

## COMMANDANT'S MESSAGE



Military Institute of Science and Technology (MIST) started its journey on 19 April 1998 to materialize the vision of Honourable Prime Minister Sheikh Hasina of having a military run Technical Institute in Bangladesh. MIST aims at being a 'Centre of Excellence' for providing quality education in the field of science, engineering and technology along with conducting research to meet national and global challenges. Perceiving the intended spirit of Bangabandhu's 'Golden Bengal', MIST plays a vital role in education sector of Bangladesh by providing technical lessons to military and civil students. MIST is a centre for comprehensive education and diverse research nurturing technologically advanced leaders with strong moral values. In the spirit of continuous growth and shared knowledge, MIST unveils its 43rd newsletter, symbolizing not only numerical achievements but also providing our readers the contents those inform, engage and elevate. I extend my gratitude to the Editorial Board for their hard work and hope that such endeavors will persist in the future.

## SPECIAL EVENTS



Respected CAS, General S M Shafiuddin Ahmed, SBP (BAR), OSP, ndu, psc, PhD accepting MIST's participation from Commandant, MIST in Social Awareness and Fund Raising program on 20 December 2023.



Respected CAS Madam is warmly received at the Central Ladies Club program organized by MIST at Army Officers Club on 12 November 2023.

## RECEPTION OF COMMANDANT, MIST AND MADAM



Major General Mohammed Saidul Islam, rcds, ndc, psc took over the responsibility of Commandant MIST on 13 August, 2023. In his long illustrious career he held numerous key appointments at National and Army Levels. Before joining MIST, the General graduated from Royal College of Defence Studies (RCDS), United Kingdom. He also contributed as the Chairman of Sena Kalyan Sangstha. He had been Director General of National Identity Card (NID) Registration Wing and Project Director of Identification System for Enhancing Access to Service Project of Bangladesh Election Commission. The General is a Graduate of National Defence College (NDC) and Defence Services Command and Staff College (DSCSC) Mirpur, Dhaka. He is also a graduate from Bangladesh University of Engineering and Technology (BUET). He is a widely travelled person who also attended a number of United Nations assignments. In his personal life, Major General Mohammed Saidul Islam, rcds, ndc, psc is happily married to Mrs. Shammy Akter and blessed with three daughters.

## ORIENTATION VISIT OF COMMANDANT, MIST



Commandant, MIST inaugurated a new Laboratory named MRI and CT Scan Training Lab of Biomedical Engineering (BME) Department. BME Department has set a milestone by establishing this Lab since MIST is the first institution to have such a lab for the student learning.



Commandant, MIST inaugurated Sculpture Project and unwrapped a journal named Facere.5 of Architecture Department. This sculpture represents the diversities of MIST family. Facere.5 is a studio project of Architecture Department's students.



Commandant, MIST visited MIST Central Library to observe the academic facilities provided to the students and faculties. He also visited MIST Day Care Centre and interacted with the children. The primary purpose of Day Care Center is to support MIST employees and their children by providing quality care and early childhood education.

## COMMANDANT'S VISIT



Commandant, MIST visited Bangladesh Military Academy (BMA), Chattogram and interacted with the members of Engineering Faculty to enhance academic collaboration, exchange programs and share insights on engineering education between BMA and MIST.

Commandant, MIST attended passing out dinner of 85 BMA Long Course, 58 BMA Special Course and 81 DSSC (AMC) Course on 26 November 2023 at the Cadet Dining Hall, BMA. It was one of the most inspirational events for the future leaders of Bangladesh Army.



Commandant visited Reju khal Bridge, Cox's Bazar. Centre for Advisory & Testing Services (CATS), CE Department of MIST is working as the consultant of this project for sub-soil investigation, detailed architectural drawings, structural drawings, and bill of quantity.

## COMMANDANT'S INTERACTION



Commandant's interaction with MIST faculty members on 19 September 2023. During interaction Commandant emphasized on enhancing the quality of education, research output, institutional reputation and service to humanity with the goal of positioning MIST as a 'Centre of Excellence'.



Commandant's Address to Military Officers of MIST held on 01 November 2023. In his address, he provided guidance and mentorship to develop professionally and excel in their roles both as educators and military leaders.



Commandant, MIST was visiting MIST Cafeteria and interacting with students and support staffs. During his visit, he instructed everyone to foster an inclusive atmosphere within the cafeteria environment.

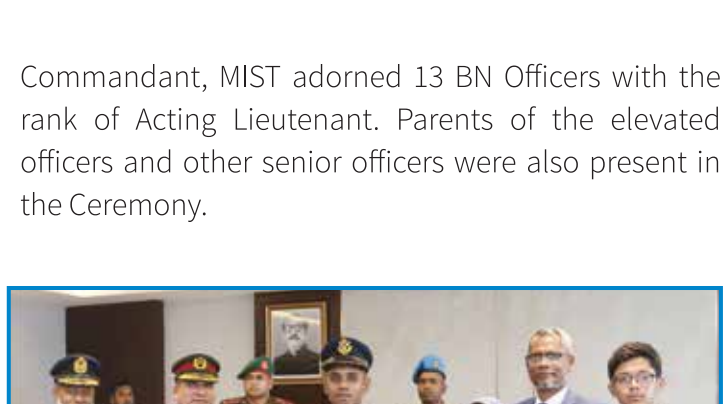
## RANK ADORNING CEREMONY



Commandant, MIST adorned Colonel Md Kamal Uddin Komol, psc with the rank of Brigadier General. Wife of Brigadier General Kamal and his daughters along with other senior officers were also present during the Ceremony.



Commandant, MIST adorned Lieutenant Colonel Khalid Mahmud and Lieutenant Colonel Md Shamim Iftakhar with the ranks of Colonel. Spouses of the officers along with other senior officers were also present during the Ceremony.



Commandant, MIST adorned 04 BAF Officers with the rank of Flight Lieutenant. Parents of the elevated officers and other senior officers were also present in the Ceremony.



## ACADEMIC AFFAIRS

### GOVERNING BODY MEETING OF MIST



41st Governing Body Meeting of MIST was held on 20 July, 2023. Major General Md Jubayer Salehin SUP, ndu, psc Engineer-in-Chief chaired the meeting. Representatives from the Ministry of Education, Ministry of Defence, Ministry of Finance, Armed Forces Division, BA, BN and BAF Headquarters, BMA, BNA, BAFA, BUET and DU were present in the meeting.

### ACADEMIC COUNCIL MEETING OF MIST



The '77th, 78th and 79th Academic Council Meeting' of MIST were held on 24 August, 24 September and 23 December, 2023 respectively. Major General Mohammed Saidul Islam, rcds, ndc, psc, Commandant, MIST chaired the meetings. Representatives from the Ministry of Education, Ministry of Defence, Armed Forces Division, three services headquarters, BMA, BNA, BAFA, BUET & DU were present in the meeting.



## ACADEMIC AFFAIRS

### ACCREDITATION VISIT - 2023



MIST organized 'Accreditation Visit-2023' from 10 December 2023 to 12 December 2023. The Evaluation Team (ET) of the board of Accreditation for Engineering and Technical Education (BAETE) comprising 06 members visited for accreditation of Bachelor of Civil Engineering program of the Department of CE and Bachelor of Computer Science & Engineering program of the Department of CSE based on Outcome Based Education (OBE) system. The Team was accompanied by 03 foreign members from Washington Accord (WA) as Verification Review Team (VRT).

### COMMITTEE FOR ADVANCED STUDIES AND RESEARCH MEETING (CASR) OF MIST



The '34th and 35th Committee for Advanced Studies and Research (CASR) Meeting' of MIST were held on 21 September and 21 December, 2023 respectively. Major General Mohammed Saidul Islam, rcds, ndc, psc, Commandant, MIST chaired the meeting. Representatives from BUET & BUP were present in the meeting.

### 4TH INDUSTRIAL ADVISORY PANEL (IAP) MEETING OF NAME DEPARTMENT

Department of NAME arranged its '4th Industrial Advisory Panel (IAP) meeting' on 19 November, 2023 to comply the industrial feedback with the existing syllabus as a part of accreditation of its undergraduate program. The meeting focused on aligning academic curricula with practical industry needs and forging strategic partnerships. The event concluded to research collaboration with the industry. Commodore A H M Rafiqul Islam, (E), NUP, psc, BN, Head of the Department Chaired this session. Chairman, CEOs and Managing Directors from different organizations and faculties of the NAME Department, MIST were present in the meeting.



## ACADEMIC AFFAIRS

### EDITORIAL BOARD MEETING OF MIST INTERNATIONAL JOURNAL OF SCIENCE AND TECHNOLOGY (MIJST)



Editorial Board Meeting of MIST International Journal of Science and Technology (MIJST) was organized by the Research and Development Wing, MIST on 26 November, 2023. Air Cdre Md Aminul Haque, ndc, psc, Head of the AE Department, MIST graced the occasion as Chief Guest. Professor Dr Firoz Alam, Editor-in-Chief and all Editorial Board members of MIJST also joined the meeting.

### MoU SIGNING CEREMONY

An MoU was signed on 03 July, 2023 between Biomedical Engineering (BME) Department of MIST and Combined Military Hospital (CMH), Dhaka for collaborative research, industrial visit/training, arranging joint seminars/events and expert/faculties exchange.



An MoU between Asian Paints Bangladesh and the Department of Architecture, MIST was signed on 21 September 2023. Head of Supply Chain and Operations and other higher officials of Asian Paints Bangladesh attended the event. Through this partnership, Asian Paints Bangladesh will provide training to the young architects of the Department.

**SEMINAR AND WORKSHOP**

**SEMINAR ON CYBER SECURITY - 2023**



A seminar on Cyber Security 2023 was organized by the CSE Department, MIST on 01 October 2023 in collaboration with Armed Forces Division (AFD). State Minister of the ICT Division, Mr Zunaid Ahmed Palak, MP graced the seminar as Chief Guest and Lieutenant General Waker-Uz-Zaman, SGP, psc, Principal Staff Officer of the Armed Forces Division was present as Special Guest. The chairman of the seminar was Major General Mohammed Saidul Islam, rcds, ndc, psc, Commandant, MIST. The Cyber Threat and our preparation was the main focus of the seminar.

**CYBER SECURITY CONFERENCE FLAG HUNT: CAPTURE THE FLAG - 2023**



Flag Hunt: Capture the Flag-2023, a Cyber-Security competition took place on 04 November, 2023. The program was organized by IT Directorate, Army Headquarters and hosted by the MIST. Major General Mohammed Saidul Islam, rcds, ndc, psc, Commandant, MIST was the Chief Guest. Total 30 teams from various universities and institutions participated in the competition.

## SEMINAR AND WORKSHOP

### 2ND INTERNATIONAL CONFERENCE ON ADVANCES IN CIVIL INFRASTRUCTURE AND CONSTRUCTION MATERIALS (CICM) - 2023



The 2nd International Conference on Advances in Civil Infrastructure and Construction Materials (CICM) was organized by the Civil Engineering Department of MIST from 26 July 2023 to 28 July 2023. The conference theme 'Resilience and Sustainability,' reflected the shared commitment to address the current challenges. Minister of Planning, M Abdul Mannan was the Chief Guest for the closing ceremony. Renowned professors, researchers, and professionals from USA, Canada, China, Japan, the UK, Australia, New Zealand, Italy, India, Hong Kong, Taiwan and Bangladesh attended the conference as speakers, presenters and session Chairs. Over two hundred twenty-five papers were presented by over three hundred presenters. Students from the MIST, BUET and many other universities attended a plenary session highlighting the higher study opportunities for Bangladeshi students.

### SEMINAR ON THE ROLE OF INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) IN CLIMATE ACTION FOR GREEN ENERGY



The seminar, titled Role of IEEE in Climate Action for Green Energy, was held on 24 September 2023. The featured keynote speaker, Prof. Dr Saifur Rahman, who serves as the IEEE President and CEO, graced the occasion. The event was honored to host other distinguished guests, including Prof. Dr Shaikh Fattah, Chair of IEEE Region-10 Adhoc on Climate Change, and Prof. Dr Celia Shahnaz, Chair of IEEE WIE 2023. During the seminar, these eminent speakers shared their extensive knowledge and insights on IEEE's pivotal role in addressing climate change and promoting sustainable energy practices in Bangladesh.

## SEMINAR AND WORKSHOP

### SEMINAR ON PLANNING AND STANDARDIZATION DESIGN OF ELECTRICAL SUBSTATIONS



The IEEE MIST Student Branch organized a seminar on Planning and Standardization Design of Electrical Substations on 02 October 2023 featuring a talk by Al Amin Hossain, Business Development Manager, Export (Technical), and Deputy Manager at Reverie Power and Automation Engineering Limited. The seminar gave insights into the fundamental aspects of electrical substations, covering topics such as planning, site selection, design principles, and industry standards.

### SEMINAR ON MANUFACTURING AND DYNAMIC MECHANICAL PERFORMANCE ANALYSIS OF NOVEL IMPACT RESISTANT MATERIALS

On 13 July, 2023 ME Department, MIST successfully arranged a seminar on Manufacturing and Dynamic Mechanical Performance Analysis of Novel Impact Resistant Materials. The seminar was conducted by Dr Ashfaq Adnan, Distinguished Professor, University of Texas at Arlington (UTA). The recent advancements and the scope of improvement in research were discussed in the session.



### SESSION ON REVOLUTIONIZING TRANSPORTATION: THE GLOBAL RISE OF ELECTRICAL VEHICLES

**Revolutionizing Transportation: The Global Rise of Electric Vehicles**

**Speaker**  
**Dr. AKM Arifat**  
 Principal Engineer,  
 Drive System Design Inc.  
 Michigan, USA

**Discussions :**

1. Electric Vehicles (EVs) as a Necessity
2. Advantages of EVs
3. Critical Components
4. Smart and Connected Transportation
5. Ongoing Research and Innovation
6. Role of STEM Graduates
7. Career Opportunities and Impact

18 September 2023  
 12:00 PM  
 (Open-3) Room-302

Organized by  
**EECE**

IEEE Region 10  
 Women in Engineering

IEEE Antennas and  
 Propagation Society

www.educare.org/bd-mist/

A session on Revolutionizing Transportation: The Global Rise of Electrical Vehicles with Dr AKM Arifat, Principal Engineer at Drive System Design Inc. in Michigan, USA at MIST took place on 18 September 2023 and was organized by the IEEE MIST Student branch. Dr AKM Arifat, shared valuable insights into the transformative impact of electric vehicles on the transportation industry.

## SEMINAR AND WORKSHOP

### WORKSHOP ON SEISMIC DESIGN OF STEEL STRUCTURES



The Civil Engineering Department of MIST organized a workshop on the Seismic Design of Steel Structures on 25 July 2023. Dr Robert Tremblay and Dr M. Shahria Alam, two top-tier professors from Canada conducted the certificate workshop course. A total of 65 participants attended the workshop, where they got hands-on training on the seismic design of special concentrically braced frames, buckling-restrained braced frames and special moment resisting frames.

### WORKSHOP ON DESIGN AND FABRICATION OF REMOTE CONTROLLED (RC) AIRCRAFT

A Workshop on the Design and Fabrication of Remote Controlled (RC) Aircraft took place on 27 and 31 August, 2023. AE Department arranged the workshop. The guest speaker of the workshop was Mr Arifur Khan, an experienced person in RC Aircraft Manufacturing and Project Manager, organized Alliance Holding Ltd. 71 registered students participated in the workshop.



### WORKSHOP ON UNDERSTANDING GOALS IN LIFE AND PEER SUPPORT AND MENTAL HEALTH



Workshop on ‘Understanding Goals in Life’ and ‘Peer Support and Mental Health’ held on 18 July 2023 and 18 September 2023 respectively under the supervision of the Directorate of Students’ Welfare. The facilitator was the counselor of MIST, Amina Khatun. The participants were the students of different levels from different departments. The workshop ended with feedback and a discussion session.

## SEMINAR AND WORKSHOP

### TECHNICAL PROGRAM COMMITTEE MEETING FOR ICEEICT - 2024



The Department of EECE orchestrated the Technical Program Committee (TPC) meeting in preparation for the International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT 2024). The conference is scheduled from 02 May to 04 May, 2024. The distinguished list of attendees included Prof. Ashraful Alam - Purdue University (USA), Prof. Celia Shahnaz - IEEE Women in Engineering (WIE) Global Chair, Prof. Shaikh Fattah- IEEE Region 10 AdHoc on Climate Change and other sixteen renowned Professors from eleven prominent universities across the country, including BUET, KUET, IUT, AIUB, UIU, EWU, IUB, AUST, UUB, GUB and ULAB. All faculty members of the EECE Department and selected faculty members from the CSE and BME Departments of MIST also attended the meeting.

### WORKSHOP ON INTRODUCTION TO PYTHON PROGRAMMING

Society of Petroleum Engineers (SPE) Student Chapter of PME Department, MIST organized a workshop on Introduction to Python Programming for the students and faculty members on 02 November, 2023. The resource person was Mr. Tahidul Islam (An alumni of the PME Department).



## GUEST SPEAKERS

### GUEST LECTURE ON RENEWABLE ENERGY SOURCES: A PROMISING PROSPECT FOR BANGLADESH



The Department of Petroleum and Mining Engineering (PME) organized a Guest Lecture on Renewable energy sources: A promising prospect for Bangladesh on 28 August, 2023. The Guest Speaker was Dr Khairul Habib, Faculty Member, Universiti Teknologi PETRONAS, Malaysia. He discussed the prospects of renewable energy in Bangladesh and the combined projects of renewable and non-renewable energy.

### GUEST LECTURE ON THE APPLICATION OF ISOTOPE TECHNIQUE IN GROUNDWATER MANAGEMENT IN MINING

On 24 August 2023, the PME Department organized a guest lecture on the topic of the Application of Isotope Technique in Groundwater Management in Mining. Dr Md Moniruzzaman, Principal Geologist of Institute of Nuclear Science and Technology was the Guest Speaker. Students and faculty members from PME Department attended the lecture.



### GUEST LECTURE ON CHALLENGES AND OPPORTUNITIES OF HARD ROCK MINE IN BANGLADESH



The PME Department hosted a Guest Lecture titled ‘Challenges and Opportunities of Hard Rock Mine in Bangladesh’ on 07 September 2023. Engr Md Obaidullah, General Manager (UgO&M) at Maddhapara Granite Mining Company Limited, was distinguished guest speaker. The lecture delved into the intricacies of hard rock mining in Bangladesh, offering valuable insights into extraction methodologies and the industry's current landscape.



## INDUSTRIAL VISITS

### INDUSTRIAL TRAINING VISIT OF NAME DEPARTMENT



On 04 November 2023, students of level-1 had a day-long industrial visit at Radiant Shipyard. The students got a glimpse of the working process of a shipyard along with shipbuilding practices and a practical work environment. The students could connect their theoretical knowledge with practical experience during the brief tour.

### INDUSTRIAL TRAINING VISIT OF BME DEPARTMENT

An engrossing industrial training visit at Incepta Pharmaceutical Limited, Savar by students of the Biomedical Engineering (BME) department MIST, was held on 14 November 2023. The students visited their Biotech Unit and Vaccine Unit with overview of different devices.



### EDUCATION AND SURVEY VISIT OF ARCHITECTURE DEPARTMENT



Department of Architecture organized an education & survey visit for students of level-2 at Zinda Park, Narayanganj on 16 September 2023 as a practical part of the ARCH-2204: Photography & Film course. The visit was focused on the planning and architectural aspects of the site.

## DELEGATION VISITS



Major General Md Mahbub-ul Alam, BSP, ndc, afwc, psc, MPhil, PhD, VC BUP met Major General Mohammed Saidul Islam, rcds, ndc, psc Commandant, MIST on 13 September 2023.



Major General Md Faizur Rahman, BSP, SGP, ndc, afwc, psc, Commandant, DSCSC met Commandant, MIST on 13 September 2023.



Call on of Defence Attaché, U.S. Embassy on 31 October 2023



Call on of Russian Delegation Team with Commandant, MIST on 30 November 2023



Call on of Defence Advisor, Indian High Commission on 09 November 2023

## GAMES AND SPORTS

### INTER DEPARTMENT VOLLEYBALL COMPETITION - 2023



Inter Department Volleyball Competition was held at MIST from 24 September 2023 to 03 October 2023 under the supervision of the Directorate of Students' Welfare. 12 Departments of MIST were divided into 4 groups in the tournament. Major General Mohammed Saidul Islam, rcds, ndc, psc, Commandant, MIST, was the Chief Guest of the closing ceremony. Before the commencement of the final match, a friendly match was held between Commandant's Team and Dean of ME Faculty Team. In this exciting match Respected Commandant's team won the match. The NAME Department became the Champion and the ME Department became Runner-up of the tournament. Lt Jeet from the NAME Department became the best player in the tournament.

### INTER DEPARTMENT FOOTBALL COMPETITION - 2023



Inter Department Football Competition - 2023 was held at MIST from 26 October to 09 November, 2023 under the supervision of the Directorate of Students' Welfare. 12 Departments of MIST were divided into 4 groups in the tournament. Commandant, MIST was the Chief Guest of the closing ceremony. CE Department became the Champion, and CSE Department became Runner-up of the tournament. Respected Commandant invited all the Best Players along with their parents.

## GAMES AND SPORTS

### SHEIKH RUSSEL FRIENDLY VOLLEYBALL MATCH - 2023



Sheikh Russel Friendly Volleyball Match - 2023 held at MIST on 18 October 2023 under the supervision of the Directorate of Students' Welfare. Faculties of MIST divided into 2 teams, have participated in the tournament. Air Cdre Aminul Haque, ndc, psc was the Chief Guest of the closing ceremony. ME and Sc & Engg faculty became the Champion and CE and ECE faculty became Runner-up of the tournament. Lt Rezwanul Karim from the ME Department became the Best Player.

### SHEIKH RUSSEL TABLE TENNIS COMPETITION - 2023



Sheikh Russel Table Tennis Competition - 2023 was held at MIST from 15 October 2023 to 18 October, 2023 under the supervision of the Directorate of Students' Welfare. Faculty members and Military Officers of MIST participated in the Competition. Brig Gen Md Rezaul Awal, psc was the chief guest of the closing ceremony. The team of Lt Col Mahbub and Lt Col Amin became the Champion, and the team of Capt Kaosar Rashid, psc, BN and Lt Col Robiul became Runner-up of the tournament. Captain Kaosar DSW became the Best Player of the Match.

## FESTIVALS

### ORIENTATION PROGRAM OF BATCH - 2023 BY MIST PHOTOGRAPHY CLUB



MIST Photography Club organized an orientation program for level-1 students of MIST on 26 October, 2023 under the supervision of the Research and Development Wing. Commandant Major General Mohammed Saidul Islam, rcds, ndc, psc was the Chief Guest and Commandant Madam Mrs. Shammy Akter was the special guest in the program.

### CSE FOOD FEST - 2023



CSE Department of the MIST organized a delightful Food Fest on 30 August, 2023. This culinary extravaganza brought together students, faculty and food enthusiasts. Commandant MIST graced the occasion as Chief Guest. The Food Fest featured a wide array of dishes, ranging from traditional favorites to international delights, lovingly prepared by talented students. Attendees had the opportunity to savor mouthwatering cuisines.

## FESTIVALS

### MIST FOOD FESTIVAL AND PITHA UTSHAB



MIST organized 'Food Festival and Pitha Utshab' on 26 October, 2023. Commandant Major General Mohammed Saidul Islam, rcds, ndc, psc was the Chief Guest and Commandant Madam Mrs. Shammy Akter was the special guest in the program.

### GRADUATING BATCHES' FAREWELL FESTIVAL - 2023



Farewell Festival 2023 was held at MIST on 07 December 2023 under the supervision of the Directorate of Students' and Cultural Committee of MIST. Release of balloons, experience sharing by level 4 students, Knifing of cake, photo session and performances of students from different Departments were the events. Finally, the program ended with the performance of renowned band 'Warfaze'.

### ALUMNI MEET - 2023

Department of CE and PME of MIST organized Alumni Meet 2023' on 18 November and 05 December 2023. Distinguished graduates from the Departments actively engaged in and contributed to the events.



## SPECIAL EVENTS ORGANIZED BY MIST LADIES CLUB



Respected CAS Madam is received with a flower bouquet at the Central Ladies Club Program organized by MIST on 12 November 2023.



Respected CAS Madam along with senior members of Central Ladies Club at Army officers Club on 12 November.



Respected CAS Madam along with members of MIST Ladies Club on the farewell program of NDC Commandant Madam, organized by MIST at Army officers Club on 12 November 2023.

## MIST LADIES CLUB ACTIVITIES



Commandant Madam, MIST is warmly received by the members of MIST Ladies Club. The program was organized on the occasion of Commandant Madam's arrival as new guardian of MIST Ladies Community.



A social evening followed by a cultural program was held at multipurpose hall of MIST organized by MIST Ladies Club. The purpose of this program was to interact and strengthen the bonding among members of MIST families.



Commandant Madam, MIST visited MIST Central Library to observe the facilities provided to the students and faculties. She also visited MIST Day Care Centre and interacted with the children.



## HUMANITARIAN ACTIVITIES



Commandant, MIST providing financial support to assist a faculty member for his son's medical treatment. This demonstrates compassion and support to MIST family members in time of need.



Commandant visiting sick MIST family members at CMH Dhaka as a reflection of his love, care and affection. MIST stands as family during thick and thin of day to day life.



Commandant, MIST visited Cook Shabuddin at CMH Dhaka while he was in the intensive care unit (ICU). Commandant's visit reflects his caring concern for his under commands in time of any crisis.

## OBSERVANCE

### NATIONAL MOURNING DAY



MIST observed National Mourning day on 15 August, 2023 with the deepest respect and honour on the occasion of the 48th Death Anniversary of Father of the Nation Bangabandhu Sheikh Mujibur Rahman. The day was a public holiday and the national flag flew at half-mast. Special prayer was offered after Johor for the departed soul of Bangabandhu. Documentary films were shown and discussion was held highlighting the struggle, achievements and contribution of the Father of the Nation.

### SHEIKH RUSSEL DAY- 2023



MIST observed Sheikh Russel Day through various programs on 18 October, 2023. MIST family paid homage by placing wreath at Sheikh Russel Corner, MIST to mark his 60th birth anniversary. The day was observed conducting seminar and discussion on life of Sheikh Russel. Dr. Muhammed Zafar Iqbal was the special guest of the seminar. Friendly table Tennis and Volleyball Competitions were also organized amongst MIST Faculty members.

## OBSERVANCE

### ARMED FORCES DAY - 2023



MIST observed Armed Forces Day on 21 November 2023 . All members of MIST and their families attended the program. Invited guests of BUP (Officers, JCOs and ORs with families) also attended the program. Every year MIST organizes various events to commemorate this significant day.

### VICTORY DAY - 2023



MIST observed Victory Day on 16 December 2023 . All members of MIST attended the event.

### CELEBRATION OF NAME DAY - 2023



NAME Department celebrated NAME Day on 19 November 2023 on its ten years celebration.

## FAREWELL



On 25 September 2023 a farewell dinner was arranged in honour of Captain M S A Al Farook Shiblee, (L), BN and Group Captain A K M Zahidur Rahman, psc. Both the officers served in MIST as Senior Instructors in Electrical Electronic and Communication Engineering (EECE) and Aeronautical Engineering (AE) Department respectively.



On 05 October 2023 a farewell dinner was arranged to bid farewell to Brigadier General Md Humayun Kabir Bhuiyan, psc and Colonel Zabed Sultan, BGBMS. Brigadier General Humayun served as Head of Mechanical Engineering (ME) Department and Colonel Zabed was the Director of Student's welfare (DSW) in MIST.

## ACHIEVEMENTS

### INCLUSION IN THE WORLD'S TOP 2% SCIENTISTS



Professor Dr Md. Enamul Hoque



Lt Col Muhammad Nazrul Islam, PhD

Professor Dr Md. Enamul Hoque, BME Department, MIST and Lt Col Muhammad Nazrul Islam, PhD, CSE Department, MIST have been prominently featured among the 'World's Top 2% Scientists', as published by Elsevier and Stanford University, USA, with the official announcement on 4 October, 2023. They have represented our esteemed institution, the Military Institute of Science and Technology (MIST), on this prestigious platform with great honor. The selection is based on the top 100,000 scientists by c-score or a percentile rank of 2% or above while taking into consideration the SCOPUS database.

### CHAMPION IN THE AI AND CLOUD INNOVATION CHALLENGE



On 13 October, 2023 Team – Glazed Donut, comprising of Labiba Ibnat and Fatima Ashraf became the Champion in the 'AI and Cloud Innovation Challenge' powered by Uqidev, & presented by Microsoft Learn Student Ambassadors (MLSA), BUP.

### LIGHT AIRCRAFT DESIGN COMPETITION - 2023

Students of AE Department, MIST attended the Light Aircraft Design Competition–2023. It was organized by the Royal Aeronautical Society (RAeS), UK, on 14 November, 2023. They secured the second position in the competition.



## ACHIEVEMENTS

### THE FASTEST 25K FEMALE IN BANGLADESH



Major Sadia Shawlin Sigma of NSE department (Level 2) reigns supreme as the Fastest 25K Female in Bangladesh. She blazed through the Sylhet 25K 2023, an AIMS certified international running event, in a jaw-dropping time of 2:09:27.91. On 16th November Respected Commandant honoured her with a token of memento during the MIST social evening.

### IEEE BUP BRANCH FEST - 2023

Team Powernap from MIST secured the champion position in the 'Research-Based Poster Presentation' segment at the 'IEEE BUP Branch Fest - 2023', which was hosted by IEEE BUP Student Branch, IEEE SB WIE Affinity Group, and IEEE Computer Society BUP Student Branch Chapter. The team presented their one-year-long capstone project, 'Light Canvas - An Interactive Virtual Drawing System,' a smart education tool that can project a drawing board on any flat surface, enabling its use for teaching children in diverse backgrounds and bridging the technology gap between urban and rural schools.



### INTER UNIVERSITY 3D BOAT DESIGN COMPETITION - 2023



A team from the NAME Department named 'TEAM ZORO' has participated in the Inter-University 3D Boat Design Competition. The event was organized by NAME Department, Bangladesh University of Engineering and Technology (BUET). A total of 44 teams from various universities participated in the competition. The above- mentioned team secured the first runner-up position in the competition.

## ACHIEVEMENTS

### 40TH ANNUAL STUDENT DESIGN COMPETITION

Best New Undergraduate Entrant award in the 40th Annual Student Design Competition organized by the Vertical Flight Society (VFS) in Virginia, USA. A group of 10 students from the 12th Batch of Aeronautical Engineering (AE) of MIST actively participated in this prestigious competition. The team was led by Md Ridwan Hasan as the Team Captain, with guidance from their advisor, Lecturer Saif Reza of the AE Department. Academic teams from 12 other countries also participated in the competition. The competition was entitled "High-Speed Vertical Takeoff and Landing (HSVTOL) Aircraft". The objective of the 40th edition (2022-2023) was to conceptualize a large VTOL aircraft capable of balancing sustained hover operations with high-speed and high-altitude cruise capabilities.



### ACHIEVEMENT OF CSE DEPARTMENT'S MIST IN ESONACE - 2023



Team Anchor Eye, consisting of Alisha Kabir, Md Rashid Ul Islam, Adib Hossain, Hafsa Mahzabin Chowdhury and M N Alam Siddiqui from the Department of Computer Science and Engineering, MIST participated in Esonance 2023. It was arranged by the Department of Electrical and Electronic Engineering, Islamic University of Technology. The team presented their Capstone project Anchor Eye: An AI based Cost-effective Aquaculture Companion Robot and achieved a remarkable feat by emerging as champions in two critical segments- Project Showcasing and Poster Presentation. The team's victory among competitors from all across the country in Esonance 2023 signifies a monumental success for Anchor Eye, showcasing its potential to transform the aquaculture industry.

### ACHIEVEMENT IN TAEKWONDO

Chowdhury Mohammad Labib, a Level-1 student of NAME Department, MIST has recently achieved an outstanding feat in a Taekwondo Competition. '1st GCS Colombo International Open Taekwondo Championship 2023' was held in Sri Lanka on 06 December 2023. Labib achieved a gold medal in the 'Poomsae Division' (under age 30). Furthermore, Labib also participated in the '1st Bangabandhu Open International Taekwondo Championship-2023' held from 19 October 2023 to 21 October 2023. It was Organized by the Bangladesh Taekwondo Federation in BKSP, Savar.



## PUBLICATIONS

## JOURNAL ARTICLE

## CE DEPARTMENT

- Lt Col Khondaker Sakil Ahmed, PhD, PEng, CEng and his research team published a journal article titled “A case study on the shear behavior of pretensioned Spun Precast Concrete (SPC) piles” in the Journal of Case Studies in Construction Material (Q1, Impact Factor 6.2) of Elsevier in September, 2023. <https://doi.org/10.1016/j.cscm.2023.e02478>
- Lt Col Khondaker Sakil Ahmed, PhD, PEng, CEng published a journal article titled “Machine learning models for predicting compressive strength of fiber-reinforced concrete containing waste rubber and recycled aggregate” in Journal of Cleaner Production (Q1, Impact Factor 11.1) of Elsevier in September 2023. <https://doi.org/10.1016/j.jclepro.2023.138673>
- Lt Col Khondaker Sakil Ahmed, PhD, PEng, CEng published a journal article titled “Shear behavior of polypropylene fiber-reinforced concrete beams containing recycled aggregate and crumb rubber” in Journal of Cleaner Production (Q1, Impact Factor 11.11) of Elsevier in September 2023. <https://doi.org/10.1016/j.jclepro.2023.137370>
- Asst Prof Md Shahjalal and Lt Col Khondaker Sakil Ahmed, PhD, PEng, CEng published a journal article titled “Fiber-reinforced recycled aggregate concrete with crumb rubber: A state-of-the-art review” in the Journal of Construction and Building Materials (Q1, Impact Factor 7.4) of Elsevier in September 2023.
- Lt Col Md. Jahidul Islam, PhD, Assistant Professor Md. Shahjalal and MSc student Tasnia Ahmed published a journal article titled “Strength, durability, and impact behavior of recycled aggregate concrete with polypropylene aggregate”. Construction and Building Materials (Q1, IF: 7.4).
- Lt Col Md. Jahidul Islam, PhD, Assistant Professor Md. Shahjalal and Lecturer M. M. Mouri published a journal article titled “Flexural and bond-slip responses of reinforced concrete beams containing recycled coarse aggregate and polypropylene plastic”. Journal Building Engineering (Q1, IF: 6.4), Available online 12 September 2023, 107776. <https://doi.org/10.1016/j.jobeb.2023.107776>.
- Lt Col Md. Jahidul Islam, PhD, and MSc student Imam Hossain published a journal article titled “Evaluation of Wind Effects on Buildings Using Design Codes and Numerical Wind Tunnel Tests”. Structure and Environment.
- Lt Col Md. Jahidul Islam, PhD, and MSc student Tasnia Ahmed published a journal article titled “Comparative study of carbon fiber and galvanized iron textile reinforced concrete”. Construction and Building Materials (Q1, IF: 7.4), Vol. 374, pages 130928.
- Lecturer A.J.M.M.U. Ahmed, Lecturer Md. Anwar Uddin and Assistant Professor Md. Asadur Rahman published a journal article titled “Developing an algorithm for sequential sorting of discrete and connected characters using image processing of multi-line license plates”. Array (Elsevier) (Q1, IF: 4.5).
- Lecturer Md. Anwar Uddin, Professor Md. Shamsul Hoque, Graduate Student Tahsin Tamanna, Graduate Student Saima Adiba, Professor Shah Md. Muniruzzaman and Research Assitant Md. Shahriar Parvez published a journal article titled “A framework to measure transit-oriented development around transit nodes: Case study of a mass rapid transit system in Dhaka, Bangladesh”. Plos one (Q1, IF = 3.752).
- Lecturer Md. Anwar Uddin, Graduate Student Tahsin Tamanna, Graduate Student Saima Adiba, Lecturer Sadib Bin Kabir published a journal article titled “Revolutionizing TOD Planning in a Developing Country: An Objective-Weighted Framework for Measuring Nodal TOD Index”. Journal of Advanced Transportation 2023 (Wiley and Hindawi) (Q2, IF = 2.3).



## PUBLICATIONS

## JOURNAL ARTICLE

## CE DEPARTMENT

- Lecturer Md. Anwar Uddin, Graduate Research Assistant Mithun Debnath, Graduate Student Sumit Roy, Graduate Student Saima Adiba, Professor M.M.A. Talukder published a journal article titled “Identifying the Smoking and Smokeless Tobacco-Related Predictors on Frequencies of Heavy Vehicle Traffic Accidents in Bangladesh: Linear and Binary Logistic Regression-Based Approach”. *Advances in Civil Engineering (Hindawi)* (Q2, IF = 1.8).
- Lecturer Md. Anwar Uddin, Graduate Student Sumit Roy published a journal article titled “Examining TOD node typology using k-means, hierarchical, and latent class cluster analysis for a developing country Innovative”. *Infrastructure Solutions (Springer Nature)* (Q2, IF = 2.4).
- Lecturer Md. Anwar Uddin and Professor Md. Shamsul Hoque published a journal article titled “Measuring Effectiveness of Non-Motorized Vehicles on Spatial Extent for TOD Development: A Case Study for MRT 6 in Dhaka”. *MIST International Journal OF Science and Technology* (Average Citation Score: 1.41).

## CSE DEPARTMENT

- Suha, S. A., & Islam, M. N. (2023). A Systematic Review and Future Research Agenda on Detection of Polycystic Ovary Syndrome (PCOS) with Computer-aided Techniques. *Heliyon*. (IF: 4.00).
- Razzak, M. A., Islam, M. N., Broti, T., Kamal, E. S., & Zahan, S. (2023). Exploring usability problems of mHealth applications developed for cervical cancer: An empirical study. *SAGE Open Medicine*, 11, 20503121231180413. (IF: 2.60).

## EECE DEPARTMENT

- Lt Col Hussain Md Abu Nyeem, PhD, EME, Md. Wahiduzzaman Khan, and Arunima Dey Pooja, “Unleashing the power of generative adversarial networks: A novel machine learning approach for vehicle detection and localisation in the dark”, *IET, Cognitive Computation and Systems*, Volume 5, Issue 3 p. 169-180

## ME DEPARTMENT

- Article Name: Thermal performance of gasifier cooking stoves: A systematic literature review. Published by: Brig Gen Md. Humayun Kabir Bhuiyan, Lec Insiat Islam Rabby, Lec Wasi Uddin, Lec Tazeen Afrin Mumu, Lec Fabliha Islam, Lec Afsana Sultana of ME Department. Published on 5th July 2023, at F1000 Research, <https://doi.org/10.12688/f1000research.126890.2>
- Article Name: Method to fabricate round cross-sectional channel using thermal expansion of air for passive flow regulators. Published by: Lec Emamul Kabir of ME Department with 1 co-author. Published on 21st August 2023, at *Electrophoresis Journal*, DOI: 10.1002/elps.202300101.
- Article Name: Engineering students knowledge level on renewable energy resources: Bangladesh military engineering institute context. Published by: Lecturer Md Insiat Islam Rabby, Lec Wasi Uddin, Lec Mohammad Tareql Islam, Lec Fabliha Islam of ME Department with 1 co-author. Published on 10th September 2023, at *International Journal of Mechanical Engineering Education*, DOI: 10.1177/03064190231199842.
- Article Name: Techno-economic and environmental feasibility analysis of solar industrial process heating systems in textile industries of Bangladesh. Published by: Lecturer Ashiqur Rahman of ME Department with 4 co-authors. Published on 14th September 2023, at *International Journal of Thermo Fluids*, DOI: 10.1177/03064190231199842
- Article Name: Solar energy harvesting from evacuated flat plate collector: Design, thermo-economic analysis, and off-design performance. Published by: Lecturer Ashiqur Rahman of ME Department with 2 co-authors. Published on 28th September 2023, at *Results in Engineering*, <https://doi.org/10.1016/j.rineng.2023.101461>.

## PUBLICATIONS

## JOURNAL ARTICLE

## AE DEPARTMENT

- Assistant Professor Md Jalal Uddin Rumi “Effect of heat treatment on the hardness and electrical conductivity of an aluminum composite reinforced with Al<sub>2</sub>O<sub>3</sub> nanoparticles” has been published in journal *Metallovedenie i Termicheskaya Obrabotka* (Russian version of Metal Science and Heat Treatment by Springer) vol 817, Issue - 7, Pages 59-63, Publication date 2023/7 (DOI: 10.30906/mitom.2023.7.59-63).

## EWCE DEPARTMENT

- A research paper titled "Arsenic Release Dynamics of Paddy Field Soil during Ground Water Irrigation and Natural Flooding " written by BSS-8913 Major Mohammad Shafiul Azam, PhD, Engrs working in the Department of Environmental, Water Resources, and Coastal Engineering has been published on 1 October 2023 in volume 343 of *Journal of Environmental Management*.

## PME DEPARTMENT

- AKM Badrul Alam, Fujii Y, Dipu NH, Chakma T, Neogi P, Ullah ASMW, et al. Potential of carboxymethyl cellulose solution to increase the shale stability. *Sci Rep* 2023;13: 17388. <https://doi.org/10.1038/s41598-023-44417-8>
- Md Tauhidur Rahman, Khairul Habib, Md Niamul Quader, Navid Aslfattahi, Kumaran Kadirgama, and Likhan Das, “Effect of Porous Density of Twisted Tape Inserts on Heat Transfer Performance Inside a Closed Conduit.” *Heliyon* (2023). (Publisher: Elsevier, Scopus IndexedQ1, Impact Factor 4.0).

## BME DEPARTMENT

- Article titled “Bioecosystems towards sustainable agricultural extension delivery: effects of various factors” written by Enock Siankwilimba, Chisoni Mumba, Bernard Mudenda Hang’ombe, Joshua Munkombwe, Jacqueline Hiddlestone-Mumford, Munyaradzi A. Dzvimbo & Md Enamul Hoque is published in the international *Journal Environment, Development and Sustainability*.
- Article titled “A benign way of measuring hemoglobin in blood – Towards developing a non-invasive technique” written by Md Enamul Hoque, Sadia Mannan Shanta, Rhythem Tahrin, Saem Chowdhury, Zarin Tasnim, Md Abdul Alim Shuvo, Shifat Al Hasnayeem Riham is published in the international *Journal Hybrid Advances*.
- Article titled “Synthesis, Properties, Applications, and Future Prospective of Cellulose Nanocrystals” written by Adib Bin Rashid, Md Enamul Hoque, Nahiyen Kabir, Fahim Ferdin Rifat, Hasin Ishrak, Abdulrahman Alqahtani, Muhammad EH Chowdhury is published in the international *Journal Polymers*.
- Article titled “Sustainability of agriculture extension services in the face of COVID-19: A study on gender-specific market systems” written by Enock Siankwilimba, Jacqueline Hiddlestone-Mumford, Md Enamul Hoque, Bernard Mudenda Hang'ombe, Chisoni Mumba, Oliver Jolezya Hasimuna, Sahya Maulu, Joseph Mphande, Moses Chibesa, Mayoba B Moono, Valdemiro Muhala, Luigi Pio Leonardo Cavaliere, Alessio Faccia, Gunawan Prayitno is published in the international *Journal Cogent Food & Agriculture*.
- Article titled “Study on different brain activation rearrangement during cognitive workload from ERD/ERS and coherence analysis” written by Md Rayahan Sarker Bipul, Md Asadur Rahman, Md Faisal Hossain is published in the *International Journal Cognitive Neurodynamics*.

## PUBLICATIONS

### BOOK

#### BME DEPARTMENT

- KM Ramkumar, R Senthilkumar, Md Enamul Hoque has published a Book titled “Advanced Mammalian Cell Culture Techniques: Principles and Practices” is published in international Publisher CRC Press.
- Bhasha Sharma, M Enamul Hoque has published a Book titled “Polysaccharides: Advanced Polymeric Materials” is published in international Publisher CRC Press.
- M Enamul Hoque, Kheng Lim Goh, Suresh Sagadevan has published a Book titled “Advanced Bioceramics: Properties, Processing, and Applications” is published in international Publisher CRC Press.

### BOOK CHAPTER

#### BME DEPARTMENT

- Sakib Hossain Khan, Md Zillur Rahman, Mohammad Rejaul Haque & Md Enamul Hoque has published a Book Chapter titled “Characterization and Comparative Evaluation of Structural, Chemical, Thermal, Mechanical, and Morphological Properties of Plant Fibers” is published in international Publisher Springer Nature Singapore.
- Sazedur Rahman, Muhammad Ifaz Shahriar Chowdhury & Md Enamul Hoque has published a Book Chapter titled “Annual Plant Reinforced Biocomposite Fiberboards—Investigation on Mechanical Properties” is published in international Publisher Springer Nature Singapore.
- Mohammad Fahim Tazwar, Syed Talha Muhtasim, Tousif Reza, Yashdi Saif Autul, Mohammed Enamul Hoque has published a Book Chapter titled “Inorganic Nanofiller-Incorporated Polymeric Nanocomposites for Biomedical Applications” is published in international Publisher CRC Press.
- Habibul Islam, Md Enamul Hoque, Shek Md Atiqure Rahman, Faris M. Al-Oqla has published a Book Chapter titled “Environmental Impact in Terms of Nanotoxicity and Limitations of Employing Organic Nanofillers in Polymers” is published in international Publisher CRC Press.
- Tousif Reza, Rokib Uddin, Mohammad Fahim Tazwar, Md Enamul Hoque, Yashdi Saif Autul has published a Book Chapter titled “Mechanical, Thermal, Electrical, Optical, and Magnetic Properties of Organic Nanofillers” is published in international Publisher CRC Press.
- Rois Uddin Mahmud, Md. Raijul Islam, Md. Abdur Rouf, Md. Rubel Alam, Asif Mahmud Rayhan, Md Enamul Hoque has published a Book Chapter titled “Synthetic Polysaccharides: Adored, Deployed” is published in international Publisher CRC Press.
- Tahrima Binte Rouf, Md Enamul Hoque has published a Book Chapter titled “Bioceramics for Drug Delivery” is published in international Publisher CRC Press.
- Md Enamul Hoque, Samira Islam Shaily, Asif Mahmud Rayhan has published a Book Chapter titled “Structural, Chemical, Electrical, Thermal, and Mechanical Properties of Bioceramics” is published in international Publisher CRC Press.
- Muhammad Ifaz Shahriar Chowdhury, Sazedur Rahman, Yashdi Saif Autul, Md Enamul Hoque has published a Book Chapter titled “Overview of Bioceramics” is published in international Publisher CRC Press.

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