Curriculum Vitae of Professor Dr. M Muzibur Rahman [Commodore M Muzibur Rahman, (E), psc, PhD, BN (Retd)]

PERSONAL INFORMATION

- 1. Name: M Muzibur Rahman
- 2. National ID: 2650898488124/5509655550
- 3. Date and Place of Birth: 16 may 1965, Barisal, Bangladesh.
- 4. Father's Name: (Late) M A Ali Hawlader
- 5. Mother's Name: (Late) Maleka Begum



- 6. Present Address: Flat B1, House 81, Road 23, Block A, Banani, Dhaka-1213
- 7. Permanent Address: Vil- Chandpura, P.O. Talukdar Hat, Barisal Sadar, Barisal
- 8. Contact information: email- <u>muzib1061@gmail.com</u> Mobile- +8801715112238

ACADEMIC QUALIFICATIONS

9. Educational Background:

- a. Degree: PhD (Mechanical Engineering)
 Institute and year: BUET, 2021
 Result: CGPA 4.0 (in scale of 4.00)
 Title of dissertation: Mechanical Behavior of Solder Affected Copper Bulk Subjected to
 Work Hardening and Thermal Treatment
- b. Degree: Master of Business Administration (Finance)
 Institute and year: NUB, 2013
 Result: CGPA 4.0 (in scale of 4.00)
 Title of dissertation: Study on Determinants of Working Capital Management
 of Domestic Private Banks in Bangladesh
- c. Degree: M Sc Engineering (Mechanical) Institute and year: BUET, 2009 Result: CGPA 3.75 (in scale of 4.00) Title of dissertation: Analysis of a Guided Deep Beam of Composite Materials
- d. Degree: Master in Defense Studies
 Institute and year: NU, 2003
 Result: Second Class
 Title of dissertation: Challenges and Prospects of Energy Security in Bangladesh

- e. Degree: Post Graduation Diploma (Marine Engineering Specialization) Institute and year: CMAT, Lonavla, India, 1999 Result: A Grade
- f. Degree: Post Graduation Diploma (Marine Propulsion Control Technology) Institute and year: IAT, Pune, India, 1998 Result: A+ Grade
- g. Degree: B Sc Engineering (Naval Architecture & Marine Engineering) Institute and year: BUET, 1991 Result: First Class Title of dissertation: Study on the Slipway Design for End-Lunching of Vessels in Bangladesh Perspective
- h. Degree: H S C
 Institute and year: B M College, Barisal, 1982
 Result: First Division
- Degree: S S C Institute and year: CWK High School, Barisal, 1980 Result: First Division

10. Professional Courses/Trainings

- a. Degree: Advanced Security, 2013
 Institute: United Nations (UN) Department of Safety and Security, Sudan
- b. Degree: Potential Observer and Staff Officers' Course, 2006 Institute: BIPSOT, Rajendrapur, Gazipur, Bangladesh
- c. Degree: Certificate de Langue Francaise, 2005
 Institute: Ambassade de France a Dacca, Bangladesh
- d. Degree: Public Procurement Regulation (PPR), 2004 Institute: Engineering Staff College, Bangladesh
- e. Degree: psc, 2003 Institute: Defence Services Command & Staff College (DSC&SC), Mirpur, Dhaka
- f. Degree: AutoCAD (Ship Design), 2001
 Institute: Advanced Centre for Courses in Engineering & Social Science, Dhaka
- g. Degree: Marine Gearbox Maintenance & Overhauling, 1997 Institute: ZF Train Centre, Friedrichshafen, Germany
- h. Degree: Marine Diesel Engine Maintenance and Overhauling, 1996 Institute: Paxman Training Centre, Colchester, UK
- Degree: Junior Staff Course (JSC), 1995
 Institute: Bangladesh Naval Academy, Chittagong

j. Degree: Intensive Course in Basic English, 1991 Institute: Department of English, University of Dhaka

AWARDS/MEDALS

- 11. Received following awards of excellence:
 - a. The best faculty (Mechanical) award in research at MIST in successive three years (2017, 2018 and 2019).
 - b. Chancellor's Gold Medal for CGPA 4.0 (out of 4.0) in MBA with Major in Finance.
 - c. "Shri Baddri Prasad Shrivastava Trophy" for standing first with distinction in Marine Propulsion Control Technology Course (MPCTC) in India.

COMPUTER SKILLS

12. Programming

- a. FORTRAN 4 and 90
- b. MATLAB
- c. C and C++

13. Application Software

- a. MS Word, Excel, Project, Power point
- b. AutoCAD
- c. MAXURF
- d. Rhinoceros
- e. ANSYS

PROFICIENCY IN LANGUAGES

14. The language proficiency is listed below:

Language	<u>Speaking</u>	Reading	<u>Writing</u>
Bangla	Fluent (Native)	Excellent	Excellent
English	Fluent	Excellent	Excellent
Arabic	Poor	Good	Fair
French	Poor	Poor	Poor

MEMBERSHIP

- 15. Have membership in professional organizations as follows:
 - a. Fellow, Institution of Engineers Bangladesh (IEB), Mechanical division.
 - b. Member, National Oceanographic and Maritime Institute (NOAMI) Bangladesh.
 - c. Member, Bangladesh Society of Mechanical Engineers (BSME).
 - d. Member, Alumni BUET.
 - e. Member, Bangladesh NAME Association.

EMPLOYMENT RECORD (33 years of Experiences)

16. Academic Experiences (16 years and 09 months)

- a. Professor, Department of Mechanical Engineering and Director Foreign Affairs & Public Relations (FA&PR), Sonargaon University, Dhaka, July 2023 onwards (03 month).
- b. Professor, Bangabandhu Sheikh Mujibur Rahman Maritime University for the programs of: (i) Coastal and River Engineering and (ii) Naval Architecture & Offshore Engineering, January 2022 to July 2023 (01 year and 07 months).
- c. Professor, Exam Controller, Head and Dean, Military Institute of Science & Technology (MIST), Mirpur, Dhaka-1216, December 2015 to January 2022 (06 years and 02 months).
- d. Research fellow, Department of Mechanical Engineering, Bangladesh University of Engineering & Technology (BUET), October 2006 to February 2009 (02 years and 04 months).
- e. Researcher, DSC&SC, National University, April 2002 to February 2003 (11 months).
- f. Senior Instructor (Associate Professor) in Engineering and NBCD (Nuclear Biological and Chemical Defense including Fire Fighting & Damage Controls), Operational Sea Training Guide (OSTG), Bangladesh Navy, July 2000 to April 2002 (01 year and 09 months).
- g. Senior Instructor (Associate Professor) in Technical Training Institute, BNS SHAHEED MOAZZAM, Kaptai, August 1999 to July 2000 (01 year).
- h. Researcher, Centre for Marine Engineering & Technology (CMET), India, October 1997 to August 1999 (01 year and 10 months).
- i. Instructor (Asst. Professor) in Technical Training Institute, BNS SHAHEED MOAZZAM, Kaptai, January to July 1995 (07 months).

j. Teacher's Assistant, Department of Naval Architecture & Marine Engineering, Bangladesh University of Engineering & Technology (BUET), April to September 1991 (06 months).

17. Admin/Professional Experiences (20+ years)

- a. Director Foreign Affairs & Public Relations (FA&PR), Sonargaon University, Dhaka, July 2023 onwards (August 2023 onward).
- b. Expert Consultant on feasibility study for development of international standard Green Recycling Shipyard at Taltali, Barguna under Ministry of Industry (May 2023 onward).
- c. Director, Polar Ice Marine Services Ltd. (PIMSL) (May 2021 to September 2023): Conducting board meetings and providing policy guidelines for business development and promotion.
- d. Senior Consultant, BN Dockyard Design Team (Sep 2021 to Jun 2022): Actively involved in design, machinery specifications and preparing tender documents.
- e. Chief of Consulting Team (Dec 2018 to May 2021): Project supervision for the construction of 20 Dredgers and 15 ancillaries of BIWTA in Karnafuli Shipbuilders Ltd.
- f. GM (Planning, Production and Admin), Dockyard & Engineering Works, Narayanganj (Nov 2014 to Dec 2015): Looking after all workshops, shipbuilding projects, general engineering, ship repair/maintenance works, administration, handling finance, etc.
- g. Commander and LO of MILOB, UNAMID, Darfur, Sudan (Nov 2013 to Nov 2014): In charge of team site for military observers to establish peace/security at the border of Sudan and Chad, Liaison with UNAMID HQ, administration of MILOBs.
- h. GM (Production) and DGM (Engineering and Admin), Khulna Shipyard, Khulna (Feb 2011 to Nov 2013): Looking after all workshops, general engineering, shipbuilding, ship repair/maintenance works, administration, etc.
- i. Engineer Officer (Chief Engineer) in 3 BN Frigates such as BNS OSMAN, BNS ABU BAKR and BNS UMAR FAROOQ (Dec 2008 to Feb 2011): Looking after general engineering, ship's operations, maintenance and repair, administration engineering department, etc.
- j. Deputy Director Naval Engineering (DDNE), NHQ, Dhaka (Oct 2006 to Dec 2008): Repair and renovation projects, procurement of engineering items for navy, docking schedule planning and control, etc.
- k. Staff Officer (Repair), Directorate of Naval Engineering, NHQ, Dhaka (Feb 2003 to Oct 2006): Marine engineering, procurement of engineering items for BN fleet, docking schedule planning and control, etc.

- 1. Staff Officer (Engineering), OSTG, Chittagong (Jul 2000 to Apr 2002): Marine engineering training, procurement of engineering items for operational training in navy, enforcement of fire-fighting equipment of BN ships and survival at sea, etc.
- m. OIC Engineering Workshop, MTO, Instructor, Divisional Officer at BNS SHAHEED MOAZZAM, Kaptai (January to July 1995 and Aug 1999 to Jul 2000): Administration of workshop technicians, procurement and maintenance of workshop machinery, operations and maintenance of vehicles, etc.
- n. Engineer Officer, BN Missile Craft Squadron (Mar 1997 to Dec 1997): Renovation of BNS ANIRBAN at Khulna Shipyard and operations, maintenance and repair of BN Missile Boats, administration engineering department, etc.
- o. Engineer Officer, BN OPV, BNS S R AMIN (September 1994 to January 1995 & July 1996 to Mar 1997): general engineering, ship's operations, maintenance and repair, administration engineering department, etc.
- p. Engineer Officer, BN Submarine Chaser, BNS NORBHOY (Dec 1995 to Jul 1996): general engineering, ship's operations, maintenance and repair, administration engineering department, etc.
- q. Project Director/Project Engineer in the constructions of 28 merchant ships/military craft and renovation of one submarine chaser & two missile craft.
- r. Assistant Engineer (March 1991 to January 1993): Bangladesh Steel & Engineering Corporation (BSEC) under the Ministry of Industry

18. Thesis/Research Supervision

- a. Under-graduation: Supervised thesis of 39 UG students (32 of MIST and 7 of BSMRMU) on various topics mainly on mechanics/structure/mechanical behavior of materials, marine propulsion and management aspects.
- **b. Post-graduation:** 02 x M.Sc. in Aeronautical Engineering and 01 x M.Sc. in Naval Engineering of MIST. Moreover, thesis of one student for MSc in Coastal & River Engineering of BSMRMU is ongoing.

19. Conducted Courses in Under-Graduation Programs

Theoretical Courses	Sessional Courses		
Bangladesh Studies	Workshop Technology		
Thermal Engineering	Strength of Materials		
Mechanics of Structure/Mechanics of	Shipbuilding Materials		
Materials			
Shipbuilding Materials and Metallurgy	Ship Design Project		
Marine Engineering (Diesel Engine,	Numerical Methods using		
GT, Refrigeration, etc)	MATLAB		
Theory of Machine and Machine	Marine Engineering sessional		
Element Design			

Composite Materials	Measurements & Instrumentation
Numerical Methods	Conduction & Radiation HT
Marine Auxiliary Machinery	
Power and Propulsion	
Maritime Economics	
Industrial Management	

20. Conducted Courses in Post-graduation

- a. Surface Science and Engineering
- b. Applied Mechanics of Composite Materials
- c. Nano-composites
- d. Advanced Engineering Materials
- e. Port Planning and Inland Water Transport
- f. Marine and Offshore Corrosion
- g. Hydrodynamic Loading of Marine Structures

RESEACRH PUBLICATIONS

- 21. The research works have been published in various journals/conference proceedings over the world and their list is appended below:
 - a. **M Muzibur Rahman** and S Reaz Ahmed, "Toward the Exact Elasticity Solution of a Deep Beam with Guided ends", Proceedings of the 4th BSME-ASME International Conference on Thermal Engineering, 2008, pp. 889-894.
 - b. **M Muzibur Rahman**, "An Outlook on Development of Shipbuilding in Bangladesh", MIST Seminar, April 2016.
 - c. **M Muzibur Rahman**. "An Appraisal of Shipbuilding Prospects in Bangladesh", The 10th International Conference on Marine Technology, Procedia Engineering 194 (2017) 224 – 231. https://doi.org/10.1016/j.proeng.2017.08.139
 - d. **M Muzibur Rahman** and S Reaz Ahmad. "Displacement Potential Solution of a Guided Deep Beam of Composite Materials under Symmetric Three-Point Bending", AIP Conference Proceedings 1919, 020001 (2017). https://doi.org/10.1063/1.5018519
 - e. **M Muzibur Rahman**, Rajia Sultana Kamol and Reyana Islam, "Structural Analysis of a Ship on Global Aspect Using ANSYS", AIP Conference Proceedings 1919, 020008 (2017). https://doi.org/10.1063/1.5018526
 - f. M Muzibur Rahman, A H Yusuf Mridha and Kazi Sakib Ahsan, "Selection of Propulsive Machinery for Repowering of an Old Patrol Craft – A Case Study", AIP Conference Proceedings 1919, 020027 (2017). https://doi.org/10.1063/1.5018545

- g. M Muzibur Rahman, Faysal Khan, M S Kaiser and S Reaz Ahmed, "Effect of Thermal Ageing on Mechanical Behavior of Synthetic and Natural Rubber Dominated Short Flat Bars", The 12th International Conference on Mechanical Engineering, AIP Conference Proceedings 1980, 030021 (2018). https://doi.org/10.1063/1.5044300
- M Muzibur Rahman, M. Abu Sufian, R Al Shahid, M S Kaiser and S Reaz Ahmed, "Effect of hot and cold rolling on electromechanical properties of a commercial high conductive metallic material", The 11th International Conference on Marine Technology MARTEC 2018 held on 13-15 Aug 2018 in Malaysia and published by UTM.
- i. Nafisha Nubayaatt Haq, **M Muzibur Rahman** and M Munir Hassan, "Development of suitable design for fishery research vessel for the contribution to the blue economy of Bangladesh", The 11th International Conference on Marine Technology MARTEC 2018 held on 13-15 Aug 2018 in Malaysia and published by UTM.
- j. M Muzibur Rahman, M S Kaiser and S Reaz Ahmed, "Effect of thermal ageing on the tensile properties of hot and cold rolled commercial high conductive metal and its alloy", The 8th BSME International Conference on Thermal Engineering held on 19-21 Dec 2018 and published by American Institute of Physics (AIP). AIP Conference Proceedings 2121, 140004 (2019). https://doi.org/10.1063/1.5115955
- k. M Muzibur Rahman, A S M Salin, M Ridoanul Haque, M S Kaiser, and S Reaz Ahmed, "Experimental Investigation of Thermo-Mechanical Properties of Copper Based Marine Propeller Materials", The 13th International Conference on Mechanical Engineering held on 18-20 Dec 2019 and published by American Institute of Physics (AIP). AIP Conference Proceedings 2324(1). https://doi.org/10.1063/5.0038082
- 1. **M Muzibur Rahman**, S Reaz Ahmed and M S Kaiser, "Behavior of Work Hardened SnPb-Solder Affected Copper on Corrosion Resistance in pH Varied Environments", European Journal of Materials Science and Engineering, volume 5 Issue 4, 2020. doi 10.36868/ejmse.2020.05.04.199.
- m. **M Muzibur Rahman** and S Reaz Ahmed, "Corrosion Behavior of Copper Based Heat Exchanger Tube in Waters of Bangladesh Region at Varied Temperature and Flow Velocity", MIST International Journal of Science and Technology (MIJST), Vol 8, issue 2. 2020. MIJST, doi.org/10.47981/j.mijst.08(02)2020.196(15-23).
- n. **M Muzibur Rahman**, S Reaz Ahmed and M S Kaiser, "Corrosion Behavior of Work Hardened Commercial Copper Alloys in the Bay of Bengal Water Environment", 6th International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE), 19-21 Dec 2020.
- M Muzibur Rahman, S N Akash, M Afrin, S Reaz Ahmed and M S Kaiser, "Tribological Behavior of Sn-Doped Copper under Varied Sliding Environments", 6th International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE), 19-21 Dec 2020.

- p. M Muzibur Rahman, S Reaz Ahmed and M S Kaiser, "On the Investigation of Reuse Potential of SnPb-Solder Affected Copper Subjected to Work-Hardening and Thermal Ageing", Elsevier Science Direct - Materials Characterization, volume 172, 2021. doi.org/10.1016/j.matchar.2021.110878
- q. M Muzibur Rahman, S Reaz Ahmed and M S Kaiser, "Thermal Ageing Effect on Electro-Mechanical Properties of Work Hardened High Conductive Copper Based Material", Sustainable Structures and Materials, An International Journal, Volume 3, No 2, 2020. doi.org/10.26392/SSM.2020.03.02.014
- r. M Muzibur Rahman and S Reaz Ahmed, "Dry Sliding Friction and Wear of SnPb-Solder Affected Copper against Stainless Steel Counter Surface", IJMSE. 2021; 18 (4) :1-12. DOI: 10.22068/ijmse.2334
- **s. M Muzibur Rahman** and S Reaz Ahmed, "Effects of work-hardening and post thermal-treatment on tensile behaviour of solder-affected copper". Pro. of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications. 2022;0(0). doi:10.1177/14644207221131878
- t. M Muzibur Rahman, S Reaz Ahmed and M S Kaiser, "Corrosion Behavior of Work Hardened SnPb-Solder Affected Copper in the Bay of Bengal Water Environment", Advances in Materials Science and Engineering, Volume 2022, Article ID 2513391, 14 pages https://doi.org/10.1155/2022/2513391
- **u. M Muzibur Rahman**, Maher Neger Prova, M Abdul Halim and S Reaz Ahmed, "Investigation of Arc Welding Joining Effects on Tensile Behavior of Marine Grade-A Mild Steel", International Conference on Mechanical, Manufacturing and Process Engineering (ICMMPE – 2022), 25 - 26, June 2022.
- v. M Mijanur Rahman and **M Muzibur Rahman**, "Effect of Laser Cutting on Mechanical Performance of Woven Glass Fiber Reinforced Plastic Composites", Materials Today: Proceedings, 2022, doi.org/10.1016/j.matpr.2022.11.327. https://www.sciencedirect.com/ science/article/pii/S2214785322071784.
- W. Md Jalal Uddin Rumi and M Muzibur Rahman, "Prediction and Optimization of Heat Treatment effects on Hardness and Electrical conductivity of Aluminum Composite reinforced with nano Al2O3 Based on Response Surface Methodology", Research on Engineering Structures and Materials, Turkey DOI: http://dx.doi.org/10.17515/resm2023.672ma0127.
- x. M Mijanur Rahman, **M Muzibur Rahman** and A M Shihab Mahin, "Mechanical Performance of Mat Glass Fiber Reinforced Plastic (GFRP) Composites subjected to Laser Cutting", The second ICMEAS, MIST, 8-10 December 2022.
- y. **M Muzibur Rahman,** Maher Neger Prova, M Abdul Halim and S Reaz Ahmed, "Investigation of Arc Welding Joining Effects on Mechanical Properties of Marine Grade-A Mild Steel", MARTEC 2022 held on 21-22 December 2022 and published by Elsevier SSRN. https://dx.doi.org/10.2139/ssrn.4447233
- **z. M Muzibur Rahman,** Saiful Ahmad and Syed Miraj Un Nabi, "Development of Jute Woven Fibre Epoxy Composite and Investigation of Mechanical Properties of Product for Versatile Applications", MARTEC 2022 held on 21-22 December 2022.

- aa. Md Jalal Uddin Rumi and M Muzibur Rahman, "Influence of Process Parameters on Specific Wear Rate of nano Al2O3 reinforced Al Composite Using Taguchi's Technique", Tribologia - Finnish Journal of Tribology. https://doi.org/10.21203/ rs.3.rs-2257726/v1
- **bb.** Md Jalal Uddin Rumi and **M Muzibur Rahman**, "Effect of Heat Treatment on Hardness and Electrical Conductivity of nano Al2O3 reinforced Al MMC", Metal Science and Heat Treatment journal, Springer, Russia. DOI: https://doi.org/10.30906/mitom.2023.7.59-63
- cc. M Muzibur Rahman, "Air Independent Powering for Propulsion and Auxiliaries of Submarines", BSMRMU Journal of Technology.
- dd. M Muzibur Rahman, Raisha Hasan Chowdhury, Tahian Ahmed Rafi and S Reaz Ahmed, "Corrosion Behavior of Scraped Copper in Velocity Varied Inland Water of Bangladesh", ICMMPE 2023 to be held at IUT on 21-22 July 2023.
- ee. Md Jalal Uddin Rumi and **M Muzibur Rahman**, "Influence of Alumina and Zinc Oxide Nanoparticles on Microstructure and Electro-Mechanical Properties of Aluminum Metal Matrix Composites Fabricated by Customized Two-Step Stir Casting Method", Research on Engineering Structures and Materials, Turkey. DOI: http://dx.doi.org/10.17515/resm2023.729ma0404
- ff. **M Muzibur Rahman**, S Reaz Ahmed and M S Kaiser, "Wear Resistance of Sn-Pb Solder Affected Copper against Stainless Steel Surface Subjected to Sea Water Lubrication", Fourth International Conference on Advances in Physical Sciences and Materials 2023 (ICAPSM 2023), Coimbatore, Tamil Nadu, India (Accepted).
- gg. M Muzibur Rahman, M S Kaiser and S Reaz Ahmed, "True stress-strain behavior of Work-hardened Solder affected Copper under Ageing Treatments", 3rd International Workshop on Plasticity, Damage and Fracture of Engineering Materials, 4-6 October 2023, İstanbul, Turkey (Abstract accepted, full paper under review).
- hh. M Mijanur Rahman and **M Muzibur Rahman**, "Characterization and Predictive Modeling of Thermally Aged Glass Fiber Reinforced Plastic Composites", Journal of Composite Materials, SAGE Publishing, USA (Under review).
- ii. **M Muzibur Rahman,** Raisha Hasan Chowdhury, Tahian Ahmed Rafi and S Reaz Ahmed, "Corrosion Behavior of SnPb-affected Copper in Velocity Varied Inland Water of Bangladesh", Corrosion Reviews, Germany (Under review).
- jj. **M Muzibur Rahman,** Md. Hasan Ruhan Rabbi, Fatema Akter and S Reaz Ahmed, "Investigation of Lead Doping Effects on Tensile Behavior of Copper", Sustainable Materials and Technologies, Elsevier, Australia (Under review).
- **kk.** Md. Khalid Ahmed and **M Muzibur Rahman**, "Corrosion Behaviour of Marine Grade Mild Steels in The Bay of Bengal Water Environment", The Corrosion Science, Elsevier, Netherlands (Under review).