thesis Title
Ph.D.	The application of solar technologies for sustainable development in agricultural sector
M. Sc. Engg.	Energy Auditing of some commercial buildings and industrial sectors in Bangladesh
M. Sc. Engg.	Influence of Different Degrees of Stenosis and Time Period on the Physiologically Realistic Pulsatile Flow Behavior Through Affected Artery and Stress Distribution on Vessel Wall
M. Sc. Engg.	Conjugate mixed convection flow from an isothermal horizontal circular cylinder with joule heating effect

(b) Research Projects:

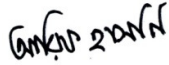
- (1) Associate Sub Project Manager, "Development of Research Facilities of Biomedical Research Phenomena", Higher Education Quality Enhancement Project (HEQEP) of University Grants Commission of Bangladesh Ministry of Education, Bangladesh.

It will build the research capability for analysis and prediction of the hemodynamics (blood fluid mechanics) in several biological systems such as in cardiovascular systems, carotid and coronary arteries, stenosed artery, stented artery, basilar artery, carotid artery bifurcation, abdominal aortic aneurysm, respiratory systems, etc. It will improve the diagnosis methodologies, therapeutic measures, requirement of bypass and anastomosis surgery, angioplasty and the development of artificial organs such as mechanical heart valves (MHV), stents, and dialysis shunts, and so on. Flow visualization will be conducted with Particle Image Velocimetry (PIV) which is used in most of the modern bioengineering lab in the world.

- (2) Team Member, "Co-Creation (Design and Testing) of Biogas Socket in Bangladesh", A Research Project of SNV Netherlands Development Organization conducted by Centre of Energy Studies (CES), BUET.

(c) Other Research:

- (i) Research going on Floating Oscillating Water Column Type Wave Energy Conversion System by Moving Particle Semi-Implicit Method.
- (ii) Research going on Micro Fluidic Cooling system with nanoparticle, Computational analysis of pulsatile blood flow and vessel wall mechanics in different degrees of stenoses and Experimental Analysis of Savonius Rotor with four twisted blades: Performance & Aerodynamic characteristics.
- (iii) Research going on Grid Connected Solar Energy: Technical and Policy Issues.
- (iv) Research going on Sustainability of Bio-energy.
- (v) Research going on Energy Conservation Through Energy Audit.



[Signature]

Date: 24 / 07 / 2017 .
[Day/Month/Year]