



## COMMANDANT'S MESSAGE

It is a great pleasure to know that MIST is publishing its 39th issue of the newsletter during the COVID19 pandemic. With the motto "Technology for Advancement," MIST began its journey on 19th April, 1998. It now comprises of 13 departments, all of which are dedicated to this motto. Despite the pandemic, we were able to complete our academic tasks while adhering to strict social distancing and other corona protocols. I appreciate the faculty's and administrators' honest efforts in this regard. The most important event during this timeframe was MIST's 21st Council, which took place on 19th December, 2021. I would like to convey my heartfelt gratitude to the editorial board for the timely publication of the MIST Newsletter.

## COUNCIL OF MIST

The **21st Council of MIST** meeting was held on 19th December, 2021. Hon'ble Education Minister Dr. Dipu Moni, MP presided over the meeting. Chief of Army Staff, Asst Chief of Naval Staff, Asst Chief of Air Staff, PSO of Armed Forces Division, Senior Secretary MOD, VC BUP, Engineer-in-Chief, high ranking representatives of DU, BUET, Ministry of Education, Ministry of Science and Technology were present in the meeting.





## DELEGATIONS



On 20th September, 2021 Pakistan's Defense Attaché visited MIST.



HE Mr. Mustafa Osman Turan, Ambassador of the Republic of Turkey in Dhaka, visited MIST on 25th November, 2021.



Senior Secretary Dr. Md. Abu Hena Mostafa Kamal, ndc and 13 other delegation members from the MOD visited MIST on 07th December, 2021.



Representatives of Fair Group visited MIST on 22nd December, 2021.

## GOVERNING BODY MEETING OF MIST



MIST held its **38th Governing Body Meeting** on December 5, 2021. Major General Ibne Fazal Shayekhuzzaman, BSP(BAR), SGP, afwc, psc, presided over the meeting. High military officials from Armed Forces Division, Services Headquarters, Academics of BUP and other high civil officials/academicians from DU, BUET and different ministries also attended the meeting.

## ACADEMIC COUNCIL OF MIST

MIST hosted its **69th Academic Council Meeting** on October 7, 2021, on Zoom Platform. The Council Meeting was presided over by the commandant, MIST. It was attended by the representatives of education and defence ministries as well as BMA, BNA, BUET and DU representatives.

## MoU SIGNING CEREMONY BETWEEN MIST & JHRML

Military Institute of Science and Technology (MIST), Bangladesh and JMI Hospital Requisite Manufacturing Ltd., Bangladesh signed a **Memorandum of Understanding (MoU)** on 21st December, 2021. This MoU is intended to foster activities in academic areas of mutual interest, such as knowledge exchange in the field of Biomedical Engineering, medical device manufacturing & management, hospital management information systems (HMIS), manufacturing vaccines, and pharmaceutical products.



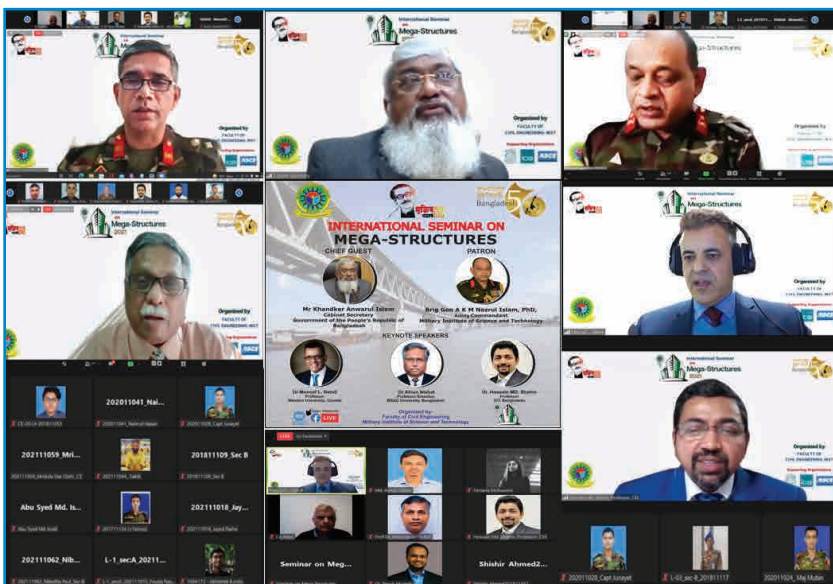
# 5TH INTERNATIONAL CONFERENCE ON ELECTRICAL ENGINEERING AND INFORMATION & COMMUNICATION TECHNOLOGY (ICEEICT 2021)

The International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT 2021) was held at MIST from 18th to 20th November, 2021. Researchers and professionals from both academia and industry from around the world attended the conference. M. A. Mannan, MP, Hon'ble Minister, Ministry of Planning, Government of the People's Republic of Bangladesh graced the inauguration ceremony as chief guest.



## WEBINAR ON INTERNATIONAL SEMINAR ON MEGA STRUCTURES 2021

Faculty of Civil Engineering of MIST organized a webinar titled **International Seminar on Mega Structures 2021**. The seminar was inaugurated by Mr. Khandker Anwarul Islam, Cabinet Secretary, Government of the People's Republic of Bangladesh as chief guest. The seminar was comprised of four key note lectures: (i) "Planning and Management of Mega structures in Bangladesh" by the chief guest. (ii) "World Landmark Megastructures" by Dr Moncef L. Nehdi, Professor, Western University of Canada. (iii) "Challenges in Constructing Padma Multipurpose Bridge" by Dr Ainun Nishat, Professor Emiretus, BRAC University, and (iv) "Lesson Learnt from the Construction of Bangabandhu Sheikh Mujibur Rahman Tunnel" by Dr Hossain Md Shahin, Professor, Islamic University of Technology (IUT). More than 400 participants attended the webinar from home and abroad.





## WEBINAR ON ROLE OF NAVAL ARCHITECTS IN ENSURING SAFETY AND COMFORT OF SEAFARERS



On September 30, 2021, the Department of Naval Architecture and Marine Engineering conducted a webinar titled, **Role of Naval Architects in Ensuring Seafarer Safety and Comfort**. The webinar featured four keynote lectures: Dr. Khondoker Shahriar Iqbal, Senior Engineer, ABS, USA; Capt. Sabbir Mahmood, Chief of Nautical Studies, Bangladesh Marine Academy; and Cdre Golam Sadeq, (G), NAVAR, and Mr Mohammad Jainul Bari, Secretary, Ministry of Planning.

## WEBINAR ON ARCHITECTURE NOW AND BEYOND

On December 9, 2021, MIST's Architecture Department hosted a webinar on **Architecture Now and Beyond** to commemorate the 100th anniversary of the birth of Bangabandhu Sheikh Mujibur Rahman and Bangladesh's 50th anniversary of independence. RAJUK Chairman Mr. A.B.M. Amin Ullah Nuri honored the occasion as chief guest. There was a keynote speech by Ar. Rafiq Azam of Bangladesh and Elin Strand Ruin of Stockholm. The event was attended by students, faculty, and special guests.



## CAREER DEVELOPMENT SEMINAR TRINOMIAL PODCAST



Trinomial Podcast presented a career development session on December 12, 2021. The MIST Career Club organized it under the Student Welfare Directorate. The seminar drew around 400 students from several departments. Enayet Chowdhury, Lecturer BUET and Ayman Sadik, CEO of 10 Minute School were the podcast's guests.



## TRAINING ON COMPUTER HARDWARE AND BASIC NETWORK (COMPTIA A+)

MIST organized a **CompTia A+** training course to train skilled and confident computer and network administrators. The training was held from October 28th to November 16th, 2021. This training included all military student officers (except Level-4) from CSE and signals officers from other departments. On completion of the training program, participants received certificates.



## AUTOMATIC FIRE SAFETY TRAINING MODULE

IPE Department MIST has developed an **Automatic Fire Safety Training Module**. The module will be used on Ergonomics and Safety Engineering Lab as a piece of Lab equipment. System has a Fire Chamber to lit fire, which could be suppressed automatically by Water, CO<sub>2</sub>, or Foam-type extinguishers. The system additionally contains a smoke detector, heat detector, and multi-detector to detect fire. When the Temperature of the Fire Chamber reaches 60° C, the sprinkler system's sprinkler will start spraying. The system could also demonstrate the circuit connections of various components to the Control Panel.



## GUEST LECTURES AT FOREIGN UNIVERSITY BY FACULTY OF AE DEPARTMENT, MIST

On November 24, 2021, two of the faculty of AE Department, Asst. Prof. Md. Jalal Uddin Rumi and Asst. Prof. Md. Mijanur Rahman gave their lectures as guest speakers organized by the department of Aerospace Engineering, GNA University, Punjab, India. Asst. Prof. Jalal Uddin Lectured on the subject "Life Cycle Costing of Aircraft Maintenance and Repair Management", and Asst. Prof. Mijanur Rahman spoke on "Human Factors in Aviation and Engineering".

## ACADEMIC COLLABORATION



Academic Collaboration between MIST and University of Lincoln, and MIST and UK & London Metropolitan University on 5th to 11th November, 2021.

## FACULTY VISIT



Faculty members of CSE Department visited NSU.



A Field Visit took place to the proposed Tangail Economic Zone (TEZ) in Bhuiyanpur Upazila of Tangail district on 15th November 2021. This team of experts from MIST was led by Col A N M Foyezur Rahman, psc, head of the EWCE department.

## TRAINING VISIT

On 28 November 2021 and 14 December 2021, students from the NAME Department had a daylong training visit at Dockyard and Engineering Workshops Ltd (DEW). During their visit, participants had the opportunity to learn about several aspects of ship design and construction. The students were able to connect their theoretical knowledge with practical experience during this brief tour.



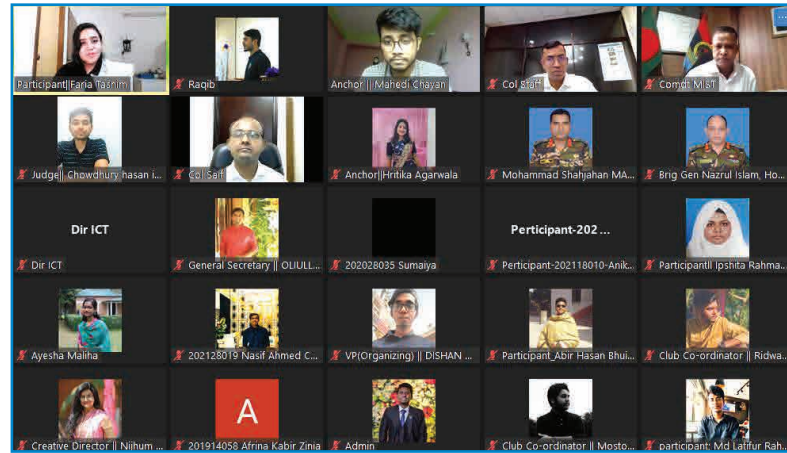


# OBSERVANCE

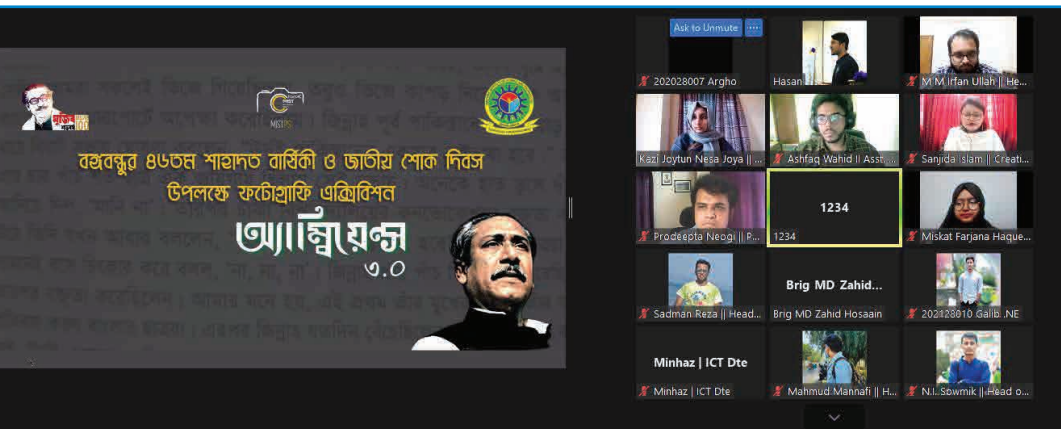


## MUJIB IN MEMORY

MIST Literature and Cultural Club organized an online poem recitation competition named as **Mujib in Memory** on 15th August 2021. More than 70 participants had participated in the competition. Faria Tasnim from Biomedical Engineering (BME) Department secured the first position and Md Latifur Rahman Limon from ME Department secured the 2nd position in this competition.



## ONLINE PHOTO EXHIBITION COMPETITION 'AMBIENCE 3.0'



To commemorate the 46th death anniversary of Bangabandhu and national mourning day, MIST Photographic Society hosted an online photography exhibition competition titled **'Ambience 3'** on August 15, 2021. Around 105 enthusiastic participants participated in the competition, and Mehedi Hasan of the Nuclear Science and Engineering Department won the first prize.

## ONLINE ENVIRONMENTAL CONTEST 2021

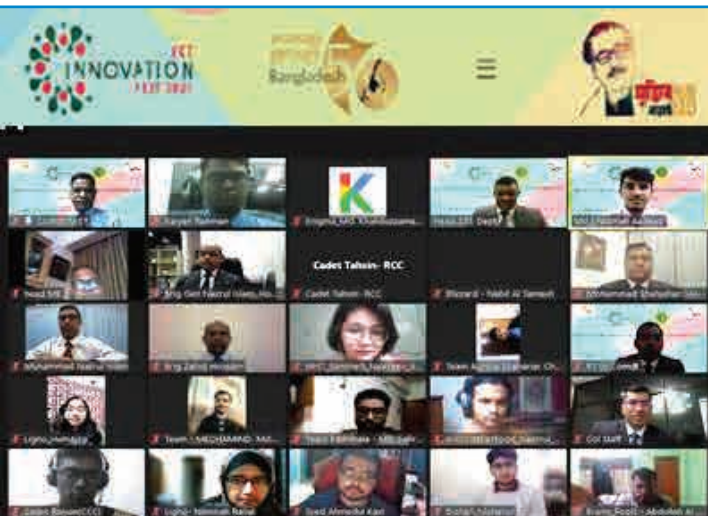
On November 29, 2021, the EWCE Department held an **Online Environmental Contest 2021** to commemorate the Golden Jubilee of Independence and the Birth Centenary of Bangabandhu Sheikh Mujibur Rahman. Md Atiqul Islam, Honorable Mayor of DNCC, was the chief guest, while the Respected Commandant of MIST was there as a special guest to highlight the occasion. University students from all over Bangladesh competed in two contests, the 'Clean Metro Contest' and the 'Recycling Heroes Contest,' in which they discussed innovative ideas and initiatives that used technical means to solve environmental problems which the country is facing today.





## INTER UNIVERSITY ICT INNOVATION FEST 2021

MIST arranged the MIST Inter University ICT Innovation Fest 2021 in September-October 2021. Cumulative prize money of BDT 315,000 was distributed among the winners. The fest basically included four categories of contests – Hackathon, Project Showcasing, Mobile App Contest, and Essay Competition. Students from different renowned universities and colleges including BUET, MIST, IUT, SUST, KUET, BRACU, NSU, and DIU actively participated in this Innovation Fest.



## SHEIKH RUSSEL DAY 2021

On October 18, 2021, MIST organized a Friendly Football Match to celebrate **Sheikh Russel Day 2021**. This match was held between Mechanical Engineering and Aeronautical Engineering Departments in which Aeronautical Engineering Department won by one goal. S Tanvin Rudro was awarded Man of the Match.



## CAMPUS HOUR

On the 15th of December, 2021, MIST Campus hosted a **Campus Hour**. This campus hour was unique because of its dress code. Different colours of Shari and Panjabi were worn by different departments. For the students, the day was extremely colourful. Hoimonti, a cultural program prepared by the Literature and Cultural Club was showcased on the same day. The students enjoyed themselves by singing and dancing throughout the day and into the evening.





## BANGABANDHU INTER DEPARTMENT FOOTBALL COMPETITION 2021

Bangabandhu Inter Department Football Competition 2021 was held at MIST football ground from 17th to 31st October, 2021. ME Department became Champion by defeating CE Department in the final match. Md Shohidul Islam Masum was adjudged Best Player of the Tournament and Lt Jaber Bin Islam was selected as Best Defender of the tournament. Md Latiful Azam Ruku became the Man of the Final for his goal in the final match.



## BANGABANDHU INTER DEPARTMENT T-10 CRICKET COMPETITION 2021



Bangabandhu Inter Department T-10 Cricket Competition 2021 was held at MIST from 28 November 2021 to 13 December 2021. ME Department became champion in the competition defeating AE Department in the final match. Rahel Imam Rocky from ME Department was selected as Man of the Match in the final match and Towfiq Imroze from AE Department was declared the best player of the tournament.

## BANGABANDHU INTER DEPARTMENT CULTURAL COMPETITION 2021

DSW Wg organized the Bangabandhu-Inter Department Cultural Competition 2021 from December 19th to 22nd. The EECE Department became champion, and the PME Department was runner up. Nahid Hasan Dipu from the PME Department and Captain Nafisa from the CSE Department became the best performers of the competition in the male and female categories, respectively. The respected Commandant Madam graced the closing ceremony as the chief guest and distributed prizes amongst the winners.



## A MEMORIAL DESIGN COMPETITION ‘50 YEARS OF BANGLADESH’

MIST Architecture Department launched a month-long Memorial Design Competition 50 Years of Bangladesh to celebrate Bangabandhu Sheikh Mujibur Rahman's birth centenary and Bangladesh's golden jubilee of independence. The name of the winners were announced on December 9, 2021. In total, 29 entries from 7 universities were submitted. Brig Gen Nazrul Islam, PhD, Director of Academic Wing, was the Chief Guest on the occasion. Associate Professor Sheikh Ahasanullah Mujumdar from the Department of Architecture, BUET, and eminent architect Dr. Nurur Rahman Khan were the respected jury members. Shizuka Ahmed (RUET), Lamya (MIST) and Md Safwan Islam (BRAC) won the first, second and third positions, respectively.



## SUSTAINABLE ENERGY CONTEST-2021



As a part of MIST's celebrations of "Mujib Borsho and Golden Jubilee of Independence" celebrations, the PME Department hosted an online competition titled **Sustainable Energy Contest 2021** on December 13, 2021. More than 200 students from various universities participated in the competition. The competition had three events: a quiz competition, a poster competition, and a showcase of innovative ideas. This competition has inspired participants to think about sustainable energy and, ideally are unconventional energy sources to ensure a safer and cleaner world.

## PHOTOGRAPHY COMPETITION “BANGLAR MUKH”

Prothom Alo organized a photography competition to mark the newspaper's 23rd anniversary of publication. The **Banglar Mukh Photography Competition** drew a total of 896 photographers. The photo of Mohammad Taswar Islam (a student of Level 4, ME Department) won first place out of 3958 photos submitted by participants.





## BANGABANDHU SHEIKH MUJIB MARATHON 2021

MIST organized the **Bangabandhu Sheikh Mujib Marathon 2021** for its military officers on the occasion of the birth centennial of Bangabandhu Sheikh Mujibur Rahman, the Father of the Nation. The tournament was open to all staff officers, student officers, and faculty members of the Armed Forces. ME Department won the champion trophy with an average score of 8.52 out of 10.

## CSE TALENT HUNT 2021

A colorful event, **CSE Talent Hunt 2021**, took place in December 2021 for discovering the hidden talents of undergraduate students of CSE department. The event included a wide range of co-curricular and extra-curricular activities such as programming, singing, dancing, painting, etc.



## CAD CONTEST 2021

The Department of IPE organized a contest called **CAD Contest 2021** on September 22, 2021, as part of MIST's academic curriculum. Students from level 2 (IPE 05) took part in the competition. Salman Ibrahim Saad, Naurin Tabassum Shuchi and Mohammad Mehedi Hasan Mehedi secured the 1st, 2nd and 3rd positions, respectively.



## OTHER ACTIVITIES

### CATS- MIST

CATS-MIST (EWCE) has been working with BEZA on the Environmental Impact Assessment (EIA) study for establishing Sonadia Eco-Tourism Park. On 22 November, 2021, the team gave an interim report for this project at the BEZA conference room.



### PYROLYSIS PLANT TO RECYCLE PLASTIC/ TIRE WASTE

IPE Department MIST has developed a **Pyrolysis Plant to recycle Plastic/ Tire waste** to generate Plastic/ Tire oil. Transforming plastic/tire waste to fuel would solve waste disposal problems and reduce the demand for fossil fuels, making it a perfect option for renewable energy. The study will also investigate the physicochemical properties (heating value, density, viscosity, cetane number etc.), engine performance (brake power, brake torque, BMEP, BTE, BSFC etc.), exhaust emissions (NO<sub>x</sub>, CO<sub>2</sub>, exhaust temperature), and total energy and exergy parameters of Plastic/Tire pyrolysis oil blended with biodiesel and diesel.





## ACHIEVEMENTS


### 12TH NATIONAL UNDERGRADUATE MATHEMATICS OLYMPIAD 2021

Md Rashid Ul Islam, a student of Level-2 CSE Department, secured the 5th position in the **12th National Undergraduate Mathematics Olympiad 2021** (Greater Dhaka North Zone), which was held on November 26th, 2021 via an online platform organized by North South University.



### CITATION MILESTONE ACHIEVEMENT BY CSE FACULTY MEMBER

Google Scholar

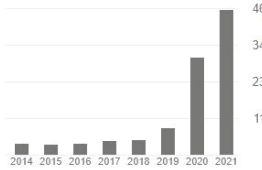


**Muhammad Nazrul Islam, Ph.D.**  
 Dept. of Computer Science & Engineering, Military Institute of Science & Technology (MIST)  
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 Human-Computer Interacti... Health Informatics Usability Engineering  
 User Experiences (UX) Machine Learning

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Citations	1179	1008
h-index	17	15
i10-index	35	29



TITLE	CITED BY	YEAR
What drives unverified information sharing and cyberchondria during the COVID-19 pandemic? S Samuli Laato, AKMN Islam, MN Islam, E Whelan European Journal of Information Systems 29 (3), 288-305	163	2020
A Machine Learning Approach to Predict Autism Spectrum Disorder KS Omar, P Mondat, NS Khan, MRK Rizvi, MN Islam International Conference on Electrical, Computer and Communication ...	65	2019

In October of 2021, one of the faculty members of CSE Department, Lt Col Muhammad Nazrul Islam, PhD, Sigs attained a research milestone by receiving 1000+ citations. His total number of citations, according to Google Scholar, is 1179, with an H-index of 17 and an i10 index of 35.

### ROBOT NOKSHAR ASOR: 3D ROBOT DESIGN CHALLENGE

MIST's TEAM NEPTUNE, led by Lt Fahim Faysal Arnob and Md Shahnewaz Khan won the Championship in the **ROBOT NOKSHAR ASOR**, a 3D Robot Design Challenge organized by Daffodil International University in September 2021. The competition included 43 teams from different universities who had to create mechanical parts, embed electronic circuits, animate the environment, and would go through extreme robotic simulation challenges. The winning design was a 'River Surface Cleaning Robot' created by 'Team Neptune.'





## NASA INTERNATIONAL SPACE APPS CHALLENGE 2021

The team MIST MOHASHUNNO was crowned with the local champion and the global nominee in **NASA International Space Apps Challenge 2021**. Team members consist of Sakshar Chowdhury- Team Leader, Flying Officer Sabekin Awaln Seefat, Md Al Mamun, Uday Shanker from the Aeronautical engineering department, and Sumaiya Al Sadia, Nahid Kamal Prithy from the Architecture department. It was organized by NASA and BASIS. More than 800 teams from different universities participated in the competition.



## THE INTERNATIONAL ASTRONOMY AND ASTROPHYSICS COMPETITION 2021

IAAC awarded Sakshar Chowdhury of Level-4, Department of Aeronautical Engineering "Gold Honor" in **The International Astronomy and Astrophysics Competition 2021**. His success in the final round exam and throughout the competition places him in the top 3% of the 4700 competitors from around the world.



## CERTIFICATE TRAINING ON TECHNOLOGICAL ASPECTS OF NNP-2006 (VVR-1200)

Capt Md Sifatul Mukhtadir, Lecturer A S M Nasim, and M. Sc Student Officer Lt. Col Samiuzzaman Mazumder received a course certificate for participating in an online training program entitled **Technical Aspects of NNP-2006 (VVR-1200)** organized by Rusatom Service JSC and Rusatom Technical Academy of Russian Federation. The course was conducted from November 08 to November 19, 2021.



## BEST STUDENT AWARD (ABROAD)

Tasnuba Tabassum Mourin and Nawrin Tasnim of BME-05 participated in the 4th International Clinical Engineering and Health Technology Management Congress (IV ICEHTMC) 2021 in Lake Buena Vista, Florida, USA, from October 24th to 26th. They received the "Best Student Award" in the Home Care category for their presentation titled "Scalable Telehealth Systems for Providing Psychopathic Therapies to Rehabilitate Drug Abusers Aiming to Salvage the Youth in the Well-Being of Bangladesh".



## BEST PAPER AWARD



A team from the IPE Department has been crowned the "Winning Team" and achieved the **Best Paper Award** at the "15th IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI-2021)" in Singapore. The team consists of Abdullah All Mamun Anik, Shuvodip Adhikary, and Md. Istiak Habib. Their supervisor was Professor Dr. Abdul Gafur. Team MIST won the title, competing with 24 finally selected teams around the world through a live camera presentation.

## APPOINTED AS THE MEMBER OF THE INTERNATIONAL UNION OF ARCHITECTS (UIA) WORK PROGRAMME FOR 2021-2023



Arch. Mohammad Sazzad Hossain, MIST Department of Architecture, has been appointed to the UIA Work Program – 'Heritage and Cultural Identity' for 2021-2023. The UIA is the only international architectural union recognized by UNESCO. UIA now includes 115 professional organizations and architects from 115 nations and territories. The UIA Heritage & Cultural Identity Work Program encourages the preservation of architectural heritage and cultural sites from natural calamities. Assoc. Prof. Mohammad Sazzad Hossain has also been nominated the ARCASIA Heritage Preservation Group (AHPG) Country Representative for 2021-2023.

## POST GRADUATE FELLOWSHIP

Nazmir-Nur Showva, M.Sc student of the BME Department, MIST, has been awarded a **Graduate Fellowship 2021** in the Bangladesh Reference Institute for Chemical Measurements (BRiCM) to carry out her M.Sc Thesis Research titled "Development Of Tachypleus Amebocyte Lysate Kit From The Horseshoe Crabs Available In Bangladesh" supervised by Major Md. Ashrafuzzaman, Ph.D, EME.





## ARTICLES PUBLISHED

### JOURNAL

#### CE Department

- Abdullah-Al Jabir, G.M Jahid Hasan and Md. Manjurul Anam have published a journal article titled “Correlation between temperature, sea level rise and land loss: an assessment along the Sundarbans coast”, Journal of King Saud University-Engineering Sciences, <https://doi.org/10.1016/j.jksues.2021.07.012> (Elsevier).
- M Tauhid Ur Rahman and Jannatul Ferdous have published a journal article titled “Spatio-temporal variation and prediction of land use based on CA-Markov of southwestern coastal district of Bangladesh” Elsevier journal “Remote Sensing Applications: Society and Environment”, Vol. 24, November 2021, <https://doi.org/10.1016/j.rsase.2021.100609>(Elsevier).
- Esharat Jahan Esha and Md Tauhid Ur Rahman have published a journal article titled “Simulation of future land surface temperature under the scenario of climate change using remote sensing & GIS techniques of northwestern Rajshahi district, Bangladesh” Elsevier journal “Environmental Challenges”, Vol 5, December 2021, 100365 [doi.org/10.1016/j.envc.2021.100365](https://doi.org/10.1016/j.envc.2021.100365) (Elsevier).
- Lt Col Khondaker Sakil Ahmed, PhD, Lec Md Shahjalal and BSc Student Md Tanvir Siddique from CE Dept have published a journal paper titled “Bond strength of post-installed high strength deformed rebar in concrete” Elsevier Journal “Case Studies in Construction Materials” (Q1, IF 2.6, Cite Score 5.1).
- Lt Col Khondaker Sakil Ahmed, PhD, Lec Jesika Rahman and Assistant Professor Kamrul Islam, CE Dept have published a journal paper titled “Data-driven shear strength prediction of steel fiber reinforced concrete beams using machine learning approach” Elsevier Journal “Engineering Structures” (Q1, IF 4.471, Cite Score 6.9) Journal.
- Lec Samia Zakir Sarothi and Lt Col Khondaker Sakil Ahmed, PhD, CE Dept have published a journal paper titled “Predicting bearing capacity of double shear bolted connections using machine learning” Elsevier Journal “Engineering Structures” (Q1, IF 4.471, Cite Score 6.9) Journal.
- Lt Col Khondaker Sakil Ahmed, PhD, PEng, CEng and MSc Student Md Ahsan Habib from CE Dept have published a journal paper titled “Flexural response of stainless steel reinforced concrete beam” Elsevier Journal “Case Studies in Construction Materials” (Q1, IF 2.983).
- Lt Col Khondaker Sakil Ahmed, PhD, PEng, CEng and Lec Afia Farzana of CE department have published a book chapter titled “Seismic Evaluation of Stainless Steel-Reinforced Concrete Bridge Pier Using Performance-Based Damage States” “Advances in Civil Engineering” Vol 184, Springer, Singapore, [https://doi.org/10.1007/978-981-16-5547-0\\_32](https://doi.org/10.1007/978-981-16-5547-0_32). October 2021.
- Lt Col Mohammed Russedul Islam, PhD, Undergraduate Student S K Subah, R. Tasnim and Research Collaborator M I Jahan from CE Dept have published a book Chapter titled “Assessing Bus Service Quality in Dhaka City from the Perspective of Female Passenger” Advances in Civil Engineering, Vol 184, Springer, Singapore, [https://doi.org/10.1007/978-981-16-5547-0\\_32](https://doi.org/10.1007/978-981-16-5547-0_32). October 2021.



## CSE Department

- An article titled “An Efficient Authentication Scheme for Secured Service Provisioning in Edge-enabled Vehicular Cloud Networks towards Sustainable Smart Cities” written by Prof Dr Mahbubur Rahman of CSE Department and co-author(s) was published in a Q1 journal having IF=7.59.
- An article titled “VGG-SCNet: A VGG Net based Deep Learning framework for Brain Tumor Detection of MRI Images” written by Col Mohammad Shahjahan Majib, Prof Dr Mahbubur Rahman, Nafiz Imtiaz Khan of CSE Department and co-author(s) was published in a Q1 journal having IF=3.37.
- An article titled “Exploring the Fundamental Factors of Digital Inequality in Bangladesh” written by Lt Col Nazrul Islam of CSE Department and co-author(s) was published in a Q1 journal having IF=1.58.
- An article titled “Developing a Novel Hands-free Interaction Technique based on Nose and Teeth Movements for Using Mobile Devices” written by Lt Col Nazrul Islam of CSE Department and co-author(s) was published in a Q1 journal having IF=3.75.
- An article titled “Land-Robot Technologies, the Integration of Cognitive Systems in Military and Defense: A Review” written by Dr M Akhtaruzzam of CSE Department and co-author(s) has been accepted in the National Defence College E-Journal (NDC EJ).
- An article titled “Towards Achieving a Delicate Blending between Rule-based Translator and Neural Machine Translator” written by Md Adnanul Islam of CSE Department and co-author(s) was published in a Q1 journal having IF=5.60.
- An article titled “A Comprehensive Guideline for Bangla Sentiment Annotation” written by Md Adnanul Islam of CSE Department and co-author(s) was published in a Q3 journal having IF=1.40.
- An article titled “An Enhanced Rule-based Translator: Can RBMT Outperform Data Driven Translators” written by Md Adnanul Islam of CSE Department and co-author(s) has been accepted in a Q2 journal having IF=2.20.
- An article titled “A Comprehensive Understanding of Popular Machine Translation Evaluation Metrics” written by Md Adnanul Islam of CSE Department and co-author(s) has been accepted in a Q3 journal having IF=0.89.
- An article titled “A Systematic Review of the Digital Interventions for Fighting COVID-19: The Bangladesh Perspective” written by Nafiz Imtiaz Khan of CSE Department and co-author(s) has been accepted in a Q1 journal having IF=4.47.
- An article titled “COVID-19 and Black Fungus: Analysis of Public Perceptions through Machine Learning” written by Nafiz Imtiaz Khan, Lt Col Nazrul Islam of CSE Department and co-author(s) has been accepted in a journal.



## AE DEPARTMENT

- Lecturer Debanan Bhadra, AE Department of MIST, published a journal paper as the first author in a Q1 Category Elsevier Journal “Materialia” (Cite score: 2.5) on November 2021. Bhadra, D., & Dhar, N. R. (2022) on “Selection of the natural fiber for sustainable applications in aerospace cabin interior using fuzzy MCDM model”. Materialia, 21, 101270. <https://doi.org/https://doi.org/10.1016/j.mtla.2021.101270>.
- Lecturer Debanan Bhadra, AE Department of MIST, published a paper as the first author in an Elsevier Journal “Materials Today: Proceedings” (Cite score: 1.8) on September 2021. Bhadra, D., Dhar, N. R., & Abdus Salam, M. (2021) on “Sensitivity analysis of the integrated AHP-TOPSIS and CRITIC-TOPSIS method for selection of the natural fiber”. Materials Today: Proceedings. <https://doi.org/https://doi.org/10.1016/j.matpr.2021.09.178>.
- Lecturer Debanan Bhadra, AE Department of MIST, published a paper as a co-author in an Elsevier Journal “Materials Today: Proceedings” (Cite score: 1.8) on November 2021. Chakma, P., Bhadra, D., & Dhar, N. R. (2021) on “Modeling and optimization of the control parameters in machining of aluminum metal matrix nanocomposite under CNT induced nanofluid”. Materials Today: Proceedings. <https://doi.org/https://doi.org/10.1016/j.matpr.2021.11.192>.

## NAME DEPARTMENT

- M Muzibur Rahman and S Reaz Ahmed, (2021). “Dry Sliding Friction and Wear Resistance of SnPb-Solder Affected Copper against Stainless Steel Counter Surface”. IJMSE. 2021; 18 (4): 1-12. DOI: 10.22068/ijmse.2334.
- Muhammad Rabiul Islam, Mahmudul Hasan Akib, Fariha Tabassum and Khandakar Akhter Hossain (2021). “On the investigation of wind generated waves in Bangladesh Rivers for the assessment of stability requirements in inland vessel design” Brodogradnja. Vol. 72 No. 3. <https://doi.org/10.21278/brod72304>.
- Md Daluar Hussain and Osman Md Amin, (2021). “A Comprehensive Analysis of the Stability and Powering Performances of a Hard Sail-Assisted Bulk Carrier”. Journal of Marine Science and Application. Vol 20, pp 426-445. <https://doi.org/10.1007/s11804-021-00219-w>;



## BME Department

- An article titled “Natural Fiber-based Green Composites: Processing, Properties and Biomedical Applications” by Prof Dr. Md Enamul Hoque, Asif Mahmud Rayhan, Samira Islam Shaily was published in the reputed journal of Applied Science and Engineering Progress on 7 October 2021.
- An article titled “Development and Validation of an Early Scoring System for Prediction of Disease Severity in COVID-19 using Complete Blood Count Parameters” by Tawsifur Rahman, Amith Khandakar, Prof Dr. Md Enamul Hoque, Nabil Ibtehaz, Saad Bin Kashem, Reehum Masud, Lutfunnahar Shampa, Mohammad Mehedi Hasan, Mohammad Tariqul Islam, Somaya Al-Maadeed, Susu M Zughaier, Saif Badran, Suhail AR Doi, Muhammad EH Chowdhury was published on 7th October 2021 in the reputed journal of IEEE Access having IF=4.48, Rank=Q1. DOI: [https://doi.org/10.1109/A\\_CCESS.2021.3105321](https://doi.org/10.1109/A_CCESS.2021.3105321).
- An article titled “Green Biocomposites for Biomedical Engineering: Design, Properties, and Applications” written by Prof Dr. Md Enamul Hoque, Ahmed Sharif, Mohammad Jawaid was published on 9th July 2021 in the reputed journal of Elsevier having Rank=Q1, eBook ISBN: 9780128215548, Paperback ISBN: 9780128215531 .
- “Gold nanoparticles (GNPs) in biomedical and clinical applications: A review” article written by Maj Md Maruf Hasan, PhD, EME Muzahidul I. Anik1, Niaz Mahmud, Abdullah Al Masud was published on 13th October 2021 in the reputed journal of Wiley Online Library having Rank=Q1. DOI: <https://doi.org/10.1002/nano.202100255>.
- An article titled “An Efficient Switched-Capacitor Based Single DC Source Inverter with Selective Harmonic Elimination.” by Maj Md Fazla Elahi, Sigs, MA Islam has been accepted on 18-20 November, 2021 for publishing in the “International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT)”, Dhaka, Bangladesh.
- An article titled “A New Double Boost Single Source Switched Capacitor Based Multilevel Inverter.” written by Maj Md Fazla Elahi, Sigs, MA Islam has been accepted on 17-19 December, 2021 for publishing in the “International Conference on Electrical, Information and Communication Technology (EICT)”, Khulna, Bangladesh.
- An article titled “Video based non-contact monitoring of respiratory rate and chest indrawing in children with pneumonia” by Ferdous Karim Lucy, Khadiza Tun Suha, Sumaiya Tabassum Dipty, Asst Prof Md Sharjis Ibne Wadud, Muhammad Abdul Kadir was published on 29th October, 2021 in the reputed journal IOP Publishing having IF= 2.833, Rank=Q2. DOI: [10.1088/1361-6579/ac34eb](https://doi.org/10.1088/1361-6579/ac34eb).
- An article titled “NSCT-based robust image watermarking in DC components of APDCBT using singular value decomposition” written by Chandan Saha, Md Hossain, Asst Prof Dr. Md Asadur Rahman was published on September, 2021 in the reputed journal of Springer International Publishing having IF=1.99, Rank=Q1; DOI: <https://doi.org/10.1016/j.array.2021.100063>.
- An article titled “Developing an Algorithm for Sequential Sorting of Discrete and Connected Characters Using Image Processing of Multi-Line License Plates” written by Abu Jar Md Minhuz Uddin Ahmed, Md Anwar Uddin, Asst Prof Dr. Md Asadur Rahman was published on 1st July, 2021 in the reputed journal of Elsevier having Rank=Q1; DOI: <https://doi.org/10.1016/j.array.2021.100063>.
- An article titled “The effects of plaque morphological characteristics on the post-stenotic flow in left main coronary artery bifurcation” written by Lec Tahura Hossain, Noushin Anan and M Tarik Arafat was published on September, 2021 in the reputed journal of IOP Science having IF=1.4, Rank=Q3; DOI: <http://dx.doi.org/10.1088/2057-1976/ac202c>.

## CONFERENCE PAPER

### CE Department

- Asif Abeer, Jannat Farzana and M Tauhid Ur Rahman: Development of ANFIS Model for Air Quality Forecasting in Dhaka City. 11th International Conference on Geotechnique, Construction Materials and Environment (GEOMATE), Kyoto, Japan, 03 to 05 November, 2021.
- Lt Col Khondaker Sakil Ahmed, PhD, Lec Samia Zakir Sarothi and Lec Afia Farzana from CE Department have published a conference paper titled “Compressive Strength Evaluation Of Rectangular Hollow Grade-201 Stainless Steel Stub Columns” in 5th International Conference on Advances in Civil Engineering (ICACE), 4th to 6th March, 2021, CUET, Chattogram, Bangladesh.
- Lt Col Khondaker Sakil Ahmed, PhD, Lec Md Shahjalal, BSc Student Md Ariful Islam and Rafiul Arifin Tantik from CE Department have published a conference paper titled “Mechanical Characterization of Concrete Containing Crumb Rubber and Recycled Brick Aggregate” in 3rd International Conference on Civil, Materials, and Environmental Engineering, Kualalampu, Malaysia, 2021.
- Lt Col Md Jahidul Islam, PhD, Assistant Professor Kamrul Islam and MSc Student Ehsani Khatun from CE Department have published a conference paper titled “Effect of fiber type and length on the mechanical properties of recycled aggregate concrete” CSCE 2021 Annual Conference, 2021, Canada.
- Lt Col Md Jahidul Islam, PhD, BSc Student Nisath Tabassum Borsha, Nisath Niala Meghna and Rahi Binte Enam from CE Department have published a conference paper titled “Mechanical and durability properties of fly ash blended concrete with GI fiber” CSCE 2021 Annual Conference, 26th to 29th May 2021, Canada.
- Lt Col Md Jahidul Islam, PhD, BSc Student Tasnia Ahmed, S M Fahad Bin Imam and Mohammad Ifaz from CE Department have published a conference paper titled “Mechanical behavior of carbon and Galvanized Iron Textile Reinforced Concrete” Advance Materials Webcongress, 12th to 13th February 2021, Sweden.
- Lt Col Md Jahidul Islam, Tasnia Ahmed, S.M.F.B. Imam and Md Ifaz, “Dynamic Behavior of Carbon, Galvanized Iron and Glass Textile Reinforced Concrete Subjected to Impact Loading”, In the 3rd AAAFM-UCLA International Conference, UCLA, USA, 18th to 20th August 2021.



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- Muhammad Nazrul Islam and co-authors. (2021). Development of a Predictive Analytic System for Chronic Kidney Disease using Ensemble-based Machine Learning. In proceedings of the 62th International Scientific Conference on Information Technology and Management Science of Riga Technical University (ITMS 2021), IEEE, 14th to 15th October, 2021, Riga, Latvia.
- Nafiz Imtiaz Khan, Muhammad Nazrul Islam and co-authors. (2021). Towards Developing a Mobile Application for Detecting Intoxicated People through Interactive UIs. In Proceedings of the 5th International Joint Conference on Advances in Computational Intelligence (IJCACI 2021), 23rd to 24th October, 2021, India, Springer.
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- Muhammad Nazrul Islam and co-authors. (2021). Automatic Malware Categorization based on K-Means Clustering Technique. In Proceedings of the International Conference on Big Data, IoT and Machine Learning (BIM 2021), 23rd to 25th September, 2021, Cox's Bazar, Bangladesh, Springer.
- Muhammad Nazrul Islam and co-authors. (2021). A Dynamic Topic Identification and Labeling Approach of COVID-19 Tweets. In Proceedings of the International Conference on Big Data, IoT and Machine Learning (BIM 2021), 23rd to 25th September, Cox's Bazar, Bangladesh, Taylor and Francis.
- Muhammad Nazrul Islam and co-authors. (2021). A Machine Learning Based Sign Language Interpretation System for Communication with Deaf-mute People. In Proceedings of the 21th International Conference on Human Computer Interaction (Interaction 2021), 22nd to 24th September, 2021, Malaga, Spain, ACM.
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- Md Shadman Aadeeb, Nusrat Sharmin and co-authors. (2021). Implementation of a GPS in the present battle tanks of Bangladesh. In IEEE Computer Society Bangladesh Chapter Winter Symposium (IEEE CS BDC WS) 2021, 13rd to 14th November, 2021, IEEE.
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- Nusrat Sharmin and co-authors. A Deep Learning-Based Approach for Real-Time Driver Drowsiness Detection. In 5th International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT), 18th to 20th November, Dhaka, Bangladesh, 2021, IEEE.
- Nusrat Sharmin and co-authors. Development of a Modern Simulation Software and Analysis of its Performance Using a Swarm System Architecture Driven by Nature-Inspired Algorithms. In International Conference on Robotics, Automation, Artificial-intelligence and Internet-of-Things (RAAICON), 3rd to 4th December, Dhaka, Bangladesh, 2021, IEEE.
- Sharifa Rania Mahmud, Nafiz Imtiaz Khan and co-authors, “Developing a Machine Learning Based Support System for Mitigating the Suppression Against Women and Children,” 5th International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT), IEEE, 18th to 20th November, Dhaka, Bangladesh, 2021.
- Nuzhat Tabassum, “A Case Study on Information Fusion Modeling in Email Archives”, 4th IEEE International Conference on Telecommunications and Photonics (ICTP) 2021, December 22nd to 24th, 2021, Dhaka, Bangladesh.
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- Tasmiah Tamzid Anannya, Muhammad Nazrul Islam and co-authors, “Seniors Aid: Requirements Elicitation and Development of a Mobile Application for Senior Citizens”. In Proceedings of the International Conference on Big Data, IoT and Machine Learning (BIM 2021), 23rd to 25th September, 2021, Cox’s Bazar, Bangladesh, Taylor and Francis.
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## IPE DEPARTMENT

- Moddasir Khan Nayeem, Tanveer Rahman, S M Faisal Ahmmed and Zubairul Alam “Comparison of Mixing Performance of Different Types of Passive Micromixers Using Numerical Analysis” 4th International Conference on Industrial & Mechanical Engineering and Operations Management, 26th to 27th December, 2021.

## BOOK CHAPTER

### CE Department

- Myisha Ahmed and G.M. Jahid Hasan published a book chapter titled “Renewable Energy in Bangladesh: Status and Potential” (Chapter 25) on the book “Design, Analysis, and Applications of Renewable Energy Systems”, Elsevier. (available online on 17 Sept 2021), <https://doi.org/10.1016/B978-0-12-824555-2.00023-X>.

### CSE Department

- Muhammad Nazrul Islam and co-authors (2021). Exploring tree-based machine learning methods to predict autism spectrum disorder. In Neural Engineering Techniques for Autism Spectrum Disorder (pp. 165-183). Academic Press.

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