MIST newsletter

Technology for Advancement

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COMMANDANT'S GLOSS



MIST, a renowned Engineering Institution focuses on developing quality technical education and research. To enrich students and faculty members with updated technical knowledge and skills, MIST regularly arranges different seminars, conferences, workshops, industrial tours and other co-curricular activities. The first half of the academic session 2018-19 was not an exception. This newsletter reflects the activities of last six months. I express my heartfelt thanks and gratitude to the editorial board for publishing MIST Newsletter regularly.

CHANGE OF COMMAND





Major General Md Abul Khair, ndc, PEng Commandant MIST went on retirement on 14 January 2019 after completion of career in Bangladesh Army. He served as commandant MIST since 10 October 2016.

Major General Md Wahid-Uz-Zaman, ndc, aowc, psc, te assumed as commandant MIST on 13 June 2019. Before joining MIST as Commandant, he was the Director, Information Technology Directorate at Army Headquarters.

Address : Mirpur Cantonment, Dhaka-1216

Web Site : www.mist.ac.bd

e-mail : info@mist.ac.bd

Chief Patron : Major General Md Wahid-Uz-Zaman, ndc, aowc, psc, te
Commandant, MIST

Editor in Chief : Colonel Molla Md. Zubaer, te
A/Director Research and Development, MIST

Editor : Lieutenant Colonel Muhammad Sanaullah, psc, Engrs
General Staff Officer-1 (Research), MIST

Asst Editor : Major Mohammad Shawkat Ali, Sigs
General Staff Officer-2 (ARSTC), MIST

GOVERNING BODY MEETING OF MIST

Governing Body of MIST sat for its 33rd meeting on 27 June 2019 at MIST. Major General Ibne Fazal Shayekhuzzaman, BSP, SGP, afwc, psc, Engineer in Chief, Bangladesh Army presided over the meeting. Major General Md Wahid-Uz-Zaman, ndc, aowc, psc, te Commandant MIST and Vice Chairman Governing Body of MIST, high military officials from AFD, Service Headquarters, BUP and other high civil officials/ Academicians from DU, BUET and different ministries were also present in the meeting.



ACADEMIC COUNCIL OF MIST



The 59th and 60th meetings of the Academic Council of MIST were held on 29 January and 18 April 2019 at MIST. A/Commandant Cdre M Munir Hassan, (E), BN, MIST chaired the meeting. Representatives from DU, BUET, Ministry of Education, Ministry of Defence, Armed Forces Division, Army, Navy and Air Force were present in the meeting.

LAUNCHING CEREMONY OF ACADEMIC SESSION 2018-19

Launching ceremony of academic session 2018-19 of MIST was held on 31 January 2019. MIST welcomed all the young engineering students including their guardians in the ceremony. There were interactive sessions for the guardians with MIST authority and orientation with MIST campus.

Academic session 2018-19 started on 18 February 2018. More than 570 students (both military and civil) joined MIST in level-1 in different disciplines. The disciplines are CE-21, CSE-19, EECE-17, ME-17, AE-11, NAME-7, BME-5, Arch-5, NSE-5, EWCE-5, IPE-4 and PME-4.



17th GRADUATION CEREMONY 2019





As the chief guest the Honourable Chief of Army Staff General Aziz Ahmed, BSP, BGBM, PBGM, BGBMS, psc, G, handed over certificates and medals to the new graduates of Military Institute of Science and Technology on the occasion of **17th Graduation Ceremony 2019** on 19 March 2019. Ministers, MPs, Chief of Army Staff, E-in-C, Secretaries, Ambassadors, Vice-Chancellors, professors of different universities, high ranking civil and military officials were present in the ceremony.

A total no of 634 students have completed their graduation this year. Amongst them 407 were civil, 225 military and 02 foreign students. Maj K M Zaheen Nasir, Engrs of Nuclear Science & Engineering Department was awarded Osmany Memorial Gold Medal for outstanding academic performance.

MIST PROJECT FAIR 2019





Research and Development (R&D) Wing of MIST organized MIST Project Fair 2019 from 20 to 21 January 2019. Brigadier General Md Shahidul Alam, Dean Faculty of Science and Engineering MIST graced the occasion as chief guest. A team of external members from BUET, UIU and internal members of MIST worked in the project evaluation committee. 15 teams of different departments with their innovative research work participated in this fair. **Development of An Automated Smart Boat to collect Floating Waste and Monitor Real Time Surface Water Quality** of CE department was awarded as the best project.

Maj Md Jahidul Islam, PhD, CE department, Brig Gen A K M Nazrul Islam, PhD, EECE department, Cdre M Muzibur Rahman, (E), psc, BN, NAME department and Lt Col Md Altab Hossain, EME, PhD, were awarded best faculty in research work.

ROBOLUTION 2019





Robolution 2019 where students from various colleges and universities participated sportingly. This year it was also an extremely thrilling competition. It was arranged by the MIST Robotics Club (MCR) under the direct supervision of EECE department. It was inaugurated on 5 April, 2019 where Lt Gen Md Mahfuzur Rahman, OSP, rcds, ndc, afwc, psc, PhD, Principal Staff Officer, Armed Forces Division was present as chief guest. Young stars from all over the country have participated in a wide variety of items such as, i-fight, line-follower, quad-copter challenge, poster presentation, projects etc. The competition was closed on the same day following the motivational speech by the honourable chief guest and a prize giving ceremony at the end.

GPH ISPAT – 'ESHO ROBOT BANAI'





MIST along with GPH Ispat and CRID USA jointly organized a reality show named **GPH Ispat – Esho Robot Banai.** The program was divided into two segments. In the first round, on 24 February, 5 teams from MIST showcased their project ideas out of which 3 teams were selected to participate in the next round. The program was held at MIST Multipurpose Hall and renowned media personality Shaikh Siraj attended the program as the chief guest. The selected 3 teams went upto 3rd round along with their spectacular projects. The season finale took place at Channel i Studio on 13 March, 2019, where Brig Gen A. K. M. Nazrul Islam, PhD Head of EECE department attended the program as a guest judge.

SEMINAR ON SEISMIC DESIGN OF STRUCTURE BY ASCE 7

Department of CE, MIST successfully organized a seminar titled as **Seismic Design of Structure by ASCE 7** which was held on 12 March 2019. The seminar was conducted by Dr. S.K. Ghosh, Head of S.K. Ghosh Associates LLC, California, USA. Approximately 60 participants were present in the seminar including faculty members of MIST, Military and Civil Officials from different organizations, MIST CE Alumni and Graduate students.



SEMINAR ON GEO-PHYSICAL METHODS FOR EVALUATING STRENGTH PROPERTIES OF SOIL



Department of CE, MIST successfully organized a seminar titled as **Geo-Physical Methods for Evaluating Strength Properties of Soil** which was held on 27 April 2019. The seminar was conducted by Mohammad Omar Faruk Murad, PhD. Scholar, School of Life and Environmental Sciences, The University of Sydney, Australia. Approximately 60 participants were present in the seminar including faculty members of MIST undergraduate and graduate students.

SEMINAR ON WORLD BIRTH DEFECTS DAY: SOCIAL AWARENESS AND PREVENTION



The BME Department, MIST arranged a seminar titled **World Birth Defects Day: Social Awareness and Prevention** followed by a rally on 3 March 2019. Professionals from Armed Forces Medical College, Combined Military Hospital, Dhaka Shishu Hospital and Dhaka Medical College Hospital delivered keynote speeches. Mr. Farhad Hossain, MP, State Minister, Ministry of Public Administration had graced the event as the chief guest. It is to be noted that, MIST has been recognized as a World Birth Defects Day (WBDD) Platinum Partner by the International Clearinghouse for Birth Defects Surveillance and Research (ICBDSR) for significant contribution to the success of observing the World Birth Defects Day.

WORKSHOP ON 1st DATATHON 2019



Under the guidance of Robi Axiata Ltd, department of CSE, MIST organized Workshop on **1st Datathon 2019** on 11 April 2019. The aim of this workshop was to build capacity and talent in the field of data science and machine learning. Total 50 Students from Level-3 and Level-4 were present in this workshop.

WORKSHOP ON SUBSTATION PLANNING, DESIGNING AND COMMISSIONING ON POWER SYSTEM ANALYSIS

On 20 February EECE department arranged a workshop on **Substation Planning, Designing and Commissioning on Power System Analysis.** The course was conducted by Engr. Md. Fardouse Alam from Innova EPC Ltd. The objective of this workshop was to make students acquainted with the ETAP Software which is broadly used for designing of substation, road calculation etc. A total of 145 students from Level 3 and Level 4 along with faculty members of EECE department joined the workshop. This course helped enhancing theoretical and practical knowledge on power system along with basic training for industrial automation.



WORKSHOP ON INTEGRATED DESIGN PROJECT AND CAPSTONE PROJECT



EECE department arranged workshop on **Integrated Design Project (IDP) and Capstone Project** on 3 April, 2019. Dr. Anisul Haque, Professor, Department of Electrical and Electronic Engineering, East West University attended the workshop as guest speaker. Group Captain Md Abdul Halim, psc of EECE department conducted the workshop. All faculty members and staff officers joined the workshop. The purpose of this workshop was to make the faculty members and students more familiar with OBE system, as the Capstone Project is considered one of the criteria for the Outcome Based Education (OBE) system.

WORKSHOP ON THERMO FLUID MODELING

A Workshop on **Thermo Fluid Modeling** was arranged by NSE department on 8 January 2019. Head of NSE Department Colonel Abu Zafor Mohammad Salahuddin delivered his welcome address in the occasion. Research Assistant Farhad Ismail, University of Alberta, Canada was the resource person of the workshop.



SHORT COURSE ON MAXSURF SHIP DESIGN USING SOFTWARE



A short course on **MAXSURF Ship Design Using Software** conducted from 7 to 20 February 2019 by the department of Naval Architecture and Marine Engineering (NAME). Total 40 students from different level successfully completed this short course.

SHORT COURSE ON INTRODUCTION TO MATLAB

The BME Department, MIST arranged a short course on **Introduction to MATLAB** for Level-3 students. The aim of the course was to introduce the students how to program with MATLAB and how it is relevant to Biomedical Engineering. The short course duration was two weeks, starting from 21 January 2019 and ending on 30 January 2019. Having completed this short course, the students learned about basic MATLAB programming, commands, scripts and its various applications, particularly in Biomedical Engineering.



GUEST LECTURE ON NUCLEAR FUEL CYCLE AND WASTE MANAGEMENT

On 4 March a guest lecture on **Nuclear Fuel Cycle and Waste Management** was organized by NSE department MIST. Dr. Shaheed Hossain, Professor of Institute of Safety and Risk Sciences Department of Water Atmosphere Environment University of Natural Resources and Life Sciences, Vienna, Austria delivered the lecture as a resource person.



GUEST LECTURE ON MINE VENTILATION AND MINE SAFETY



On 11 April 2019, a guest lecture on **Mine Ventilation and Mine Safety** was organized by the department of PME, MIST. Md. Abu Taleb Farazi, General Manager (Operation) of Maddhapara Granite Mining Company Limited (MGMCL) delivered the lecture as a resource person. All the students of PME department gathered a profound knowledge on the importance of mine ventilation in context of the MGMCL. They came to know about the hazardous gases, increased temperature and humidity in subsurface environment of the mine. They also learned how the ventilation system (Main fan, Auxiliary fan, Booster fan) of MGMCL is designed and maintained considering the subsurface environment.

GUEST LECTURE ON LIQUEFIED NATURAL GAS (LNG)

On 14 May 2019, a guest lecture on **Liquefied Natural Gas (LNG)** was organized by department of Petroleum and Mining Engineering of MIST. Engr. Md. Rafiqul Islam, General Manager (LNG) of Rupantarita Prakritik Gas Company Limited (RPGCL), Petrobangla conducted the lecture as resource person. All students of PME department gathered profound knowledge on (i) LNG Liquefaction plant construction and operation. (ii) LNG transportation vessels construction and their classification, size. (iii) LNG regasification plants types, classification and operation. (iv) LNG systems in Bangladesh, LNG pricing (v) Job prospect of PME graduate engineer in LNG section in Bangladesh and abroad.



STUDENTS TRAINING VISIT

On 20 February 2019, a training visit to three institutions was organized for students of BME department. They visited Armed Forces Institute of Pathology (AFIP), Dhaka, Institute of Nuclear Medicine & Allied Sciences (INMAS), DMCH and Ahsania Mission Cancer and General Hospital, Dhaka. The visit to AFIP included visits to different departments of the institute and general brief over the work performed by the institution. The visit to DMCH involved being familiarized with different approaches to diagnostic and therapeutic technology such as Brachytherapy, CT scanning, MRI imaging etc. Ahsania Mission Cancer and General Hospital visit involved visiting different wings and sectors of the hospital and being familiarized with the operational environment of the facility.



JOB FAIR FOR BIOMEDICAL ENGINEERS



On 3 March 2019, The Department of Biomedical Engineering, MIST organized the first ever **Job Fair for Biomedical Engineers** in the country. Mr. Farhad Hossain, MP, State Minister, Ministry of Public Administration, inaugurated the ceremony by ribbon cutting. He also visited different stalls of renowned companies. Students attended interviews with the attending companies. Graduates of the first batch of BME department participated in job interviews hosted by individual companies. A total of 9 companies hosted job interviews for potential professional Biomedical Engineers in this occasion.

CAMPUS RECRUITMENT SESSION 2019

Campus Recruitment Session 2019 was facilitated by British American Tobacco Ltd. on 26 February 2019 at GMMPH, MIST. The event was co-ordinated by MIST Career Club under the supervision of the DSW. Representatives from BAT Bangladesh and noted alumni from the Faculty of ME and Faculty of ECE attended the session and inspired the students to take necessary steps for reaching their desired career growth. The vibrant session was attended by students from different levels of MIST. Col Md. Mahboob Karim, psc, Dir DSW attended the session as the chief guest.



OBSERVANCE

OBSERVANCE OF BIRTHDAY OF FATHER OF THE NATION AND NATIONAL CHILDREN DAY

MIST organized a special program in observance of the 99th Birth Anniversary of Father of the Nation and National Children Day on 17 March 2019. It started with munajat after Fazar prayer. Still photographs on Bangabandhu and Liberation War were displayed. A discussion session was arranged under the arrangement of Head, PME department, Col Nasir Uddin Ahmed. Biography of Bangabandhu and his significant contribution to the Independence of Bangladesh were discussed in the program.



BOSHONTO BORON 2019



The students of MIST welcomed the season of Spring by a grand event titled as **Boshonto Boron 2019.** This event took place on 13 February 2019 at MIST Plaza. The event was facilitated by MIST Literature & Cultural Club under the supervision of the DSW.

BANGLA NEW YEAR 1426

The students of MIST welcomed the **Bengali New Year 1426** on 14 April 2019. The day long program included various segments including cultural program, stalls from each department, horse riding etc. Osmany Hall, MIST arranged this grand event. Commodore M Munir Hassan, (E), BN attended the event as the chief guest.



COMPETITION

INTER DEPARTMENT ATHLETICS COMPETITION 2019

Inter Department Athletics Competition 2019 was held on 18 to 20 February 2019 organized by Admin Wing. Students from different departments of MIST participated in the event. ME department became the champion and CSE department became runner-up. Air Cdre Md Afzal Hossain, Head, CSE Department attended the event as the chief guest and also distributed prizes among the winners of various events of the competition.



INTER DEPARTMENT CRICKET COMPETITION 2019



Inter Department Cricket Competition 2019 took place from week-4 onwards of Term 1 (Spring Term 2019). The event was arranged by Osmany Hall, MIST. Students from different departments of MIST participated in the event. The final match was conducted on 6 March 2019. Air Cdre Md Abdus Salam, Head, AE department, attended the event as chief guest. The champion of this event was AE Department.

INTER DEPARTMENT VOLLEYBALL COMPETITION 2019

Inter Department Volleyball Competition 2019 took place from week-5 onwards of Term 1 (Spring Term 2019). This event was also facilitated by Osmany Hall, MIST for both male and female students. Different departments of MIST participated in the event. The champion of the female segment was ME department and on the other hand the male segment was CSE department. The final match took place on 20 March 2019. Air Cdre Md Afzal Hossain, Head, CSE department graced the occasion as chief guest and distributed prizes among the winners.



INTER DEPARTMENT CULTURAL COMPETITION AND NOBIN BORON 2019



Inter Department Cultural Competition and Nobin Boron 2019 was inaugurated on 10 February 2019, organized by R&D Wg in assistance with EECE, CSE departments and ICT Dte. Students from different departments of MIST participated in the event and the prize distribution of this event was conducted during Nobin Boron 2019. Capt Arman (EECE-16) achieved the best male performance award in both 'Nazrul Geeti' and 'Rabindra Sangeet'. Besides, Sauda Suara Naba (EECE-16) achieved the best female performance award in 'Nazrul Geeti'. The prize winners also performed during the Nobin Boron 2019.

At the end CSE department secured Champion and EECE department became over-all Runner-up. Air Cdre Md Afzal Hossain, Head, CSE Department graced the occasion as the chief guest.

QUIZ COMPETITION 2019



Quiz Competition 2019 was organized by MIST Literature & Cultural Club on 30 April 2019 at GMMPH, MIST. The agenda of this event was to encourage the students for regular quiz competitions so that they remain up to date with current affairs. Col Md. Mahboob Karim, psc, Dir DSW graced the occasion as the chief guest of the event.

INTER UNIVERSITY PROGRAMMING CONTEST (IUPC 2019)

Department of CSE, MIST organized **Inter University Programming Contest at MIST (IUPC MIST 2019)** on 22 to 23 February 2019. 122 teams of 52 universities across the country participated in this competition. Professor Dr. M. Kaykobad, BUET graced the occasion as the chief guest of this competition. Furthermore, various invited guest from Information and Communication Technology (ICT) division were also present at the event.



ACHIEVEMENTS

PARTICIPATION IN DEBATE AND NEWS CASTING COMPETITION IN INDONESIA

Under the guidance of Science and Humanities department, four students from different departments of MIST participated in **Debate and News Casting Competition at Asian English Olympics 2019** organized by BINUS University in Jarkarta, Indonasia from 11 to15 February, 2019. The names of the students are as follows: Ridhita Binte Borhan (NSE department), Hasnat Mosharaf Sami (NSE Department), Tasfia Islam Suzan (EECE department) and Md. Sadman Sakibul (BME department).



YOUNG SOCIAL ENTREPRENEUR 2019



Three students from various departments of MIST participated in **Young Social Entrepreneur 2019.** The team from MIST ranked 15th among 500 teams from 26 countries. The names of the students are as follows: Farzana Mubashera Adrita (PME Department), Tasnim Ahmed Tahsin (IPE department) and Mehedi Hassan Bappy (IPE department).

PARTICIPATION AT THE FUTURE LEADERS SUMMIT 2019

Md Sadman Sakibul Sefat of BME Department acted as the Deputy Speaker at the **Future Leaders Summit - 2019** held on 02 February 2019 which was organized by BUP Law and Moot Court Club in Bangladesh University of Professionals. The program was organized to achieve the postgraduate and political qualifications for law department students.



PARTICIPATION IN THE INTER UNIVERSITY PUBLIC SPEAKING COMPETITION 2019

Md Sadman Sakibul Sefat of BME Department participated in the **Inter University public speaking competition 2019, season 2** organized by IDOL Focus in Southeast University (Banani Campus) on 30 June 2019. He competed against a total of 150 participants from 30 different public and private universities. He placed 11th in the competition being included in the top 16.



STUDENT PARTICIPATION IN CONFERENCE ABROAD





Oranti Ahmed Omi and Puja Saha of BME department participated in the **International Conference on Emerging Trends in Engineering (ICETE)** at the College of Engineering Osmania University, Hyderabad, India from 22 March 2019 to 23 March 2019. Two of their papers have been presented as conference papers and has been published by Springer Nature in the book titled "Advances in Decision Sciences, Image Processing, Security and Computer Vision".

DREAM FLY 'DREAMS FIN' AT THE SKY OF USA

A team from MIST named **Dreams Fin** participated in America Institute of Aeronautics and astronautics (AIAA) Design Build Fly (DBF) Competition 2019 which was held at Tucson, Arizona, USA from 11 to 14 April 2019. Two students from AE Department of MIST named Taimum Al Nafis and Sajjid Hasan Asif took part in the competition in Arizona, USA.

For this competition the students of MIST fabricated a remote controlled aircraft utilizing Brushless Motor, DC Motor, Servo, Propeller, Arduino, Motor Control, Motor Driver, Transmitter, Receiver etc.



BAIUST ROBO FEST 2019



A team from MIST Abdullah All Mamun Anik, Student of IPE department, Mohammed Abdul Khaled (CE), Naim Ibna Khadem (CSE), Kamrun Nipun (CE), Asef Israk Arnob (CE), Hasan Mehedi (EWCE) selected for 1st runner up both Rob soccer and project showcasing competition event of Bangladesh Army International University of Science and Technology (BAIUST) at Cumilla Cantonment in 2 February 2019. Team members received competition prize from BAIUST V.C Professor Brigadier General (Retd) K M Salzar Hossain, ndc, psc.

DELIVERING LECTURES AT CHARLES UNIVERSITY, PRAGUE AS A VISITING PROFESSOR



Mohammad Sazzad Hossain, Associate professor, Department of Architecture, MIST was invited by the Charles University, Prague to give lectures at Postgraduate level. From 8 to 26 April, Prof. Hossain was associated with the International Master's Program "TEMA+ European Territories: Heritage and Development" at Charles University and his key responsibilities were to give lectures, conduct seminars and carry out research activities focusing on History of Architecture, Built Heritage and Conservation. Charles University is one of the leading Universities in Europe. In 2012 Mr. Hossain also taught at the University of Padua, which is another reputed University in Italy.

It may be mentioned that Assoc Prof. Hossain is already recognized at National and International level for his expertise in the field of Heritage and Conservation. He is the current President of South Asian Chapter, Erasmus Mundus Association; General Secretary of Bangladesh National Committee, International Council on Monuments and Sites (ICOMOS) and Secretary, Heritage and Culture, Institute of Architects Bangladesh(IAB).

BEST PAPER AWARD



Research Paper titled **Non Linear Finite Element Investigation of the Lateral Load Capacity of Stiffened SPSW for various Aspect Ratios** of Lecturer Mumtahina Akter, CE department of MIST has been awarded as the Best Paper in the International Conference on Disaster Risk Management (ICDRM 2019) in BUET in January 2019.

RESEARCH GRANT

Professor G. M. Jahid Hassan CE department of MIST has received a project fund of BDT 2,00,000/- for doing research work as Principal Investigator for the financial year 2018-2019. Title of the project is Coaster- Coastal Erosion Hazard Assessment along the Coastline of Bangladesh.



PUBLICATIONS OF INTERNATIONAL CONFERENCE

- Professor G. M. Jahid Hassan CE department of MIST has submitted a conference paper titled as Estimation of Aerial Hanges along the Coastline of Bangladesh due to Erosion and Accretion which is accepted for presentation in the 4th World Congress on Engineering and Applications (WCEA-2019) to be held in Bali in December 2019.
- Lecturer Jesika Rahman CE department of MIST has submitted a conference paper titled as Behavior of Concrete Filled Stainless Steel Tubular Column under Axial Loads which is accepted for presentation in the 44th Conference on Our World in Concrete & Structures (OWICS-2019) to be held in Singapore in August 2019.
- Lecturer Md. Shahjalal CE department of MIST published a conference paper titled "Experimental Study on the Mechanical Properties of Recycled Aggregate Concrete using Crumb Rubber and Polypropylene Fiber" in 7th CSCE International Specialty Conference on Engineering Mechanics and Materials (CSCE 2019), Laval, Greater Montreal Area, Canada, June 2019
- Lecturer Md. Shahjalal CE department of MIST published a conference paper entitled "Seismic performance of base isolated bridges at subfreezing temperature" in 12th Canadian Conference on Earthquake Engineering (CCEE 2019), Québec, Canada, June 2019.
- Lecturer K.H Afia Farzana Haque CE department of MIST published a conference paper entitled "Development of Climate Resilient Low Cost Water Treatment System" in the International Conference on climate change (ICCC-2019), March 2019.