

# Curriculum Vitae

## Personal Detail:

**Name:** Mohammad Arif Hasan Mamun

**Present position:** Professor,  
Department of Mechanical Engineering,  
Bangladesh University of Engineering and Technology  
(BUET), Dhaka-1000, Bangladesh.

**Web address:** <https://me.buet.ac.bd/faculty/dr-mohammad-arif-hasan-mamun>

**Email address:** arifhasan@me.buet.ac.bd, mahmamun1@gmail.com

**Telephone:** +880255666000 Ext. 7779 (Office), Ext. 6944 (Home),  
+8801819487324 (Mobile)



## Academic Qualifications:

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

<sup>1</sup>Specialization: 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

<sup>2</sup>Specialization: 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.

<sup>3</sup>B. Sc. Project 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
<b>Professor</b>	Dept. of Mech. Engg., BUET, Dhaka	21 <sup>st</sup> September 2011 to date
<b>Director</b>	Directorate of Advisory, Extension and Research Services (DAERS), BUET, Dhaka	4 <sup>th</sup> December 2022 to date
<b>Director</b>	Institute of Appropriate Technology (I.A.T), BUET, Dhaka	16 <sup>th</sup> July 2017 to December 2020
<b>Associate Professor</b>	Dept. of Mech. Engg., BUET, Dhaka	1 <sup>st</sup> September 2007 to 20 <sup>th</sup> September 2011
<b>Post-Doctoral Research Fellow</b>	Institute of Ocean Energy, Saga University, Japan	1 <sup>st</sup> October 2009 to 31 <sup>st</sup> Dec.2010 (on leave from BUET)

<b>Assistant Provost</b>	Titumir Hall, BUET, Dhaka	2005-2008
<b>Assistant Professor</b>	Dept. of Mech. Engg., BUET, Dhaka	2 <sup>nd</sup> January 2000 to 30 <sup>th</sup> August 2007
<b>Lecturer</b>	Dept. of Mech. Engg., BUET, Dhaka	17 <sup>th</sup> September 1997 to 1 <sup>st</sup> January 2000

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

- (1) Member of Association of Energy Engineers (AEE), Atlanta, USA.
- (2) Certified Energy Auditor (NO. 90144), Association of Energy Engineers (AEE), Atlanta, USA.
- (3) Association of Energy Engineer (AEE)'s Authorized Trainer for Certified Energy Auditor (CEA) program.
- (4) Member of Alumni of University of Waterloo, Canada.
- (5) Member of Alumni of Bangladesh University of Engineering and Technology, BUET, Dhaka-1000.
- (6) Member of Bangladesh Society of Mechanical Engineers.
- (7) Life Fellow of Institute of Engineers, Bangladesh.

**Professional Awards / Honors Received:**

- (1) **Publication Incentive for Q1 Journal Paper Publication** from BUET, 2023 (Incentive ID: 222220231002502).
- (2) **Basic Research Grant**, BUET for Research purpose from July 2021 to June 2023 (Submission ID: 1111202110025)
- (3) Awarded "**Asia Subcontinent Region Energy Professional Development Award for 2016**" from the Association of the Energy Engineers (AEE), Atlanta, USA.
- (4) Awarded "**Techfair-A Manifestation of Novelty Adjudicator's Award 2016**" from The Institute of Engineers, Bangladesh.
- (5) Awarded "**Commonwealth Scholarship**" for Research Student, Ph. D. Programs (2000-2003)
- (6) Awarded "**International Graduate Student Bursary**" from University of Waterloo, 2000-2003.
- (7) Awarded "**Teaching Assistantship**" from Department of Mechanical Engineering, University of Waterloo, 2002-2003.
- (8) Awarded "**Dr. V.G. Desa Gold Medal**" for the First position with honors in the B.Sc. Engineering.

- (9) Awarded "**Dean's Scholarship**" for four years while studying B. Sc. Engineering in the Department of Mechanical Engineering, BUET.
- (10) Awarded "**Merit Scholarship**" for four years while studying B. Sc. Engineering in the Department of Mechanical Engineering, BUET.
- (11) Awarded District level "**Talent Pool Scholarship**" for good result in the combined exam of grade 8
- (12) Awarded 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 (New and Renewable Energy Technologies) of 9th BSME International Conference on Thermal Engineering, 19-21 December 2024, BUET, Dhaka, Bangladesh.
- (2) Member, Organizing Committee, "9th BSME International Conference on Thermal Engineering", 19-21 December 2024, BUET, Dhaka, Bangladesh.
- (3) Session Chair of a Technical Session of 14th International Conference on Mechanical Engineering, ICME2023, 18-19 December 2023, BUET, Dhaka, Bangladesh.
- (4) Member, Organizing Committee of 14th International Conference on Mechanical Engineering, ICME2023, 18-19 December 2023, BUET, Dhaka, Bangladesh.
- (5) Member, Review Committee of 14th International Conference on Mechanical Engineering, ICME2023, 18-19 December 2023, BUET, Dhaka, Bangladesh.
- (6) Session Chair of a Technical Session of 13th International Conference on Mechanical Engineering, ICME2019, 18-20 December 2019, BUET, Dhaka, Bangladesh.
- (7) Member, Organizing Committee of 13th International Conference on Mechanical Engineering, ICME2019, 18-20 December 2019, BUET, Dhaka, Bangladesh.
- (8) Member, Review Committee of 13th International Conference on Mechanical Engineering, ICME2019, 18-20 December 2019, BUET, Dhaka, Bangladesh.
- (9) Session Chair of a Technical Session of 12th International Conference on Mechanical Engineering, ICME2017, 20-22 December 2017, BUET, Dhaka, Bangladesh.
- (10) Member, Organizing Committee of 12th International Conference on Mechanical Engineering, ICME2017, 20-22 December 2017, BUET, Dhaka, Bangladesh.
- (11) Member, Review Committee of 12th International Conference on Mechanical Engineering, ICME2017, 20-22 December 2017, BUET, Dhaka, Bangladesh.
- (12) 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.
- (13) Reviewer, Proceedings of the Eleventh International Conference on Mechanical Engineering, 18-20<sup>th</sup> December 2015, BUET, Dhaka, Bangladesh.
- (14) Session Chair of a Technical Session of the Eleventh International Conference on Mechanical Engineering, 18-20<sup>th</sup> December 2015, BUET, Dhaka, Bangladesh.

- (15) Reviewer, Proceedings of the Tenth International Conference on Mechanical Engineering, 20-21 June 2014, Dhaka, Bangladesh.
- (16) 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.
- (17) Reviewer, International Journal of Green Energy, Taylor & Francis.
- (18) Reviewer, Heat Transfer Engineering Journal, Taylor & Francis.
- (19) Reviewer, Journal of Computational and Applied Mathematics, Elsevier.
- (20) Reviewer, Journal of Mechanical Engineering, the Institute of Engineers, Bangladesh.
- (21) Reviewer, Journal of Naval Architecture and Marine Engineering, Department of Naval Architecture and Marine Engineering, BUET, Dhaka-1000, Bangladesh.
- (22) Member Secretary, Specialized Package Course Offered to Bangladesh Navy Officers Organized by Department of Mechanical Engineering, BUET, Dhaka-1000, for 2005 & 2006.
- (23) Reviewer, Proceedings of the Ninth International Conference on Mechanical Engineering, 18-20<sup>th</sup> December 2011, Dhaka, Bangladesh.
- (24) Reviewer, Proceedings of the Eight International Conference on Mechanical Engineering, 26-28 December 2009, Dhaka, Bangladesh.
- (25) Reviewer, Proceedings of the Seventh International Conference on Mechanical Engineering, 29-31 December 2007, Dhaka, Bangladesh.
- (26) Reviewer, Proceedings of the 3rd BSME-ASME International Conference on Thermal Engineering 20-22 December, 2006, Dhaka, Bangladesh.
- (27) Reviewer, Proceedings of the Sixth International Conference on Mechanical Engineering, 28-30 December 2005, Dhaka, Bangladesh.
- (28) Member, Publication Committee, “Sixth International Conference on Mechanical Engineering”, 28-30 December 2005, Dhaka, Bangladesh.
- (29) Member, Publication Committee, “Third International Conference on Fluid Mechanics and Heat Transfer”, BUET, Dhaka, Bangladesh, December 15-16, 1999.
- (30) 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.
- (31) Member, Publication Committee, “Second International Seminar on Fluid Mechanics and Heat Transfer”, BUET, Dhaka, Bangladesh, December 17-18, 1997.
- (32) 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 Team Leader for Energy Audit of "Millenium Corporate Branch Trust Bank Limited Bir Shresta Shaheed Jahangir Gate, Dhaka-1206", in Cooperation with Sustainable and Renewable Energy Development Authority (SREDA) in January 2018.
- (2) Worked as a Consultant of "Technical feasibility checking of Automatic Tracking System for Solar PV Panel for Lumenizer Energy", a consultancy work carried out by the Dept. of Mech. Engg., BUET, 2017.
- (3) 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.
- (4) 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.
- (5) Worked as a Consultant of "Development of Renovation of Air-conditioning 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 18<sup>th</sup> 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 Narayangoj 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 Pre-stressed 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.



**Member of Different Committee of BUET**

- (1) Project Director, Technology Transfer Office at BUET, HEQEP Sub-Project, CP-4020, 2017-2018.
- (2) Member, Finance Committee, BUET, 2018-2022.
- (3) Member-Secretary, Committee for Advanced Studies and Research (CASR), 4<sup>th</sup> December 2022 to date.
- (4) Member, Library Development Committee, 2022 to date.
- (5) Member of The Sectoral Committee (SC) for engineering programs under Mechanical Engineering Sector, BOARD OF ACCREDITATION FOR ENGINEERING AND TECHNICAL EDUCATION (BAETE).

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

- (6) Member, Boiler Inspector Examination Committee, Chief Boiler Inspector Office, Shilpa Bhaban, Dhaka (2012-2014).
- (7) Member, Selection Board for the appointment of the Director (Technical) of the Rural Power Company Ltd. (RPCL) (2012).
- (8) Electro-mechanical Engineering Adviser, Jibon Bima Corporation, Dhaka-1000 (2011-2012).
- (9) Member, Pre-shipment Inspection Committee of the Greater Rangpur Agriculture & rural Development Project, Department of Agriculture Extension (DAE), Khamarbari, Dhaka-1215(2011-2012).
- (10) Member, Tender Evaluation Committee (Technical) of the CID Police, Dhaka, Bangladesh (2014).
- (11) BUET Delegate (Mechanical), Dhaka City Corporation, Dhaka-1000 (2011-2012).

**Supervision Thesis / Design Project at undergraduate Level:**

<b>Title of the Thesis</b>	<b>Year</b>
1. Conjugate Natural Convection and Entropy Generation inside a Hollow Fin under the Influence of a Magnetic Field along with Joule Heating	2024
2. Numerical Study of mixed convection through a vented Triangular Solar Collector Filled with Water based Hybrid Nanofluid	
3. Numerical Analysis of Conjugate Mixed Convection Through a Vented Square Chamber with Heat Generating and Conducting	

<p>Rotating Circular Cylinder</p> <p>4. Numerical Analysis of Conjugate Magneto hydrodynamic Natural Convection in an M-Shaped cavity equipped with a Fin and filled with Nanofluid</p> <p>5. Machine Learning Analysis of MHD Mixed Convection in a Ferrofluid filled vented cavity with Heat Generating Rotating Cylinder</p> <p>6. Analysis of Mixed Convection in A L Shaped Enclosure Separated By A Nanofluid and Nanofluid saturated Porous Layer with an Inner Adiabatic Rotating Cylinder</p>	
<p>7. Thermal Performance Investigation of Hybrid Nanofluid Flowing through a Heat Exchanger Fitted with Multiple Pairs of Helical Twisted Tape</p> <p>8. A Study of the thermal performance in a converging diverging microchannel heat sink with triangular ribs</p> <p>9. Thermal investigation of multiple vent based battery thermal management system</p> <p>10. Numerical Investigation on the Thermal Performance of Double Tube Heat Exchanger with Sinusoidal Shaped Inner Pipe</p> <p>11. Numerical Investigation of heat transfer and flow characteristics of pyramidal shaped dimpled tubes</p> <p>12. MHD Natural Convection in Square Cavity filled with Nano-Encapsulated Phase Change Materials (NEPCMs) with Two Discrete Heat Sources</p> <p>13. Numerical Investigation of MHD Mixed Convection and Entropy Generation Inside a Square Vented Cavity Filled with Nanofluid with the Effect of Joule Heating, including a Heat Conducting Rotating Circular Cylinder at the Centre</p>	2023
<p>14. Numerical investigation of mixed convection of non-Newtonian fluid in a trapezoidal cavity in the presence of a rotating heated</p>	2022

<p>cylinder under porous medium</p> <p>15. Numerical Analysis of heat transfer performance of non-Newtonian Nano-fluid in a rectangular microchannel with trapezoidal ribs different upstream angles partially vented square cavity in the presence of a rotating</p> <p>16. Numerical investigation of thermo hydraulic performance for a Nano fluid in a CPU heat sink with variable shape of grooves</p>	
<p>17. Mixed convection of non-Newtonian fluids in a driven with corrugated vertical wall and two localized heat sources</p> <p>18. Study of boundary layer flow over a moving flat plate in jeffery fluid with newtonian heating</p> <p>19. Conjugate mixed convection flow of gallium in a</p> <p>20. Similation of evaporation boosted convective heat transfer using nanofluid</p>	2021
<p>21. Design, Fabrication and Performance Test of Gorlov Helical Turbine in The context of Bangladesh</p> <p>22. Design, Fabrication and Performance Test of Hybrid Savonius-Darrieus Vertical Axis Wind Turbine for Small Scale Power Generation in Bangladesh</p> <p>23. Computational Modeling of Fire and Smoke Propagation within an Academic Building in Bangladesh.</p> <p>24. Performance Study of Binary Refrigerant Mixtures by using Aspen HYSYS</p>	2019
<p>25. Effect of magnetic field on mixed convection in a C-shaped cavity filled with ferrofluid with rotating circular cylinder in different position with heated intruded portion.</p> <p>26. Heat Transfer Enhancement in Shell and Tube Heat Exchanger by Using <math>\text{Al}_2\text{O}_3</math>/Water and <math>\text{TiO}_2</math>/Water Nanofluid.</p> <p>27. Numerical Study of Micro-channel Cross Flow Heat Exchanger</p>	2018

using Nanofluids	
28. Numerical Study of Double Diffusive Natural Convection in Double Slope Solar Still	
29. Analysis of solar thermal storage system based on phase changing material and its module geometry 30. Power generation using waste heat by organic ranking cycle for different working fluids 31. Feasibility study of implementation of vapor absorption chiller in central auditorium by utilizing the exhaust gas from BUET power plant. 32. Mathematical analysis of a solar tower power plant with modified design 33. Numerical Analysis of heat transfer characteristic of MEMS using Nanofluids. 34. Buckling and aerodynamic analysis of a new wind turbine tower by numerical simulation. 35. On the impact of gorlov helical turbine for small scale electricity generation in Bangladesh.	2017
36. Numerical Study of Nanofluid Mixed Convection in Two Sided Lid Driven Cavity Including Discrete Heat Sources and a Rotating Cylinder. 37. Numerical Study of Magneto-Hydrodynamic Mixed Convection of Nanofluid (Cu-Water) in Lid Driven Skewed Enclosure with Circular Rotating Element Inside. 38. Mixed Convection & MHD Effect Analysis in Lid-Driven Cavity with Sinusoidally Curved Bottom Wall Using CNT-Water Nanofluid in a Porous Medium.	2016
39. Biogas Production from Tannery Wastage using Mesophilic Anaerobic Digestion Process.	2015

<p>40. Measurement of Calorific values of Tannery Wastages Containing low and high chromium and raw fleshy Wastages using Bomb Calorimeter.</p> <p>41. Optimizing the Ventilation m using Numerical Analysis to Ensure Desired Temperature and Waste Heat Recovery in Large Industrial Hall.</p>	
<p>42. Study of Magneto-hydrodynamic Pump: Analytical Approach</p> <p>43. Constant Pitch Propeller Design for low Subsonic Airplane</p> <p>44. CFD Analysis of an Aero plane Wing of NACA 4412 Aerofoil</p>	2014
<p>45. Design of a Micro Fluidic Cooling system.</p> <p>46. Numerical analysis of pulsatile blood flow and vessel wall mechanics in different degrees of stenoses.</p> <p>47. Experimental Analysis of Savonius Rotor with four twisted blades: Performance &amp; Aerodynamic characteristics.</p>	2013
<p>48. Design of a Micro Fluidic Cooling system.</p> <p>49. Numerical analysis of pulsatile blood flow and vessel wall mechanics in different degrees of stenoses.</p> <p>50. Experimental Analysis of Savonius Rotor with four twisted blades: Performance &amp; Aerodynamic characteristics.</p>	2012
<p>51. Atmosphere Reentry Simulation of Space Shuttle</p> <p>52. Interaction between Natural Convection and Radiation in Circular and Arc Cavity</p> <p>53. Numerical Analysis of Pulsating Blood Flow in a Human Coronary Artery</p> <p>54. Modeling of Blood Flow and Heat Transfer Trough Human Vein</p> <p>55. Numerical Analysis of Micro Heat Pipe</p> <p>56. Load Alleviation on Wind Turbines in Variable Flow and Different Airfoil Geometry</p>	2009

<p>57. Analysis of Propeller Fan in Compartment of Household Refrigerator</p> <p>58. Passive Shroud Cooling Concept For HP Turbine CFD Based Approach</p> <p>59. Numerical Study of Evaporation Heat Transfer Characteristics of Refrigerant R-134a in Horizontal Small Tube.</p> <p>60. CFD Analysis of Free Convection and Mass Transfer Flow Near a Vertical Plate</p>	
<p>61. Mixed Convection in a Rectangular Cavity with Backward Facing Step.</p> <p>62. Micro Fluid Dynamics in Two Dimensional Engineered Cell Systems in Bioreactors.</p> <p>63. Analysis of Propeller Fan In Compartment of Household Refrigerator</p> <p>64. CFD Analysis of Effect of Height of North Wall and Width and Length on Evaporation in a Solar Still.</p> <p>65. Computational Analysis of an Airfoil in Ground Effect</p>	2008
<p>66. Effect of Radiation on Free Convection Flow on a Sphere with Isothermal Surface and Uniform Surface Heat Flux.</p> <p>67. Thermal Conductivity Measurement of Insulating Material and Error Minimization</p> <p>68. Design and Fabrication of a Constant Temperature Bath</p> <p>69. Moisture Permeability Measurement</p> <p>70. Effect of Channel Inclination Angle on Natural Convection Heat Transfer</p>	2007

### **Supervision of Completed Graduate Research Work:**

<b>Level (Masters / Ph.D.)</b>	<b>Thesis Title</b>	<b>Year</b>
M. Sc. in Mechanical Engineering	Intelligent computational analysis of magnetohydrodynamic double diffusive mixed convection in nanofluids	2023
M. Sc. in Mechanical Engineering	Parametric study for performance of small size hermetic reciprocating compressors	2022
M. Sc. in Mechanical Engineering	Thermal Performance analysis of different multi layer phase change materials based thermocline thermal energy storage systems	2022
M.Sc. in Management of Technology, IAT, BUET	Technology Assessment and Technology Transfer of “3D Printing Technology” in Bangladesh	September 2020
M.Sc. in Management of Technology, IAT, BUET	Assessment of Contamination Status and Potential Health Risk of Heavy Metals in Soil and Vegetables of Savar Tannery Adjacent Area	August 2020
M.Sc. in Management of Technology, IAT, BUET	Formulation of relevance tree scenario generation for successful implementation of Hi-Tech and software technology park in Bangladesh	September 2020
M.Sc. in Management of Technology, IAT, BUET	Feasibility Assessment of Implementing GSM or DCS Frequency Band for 3G Wireless Network in Bangladesh.	April 2019
M.Sc. in Management of Technology, IAT, BUET	Assessment of Brick Kiln Technologies of Bangladesh	March 2019
M.Sc. in Management of Technology, IAT, BUET	Appraisal of detailed area plan and development of a revised conceptual plan for Dhaka City	March 2019
M.Sc. in Management of Technology, IAT, BUET	Formulation of a process to improve PCE & reduction waste of a lead acid battery industry by using lean six sigma model.	February 2019
M. Sc. in Mechanical Engineering	Forced Convection Heat Transfer With Nanofluids in Flat Plate Solar Collector	2015
M. Sc. in Mechanical Engineering	Mixed Convection in Trapezoidal Cavity at Various Aspect Ratios with a Moving Lid	2009
M. Sc. in Mechanical Engineering	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. in Mechanical Engineering	Natural Convection Heat Transfer from Discrete Heat Sources in a three Dimensional Enclosure	2005

\* As a Co-Supervisor


## LIST OF PUBLICATIONS

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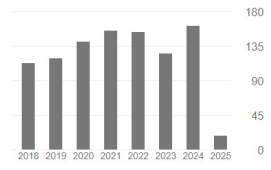
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TITLE	CITED BY	YEAR
<a href="#">Performance investigation of an automotive car radiator operated with nanofluid-based coolants (nanofluid as a coolant in a radiator)</a> KY Leong, R Saidur, SN Kazi, AH Mamun Applied Thermal Engineering 30 (17-18), 2685-2692	666	2010
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Citations	2040	757
h-index	20	14
i10-index	34	17



### (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, DOI: 10.5772/21108.

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- (23) **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.
- (24) **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 13<sup>th</sup> Asian Congress of Fluid Mechanics, 17-21 December 2010, Dhaka, Bangladesh
- (25) **Mohammad Arif Hasan Mamun**, Shuichi Nagata, Kazutaka Toyota, Yasutaka Imai and Toshiaki Setoguchi, "*Wave Energy Utilization: Recent Trend*," Proceedings of the 13<sup>th</sup> Asian Congress of Fluid Mechanics, 17-21 December 2010, Dhaka, Bangladesh
- (26) M. M. Rahman, Saidur Rahman and **M. A. H. Mamun**, "*Effect of Nanofluid on Mixed Convection in a Ventilated Enclosure*," Proceedings of the 13<sup>th</sup> Asian Congress of Fluid Mechanics, 17-21 December 2010, Dhaka, Bangladesh
- (27) 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*", 17<sup>th</sup> Australasian Fluid Mechanics Conference Auckland, New Zealand, 5-9 December 2010.
- (28) **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 & 9<sup>th</sup> joint Young Reasearcher Forum, August 30-September 1, 2010, Busan, Korea.
- (29) 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.

- (30) **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 8<sup>th</sup> International Conference on Mechanical Engineering, 26-28 December, 2009, Dhaka, Bangladesh (ICME09-TH-21).
- (31) 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 8<sup>th</sup> International Conference on Mechanical Engineering, 26-28 December, 2009, Dhaka, Bangladesh (ICME09-TH-10).
- (32) Naheed Ferdous, Md. Tofiqul Islam, **Md. A. Hasan Mamun**, “*Natural Convection and Radiation in Circular and Arc Cavity*”, Proceedings of the 8<sup>th</sup> International Conference on Mechanical Engineering, 26-28 December, 2009, Dhaka, Bangladesh (ICME09-TH-02).
- (33) M.N. Hossain, **M.A.H. Mamun** and S. Saha, “*Mixed Convection in a Trapezoidal Cavity with Moving LID an Top wall and Heating from Below*”, Proceedings of the International Conference on Chemical Engineering 2008, ICChE 2008, 29-30 December, Dhaka, Bangladesh
- (34) **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.
- (35) 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.
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- (37) **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).
- (38) 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 11<sup>th</sup> Annual Paper Meet, APM 25-26 December 2006, Dhaka.
- (39) 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.

- (40) 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.
- (41) 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
- (42) 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.
- (43) **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), 22<sup>nd</sup> -25<sup>th</sup> May, 2006, Kuala Lumpur, Malaysia, Organized by –The Institution of Engineers, Malaysia.
- (44) 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), 22<sup>nd</sup> -25<sup>th</sup> May, 2006, Kuala Lumpur, Malaysia, Organized by –The Institution of Engineers, Malaysia.
- (45) Mohammad Ahsan Habib, Md.Rafiqul Islam and **M. Arif Hasan Mamun**, “*Power Generation from Tidal Energy in the Coastal Area of Bangladesh*”, 5<sup>th</sup> International Mechanical Engineering Conference and 10<sup>th</sup> Annual Paper Meet, 30 Sept.-2<sup>nd</sup> October 2005, Dhaka, Bangladesh, Organized by – Mechanical Engineering Division, The Institution of Engineers, Bangladesh.
- (46) Sanchita Amin, Susanjib Sarkar and **Arif Hasan Mamun**, “*Design and Manufacture of Vertical Tube Evaporator for Water Treatment*”, 5<sup>th</sup> International Mechanical Engineering Conference and 10<sup>th</sup> Annual Paper Meet, 30 Sept.-2<sup>nd</sup> October 2005, Dhaka, Bangladesh, Organized by – Mechanical Engineering Division, The Institution of Engineers, Bangladesh
- (47) 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*”, 4<sup>th</sup> International Mechanical Engineering Conference, 28-31 December 2004, Dhaka, Bangladesh.
- (48) **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 12<sup>th</sup> International Symposium on Applications of Laser Techniques to Fluid Mechanics, 12-15 July 2004, Lisbon, Portugal.

- (49) **M. A. H. Mamun**, W. H. Leong, K. G. T. Hollands, & D. A. Johnson, “*Natural Convection Benchmark Experiments Across a Cubical Cavity*”, 2<sup>nd</sup> BSME-ASME International Conference on Thermal Engineering, 2-4 January 2004, Dhaka, Bangladesh.
- (50) **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.
- (51) 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.
- (52) **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.
- (53) **Md. Arif Hasan Mamun**, A. M. Aziz-Ul Huq and M. A. Rashid Sarkar, “*Global Solar Radiation on Horizontal Surface in Dhaka*” 2<sup>nd</sup> International Seminar on Renewable Energy for Poverty Alleviation (ISRERA’99), 26-27 November, 1999, Dhaka, Bangladesh.
- (54) **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*”, 5<sup>th</sup> Annual Paper Meet, Mechanical Engineering Division, 5-7 November, 1998, Organized by – Chittagong Centre, Institution of Engineers, Bangladesh.
- (55) 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 ‘20<sup>th</sup> 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.
- (56) **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.
- (57) 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.

- (58) **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.
- (59) **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/ Seminar attended (as a Resource Person):**

- (1) **Mohammad Arif Hasan Mamun**, "*Efficiency Estimate and Efficient Boiler Operation* " Training Workshop on "Boiler Operation, Maintenance and Safety" organized by Directorate of Continuing Education (DCE), Bangladesh University of Engineering and Technology (BUET), Dhaka-1000, at Lecture room, DCE, 3<sup>rd</sup> Floor, Institute Building, BUET, Batch 01 (25-27 August 2023) & Batch 02 (01-03 September 2023).
- (2) **Mohammad Arif Hasan Mamun**, "Basic understanding of elevator system" Training Workshop on Lift, Boiler and Electrical Safety for Officials of Bangladesh Fire Service and Civil Defense (BFSCD) Organized by DCE, BUET, Dhaka, at Lecture room, DCE, 3<sup>rd</sup> Floor, Institute Building, BUET, 24-26 September 2018.
- (3) **Mohammad Arif Hasan Mamun**, "*Efficiency Estimate and Efficient Boiler Operation* " Training Workshop on "Boiler Operation, Maintenance and Safety" organized by Directorate of Continuing Education (DCE), Bangladesh University of Engineering and Technology (BUET), Dhaka-1000, at Lecture room, DCE, 3<sup>rd</sup> Floor, Institute Building, BUET, 18-21 July 2018.
- (4) **Mohammad Arif Hasan Mamun**, "*Efficiency Estimate and Efficient Boiler Operation* " Training Workshop on "Boiler Operation, Maintenance and Safety" organized by Directorate of Continuing Education (DCE), Bangladesh University of Engineering and Technology (BUET), Dhaka-1000, at Lecture room, DCE, 3<sup>rd</sup> Floor, Institute Building, BUET, 26-28 February 2018.
- (5) **Mohammad Arif Hasan Mamun**, "*Efficiency Estimate and Efficient Boiler Operation* " Training Workshop on "Boiler Operation, Maintenance and Safety" organized by Directorate of Continuing Education (DCE), Bangladesh University of Engineering and Technology (BUET), Dhaka-1000, at Lecture room, DCE, 3<sup>rd</sup> Floor, Institute Building, BUET, 4-6 December 2018.
- (6) **Mohammad Arif Hasan Mamun**, "*Energy Efficiency Awareness and Its Impact*" Seminar on "Technical Best Practices in Industrial Energy Efficiency" Jointly

Organized by The Energy Efficiency Engagement (3e) project in collaboration with BD Technology funded by The Nordic Chamber of Commerce and Industry in Bangladesh (NCCI) on 29th July 2017 at Hotel The Peninsula, Chittagong.

- (7) **Mohammad Arif Hasan Mamun**, Key note Speaker to the session titled: "*National Energy Efficiency Policy for Sustainable Economic Growth*" Seminar on 'International Energy Efficiency Day 2017' Organized by the Ministry of Power, Energy and Mineral Resource (MoPEMR), Government of Bangladesh on 5th March 2017 at Radisson Blue Dhaka Water Garden, Dhaka, Bangladesh
- (8) **Mohammad Arif Hasan Mamun**, "*Energy Audit: Major Challenge in Bangladesh Aspect*" Workshop on "*Energy Audit*" organized by Sustainable and Renewable Energy Development Authority (SREDA) on 21st January 2017 at the Chandana Hall of SREDA, IEB Building, Ramna, Dhaka.
- (9) **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.
- (10) **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.
- (11) **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.
- (12) **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.
- (13) **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.
- (14) **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.
- (15) **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.

- (16) **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.
- (17) **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.
- (18) **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.
- (19) **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.
- (20) **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.
- (21) **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,.
- (22) **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.
- (23) **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 Fleasy 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).

**(g) 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) Energy Audit Training of Trainer in South Korea, Organized by KEA-ADB partnership, 19-27 Nov 2018.
- (2) Training Program on “Intellectual Property for Least Developed Countries; Industrial Property and Technological Capacity Enhancement” held on April 8th – 27th, 2018 at The Swedish Patent and Registration Office, Stockholm, Sweden, Organized by WIPO & SIDA.
- (3) High-Level Policy Workshop on Policy Issues on “*Energy Efficiency and Conservation Promotion in Bangladesh*” in cooperation with UNDP and KEA, Organized by Sustainable and Renewable Energy Development Authority (SREDA), on 18 January 2018 at “Gomoti” multipurpose conference hall of SREDA, IEB Building (9th floor), Ramna, Dhaka-1000.
- (4) Training Program on “*Energy Audit Skill Development*” in cooperation with UNDP and KEA, Organized by Sustainable and Renewable Energy Development Authority (SREDA), held on 15 to 17 January 2018 at “Chandana Hall” of

SREDA, IEB Building (9th floor), Ramna, Dhaka-1000.

- (5) The Stakeholder Workshop on "*Draft Energy Audit Regulation*" organized by Sustainable and Renewable Energy Development Authority (SREDA) at the Multipurpose Conference Hall (Gomoti) of SREDA, IEB Building, Ramna, Dhaka on 18th January 2017.
- (6) Workshop on "*Measurement and Verification for 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.
- (7) 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,
- (8) 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.
- (9) Energy Auditor Certification Program through the Association of Energy Engineer (AEE) under CCEB-USAID, 19-21 Aug, 2013, Dhaka, Bangladesh
- (10) Short Course on "Signal Analysis with Application in Sound and Vibration", Organized by BUET-SIDA Project 14-15<sup>th</sup> June, 2011, BUET, Dhaka-1000.
- (11) Workshop on Numerical Weather Prediction, 12-15<sup>th</sup> December, 1998, BUET, Dhaka-1000.
- (12) Workshop on Prospect of Small Hydropower Generation in Bangladesh, 18-19<sup>th</sup> May, 1998, BUET, Dhaka-1000.

#### **EXPERIENCE IN IMPLEMENTING PROJECT/RESEARCH**

TITLE OF THE PROJECT/ RESEARCH ACTIVITY	DONOR/ SPONSOR	POSTION IN THE PROJECT	YEAR	
			FROM	TO
Establishment of Technology Transfer Office (TTO) in BUET	HEQEP Sub-Project, CP-4020, UGC, MoE, GoB. (1,99,00,000 BDT)	Sub-Project Manager (SPM)	2017-2018	
Development of Research Facilities on Biomedical Fluid Flow Phenomena	HEQEP Sub-Project CP2099, UGC, MoE, GoB. (2,93,98,000 BDT)	Deputy Sub-Project Manager (DSPM)	April 2012-March 2014	

Mohammad Arif Hasan Mamun  
[Signature]

Date: 04/ 02/ 2025 .  
[Day/Month/Year]