

## COMMANDANT'S MESSAGE



It is a great pleasure to know that MIST is publishing its 41st issue of newsletter. With the motto “Technology for Advancement”, MIST began its journey on 19th April, 1998. Within a span of more than two decades, MIST is now one of the leading engineering institutes of Bangladesh. The institution is providing quality education in the field of science, engineering technology and is conducting research to meet the “National and Global Challenges”. Moreover, MIST regularly arranges different seminars, conferences, workshops, industrial tours and other co-curricular activities. The second half of the academic session 2021-22 is more vibrant and eventful in terms of academic and co-curricular activities. I express my heartfelt thanks and gratitude to the editorial board for publishing MIST Newsletter regularly.

## INAUGURATION CEREMONY OF NEWLY CONSTRUCTED ACADEMIC AND ADMIN TOWERS



The Chief of Army Staff, Bangladesh Army General S M Shafiuddin Ahmed, SBP (BAR), OSP, ndu, psc, PhD inaugurated newly constructed academic and admin towers on 29 November, 2022.

## INAUGURATION CEREMONY OF 'HALL OF FAME' & 'CENTRAL LIBRARY' (29 NOVEMBER 2022)



## DELEGATIONS



The State Minister for ICT, Zunaid Ahmed Palak, MP on 11 August, 2022.



H.E Charles Whiteley, Ambassador of European Union to Bangladesh visited MIST on 13 September, 2022.



Mr Salih Arican, a Bio-medical professional from Germany on 25 October, 2022



BCS and BJS-78 Orientation Training Visit to MIST on 01 September, 2022.



Flight Safety Officers' (FSO) visit to MIST on 12 October 2022.

## 2nd INTERNATIONAL CONFERENCE ON MECHANICAL ENGINEERING AND APPLIED SCIENCES - 2022



On December 8 to 10, 2022, the Faculty of Mechanical Engineering, MIST, organized the "2nd International Conference on Mechanical Engineering and Applied Sciences (ICMEAS-2022)" at MIST. Honourable Minister of Science and Technology Architect Yafes Osman inaugurated the conference as the chief guest.

## 4TH INTERNATIONAL CONFERENCE ON ENERGY AND POWER (ICEP)



Department of Nuclear Science and Engineering along with Department of Petroleum and Mining Engineering has successfully organized a conference titled "4th International Conference on Energy and Power (ICEP-2022)" on 11 to 13 December 2022. Honourable Adviser to the Prime Minister, on Power, Energy & Mineral Resources Affairs, Dr. Tawfiq-e-Elahi Chowdhury, BB, has graced the inauguration ceremony as the chief guest.

## GOVERNING BODY MEETING OF MIST



MIST held its 40th Governing Body Meeting on 19 December, 2022. Major General Md Wahid-Uz-Zaman, BSP (BAR), ndc, aowc, psc, te, Commandant, MIST presided over the meeting.

## ACADEMIC COUNCIL OF MIST

The 72nd & 73rd Academic Council Meeting of MIST were held on 08 August and 02 November, 2022 respectively. Major General Md Wahid-Uz-Zaman, BSP, (BAR), ndc, aowc, psc, te, Commandant, MIST chaired the meeting. Representatives from Ministry of Education, Ministry of Defence, Armed Forces Division, three Services Headquarters and representatives of BMA, BNA, BAFA, BUET & DU were present in the meeting.

## SEMINAR ON SCADA AND SAS



The Electrical, Electronic & Communication Engineering Department arranged a seminar titled “SCADA and SAS (Supervisory Control & Data Acquisition and Substation Automation System)” on 02 October 2022.

## SEMINAR ON ROLE OF NAVAL ARCHITECTS AND MARINE ENGINEERS TO ENSURE GREEN SHIP TECHNOLOGIES



On September 29, 2022, the Department of Naval Architecture and Marine Engineering conducted a seminar titled “Role of Naval Architects and Marine Engineers to Ensure Green Ship Technologies” on the occasion of World Maritime Day 2022. Maj Gen Md Wahid-Uz-Zaman, BSP (BAR), ndc, aowc, psc, te, Commandant, MIST graced the seminar as Chief Guest.

## WEBINAR ON SCADA AND SUBSTATION AUTOMATION: THE PLATFORMS FOR ALL AUTOMATION

On October 6, 2022 Electrical, Electronic and Communication Engineering Department arranged a webinar titled "SCADA and Substation Automation: the Platforms for all Automation". The webinar was chaired by Brigadier General A K M Nazrul Islam. Guest speaker for the webinar was Mr. John D. McDonald, P.E., who is a smart grid business development leader for GE’s grid solutions business.



## WEBINAR ON OPERATIONS RESEARCH INSIGHTS INTO REAL-LIFE PROBLEMS WITH UNCERTAINTY



Department of Industrial and Production Engineering organized a webinar on “Operations Research Insights into Real-Life Problems with Uncertainty” on 22 October 2022. All the faculty members and students joined the webinar.

## WEBINAR ON REFERENCE MANAGEMENT FOR UNDERGRADUATE AND POSTGRADUATE THESIS/ PROJECT

On 10 October, 2022, a webinar was organized under the supervision of the Department of ME on “Reference Management for Undergraduate and Postgraduate Thesis/ Project”. Assistant Professor Moammer Deen Arif, Lecturer Insiat Islam Rabbi and Lecturer Wasi Uddin from ME Department were the speakers of the webinar.

## WEBINAR ON COMSOL MULTIPHYSICS-INTRODUCTION & ASPECTS

On October 17, 2022, a webinar was organized under the supervision of the Department of ME, entitled "Comsol Multiphysics-Introduction & Aspects". Assistant Professor Tarek Mahbub of ME department was the speakers in the webinar.

## GUEST LECTURE ON APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN MEDICINE

BME Department organized a Guest Lecture on Applications of “Artificial Intelligence in Medicine” by Muhammad E. H. Chowdhury, PhD and PostDoc (University of Nottingham, Nottingham, UK) Assistant Professor, Department of Electrical Engineering, College of Engineering, Qatar University, Doha, Qatar on 19 July, 2022.

## SHORT COURSE ON PRACTICAL APPLICATION OF ARTIFICIAL INTELLIGENCE (AI)



From 24 to 28 September, 2022 the Department of CSE, MIST conducted a short course titled “Practical Application of Artificial Intelligence (AI)”. The course was conducted by instructors Diego Lamacchia, VP of AI operations, and Dr. Khairul Chowdhury, AI Solution Architect from IDARE LLC (USA).

## SHORT COURSE ON CYBER SECURITY FOR INFORMATION AGE: PRACTICES AND CHALLENGES

A team comprising of academicians, professionals, and students visited MIST Cyber Range for a short course on "Cyber Security for Information Age: Practices and Challenges" on 23 July, 2022. The visit was part of a 3 daylong short course arranged by the Department of CSE, Islamic University of Technology (IUT), Bangladesh. The course was attended by a total of 35 participants from 14 different universities/institutes including 6 foreign students who participated online.





## SPECIALIZED COURSE ON CYBER SECURITY OPERATION CENTER ANALYSIS AND THREAT HUNTING

A specialized course on “Cyber Security Operation Center Analysis and Threat Hunting” commenced on 16 July, 2022 specifically for law enforcement agency members. A total of 19 participants, from various law enforcement agencies of the nation, including AITSO, Army Cyber Gp, STC&S, and NSI are attending the 5-week long course.



## CERTIFICATE COURSE ON INFORMATION SECURITY ASSESSMENT AND PENETRATION TESTING



The first batch of the Certificate Course on “Information Security Assessment and Penetration Testing” was conducted from 17 June to 23 July 2022. The first course is being attended by security and ICT professionals from different banks as well as IT companies. Top security professionals from the banking sector and academicians and staff from MIST are conducting the course.

## CERTIFICATION COURSE ON MEDICAL IMAGING AND RADIOTHERAPY

Department of BME organized a Certification Course titled “Medical Imaging and Radiotherapy” by an experienced foreign professional Mr Salih Arican (Germany) from 25 October to 01 November 2022. Biomedical Engineers, Nuclear Engineers, Radiologists, and Medical technologists from various Universities and Institutions from various educational backgrounds participated in this course.



## LAUNCHING CEREMONY OF THE ONLINE VERSION OF MIJST SPECIAL ISSUE: PADMA BRIDGE (30 November 2022)



## INAUGURATION OF PETROLEUM PRODUCTS AND LUBRICATING OIL TESTING LAB (29 September 2022)



## INAUGURATION OF NEW BASKETBALL GROUND (14 December 2022)



## INAUGURATION OF FEMALE COMMON ROOM (15 December 2022)



# OBSERVANCE

## NATIONAL MOURNING DAY



## SHEIKH RUSSEL DAY 2022



## ARMED FORCE DAY 2022



## VICTORY DAY 2022



## CLUB ACTIVITIES

### ANURONON 2022: THE BIGGEST NATIONAL EVENT



Anuronon 22 was organized by BME Department in assistance with Einthoven Club MIST on 2nd July, 2022 .

### MIST PHOTOGRAPHIC SOCIETY'S ORIENTATION PROGRAM



MIST Photographic Society's Orientation Program for new members was held on July 20, 2022.

### WELCOMING NEW MEMBERS OF MIST COMPUTER CLUB-2022

The welcoming ceremony of the MIST Computer Club was arranged in the Multipurpose Hall on 27 October, 2022 with the participation of enthusiastic club members from all the departments.



## SEMINAR ON HIGHER STUDIES ABROAD

MIST Career Club in Collaboration with Australian Education Career Counseling (AECC) arranged a seminar on “Higher Studies Abroad” on 16 November, 2022. Approximately 200 students participated the program.



## SEMINAR ON ENGINEERING MATHEMATICS TO FACE IR 4.0 AND INTRA MIST MATH OLYMPIAD



Seminar on “Engineering Mathematics to Face IR 4.0 and Intra MIST Math Olympiad 2022” was held from 6 to 8 November, 2022 organized by the Department of Science & Humanities MIST. Tariq Hasan Rizu, CSE-20 secured 1st position in the Competition.

## BANGABANDHU INTER-DEPARTMENT FOOTBALL COMPETITION 2022

“Bangabandhu Inter-Department Football Competition 2022” was held from 10 to 20 October, 2022. ME Department became champion and NAME Department became runner up in the competition. Ruku from ME Department became the best player of the tournament.



## MIST INTER DEPARTMENT DEBATE COMPETITION - 2022

"MIST Inter Department Debate Competition-2022" was held from 13 to 20 November, 2022 under the supervision of Department of Science and Humanities.



## BANGABANDHU 3rd INTER UNIVERSITY SPORTS CHAMPIONSHIP - 2022



"Bangabandhu 3rd Inter University Sports Championship 2022" was organized by the Ministry of Youth and Sports on November 23, 2022. MIST secured 4th position in Chess, Volleyball (Male), Volleyball (Female), Table Tennis Doubles (Female), Marathon (Female), 100m Sprint (Female) and Secured Silver Medal in 100m Sprint (Male). Capt. Mahmud Al Mehran Mugdho, Inf from ME Department was the Silver Medal Winner.

## RC MOTO RACING COMPETITION



MOTO MIST Automotive Club arranged RC MOTO Racing Competition on July during campus hour.

## OTHER ACTIVITIES

### BATHYMETRIC SURVEY



An expert team from EWCE Department conducted BATHYMETRIC SURVEY along the newly constructed Patenga Container Terminal (PCT) and Dolphin Jetty area of Karnaphuli river at Chattogram from 11 to 13 October, 2022.

### CE FEST-2022



Department of Civil Engineering of MIST organized “CE FEST-2022” on 10 November 2022.

### MECHANIVERSE 1.0



“Mechanical Engineering Day” was celebrated on December 14, 2022 by with the students of ME Department of MIST.

### FAREWELL FESTIVAL-2022



Directorate of Student Welfare hosted Farewell Festival-2022 on 15 December, 2022 in order to bid farewell to departing Level 4 Students.



# ACHIEVEMENTS

## DISTINGUISHED PROFESSOR AWARD FOR LIFE LONG CONTRIBUTION



In recognition and appreciation of outstanding achievement and contributions in academia and dedication and lifelong support in the industrial engineering and operations management profession Dr A. K. M Nurul Amin, Professor IPE Department MIST was awarded with the Distinguished Professor Award by the IEOM Society International on 28 December 2022.



## CHAMPION AWARD (R & D CATEGORY) AT THE BASIS NATIONAL ICT AWARDS-2022

A team of enthusiastic researchers led by Lt Col Muhammad Nazrul Islam, Ph.D., Sigs from the CSE department of MIST, took part in the BASIS National ICT Awards 2022 with their project Nose-Teeth based Interaction with Mobile Devices for Disable Users. The team received the Champion trophy at the BASIS National ICT Awards-2022 Gala Night held at Radisson Blue Water Garden, Dhaka on 31 October, 2022.



## INTERNATIONAL COLLABORATIVE RESEARCH GRANT



Lt Col Muhammad Nazrul Islam, Ph.D., Sigs of CSE Department received an International Collaborative Research Grant (Grant No. 896) of 10,000 SAR from King Faisal University (KFU), Ministry of Education, Saudi Arabia to pursue collaborative research and publications.



## KEYNOTE SPEECH



Dr A. K. M Nurul Amin, Professor IPE Department MIST delivered a Keynote speech at 7th International Conference on Mechanical, Industrial and Energy Engineering organized by KUET on 22 to 24 December 2022.

## SPEECH AT ERASMUS+ PDO PROGRAM



Architect Mohammad Sazzad Hossain, Associate professor, Department of Architecture, attended the Erasmus + PDO program, as a speaker on 11 August 2022. The event was organized by the European Union in Bangladesh.

## BEST CONFERENCE PAPER AWARD



A paper titled - “A Robotic Arm for Pick-and-Place Operation: An Experimental Study” by Lecturer Shah Md. Ahasan Siddique, Lecturer Shadman Tajwar & Brig Gen Humayun Kabir Bhuiyan of ME Department, MIST was awarded as the “Overall Best Conference paper of ICMEAS 2022”.

## BEST PRESENTED PAPER AWARD

Captain Kaosar Rashid, (E), psc, BN, Head, NAME Department and Musa Al Kazim Apon were awarded with the ‘Best Presented Paper Award’ for their paper titled, “Experimental Investigation of Degradation of Shipbuilding Steel Plate Exposed to the Open Environment” the paper was presented at ICMEAS 2022.



## BEST PRESENTED PAPER

A conference paper titled “CNN-based Clinical Diagnosis and Detection Support System for X-ray” by Master’s students Bipin Thapa Magar, Kumar Shrestha and Supervised by Md. Asadur Rahman was awarded for the Best Presented Paper in ICMEAS 2022.



## ANATOLIAN ROVER CHALLENGE - 2022



In the “Anatolian Rover Challenge 2022” competition held on July 22 to 25, 2022 at the Istanbul Technical University (ITU) campus in Turkey. MIST Mongol Barota Team secured 3rd position in ARC 2022.

## STEM VENTURE AWARD COMPETITION

A team of students from NAME Department became winner in “STEM Venture Award Competition” on 6 September, 2022. Total 108 universities took part in this competition. This competition was arranged under the supervision of US Embassy.



## ICPC ASIA WEST CONTINENT FINAL CONTEST- 2021



"MIST\_FrostByte", Team of A.S.M Rakibul Hasan(CSE-19), Tariq Hasan Rizu(CSE-20), and Rayhan Ferdous Faisal(CSE-20), qualified in the "ICPC Asia West continent final contest- 2021" for the very first time from MIST. This team was coached by Lecturer Swapnil Biswas and supervised by the HOD of CSE Department Brig Gen Abdur Razzak, SUP, psc.

## 2ND INTERNATIONAL COMPETITION FOR YOUNG RESEARCHERS 2022



Sazzatul Islam Anik, a student of Level 4 of the Department of Computer Science and Engineering secured the first position in the 2nd International Competition for "Young Researchers 2022". He presented his research idea titled "Towards Developing Smart Optometrist for the Diagnosis of Amblyopia at Early Age". The prestigious event was held on 30th October, 2022 and was organized by UniV.



## FOOTPRINTS BY ALUMNI AT THE WORLD'S ONE OF TOP IT COMPANIES



The Department of CSE is delighted to share the news that Shifat Zaman Mayem and A M Shated Hasan have got the offer to join Amazon, Dublin, Ireland, and Amazon, London UK respectively as Software Development engineers. This is a proud moment for every member of the MIST Computer Club as well as the CSE Department of MIST.



## STUDENT LEADERSHIP PROGRAM AT USA

Ramisha Fariha Baki, a Level-4 student of CSE Department at MIST has participated in the prestigious John McCain Study of the U.S. Institute (SUSI) for Student Leaders on the Rule of Law and Public Service from 18 June 2022 to 20 July 2022. This is a U.S. Department of State-sponsored program in honor of the Late U.S. Senator John McCain on the Rule of Law and Public Service through the Study of the U.S. Institutes for Student Leaders program.



## BdOSN DEV MANIA 2022 PROJECT COMPETITION



Two teams of the CSE Department recently participated in BdOSN Dev Mania 2022 Project competition organized (online) by Bangladesh Open Source Network (BdOSN) on 31 July. The teams secured the first runner-up and second runner-up positions and won prize money of Tk 10,000 and Tk 8,000 respectively. A total of 9 teams consisting of only female students participated in the event from AUST, BUBT, DU, NSU, and MIST.

## VLSITHON 1.0



MIST EECE "Team Bluebird" became the 1st runner up out of 100 participants from 15 different universities across the country, in the biggest VLSITHON 1.0 (Battle of IC Layout Designers), organized by ULKASEMI Limited at United International University on 05 December 2022.

## 13TH NATIONAL UNDERGRADUATE MATHEMATICS OLYMPIAD



13th National Undergraduate Mathematics Olympiad (Dhaka North Region) took place on 25 November, 2022 in IUB and Maimoona Hossain Moumita from BME-08 secured 10th position.

## PUBLICATIONS

## JOURNAL

## CE DEPARTMENT

- Professor Dr. G M Jahid Hasan, Abdullah-Al Jabir and Md Manjurul Anam has published a journal article titled as “Monitoring bank-line movements of the rivers flowing across the Sundarbans using remote sensing and GIS techniques”, Regional Studies in Marine Science, Elsevier, Vol 51, 2022, <https://doi.org/10.1016/j.rsma.2022.102679>, (Impact Factor: 2.166, Site Score: 2.3).
- Professor Dr. Md Tauhid Ur Rahman has published a journal article titled as “Use of cellular automata-based artificial neural networks for detection and prediction of land use changes in North-Western Dhaka City”, Impact Factor 5.19 (Springer) Environmental Science and Pollution Research, Vol. 2022, <https://link.springer.com/article/10.1007/s11356-022-22079-9>.
- Lt Col Khondaker Sakil Ahmed, PhD, PEng, CEng, Max T. W. Chuan, Jian Dai, Ang Kok Keng published a journal article titled Dynamic Responses of Padma Multipurpose Bridge Truss due to Moving Train Load. MIST INTERNATIONAL JOURNAL OF SCIENCE AND TECHNOLOGY, 10(2), 65-78. [https://doi.org/10.47981/j.mijst.10\(02\)2022.383\(65-78\)](https://doi.org/10.47981/j.mijst.10(02)2022.383(65-78)).
- Lt Col Khondaker Sakil Ahmed, PhD, PEng, CEng, S M Moniruzzaman, Tahsin Reza Hossain, Shamim Z Bosunia published a journal article titled Force based Design Approach for Seismic Evaluation of Padma Multipurpose Bridge Pier at Different Performance Levels in the special issue “Padma Bridge” of MIST International Journal of Science and Technology, 10(2), 57-63 [https://doi.org/10.47981/j.mijst.10\(02\)2022.387\(57-63\)](https://doi.org/10.47981/j.mijst.10(02)2022.387(57-63)).

## ME DEPARTMENT

- Lecturer Md Insiat Islam Rabby from ME department has published a journal paper titled “Numerical Study of Laminar Convective Heat Transfer from Corrugated Pipe into an Al<sub>2</sub>O<sub>3</sub>-AlN/H<sub>2</sub>O Hybride Nanofluid” in Case Studies in Thermal Engineering, Vol 39, 2022, Elsevier.
- Lecturer Md Insiat Islam Rabby and Lecturer Tazeen Afrin Mumu from ME department has published a journal paper titled Heat Transfer through Triangular Corrugated Pipe for Laminar Flow Region by Using Nanofluids: A Numerical Study in Romanian Journal of Materials, volume 52(4), 2022.
- Lecturer Md Insiat Islam Rabby from ME department has published a journal paper titled “Do Medical Expenses of Covid-19 Treatment in Private Hospitals of Bangladesh Creates Economic-Burden: Evidence from Media Report” in Turkiya Klinikleri Journal of Medical Science, Volume 42 (4), 2022.

## AE DEPARTMENT

- Shaikh Reaz Ahmed, Zakaria Islam has published a paper titled as “Displacement-function analysis of local stresses in thick beams on simple support” International Journal of Mechanical Science, 239,107908 (SJR: Q1, Impact Factor: 6.677).

# JOURNAL

## NAME DEPARTMENT

- A paper titled, 'Applicability of Current Statutory Rules for Stability Requirements of Bangladesh Inland Passenger Vessels' by Muhammad Rabiul Islam; A. K. M. Samiu Haque Barnil; Md. Shaidur Rahman; Khandakar Akhter Hossain was published on Journal of Ship Research, J Ship Res 66 (03): 219–230.

## IPE DEPARTMENT

- Neyeem, M.K and Alam, S.T., 2022. A scenario-based stochastic programming model for multi commodity distribution considering disruption in distribution network. Result in Control and Optimization, vol. 8, p.100167.

## BME DEPARTMENT

- Article titled "Biopolymers and Biomimetic Materials in Medical and Electronic-Related Applications for Environment–Health–Development Nexus: Systematic Review" written by Faris Mohammed AL-Oqla, Mohammed Hassouna Alaaeddin, Md Enamul Hoque, & Vijay Kumar Thakur has published in journal of Bionic Engineering.

Article titled "Gelatin based scaffolds for tissue engineering-a review" written by Adib Bin Rashid, Nazmir-Nur

- Showva, Md Enamul Hoque has published in International journal of Current Opinion in Biomedical Engineering.

Article titled "Collagen/Chitosan/Nigella Sativa Inscribed Electrospun Hybrid Bio-Nanocomposite for Skin Tissue Engineering" written by Md. Rubel Alam, Shah Alimuzzaman, Md. Abdus Shahid, Md Enamul Hoque is published in

- International journal of Biomaterials Science: Polymer Edition.

Article titled "Performance enhancement and life cycle analysis of a novel solar HVAC system using underground water and energy recovery technique" written by Rahman S.M.A, Salah Issa, Mamdouh El Haj Assad, Sheikh

- Khaleduzzaman Shah, Mohammad Ali Abdelkareem, Md Enamul Hoque, & A.G. Olabi is published in International journal of Thermal Science and Engineering Progress.

Article titled "Early Prediction of Diabetes Using an Ensemble of Machine Learning Models.." written by Aishwariya Dutta, Md. Kamrul Hasan, Mohiuddin Ahmad, Md. Abdul Awal, Md. Akhtarul Islam, Mehedi Masud, and Hossam

- Meshref has published in International Journal of Environmental Research and Public Health, MDPI.

Article titled "Segmenting 3D geometry of left coronary artery from coronary CT angiography using deep learning for hemodynamic evaluation." written by Sadman Rahman Sadid, Mohammed S Kabir, Samreen T Mahmud, Md Saiful Islam, AHM Waliul Islam, M Tarik Arafat, has published in International journal of IOP Publishing.

- Article titled "Natural Fiber-based Green Composites: Processing, Properties and Biomedical Applications" written by Md Enamul Hoque, Asif Mahmud Rayhan, Samira Islam Shaily has published in International journal of Applied Science and Engineering Progress.

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## CONFERENCE PAPER

### CE DEPARTMENT

- Professor Dr. Md Tauhid Ur Rahman: SUSTAINABLE ADAPTATION PRACTICES IN ENSURING FOOD SECURITY IN SOUTHWESTERN, BANGLADESH. Presented at International Conference on Water Security and Climate Change, WSCC-2022, Bangkok, Thailand, 01st -3rd December 2022.

### EECE DEPARTMENT

- M. M. Aminuzzaman, M. Hossam-E-Haider. "A Novel Non-Invasive Method To Measure Glucose Concentration Using Triple Pole CSRR Based Sensor." 12th International Conference on Electrical and Computer Engineering (ICECE), 2022. [Accepted].
- F. B. F. Maisha, S. U. Ahmed, M. Hossam-E-Haider. "Bangla License Plate Detection and Recognition System with YOLOv7 and Improved Custom OCR Engine." 4th Int. Conf. on Emerging Research in Electronics, Computer Science and Technology (ICERECT), 2022. [Accepted].
- M. Hossam-E-Haider, D. Roy. "Object Tracking Based on Background Subtraction and Kalman Filtering". International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE 2023). [Accepted].

- M. M. Rahman, M. Hossam-E-Haider "Performance Analysis of Effective Sensors for Determining Reliable Flare Altitude of Fixed Wing UAV." 4th Int. Conf. on Sustainable Technologies for Industry 4.0 (STI 2022). [Accepted].

- Saquib, F. Raihan, A. Chakma, and M. S. A. A. F. Shiblee. "Analyzing The Technical Constraints Of Single Phase Residential Grid-Connected Pv Under Net Energy Metering Scheme." Khulna University Studies (2022): 93-103.

- Md Abdul Wahed and Hussain Nyeem. "Reversible data hiding with dual pixel-value-ordering and minimum prediction error expansion." Plos one 17.8 (2022): e0271507.

- M. F. Elahi and M. A. Islam, "A Triple Boost Self-Balanced Switch Capacitor Converter Based Multilevel Inverter", in the 12th International Conference on Electrical and Computer Engineering (ICECE), Dhaka, 21-23 Dec 2022. [Accepted].

- M. R. Hoque, M. M. Hasan, R. Islam and K. Islam, "Comparative Analysis Of Harmonic Mitigation Schemes For A Three Phase Uncontrolled Full Wave Rectifier," Int. Conf. on Energy and Power Engineering (ICEPE), 2022. [Accepted & presented].

- M. M. Hasan and A. H. Chowdhury, "Performance Analysis of a DQ0 Controlled Grid Forming Inverter for Grid Connected Photovoltaic System: A Case Study," 4th Int. Conf. on Sustainable Technologies for Industry 4.0 (STI), 2022. [Accepted].

- M. M. Hasan and A. H. Chowdhury, "Droop Control Based Virtual Inertia Emulation for Stability Enhancement of a Microgrid System," 12th Int. Conf. On Electrical and Computer Engineering (ICECE), 2022. [Accepted].

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## CONFERENCE PAPER

### ME DEPARTMENT

- Lecturer Ashif Ahmed from ME Dept has published a conference paper titled “Effect of Pre and Post Processing Thermal Treatment on Mechanical Behaviour of Jute Textile reinforced polymer Composites” in 8th Asian Conference on Mechanics of Functional Materials and Structure at IIT Guwahati, India on 11-14 December, 2022.
- Lecturer Md Insiat Islam Rabby from ME department has published a conference paper titled “Environmental Sustainability Practices among Small and Medium Entrepreneurs: A Review” in proceedings of 17th Asia-Pasific Management Accounting Association Annual Conference 2022 at Dhurakij Pundit University, Bangkok, Thailand on 8-11 November, 2022.
- Lecturer Md Insiat Islam Rabby from ME department has published a conference paper titled “Thermal performance of a gasifier cooking stoves: A systematic literature review” in International Conference on Clean Energy Systems and Technologies 2022 at Uttarachal University, India on 14-16 October, 2022.

2nd International Conference on “Mechanical Engineering and Applied Sciences 2022” was organized by the Faculty of Mechanical Engineering, MIST from 08 to 10 December, 2022. Following papers were presented by the Faculty Members and Students of ME Department:

- Brigadier General Md. Omar Faruque from ME department has published a conference paper titled “A Comprehensive Review on Fire Safety in Urban Area Buildings: An Assessment and Strategies for System Improvement”.

Brigadier General Md Humayun Kabir Bhuiyan, Brigadier General Md. Omar Faruque, Lec Ahsan Siddique, Lec Insiat

- Islam Rabby and Lecturer Sadman Tajwar from ME department has published a conference paper titled “Hardness and Microscopic Evaluation of Heat-Treated Steel with 0.47% Carbon”.

Brigadier General Md Humayun Kabir Bhuiyan, SAE Asraful Rahman, Lec Anik Sarker and RA Dr. Ahmed Afif Bin Abedin

- from ME department has published a conference paper titled “Design, Construction, and Investigation of the Drying Equipment Using Solar Power for Bangladeshi”.

Brigadier General Md Humayun Kabir Bhuiyan from ME department has published a conference paper titled

- “Fostering Outcome Based Learning Model in Engineering Education: Challenges and Ways Ahead for Bangladesh”.

Professor Dr. Maglub Al Nur from ME department has published a conference paper titled “Comparative Analysis of Exhaust Emission of Retrofitted SI Engine Runs by Different Fuels”.

- Professor Dr. Maglub Al Nur from ME department has published a conference paper titled “Investigation of the Electrochemical Corrosion Property of 2xxx Series Cast Aluminium Alloy in 0.3 M, 0.6 M NaCl and Seawater Environments”.

Col Mubarak Hossain, AP Tariq Mahbub, AP Dr. Sayem Hossain Bhuiyan from ME department has published a conference paper titled “An Experimental Investigation of Wind Effect on Tall Buildings with Pentagonal Cross Section”.

- Assistant Professor Tariq Mahbub from ME department has published a conference paper titled “Study on the Effect of Body and Tail Fin Alignment on the Lift and Drag Performance of a Projectile in Subsonic Regime”.

Assistant Professor Tariq Mahbub from ME department has published a conference paper titled “Computational Modeling of Air Flow Pattern around the Four Towers of Military Institute of Science and Technology (MIST): A 2D Study”.

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## CONFERENCE PAPER

### ME DEPARTMENT

- Assistant Professor Dr. Sayem Hossain Bhuiyan from ME department has published a conference paper titled “Solar Powered Multipurpose Agricultural Vehicle Prototype”
- Assistant Professor Dr. Sayem Hossain Bhuiyan from ME department has published a conference paper titled “Automatic Ground Clearance System for Car”.
- Assistant Professor Dr. Muammer Din Arif from ME department has published a conference paper titled “Performance Evaluation of Direct Liquid-Based Cooling System for Data Centers”.
- Assistant Professor Atif Yasir from ME department has published a conference paper titled “Comparative Analysis of Aerodynamic Lift and Drag of Commercially Used Airfoil Incorporated with Co-Flow Jet”.
- Assistant Professor Atif Yasir from ME department has published a conference paper titled “Comparative Analysis of Magnus Effect in Terms of Lift and Drag in a Commercially Used Airfoil”.
- Assistant Professor Atif Yasir from ME department has published a conference paper titled “Investigation of Varying Drag Force over Serie of Rivets under Subsonic Flow of Air at Cruising Altitude”.
- Assistant Professor Atif Yasir from ME department has published a conference paper titled “A Numerical Investigation on Boundary Layer Control with Blown Flaps Incorporating Coanda Effect”.
- Lecturer Suvro Bhowmick from ME department has published a conference paper titled “Numerical Investigation Over the Experimental Analysis of Temperature Distribution of Pinned Surface for Forced Convection Along with Different Material Assignments & Geometries”.
- Lecturer Suvro Bhowmick from ME department has published a conference paper titled “Numerical Investigation & Comparative Analysis of Airfoil Fin, Tapered Fin, and Pinned Fin for Free Convection, along with Varying Mat”.
- Lecturer Afsana Sultana from ME department has published a conference paper titled “Thermo-elastic Characteristics of Thermal Barrier Coating in a Gas Turbine Combustion Chamber with an Intermediate FGM Layer”.
- Lecturer Tazeen Afrin Mumu from ME department has published a conference paper titled “Thermo-elastic Characteristics of Thermal Barrier Coating in a Gas Turbine Combustion Chamber with an Intermediate FGM Layer”.
- Lecturer Anik Sarker from ME department has published a conference paper titled “Numerical Analysis of Wettability Mediated Droplet Formation in the Dripping Regime in T-junction”.
- Lecturer Anik Sarker from ME department has published a conference paper titled “Influence of inlet velocity and wall wettability on PEM fuel cell”.
- Lecturer Md Insiat Islam Rabby from ME department has published a conference paper titled “Aerodynamic and Flow Characteristics of a Rough Airfoil: A Numerical Study”.
- Lecturer Md Insiat Islam Rabby, Lecturer Safwan-Ul-Iman, Lecturer Fabliha Islam and Lecturer Tazeen Afrin Mumu from ME department has published a conference paper titled “Experimental Study of Radiation and Natural Convective Heat Transfer over Circular Disk under Vacuum and Air Medium”.
- Lecturer Md Insiat Islam Rabby from ME department has published a conference paper titled “Numerical Study on Thermal Behavior of a Solar Chimney”.
- Lecturer Md Insiat Islam Rabby from ME department has published a conference paper titled “Laminar convective heat transfers across a circular pipe by using MWCNT + Fe<sub>3</sub>O<sub>4</sub> hybrid nanofluid: A numerical study”.
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## CONFERENCE PAPER

### ME DEPARTMENT

- Lecturer Md Insiat Islam Rabby from ME department has published a conference paper titled “Application of Nanotechnology in Medical Science: A Review Based on Clinical Trial”.
- Lecturer Md Insiat Islam Rabby, Lecturer Md Wasi Uddin and Maj HM Khairul Enam from ME department has published a conference paper titled “Potential Nanoparticles to Integrate with Ceramic Membranes for Treating Industrial Wastewater: A Review”.
- Lecturer Md Wasi Uddin from ME department has published a conference paper titled “Lightweight design and structural analysis of an e-bike chassis using FEM”.
- Lecturer Md Wasi Uddin from ME department has published a conference paper titled “FEA-Based Structural Analysis of Motorcycle Suspension System Using Different Materials”.
- Lecturer Md Mohammad Tarequl Islam from ME department has published a conference paper titled “Thermal Performance Analysis of a Rectangular Finned Heat Sink under Dust Deposition”.
- Lecturer Shah Md Ahsanul Siddique, Lecturer Sadman Tajwar and Brigadier General Md Humayun Kabir Bhuiyan from ME department has published a conference paper titled “A Robotic Arm for Pick-and-Place Operation: An Experimental Study”.

### NAME DEPARTMENT

2nd International Conference on “Mechanical Engineering and Applied Sciences 2022” was organized by the Faculty of Mechanical Engineering, MIST from 08 – 10 December 2022. On the conference the following papers were presented by the Faculty Members and Students of NAME Dept

- Kaosar Rashid, Musa Al Kazim Apon, “Experimental Investigation on Degradation of Shipbuilding Steel Plate Exposed to the Open Environment”.
- Tasmia Hoque, Md Mezbah Uddin, Md Helal Sheikh, “Comparative study of used and unused plates in Bangladesh ship building industry”.
- Rakibul Azad Tawhid, Mahmudul Hasan, Muhammad Rabiul Islam, “Directional Spectrum of Wind Generated Waves in Bangladesh Rivers for Designing the Inland Vessels”.
- S M Saimoon Rehan Abdee, Anan Md. Ashfaq Wahid, A. K. M. Samiu Haque Barnil, Muhammad Rabiul Islam, “Total Roll Moment of Bangladesh Inland Vessel Due to the Wind Generated Waves and Gust”.
- Kaosar Rashid, N. M. Golam Zakaria, “Environmental Pollution in Bangladesh by Inland Passenger Vessel Operation”.
- Khandakar Akhter Hossain, Shahan Malek Usham, “Art Tale of Container Ship”.
- Shahan Malek Usham, Fida Mashfiha, Md Touhidul Islam, “Numerical analysis of pressure distribution around a Symmetrical Aerofoil for high Reynolds Number”.
- Mohammad Tanvir Hossain, Musarrat Zaman, Nusrat Jahan Silvia, S.M. Ikhtiar Mahmud, “Identification of the Potentials and Hazards of Solar Waste Generation in Bangladesh and Assessing the Way Forward for the Hazard Reduction”.
- Mohammad Tanvir Hossain, Musarrat Zaman, Arman Uddin, S.M. Ikhtiar Mahmud “Assessment of Occupational Health Hazard of the Workers in Manual PET Bottle Recycling Factories of Bangladesh”.

## CONFERENCE PAPER

### BME DEPARTMENT

- C Balaji Ayyanar, K Marimuthu, B Gayathri, C Bharathiraj, Md Enamul Hoque, has presented a article titled “Characterization and In-vitro Investigation of Natural Plant Extracts Blended PVA Biomembrane for Wound-Dressing”, International Online Conference on Nano Materials (ICN 2022), 12-14 August 2022, Kerala, India .

Professor Md Enamul Hoque, Asif Mahmud Rayhan, has presented a article titled “Jute Fiber Reinforced

- Biocomposite: Towards Developing Composite Bone Plate”, 2nd International Conference on Mechanical Engineering and Applied Sciences, 2022 (ICMEAS 2022), Dhaka, Bangladesh.

Professor Md Enamul Hoque, Mirajul Islam Sarker has presented a article titled “Electrospun r-PET/CNT nanofibrous Mat–Towards Development of Antibacterial Face Mask”, International Conference on 6th Virtual Edition of Polymers, Plastics and Composites (Virtual Polymers-2022), London, UK.

- Professor Md Enamul Hoque, Mirajul Alam Sarker, Md. Rubel Alam, Md. Kabir Hossain, Md. Abdul Gafur has presented a article titled “Fabrication and characterization of CNT-integrated nanofibrous membrane for developing an antibacterial face mask”, International Conference on 6th Virtual Edition of Polymers, Plastics and Composites (Virtual Polymers-2022) Dhaka, Bangladesh.

Professor Md Enamul Hoque, Md Rubel Alam. has presented a article titled “Face Mask Against COVID-19 – Roles, Requirements, Efficacy and Sustainability”, International Conference on Pathogens Research eConference (Pathogens-eCon2022), Tokyo, Japan.

- Syeda Omia Ahalam Md. Sharjis Ibne Wadud Farhan Ishtiaque, Sadman Rahman Sadid, Mohammed Shihab Kabir has presented a article titled “IoT-Based Low-cost Remote Patient Monitoring and Management system with Deep Learning-Based Arrhythmia and Pneumonia detection”, IEEE 4th International Conference on Computing, Power and Communication Technologies (GUCON).

Professor Md Enamul Hoque, Asif Mahmud Rayhan, has presented an article titled “Jute Fiber Reinforced Biocomposite: Towards Developing Composite Bone Plate”, on 2nd International Conference on Mechanical Engineering and Applied Sciences, 2022 (ICMEAS 2022), Dhaka, Bangladesh.

- Professor Md Enamul Hoque, Mirazul Alam Sarker has presented a article titled “Electrospun r-PET/CNT nanofibrous Mat–Towards Development of Antibacterial Face Mask”, International Conference on 6th Virtual Edition of Polymers, Plastics and Composites (Virtual Polymers-2022), London, UK.

Professor Md Enamul Hoque, Mirazul Alam Sarker, Md. Rubel Alam, Md. Kabir Hossain, Md. Abdul Gafur has presented a article titled “Fabrication and characterization of CNT-integrated nanofibrous membrane for developing an antibacterial face mask”, International Conference on 6th Virtual Edition of Polymers, Plastics and Composites (Virtual Polymers-2022) Dhaka, Bangladesh.

- Md. Asadur Rahman, Md Tanjil Ahamed Tanim, and Abdullah AL Fahad presented a conference paper titled “Development of an ECG Signals Extracting Algorithm from Clinical ECG Images” International conference on Mechanical Engineering and Applied Science (ICMEAS- 2022), 8 to 10 December 2022.

### PME DEPARTMENT

- Professor AKM Badrul Alam of the PME Department has delivered a technical paper titled “Potential of CMC to increase the stability of shale” in the 12th Asian Rock Mechanics Symposium (ARMS 12), on November 22 to 26, 2022

## TEXT BOOK

### CE DEPARTMENT

- Professor Dr. Md Tauhid Ur Rahman and Asst Prof Dr. Tanvir Mustafy has published a book titled as “Statistics and Data Analysis for Engineers and Scientists”, Springer Nature, Singapore Pte Ltd. Agreement Signed on 18th October 2022.
- Professor Dr. Md Tauhid Ur Rahman, Asst Prof Dr. Tanvir Mustafy and Mafisa Siddique has published a book titled as “Engineering Data Analysis with MATLAB: Principles and Applications”, CRC Press, Taylor & Francis Group Agreement signed on 2nd December 2022.

## BOOK CHAPTER

### BME DEPARTMENT

- Habibul Islam, Professor Md Enamul Hoque, and Muhammad H. Hasan has published a Book Chapter titled as “Biodegradability of polyolefins: Processes and procedures” in Publisher Elsevier.
- Md Zillur Rahman, M Mahfuza Khatun and Professor Md Enamul Hoque, has published a Book Chapter titled as “Plastic waste to plastic value: Role of industrial biotechnology” in Publisher Elsevier.
- Yashdi Saif Autul, Rowfi Khan, Muhammad Ifaz Shahria Chowdhury, Professor Md Enamul Hoque, and Suresh Sagadevan has published a Book Chapter titled as “Synthesis of Two-dimensional Hybrid Materials, Unique Properties, and Challenges” in Publisher Royal Society of Chemistry.
- Muhammad Ifaz Shahriar Chowdhury, Professor Md Enamul Hoque,, Shek Md Atiqure Rahman has published a Book Chapter titled as “CO2 Conversion to Chemicals and Fuel Cells Using Renewable Energy Sources” in Publisher Royal Society of Chemistry.

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