



Newsletter

Vol 1 | Issue 1, 2022



E
E
E



A
C
C
E



C
S
E



N
E



R
M
E

Faculty of Engineering and Technology

University of Dhaka
Bangladesh



Faculty of Engineering and Technology

University of Dhaka



Newsletter

Vol 1 | Issue 1, 2022



CONTENTS

Message from the Dean	03
What's new at the FoET?	04
Dept. of Electrical & Electronic Engineering	05
Dept. of Applied Chemistry & Chemical Engineering	17
Dept. of Computer Science & Engineering	29
Dept. of Nuclear Engineering	41
Dept. of Robotics and Mechatronics Engineering	51



MESSAGE FROM THE

DEAN

I am pleased to present this inaugural issue of the Faculty of Engineering and Technology (FoET) Newsletter, which highlights our recent initiatives and achievements. This is also a chance for us to discuss with you the significant events that have occurred at FoET over the past few years.



In 2008, the FoET at the University of Dhaka was formed to satisfy the technological needs of the community. This faculty is currently comprised of five departments: Electrical and Electronic Engineering, Applied Chemistry and Chemical Engineering, Computer Science and Engineering, Nuclear Engineering, and Robotics and Mechatronics Engineering. Research and education in the subject of Engineering and Technology have advanced noticeably since the faculty's inception. Every year, the faculty admits a pool of the country's most talented students, through a highly competitive admission process.

One of the most significant achievements of FoET in 2022 was the introduction of a collaborative research grant. Collaborations play an essential role in the advancement of scientific and technological knowledge, which could not be achieved by a single researcher working alone. In this regard, FoET at the University of Dhaka seeks to encourage interdepartmental research collaboration between two or more of its departments. The program promotes initiatives that propose varied approaches to multidisciplinary subjects, combine multiple points of view, and investigate new pathways for engineering and technology advances. The proposed initiatives must have measurable and enduring outcomes, such as books, book chapters, and peer-reviewed articles in Q1 or Q2 Scopus-indexed journals. To address aspiring contributions, collaboration and interpretation must be incorporated into all project outputs.

In July of this year, we had the opportunity to host Dr. Sayeef Salahuddin, TSMC Distinguished Professor of Electrical Engineering and Computer Sciences at the University of California Berkeley, USA. During Professor Salahuddin's visit, the faculty had discussed possible academic and research collaborations with UC Berkeley. Finally, I am pleased to inform you that a Memorandum of Understanding (MoU) was signed this year between the University of Dhaka and THM University of Applied Sciences, Germany. The FoET has been supported by THM, and we will continue to collaborate closely with THM officials.

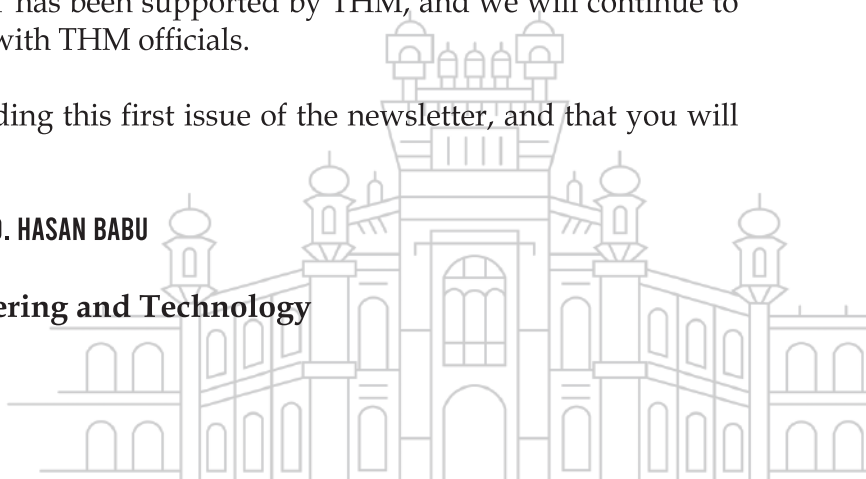
I hope you like reading this first issue of the newsletter, and that you will stay in touch.

PROFESSOR DR. HAFIZ MD. HASAN BABU

Dean

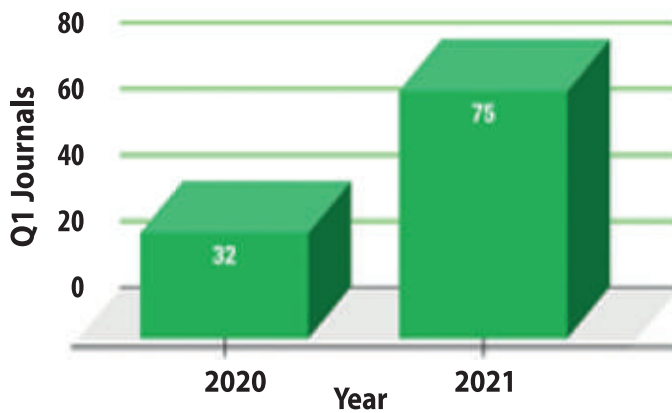
Faculty of Engineering and Technology

University of Dhaka
Dhaka-1000, Bangladesh



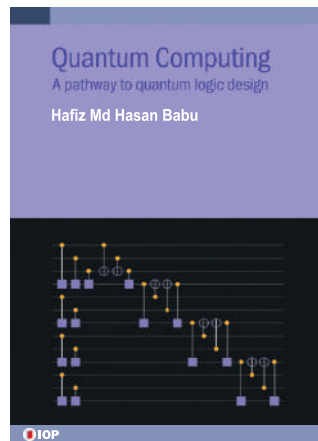
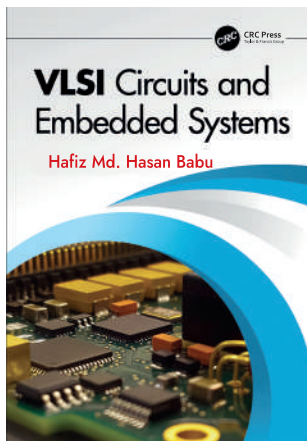
What's new at the Faculty of Engineering and Technology (FoET)?

Q1 Journals from FoET



Q1 Journal Publications

The number of articles published by FoET faculty members in the leading Q1 journals has increased dramatically. FoET faculty members have published in high-impact journals such as Material Today, ACS Nano, Science Advances, etc.



Four High Quality Engineering Books authored by Honorable Dean of FoET Professor Dr. Hafiz Md. Hasan Babu.



MoU Between THM and DU

A Memorandum of Understanding (MoU) between the University of Dhaka (DU) and THM University of Applied Sciences, Germany, was signed on September 14, 2022.



A new trust fund, titled "Abdullah Al-Mahmud Trust Fund", has been established at the Faculty of Engineering and Technology of the University of Dhaka.

DEPARTMENT OF
ELECTRICAL AND ELECTRONIC ENGINEERING



DEPARTMENT OF
ELECTRICAL AND ELECTRONIC ENGINEERING



What's new in the Department of Electrical and Electronic Engineering?



Modernization of Lab Facilities

The EEE department has taken major initiatives to improve lab facilities to meet the needs of modern EEE instructional laboratories. To expedite this process a subcommittee has been formed, and they recently visited the EEE department, BUET. BUET EEE faculty members also shared their views and ideas on improving the lab facilities of our department.

Research Promotion Committee (RPC)

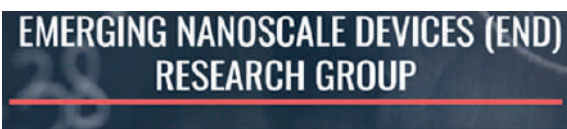
The Department of EEE has already formed a research promotion committee (RPC) for

transformational changes in the research domain of the department. More specifically, RPC keeps track of producing quality journal papers of the faculty members and has opened a research window frame in the department where faculty members' expertise area and publication has been displayed. The long-term goal of the RPC is to create a strong research environment in the department.



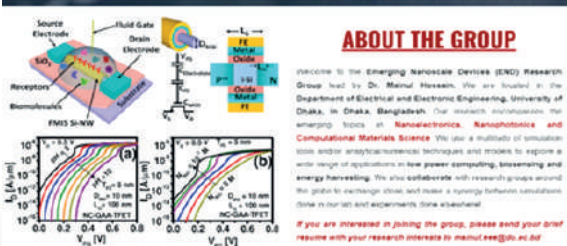
Material Science Research Laboratory

A materials research laboratory has recently been established in the department of EEE under the leadership of Dr. Imtiaz Ahmed. The laboratory will focus on the synthesis and characterization of novel nanomaterials for energy harvesting applications.



Emerging Nanoscale Devices (END) Research Group

The emerging nanoscale devices research group in the department of EEE, led by Dr. Mainul Hossain was established in 2019. The group uses a multitude of simulation tools and/or analytical/numerical techniques and models to explore wide range of applications in low-power computing, biosensing, and energy harvesting.



Department of Electrical and Electronic Engineering Research Accomplishments (2019-Present)

High Impact Journals by Current Faculty Members			
 19,069 Nano Energy	 16,894 Science Advances	 16,744 Chemical Engineering Journal	 12,043 npj 2D materials and applications
 10,681 Sustainable Materials and Technologies	 9,185 Physical Review Letters	 8,857 Energy	 7,923 Nanophotonics
 7,188 Solar Energy	 6,698 Computers in Medicine and Biology	 6,633 Journal of Molecular Liquids	 5,431 International Journal of Heat and Mass Transfer
 5,155 Engineering Science and Technology	 4,682 Journal of Materials Science	 4,565 Results in Physics	 4,55 Thermal Science and Engineering Progress
 4,381 IEEE Transactions on Microwave Theory and Techniques	 4,325 IEEE Sensors Journal	 4,177 The Journal of Physical Chemistry C	 4,152 Computers and Electrical Engineering
 4,124 IEEE Transactions on Human-Machine Systems	 4,079 IEEE Transactions on Industry Applications	 4,036 RSC Advances	 3,833 Optics Express
 3,754 Optical Materials	 3,691 IEEE Transactions on Circuits and Systems II: Express Briefs	 3,476 IEEE Access	 3,221 IEEE Transactions on Electron Devices
 3,062 IEEE Microwave Magazine	 2,902 IEEE Aerospace and Systems Magazine	 2,840 Optik	 2,710 Journal of Applied Physics
 2,414 IEEE Photonics Technology Letters	 2,048 Semiconductor Science and Technology	 2,070 ECS Journal of Solid State Science and Technology	

Quick Facts

- Established in 1965 as Applied Physics
- Renamed as EEE in 2014
- # Faculties at station: 24
- # Undergraduate Students: 300
- # Graduate Students: 60
- Degrees offered: BSc., MSc. and PhD.

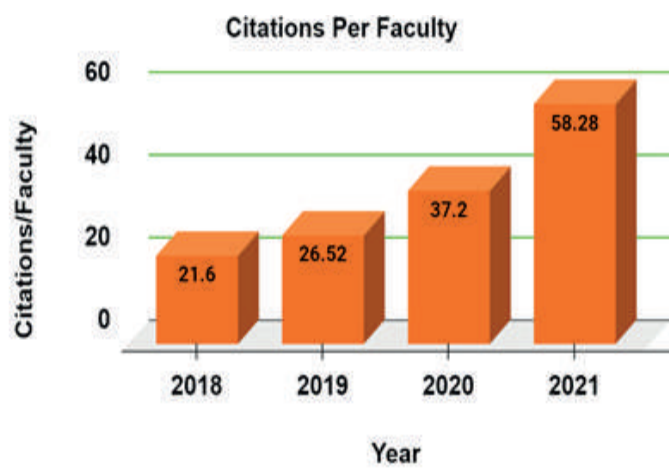
Major Research Areas

- Nanoelectronics
- Optics and Photonics
- Materials Science and Engineering
- Renewable Energy
- Biomedical Engineering
- Satellite and Telecommunication
- Microwave Engineering
- Robotics and Artificial Intelligence
- Internet of Things (IoT)
- Computer Vision
- Power Systems
- VLSI Design

2021 Research Outcome

Book: 5
Book chapter: 16
Journal: 53
Conference proceedings: 9

Current Faculties with Ph.D.s from:



Department of Electrical and Electronic Engineering

Notable Q1 and Q2 Publications (2019-Present)



Dr. Anis Ahmed
Professor



Mathematical Modelling of
Engineering Problems



Dr. Subrata Kumar Aditya
Professor



IEEE Aerospace and Electronic
Systems Magazine



Dr. Md. Adnan Kiber
Professor



Frontiers in Communications and
Networks



Dr. Saeed Mahmud Ullah
Professor



Optik



Dr. Mosabber Uddin Ahmed
Professor



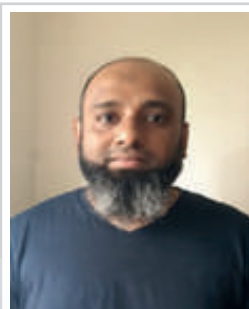
Computers in
Biology and Medicine



Dr. Md. Junaebur Rashid
Professor



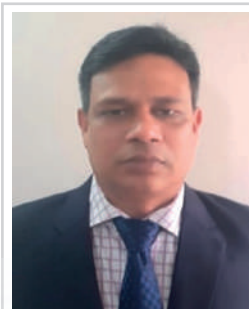
Solar Energy



Dr. Imtiaz Ahmed
Associate Professor



Physical Review Letters



Dr. Abul Kalam Azad
Associate Professor



IEEE Sensors Journal

Department of Electrical and Electronic Engineering

Notable Q1 and Q2 Publications (2019-Present)



Dr. M. L. Palash
Associate Professor



Nano Energy



Dr. Ahsan Habib
Assistant Professor



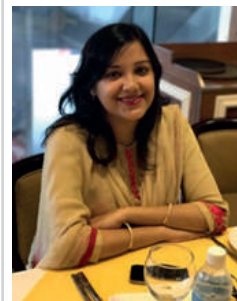
Science Advances



Dr. Md. Minarul Islam
Assistant Professor



IEEE Transactions on Industry Applications



Dr. Sharnali Islam
Assistant Professor



IEEE Access



Dr. Mainul Hossain
Assistant Professor



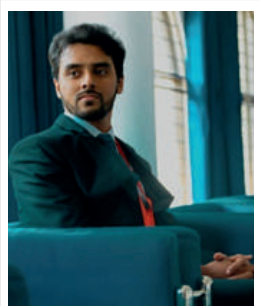
npj 2D Materials and Applications



Dr. Shekh Md. Mahmudul Islam
Assistant Professor



IEEE Transactions on Microwave Theory and Techniques



Mir Md. Fahimul Islam
Lecturer



IEEE Transactions on Electron Devices



Sarah Cynthia Gomes
Lecturer



RSC Advances



Department of Electrical and Electronic Engineering Student Achievements (2019-Present)



Nayeem Jahan Rafi recently joined Google as a software engineer.



Quazi Rushan Islam represented Bangladesh at the 69th Lindau Nobel Laureate Meetings, held in Germany, in 2019.



Syed Doha Uddin and Nishat Tasnim became the top three finalist in Huawei Seeds for the Future-2020. Shadmin Sultana made it to the top 7 finalists in Huawei Seeds for the Future-2022.



Nafisa Amin has been invited to participate in Optica's "Student Leadership Experience" conference.



Aminul Haque Shawon and his team "Cygnus" became the champion in National Hackathon on Frontier Technologies 2020, organized by ICT Division, Bangladesh.



Nishat Tasnim, Anika Tahsin, Sharar Muhtasim and Muhammad Aminul Haque of session 2017-18 got the opportunity to attend the prestigious "METANANO School on Optical Biosensing 2022" organized by ITMO University, St. Petersburg, Russia.

Department of Electrical and Electronic Engineering Faculty Achievements (2019-Present)

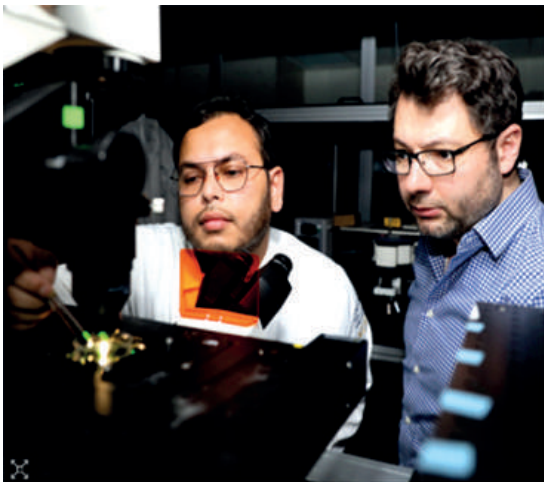


Dr. Shekh Md Mahmudul Islam recently attended the most prestigious and flagship conference, “IEEE International Microwave Symposium (IMS-2022), which was held in Denver, Colorado, USA, and arranged by IEEE Microwave Theory and Technology (MTT) society. Dr. Islam has also served as a technical committee (TC) member of the IEEE MTT society and met with Prof. Dr. Rashunda Henderson, the current president of the IEEE Microwave Theory and Technology (MTT) society. In addition, Dr. Islam just received approval for a US patent.

ADVANCED MATERIALS | RESEARCH UPDATE

Plasmonic nanoprobe optically monitors neural activity

21 Oct 2019 Isabelle Dumé



UC Santa Cruz Engineers Ahsan Habib (left) and Ali Yanik have developed ultrasensitive nanoscale optical probes to monitor the bioelectric activity of neurons and other electrogenic cells, CREDIT: Carolyn Lagattuta

ScienceDaily
Your source for the latest research news

Medical press

EurekAlert!

physicsworld

Novel nanoprobe show promise for optical monitoring of neural activity

Date: October 18, 2019

Source: University of California - Santa Cruz

Summary: Researchers have developed ultrasensitive nanoscale optical probes to monitor the bioelectric activity of neurons and other excitable cells. This novel readout technology could enable scientists to study how neural circuits function at an unprecedented scale by monitoring large numbers of individual neurons simultaneously. It could also lead to high-bandwidth brain-machine interfaces with dramatically enhanced precision and functionality.

Dr. Ahsan Habib has been elected as the Treasurer of the IEEE Photonic Society Bangladesh Chapter. Dr. Ahsan Habib’s research work, on optical monitoring of neural activity, at the University of California, Santa Cruz, USA, has been featured on Physics Work, Science Daily, EurekAlert and Medical Xpress. Also, Dr. Habib has filed two US patent applications, and one of them got approval recently.



Dr. Mainul Hossain is the elected chair of the IEEE Photonics Society, Bangladesh Chapter. He is also a member of the National Young Academy of Bangladesh (NYAB). Also, Dr. Mainul Hossain was awarded the highly competitive India Science Research Fellowship (ISRF) by the Government of India for 2019-2020 for conducting research as a visiting faculty/research fellow at the Centre for Nano Science (CeNSE) and Engineering at the Indian Institute of Science (IISc), Bangalore, India.

Department of Electrical and Electronic Engineering

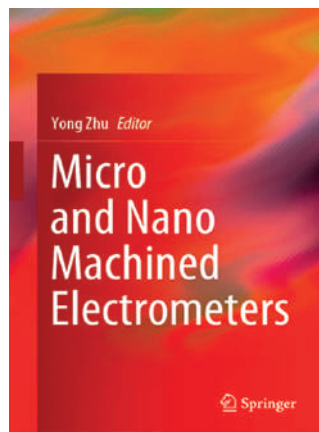
Faculty Achievements (2019-Present)



The **Roushan Innas Ali Welfare Trust Gold Medal** was awarded to Professor **Dr. Mosabber Uddin Ahmed** for his outstanding research. Professor Uddin was also awarded the Taylor & Francis Commonwealth Scholar Highly Commended Journal Article Prize. Recently, he authored the book *Signal Processing Techniques for Computational Health Informatics*. This book focuses on the signal processing techniques utilized in computational health informatics.



Dr. M. L. Palash presented his research work at the **International Conference on Environmental Protection for Sustainable Development (ICEPSD-2022)** as an invited lecture on September 3, 2022. Dr. Palash received many awards from Japan for his excellence in research, such as the President's Award, the Dean's Award, and the Young Researcher Award in Energy



Dr. Imtiaz Ahmed, Associate Professor, has recently published a book chapter in the book titled "**Micro and Nano Machined Electrometers.**"

Dr. Abul Kalam Azad received the Dean's Award for his distinguished research work.

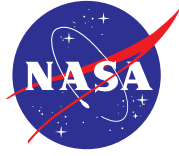
Mir Md. Fahimul Islam (currently Lecturer in the department) received the Dean's Award for his outstanding result in the BSc. Examination.

Sarah Cynthia Gomes (currently Lecturer in the department) received the Dean's Award for her outstanding result in the BSc. Examination



From the left Sarah Cynthia Gomes, Dr. Abul Kalam Azad and Mir Md. Fahimul Islam.

Department of Electrical and Electronic Engineering Alumni Achievements (2019-Present)



Dr. Shah Mohammad Bahauddin, an astrophysicist, has been appointed as research faculty at the Laboratory for Atmospheric and Space Physics. He is also involved in NASA's upcoming Polarimeter to Unify the Corona and Heliosphere (PUNCH) mission.



Dr. Masudul Imtiaz has been appointed as an assistant professor of the department of Electrical and Computer Engineering at Clarkson University, USA.



EEE alumni **Sheikh Ghafoor, Ph.D.** and Professor of Computer Science at Tennessee Tech, USA, has won the 2020-2021 Brown-Henderson outstanding engineering faculty award.



EEE alumni Dr Rajib Ahmed has been appointed as a senior optical engineer at META (Facebook). Dr. Ahmed has postdoctoral research experience from Stanford University.



Dr. Faisal Jahan has recently been promoted to the TD Manager position at Intel Corp., in Oregon, USA



EEE alumni Dr. Asif Naimur Rashid has been appointed as the new Chief Business Officer of Grameenphone (CBO).



Shariar Pavel is currently appointed as the Chief Experience Officer (CXO) at Huawei Device, UAE.



Abu Isa Md. Mainuddin recently got appointed as the Executive Director of BASIS.

Department of Electrical and Electronic Engineering

Events by clubs and Societies

Optical Society of America (OSA) Bangladesh Student Chapter at University of Dhaka presents
#lightinguptheminds webinar series

OPTICS AND PHOTONICS RESEARCH IN BANGLADESH: DO'S AND DON'TS



Dr. Sajid M Choudhury
Assistant Professor
Department of Electrical and Electronic Engineering, BUET
Founding Chair, Optical Society of America (OSA) Bangladesh Section

My personal journey through Nanophotonics: Fabrication, Experiments and Simulation



Dr. Mahdy Rahman Chowdhury
Associate Professor
Department of Electrical and Computer Engineering, NSU

Research in Bangladesh: My experience & suggestion

6 August 2021
Friday
7:30 PM

Organised by:  

Available on: 

Optica Bangladesh Student Chapter at University of Dhaka presents

DISORDERED PHOTONICS and the Quest for Order in Disorder

11 November, 2021 (Thursday)
6:30 pm BST (UTC+6)



Speaker:
DR. MD. ZUNAID BATEN
Associate Professor
Department of Electrical and Electronic Engineering (EEE)
Bangladesh University of Engineering and Technology (BUET)

Available on: 

Organized by:  

Transistors: Past-Present-Future and EUV to the Rescue

Journey of the Transistor



Dr. Anisul Haque
Professor
Department of Electrical and Electronic Engineering (EE)
East West University (EWU)
IEEE EDS Distinguished Lecturer

EUV Lithography: Pushing Moore's Law Forward



Yassin Chowdhury
Functional Architect
EUV Source Metrology
ASML, Netherlands, B.V.

Sunday, June 13, 2021
07:00 pm (BST)
Virtual Platform (Zoom)

Promoting excellence in research and learning in the area of electron device.


IEEE EDS Student Branch University of Dhaka presents



WEBINAR ON

MODELING & SIMULATION of NEGATIVE CAPACITANCE TRANSISTORS

DR. YOGESH SINGH CHAUHAN
Professor
Indian Institute of Technology, Kanpur
Fellow of IEEE, Editor of IEEE TED
IEEE EDS Distinguished Lecturer

11 AUG
06:30 pm (BST)
06:00 pm (IST)

Available on: 

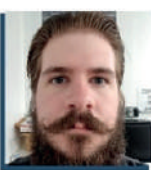
<https://eds.ieeebd.org/home/>

Promoting excellence in research and learning in the area of electron device.



OPTICA
Student Chapter University of Dhaka

THE PHOTONICS INDUSTRY UNDER THE LENS OF A YOUNG PROFESSIONAL




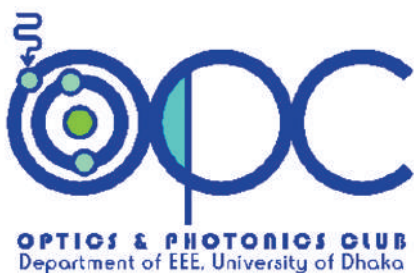
SESSION SPEAKER
RYAN GARDNER
SENIOR OPTICAL ENGINEER
RKO ENGINEERING CORP
SANTA CRUZ, CALIFORNIA, USA

DATE & TIME

AUG 24, 2022
08.00 PM (GMT +6)

A look into navigating the Photonics industry as a professional and the changes that have occurred post Covid-19. Insights from working in an established company, a FAANG company, and a startup. How one might explore working in Optics and avoiding pitfalls.

 SCAN ME



Visitors to the Department of Electrical and Electronic Engineering

Seminar on Bending, Trapping and Slowing Down Light Beams Periodic Nanoholes for Highly-efficient Photovoltaics and Ultra-fast Photodetection



SPEAKER

M. Saif Islam

- Ph.D., Electrical Engineering, UCLA (2001)
- Professor and Chair, ECE, UC Davis
- Elected Fellow of AAAS, OSA, SPIE and NAI

August 5, 2019
02:30 PM – 4:00 PM
Room-208, Department of EEE, DU

The event is free and open for all.





Dr. Saif Islam is a professor of the ECE Department at the University of California, Davis. Dr. Islam's research focuses on CMOS-compatible nanoscale devices, sensors, and detectors for high bit rate datacom, telecom, imaging, sensing, computing, and energy harvesting. He is an elected fellow of the AAAS, OSA, SPIE, and National Academy of Inventors (NAI).

75 CELEBRATING THE 75TH ANNIVERSARY OF TRANSISTOR
 IEEE EDS Student Branch University of Dhaka presents
 SEMINAR ON

THE PHYSICS OF NEGATIVE CAPACITANCE, ITS IMPLEMENTATION IN ULTRATHIN FERROELECTRICS AND ITS IMPLICATIONS FOR NEXT GENERATION ELECTRONICS

Sayeef Salahuddin, Ph.D
 TSMC Distinguished Professor
 University of California, Berkeley, USA
 Fellow of the IEEE and the APS
 Former Chair of the IEEE EDS Committee on Nanotechnology

SUN 24 JULY | 02:30 PM (BST)

VENUE
 ROOM#208, 2ND FLOOR
 DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING




<http://edl.uvsnbdh.org/home/>

Promoting excellence in research and learning in the area of electron device



Dr. Sayeef Salahuddin is a TSMC Distinguished professor of Electrical Engineering and Computer Sciences at the University of California Berkeley, USA, who visited EEE in July 2022. Dr. Sayeef Salahuddin is an IEEE and APS Fellow.

DEPARTMENT OF
APPLIED CHEMISTRY AND CHEMICAL ENGINEERING





DEPARTMENT OF
APPLIED CHEMISTRY AND CHEMICAL ENGINEERING



What's new in the Department of Applied Chemistry and Chemical Engineering?

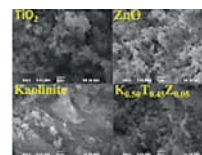
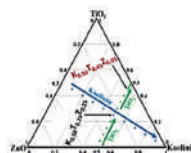
Upgradation of the Existing Lab Facilities

The Department of Applied Chemistry and Chemical Engineering (ACCE) was established with the aim to solve the industrial problems of our country. To avail of the founding motto, ACCE offers very strong, state-of-the-art MS programs to develop graduates of international reputation who are dedicated to ethics, competence, and lifelong learning by broadening and deepening their knowledge bases. As a part of the continuous upgradation of the lab facilities, atomic absorption spectroscopy has been purchased along with a deionized water treatment facility. The MS graduate students are actively working on different projects under the supervision of faculty members in the following labs.



The Frontier Research Lab
(PI: Professor Dr. Sayed MD. Shamsuddin)

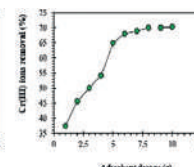
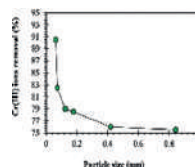
The lab develops high-performance porous novel nanocomposites for solar-assisted photocatalytic degradation of organic pollutants.



Environmental and Analytical Chemistry Lab

(PI: Professor Dr. Md. Nurul Amin)

The research work of Professor Dr. Amin's group focuses on the removal of life-threatening inorganics from the wastewater and effluents produced in different industries.



Materials Innovation, Development and Application System Lab (PI: Professor Dr. Md. Nurnabi)

Dr. Nurnabi's group focuses on the development of advanced materials for adsorptions purpose. His group's major focus is membrane fabrication, electrocoagulation of coloring substance from textile effluent, graphene oxide-based adsorbent, C-dot synthesis. The group is also extending its research area to microbial fuel cells and cell imaging.

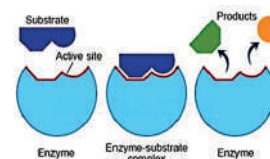


What's new in the Department of Applied Chemistry and Chemical Engineering?



Enzyme and Bioprocessing Lab (PI: Professor Dr. A. N. M Hamidul Kabir)

Dr. Kabir's group works closely with several textile industries and is trying to come up with new strategies for waste valorizations by producing cellulase enzymes from the wastes.



Environmental and Biomaterials Lab (<https://env-biomat.info.bd/>) (PIs: Dr. Mohammed Mizanur Rahman and Professor Dr. Papia Haque)



The research group is now developing sustainable and functional bioproducts through the valorization of wastes generated from leather and fish industries by using green chemistry to

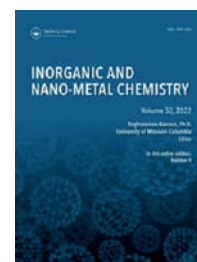


deliver hygiene products, smart packaging, and flexible electronics that benefit society as well as the environment. This group has published numerous articles in Q1 indexed journals and book chapters that have received more than 1500+ citations in the past three years.



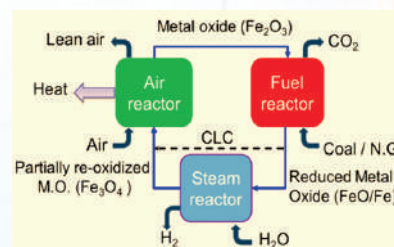
Advanced Smart and Functional Nanomaterials Lab (PI: Professor Dr. Md. Ashaduzzaman)

This group focuses on developing metal-organic frameworks (MOFs) and high performance porous novel composites to pave the way toward more for competent, economical, and non-destructive textile effluent treatment.



Clean and Affordable Energy Lab (PI: Associate Professor Dr. Mohammad Ismail)

Dr. Ismail's research group works on alternative clean fuels, and currently, he is focusing on "Integrated Carbon Capture and Clean Hydrogen Production in Power Plants via Chemical Looping Combustion & Hydrogen Production."



Department of Applied Chemistry and Chemical Engineering Research Accomplishments (2019-Present)



Faculties with Ph.D.s from



Quick Facts

- Established in on 14th August 1972
- Previously known as Applied Chemistry
- Renamed as ACCE in 2009
- Faculties at Station: 21
- Undergraduate Students: 300 (Approx.)
- Graduate Students: 60
- Degrees Offered: B.Sc., M.S., M.Phil. and Ph.D.
- www.du.ac.bd/body/ACT



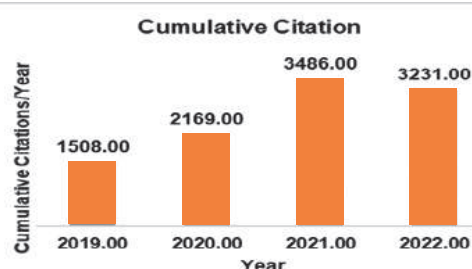
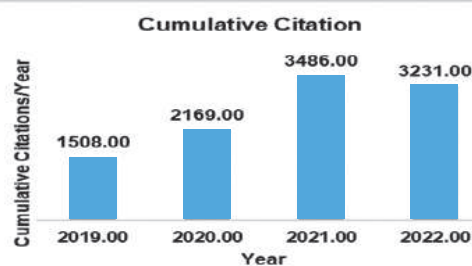
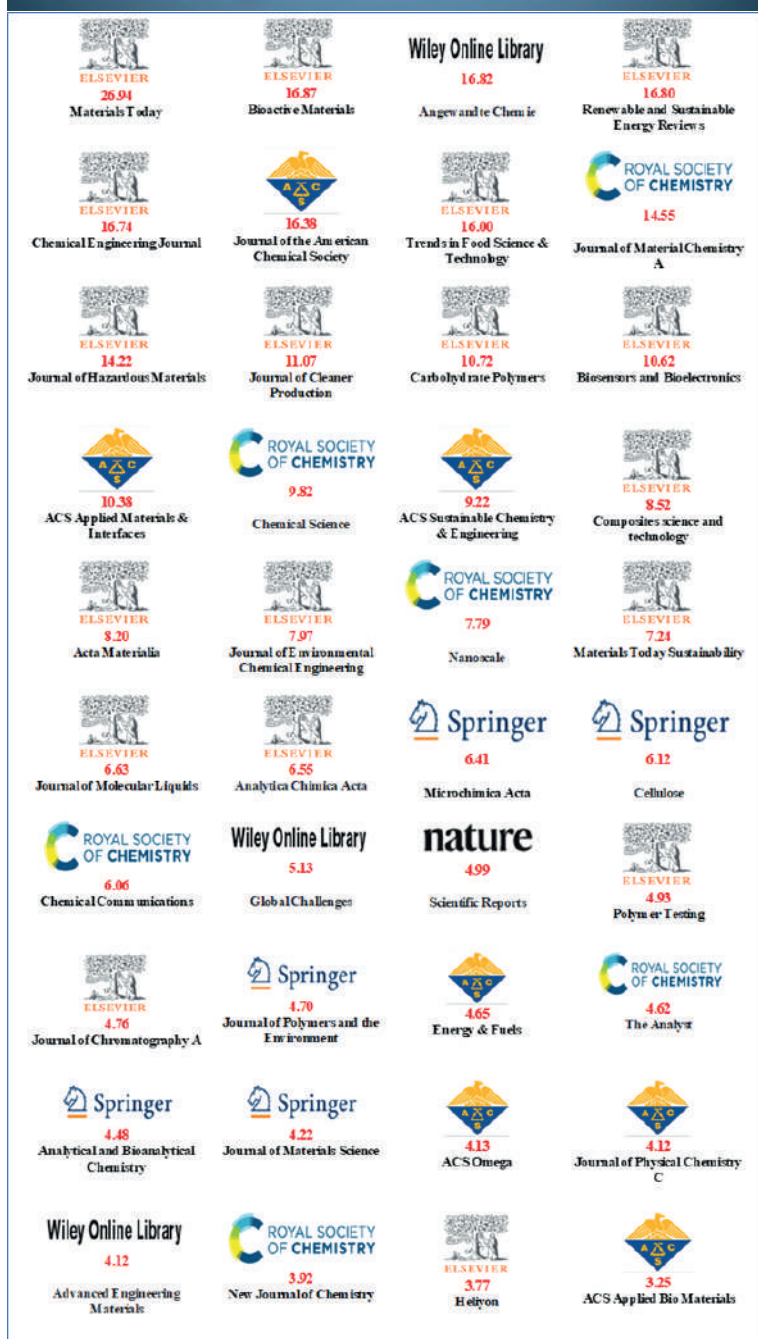
2021 Research Outcome

- Journals: 64
- Book Chapters: 17
- Conference Proceedings: 8



Major Research Areas

- Biopolymer and Biocomposite
- Nanotechnology
- Separation Sciences
- Photocatalytic Degradation
- Material Science
- Natural Products
- Environmental Chemistry
- Surface and Green Chemistry
- Cellulose and Nanocellulose
- Packaging and Hygiene Products (Facial Tissue, Paper Towel, Napkins)
- Analytical Chemistry
- Nanofluids and Microfluids
- Energy (Microbial Fuel Cell, Clean Fuels, Biofuels and Bioenergy)
- Membrane Technology
- Adsorption and Catalysis
- Photochemistry
- Hydrogels
- Metal-organic Framework

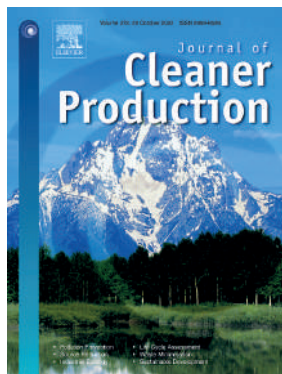


Department of Applied Chemistry and Chemical Engineering

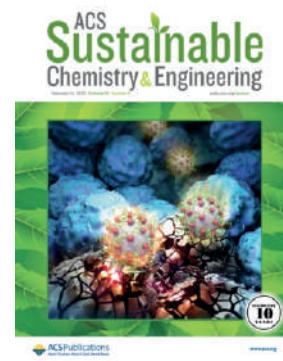
1st Author/Corresponding Author Q1 Publications (2019-present)



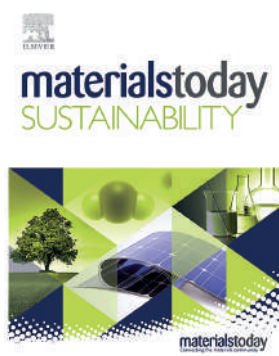
Professor Dr. Papia Haque



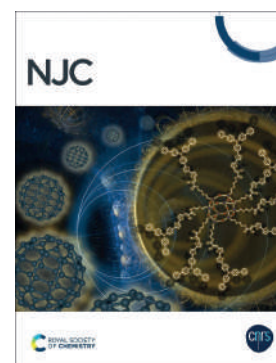
Dr. Khandoker Samaher Salem



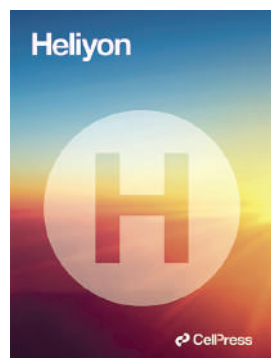
Dr. M Nuruzzaman Khan



Dr. Md. Ashrafur Islam Molla



Dr. Abul Khayer Mallik



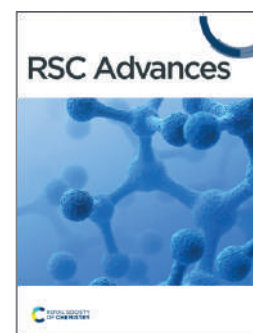
Dr. Taslima Ferdous



Dr. Mohammad Shahruzzaman



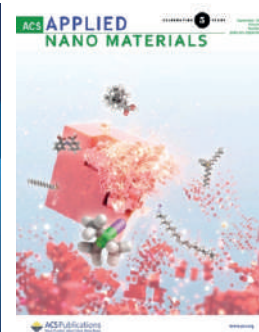
Prof. Dr. A. F. M. Mustafizur Rahman



Department of Applied Chemistry and Chemical Engineering Faculty Achievements (2019-Present)



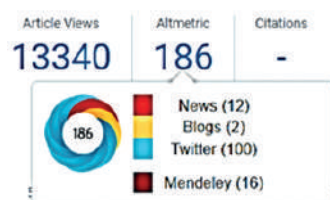
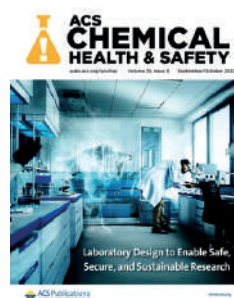
Dr. Mithun Sarker, Associate Professor, received the Dean's Award (Gold Medal) from the Faculty of Engineering and Technology for his outstanding research work and publications.



Dr. M Nuruzzaman Khan, Associate Professor, has been appointed as DAAD Research Ambassador for his research contributions by the German Academic Exchange.



Dr. Taslim Ur Rashid, Associate Professor, has been hailed for his review article on the effectiveness of N95 masks against the COVID 19 virus.



Dr. Khandoker Samaher Salem, Assistant Professor, received "The Goldstein Graduate Student Enhancement Fellowship, 2020" from the College of Natural Resources, NC State University for his excellent research work, publications, and patent.



Department of Applied Chemistry and Chemical Engineering

Student Achievements (2019-Present)



Shakil Shahriar Efty, Foyez Jalal Uddin, and Md. Shahriar Hossain Shuvo (from the left) were the runners-up in the 1st Bangladesh Chemical Hackathon-2021 organized by ChemFusion, Department of Chemistry, University of Dhaka.



Md. Shahriar Hossain Shuvo achieved the 3rd position in the "Chem E Action", a competition organized by BUET AIChE Student Chapter.



Alfaz Hossain, Oishee Rahman and Preyanty Sen won the second runner-up prize in the poster presentation of "ChemFusion International ChemFest-2022."



Oishee Rahman, Saiful Islam, and Mehedi Hasan jointly won the runner-up prize in the "Intra Department Poster Presentation Competition 2021."

Department of Applied Chemistry and Chemical Engineering Alumni Achievements (2019-Present)



Dr. Saiful M Chowdhury has been promoted to Associate Professor in the department of chemistry and biochemistry at The University of Texas at Arlington.

Dr. Md Mushfequr Rahman has joined as the Head of the Department of Materials Chemistry and Mass Transport, Institute of Membrane Research, Helmholtz-Zentrum Hereon, Germany.

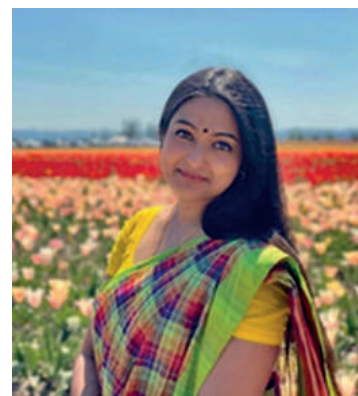


Dr. Nazrul Islam is working as an Associate Professor of Innovation/Entrepreneurship and Interdisciplinary Pathway Lead for Global Political Economy at the University of Exeter Business School.



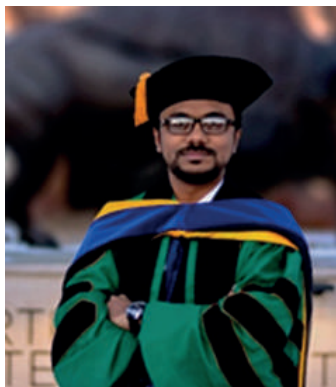
Dr. Shams Tania Afroza Islam is working as a Senior Scientist, Pfizer Ltd, UK

Dr. Fatema Wahida is working as a Process Engineer, Intel Corporation, Oregon, USA.



Department of Applied Chemistry and Chemical Engineering Alumni Achievements (2019-Present)

ThermoFisher
SCIENTIFIC



Dr. Shahan Molla is a Scientist in Cell and Gene Therapy R&D, Thermo Fisher Scientific, USA



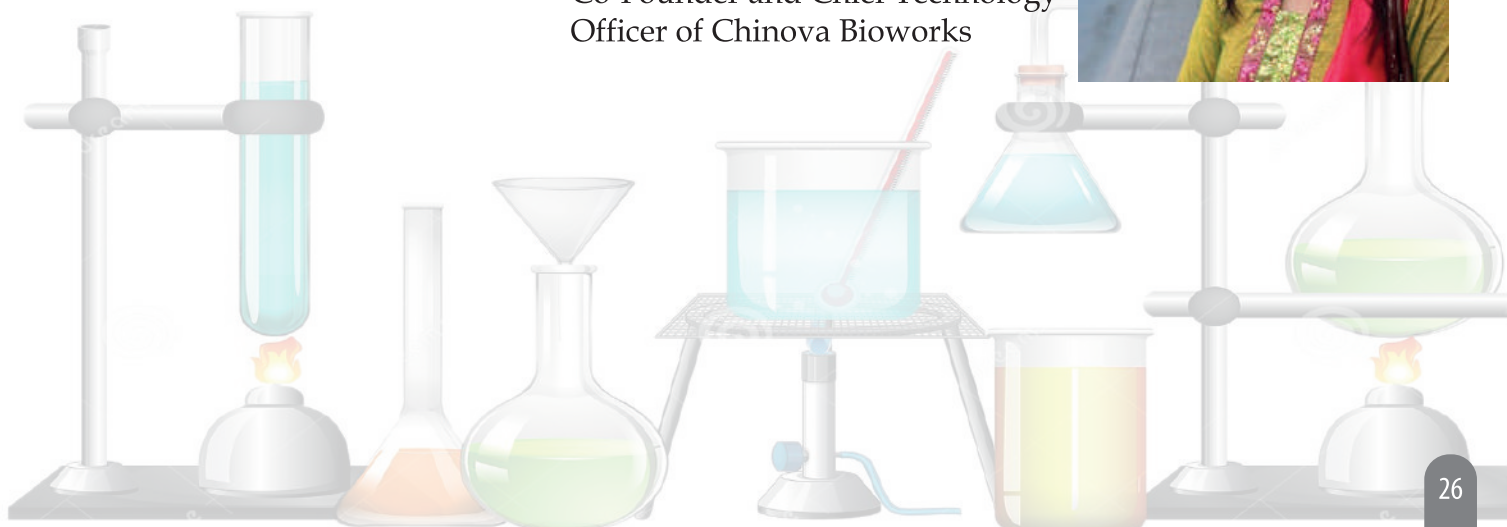
Md. Masudur Rahman has been promoted to additional Deputy Inspector General at Police Headquarters, Dhaka



Dr. Muhammad Mominur Rahman has been appointed as the Chemistry Research Associate, Brookhaven National Laboratory, USA



Dr. Tanzina Huq is the Co-Founder and Chief Technology Officer of Chinova Bioworks



Department of Applied Chemistry and Chemical Engineering Events by Department and Societies



The Department of Applied Chemistry and Chemical Engineering is celebrating its golden jubilee this year. The honorable Pro-VC Professor Dr. A. S. M. Maksud Kamal, inaugurated the program as chief guest. The Dean of the Faculty of Engineering and Technology, Professor Dr. Hafiz Md. Hasan Babu was present at the program as special guest.

The department is arranging a lecture series where different industries will share their knowledge with our undergraduate and graduate students to give them a real-life holistic overview of the industrial unit operations and processes.



ACS Student Chapter, University of Dhaka

The American Chemical Society (ACS) Student Chapter, University of Dhaka started its journey in 2018. From the beginning of its journey, the student chapter has arranged a number of activities including seminars, webinars, workshops, chemical Olympiads and Carnivals in different areas of Bangladesh.



Founder Executive Committee of American Chemical Society, Dhaka University Chapter (ACSDU)



In 257th ACS National Meeting in Orlando, Florida, USA

Department of Applied Chemistry and Chemical Engineering Events by Department and Societies

SEMINAR ON
Radiation in the Environment
The QST/ NIRS Research Activities in the Field of Radon & Thoron

SPEAKER :

Miroslaw Janik
Ph.D.
Department of Radiation Measurement & Dose Assessment
The National Institutes for Quantum & Radiological Science & Technology (QST)
Chiba, Japan



Venue: Room No. 102, Dept. of Applied Chemistry & Chemical Eng., University of Dhaka
Date: February 11, 2019. Time: 12:00 pm - 1:00 pm

Dept. of Applied Chemistry & Chemical Eng., University of Dhaka
ACS International Student Chapter
University of Dhaka

ACS Student Chapter, University of Dhaka Presents a Seminar on
Engineering Spin-Driven Thermoelectric Materials
on the Celebration of Nanotechnology Day - 2022

October 10 (Monday) 2:00 pm BD Time Dept. of ACCE, DU



Md. Moazzam Hossain Prubash
Technology Development Engineer, Intel Corporation,
Ph.D. in Materials Science (Major) and Electrical Engineering (Co-major),
NC State University,
BSc and MSc in Electrical and Electronic Engineering, BUET

Dept. of Applied Chemistry & Chemical Eng., University of Dhaka
ACS International Student Chapter
University of Dhaka
Intel
NC STATE UNIVERSITY

Speaker

Graphene-based technologies for smart wearable e-textiles and sustainable composite applications



Dr. Nazmul Karim
Associate Professor
New materials and sustainable technologies
Center for High-Resolution Microscopy, UNM, USA

9 March 2022
02:00 PM
Department of Applied Chemistry & Chemical Engineering, University of Dhaka
Room 102

ACS International Student Chapter
University of Dhaka

SEMIMAR ON **Women In Higher Education**

16 AUG 2020 AT 9:00 PM

Dr. Fatima Wahida
Process Engineer,
Intel Corporation, United States

Tahmina Neem
Graduate Research & Teaching Assistant,
University of Massachusetts Lowell

ACS International Student Chapter
University of Dhaka

CHEMCARNIVAL-2022

KHULNA ZILLA SCHOOL, KHULNA
10TH SEPTEMBER, 2022

EVENTS:
1. CHEMISTRY OLYMPIAD
2. SCIENCE PROJECT EXHIBITION
3. EXTEMPORE SPEECH

CATEGORIES:
CLASS 9-10

CO-POWERED BY:
KHULNA ZILLA SCHOOL SCIENCE CLUB

REGISTER NOW!

ACS International Student Chapter
University of Dhaka



DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING



NC1=NC(=O)NC=C1 CYTOSINE

NC1=NC=NC2=C1N=CN2 GUANINE

NC1=NC=NC2=C1N=CN2 ADENINE

CC1=CNC(=O)NC1=O THYMINE

DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING

What's new in the Department of Computer Science and Engineering?

Modernization of Lab Facilities and Research Initiatives

The University of Dhaka's Computer Science and Engineering (CSE) department has made great strides in establishing its software and hardware lab facilities. Specifically, on our recently completed sixth floor, we have developed four software labs, one animation lab, two hardware labs, and a conference room that can accommodate more than 110 people. In addition, we have constructed four High-Performance Computing (HPC) facilities for conducting experiments in cutting-edge research domains.



Green Networking Research Group (GNR): Under the leadership of Prof. Dr. Md. Abdur Razzaque, Green Networking Research Group (GNR) focuses on conducting research in the area of Cloud Computing, Sensor and Ad Hoc Networks, Mobile Crowdsourcing, Internet of Things, Edge Computing, etc. Between 2020 and 2022, the lab published **thirteen Q1 journals and eleven conference papers.**

Data Mining Research Group (DMR): Prof. Dr. Chowdhury Farhan Ahmed leads the Data Mining Research Group (DMR). This group is renowned for its high-quality research in the fields of Data Mining, Knowledge Discovery, and Information Retrieval. They produced **five Q1 journal articles and seven top conference papers** in the years 2020-2022.



Cognitive Agents and Interaction Lab (CAIL): Dr. Md. Mosaddek Khan initiated CAIL in 2019 to conduct research in various domains of broader Artificial Intelligence. That includes Multi-Agent Deep Reinforcement Learning, Distributed Decision Making in AI, Crowd Sourcing, Causal Inference, etc. From 2020 to 2022, this group published **seven A* conference papers and four Q1 journal articles.**

Department of Computer Science and Engineering

Research Accomplishments (2020-Present)

Major Research Areas

- VLSI Design
- Artificial Intelligence
- Machine Learning
- Data Mining
- Networking
- Computer Graphics

Quick Facts

Faculty Members in Service: 23
 h-index: 140
 i10-index: 210

Books: 4
 Journals: 39
 Major Conferences: 29

Citations per Faculty



Faculties with Ph.D. from



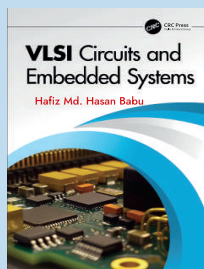
- India: 1
- Japan: 4
- Australia: 4
- Bangladesh: 1
- S. Korea: 5
- Canada: 2
- USA: 2
- UK: 2

Research Projects and Grants

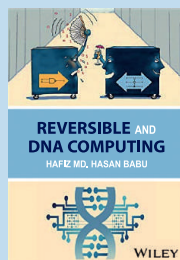
Sponsor	#Projects	Amount
ICT Innovation Grant	6	71 lakh
100 Years of DU Research Project	7	27 lakh
Australian Academy of Science	1	2 lakh
Total		1 Crore

* Amounts are in BDT

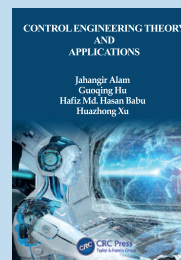
Books



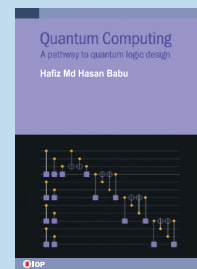
VLSI Circuits and Embedded Systems (CRC Press, 2022)



Reversible and DNA Computing (John Wiley & Sons, 2020)



Control Engineering Theory and Applications (CRC Press, 2022)



Quantum Computing: A pathway to quantum logic design (IOP 2020)

Author: Prof. Dr. Hafiz Md Hasan Babu

Selected High Impact Journals



Information Sciences: IF- 5.047



ACM Transactions on Management Infor. Systems: IF: 2.54



IEEE Transactions on Systems, Man, and Cybernetics: IF- 11.471



Applied Intelligence: IF - 5.019



Computer Networks: IF: 5.493



Network and Computer Appl: IF - 7.574



IEEE Access: IF - 3.367



Computer Communications: IF -5.047



Neural Computing and Applications: IF - 5.102



Systems Architecture: IF - 5.836

Major CS Conference Proceedings



AAAI Conference on Artificial Intelligence (Core: A*)



Intl. Conference on Autonomous Agents and Multiagent Syst. (Core: A*)



International Joint Conference on Artificial Intelligence (Core: A*)



Pacific-Asia Conference on Knowledge Discovery and Data Mining (Core: A)

Department of Computer Science and Engineering

Notable Q1/A* Publications (2020-Present)



Dr. Md. Rezaul Karim
Professor



IEEE Access



Dr. Md. Abdur Razzaque
Professor



IEEE Transactions on Systems,
Man, and Cybernetics



Dr. Chowdhury Farhan Ahmed
Professor



ACM Transactions on
Management Information
Systems



Dr. Md. Mamun-or-Rashid
Professor



International Conference on
Autonomous Agents and
Multiagent Systems



Dr. Md. Mustafizur Rahman
Professor



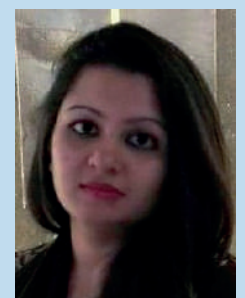
IEEE Access



Dr. Hafiz Md Hasan Babu
Professor



Intelligent Systems with
Applications



Dr. Ismat Rahman
Associate Professor



IEEE Access



Dr. Md. Mosaddek Khan
Associate Professor



AAAI Conference on Artificial
Intelligence



Md Mahmudur Rahman
Assistant Professor



Information Sciences



Md. Ashraful Islam
Assistant Professor



Applied Intelligence

Department of Computer Science and Engineering

Student Achievements (2020-Present)



Therap JavaFest 2022: Mohima Ahmed Joyee's team won the competition; Fahmida Ara and Shahriar Rumel placed as the first runners-up.



Jubayer Rahman Nirjhor (Batch 24) won the first prize in the International Mathematics Competition 2022 (for undergraduates). In 2020, he also became the 1st Grandmaster in Codeforces. At that time, he was the 5th Grandmaster from Bangladesh, and currently there are only 407 Grandmasters worldwide, and he achieved all this as a 2nd year student.



Team Leveor of CSEDU won 2 awards in 2 tracks. Gold Award in the Professional track; Silver Award-Document Authentication Category, Blockchain Olympiad Bangladesh.

Department of Computer Science and Engineering

Student Achievements (2020-Present)

DU_NotStrongEnough, Ayman Rashid (Batch 23), Jubayer Rahman Nirjhor, and Ayon Shariar (Batch 24) became the Champions at Ahsanullah University of Science and Technology and BUET's Inter University Programming Contest 2022.



Dr. Nazma Tara earned her doctorate in 2020 under the guidance of Prof. Dr. Hafiz Md Hasan Babu. Dr. Sajeeb Saha and Dr. Md. Ahsan Habib completed their Ph.D.s under the supervision Prof. Dr. Md. Abdur Razzaque in 2021 and 2022, respectively, from GNR lab of the CSE department.



Fahim Arefin and Jargis Ahmed of Batch 20, Redwan Ahmed Rizvee, and Nahian Ashraf (Batch 21) won the Dean's Award 2020.

Department of Computer Science and Engineering

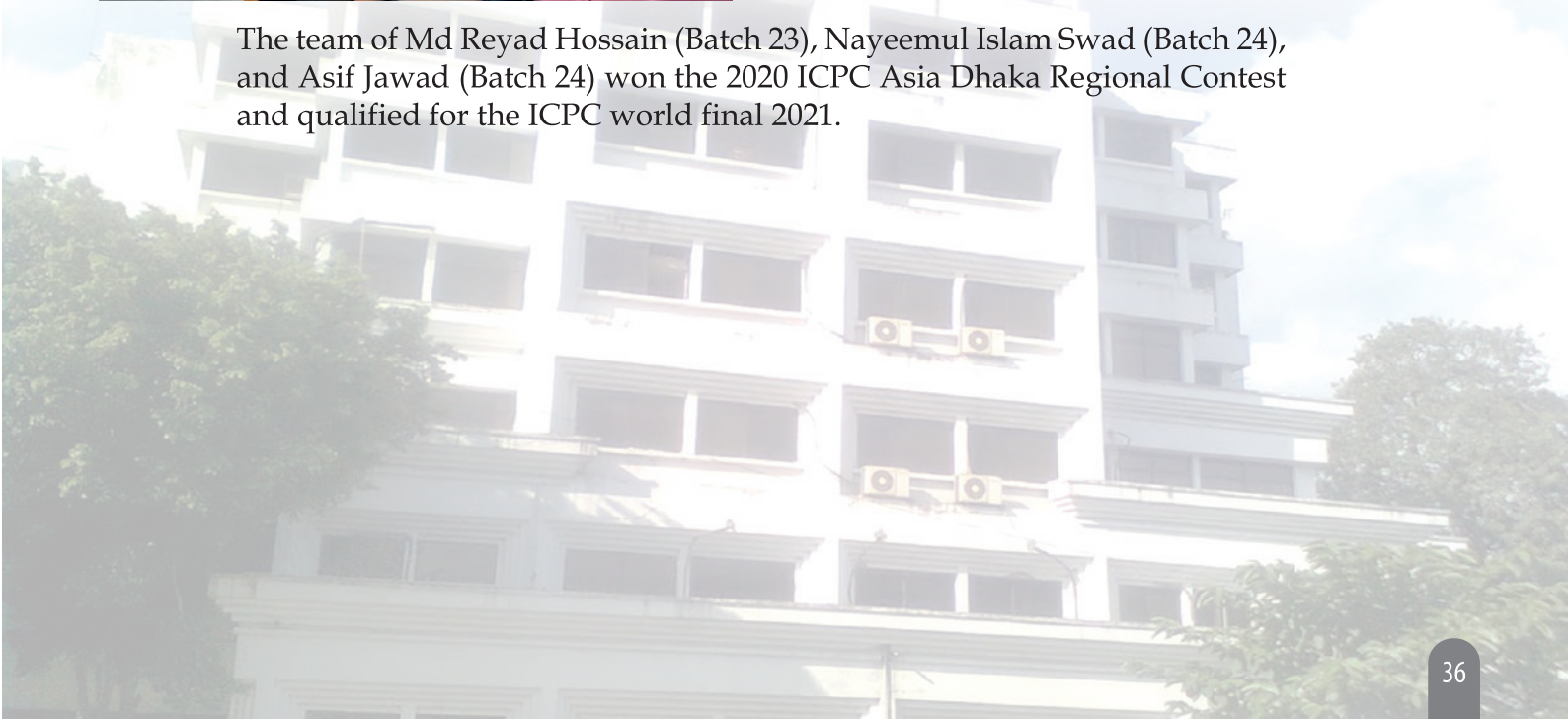
Student Achievements (2020-Present)



DU_Swampfire qualified for the ICPC World Finals 2020, which took place in Moscow, Russia. The team members are Shahadat Hossain Shahin (21st Batch), Mahamudur Rahaman Sajib (20th Batch), and Jubayer Rahman Nirjhor (24th Batch).



The team of Md Reyad Hossain (Batch 23), Nayeemul Islam Swad (Batch 24), and Asif Jawad (Batch 24) won the 2020 ICPC Asia Dhaka Regional Contest and qualified for the ICPC world final 2021.



Department of Computer Science and Engineering Alumni Achievements (2020-Present)

CSEDU Alumni at Top Research Engineer/Scientist Positions



Anna Fariha
Researcher, Microsoft



Muhammad Shakhawat Hossain
Booking.com



Sharbani Pandit & Krishanu Sarker
Amazon



Sheikh Muhammad Sarwar
Applied Scientist II, Amazon



Eight students from the same batch (Batch 21, Ekush) joined Google in various places as Software Engineers. From left, Nahian Ashraf, Shariar Hossain Sajib, Md Shahadat Hossain Shahn, Riddho Ridwanul Haque, Md Saadman Sakib, Safayat Ullah, Md Al Nasirullah Siddiki, and Nazmus Sakib.

Recent move of CSEDU Alumni to Google



Nazir Saleheen



Md. Shiplu Hawlader



Shahed Shahriar



Sharmin Mahzabin

Department of Computer Science and Engineering Alumni Achievements (2020-Present)

Recent move of CSEDU Alumni to leading positions at International/BD tech firms



Mohammad Azmal Huda
Chief Product &
Technology Officer
Bkash Limited



Syed Sohael Reza
Chief Executive
Officer, ADN
DigiNet Ltd



Syed Zubair Hossain
Chief Technology
Officer, Divine
IT Limited



Dr. Monirul Islam Sharif
Director of Engineering,
Google

Recent move of CSEDUians to notable faculty positions



Prof. Dr. Alamgir Hossain
Vice President Cambodia University of
Technology & Science, Cambodia



Dr. M. Julius Hossain
Head of Image and Data Analysis
Group at the Center for Immunology
University of Southampton



Prof. Dr. Hafiz Md. Hasan Babu
Dean, Faculty of Engineering and
Technology, University of Dhaka
Bangladesh



Dr. Pavel Tariq
Assistant Professor of
Trustworthy Cyberspace at
Syracuse University, USA



Dr. Tarannun Shaila Zaman Prrottasha
Assistant Professor
State University of New York
Polytechnic Institute, USA



Dr. Nazmus Sakib Miazi
Assistant Teaching Professor at
Northeastern University, USA

Department of Computer Science and Engineering Alumni Achievements (2020-Present)

Recent move of CSEDUIans to notable faculty positions

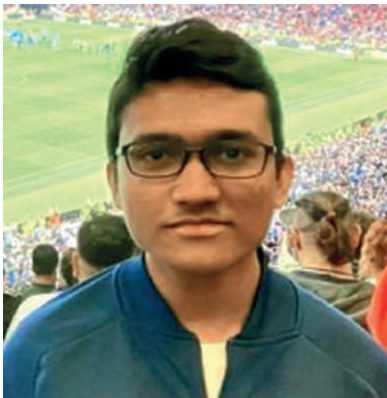


Dr. Mir Hasan
Assistant Professor at Austin
Peay State University, USA

**Dr. Redowan Rahman Ratul &
Dr. Mahbuba Afrin Ritu**
Both working as Lecturers
Computing at Curtin University
Perth, Australia



Recent move of CSEDU Alumni to other big tech firms



Sourav Sen Tonmoy
Software Engineer
Meta, UK



Mahamudur Rahaman Sajib
Software Engineer
IBM, Germany



Maliha Tashfia Islam
Software Engineer
Microsoft, USA



Md. Muhaimin Shah Pahalovi
Software Engineer, Delivery Hero
Germany



Shafayat Nabi,
Backend Engineer
PayPay Systems, Japan



Mesbah Tanvir,
Software Engineer
Meta, Toronto

Department of Computer Science and Engineering

Events and Activities



Code Samurai 2019 - Inter University Hackathon



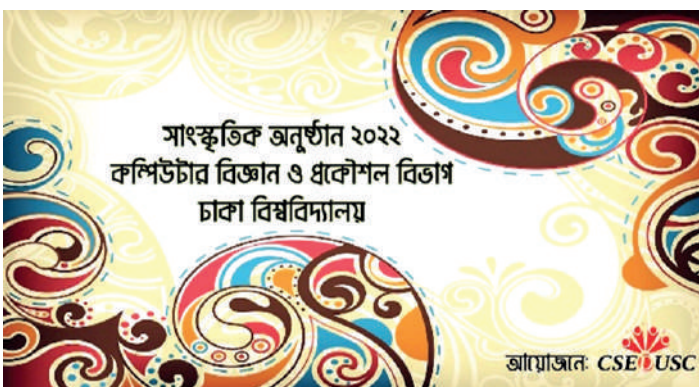
ICPC Asia Dhaka Regionals Contest, 2020



Freshers' Week and Fresher's Reception 2021



Prof. Dr. M. Lutfar Rahman Merit Award



CSEDU Cultural Program, 2022



CSEDU Indoor Games, 2022



Ushnotar Feriwala, 2021



CSEDU Indoor Games, 2022

DEPARTMENT OF
NUCLEAR ENGINEERING



DEPARTMENT OF
NUCLEAR ENGINEERING

What's new in the Department of Nuclear Engineering?

Modernization of Lab Facilities

The department of NE has taken major initiatives to improve the lab facilities to provide first-hand training in order to prepare our students as a skilled Nuclear Engineer for our Rooppur Nuclear Power Plant and adapt with the challenges in the global arena.



Faculties of NE are working towards the modernization of Lab facility.



High Purity Germanium (HPGe) radiation detector



RankineCycler™ is a classroom-sized turbine power plant lab for thermodynamic steam power education.



Hydraulic bench for flow measurements.



Flow boiling regime demonstration apparatus.



Demo Model of Rooppur Nuclear Power Plant



Thermal Conductivity Meter with Linear Heat Conduction Module is used to determine the thermal conductivity of metals/metal alloys.

Department of Nuclear Engineering Publications (2019-Present)



Prof. Dr. Khorshed Ahmad Kabir
Founder Chairman



Quick Facts

- Established: 2012 with MSc.
- BSc. Starting Session: 2013-14
- Faculties at station: 05
- Faculties in PhD. Program: 06
- Faculties in Fellowship Program: 02
- Undergraduate Students: 145
- Graduate Students: 14
- Degree offered: BSc., MSc. and PhD.

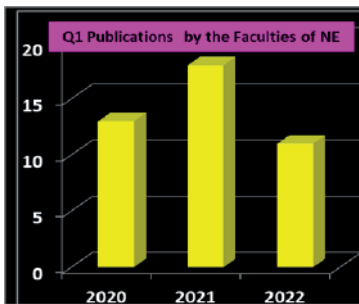
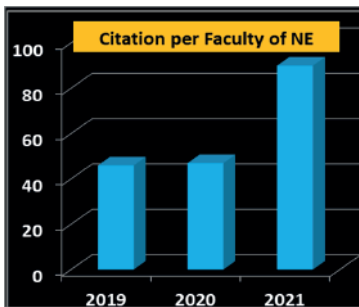


Students of Nuclear Engineering



Major Research Areas

- Reactor design and simulation
- Neutronic analysis of a Reactors
- Fuel burnup and waste management
- Reactor accident analysis and safety
- Nuclear security & safeguard
- Thermal hydraulics
- Nuclear materials
- Radiation measurements



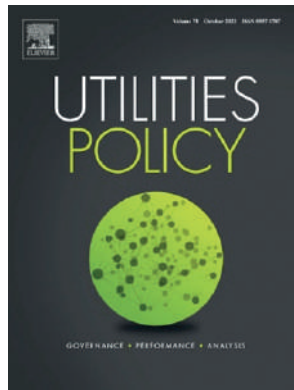
High Impact Journals by the Faculties of Nuclear Engineering



Department of Nuclear Engineering One Selected Q1 Publication (2020-Present)



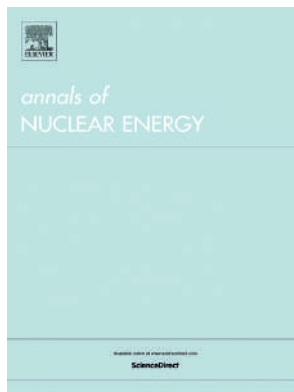
Prof. Dr Shafiqul Islam



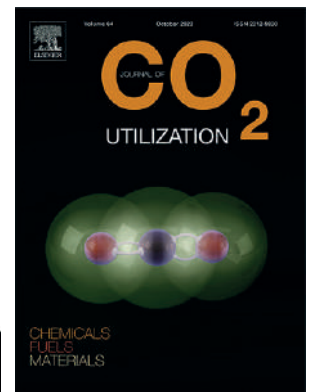
Dr. Afroza Shelley



Md. Hossain Sahadath



Dr. Amimesh Pal

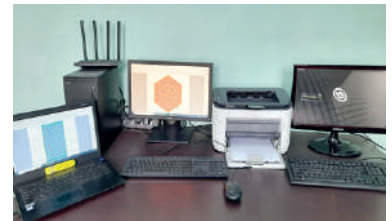


MoU is signed between the Department of Nuclear Engineering, University of Dhaka and Bangladesh Atomic Energy Commission (BAEC) to enhance collaborations and joint research activities (10.02.2020).

Department of Nuclear Engineering Simulation Lab for Nuclear Reactors

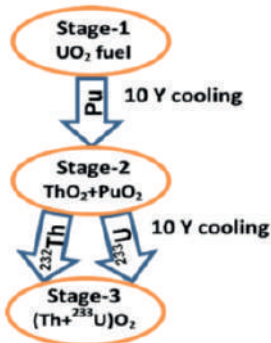


A reactor simulation lab, "Research Laboratory for Nuclear Reactors (RLNR)," has recently been established in the department of NE, under the leadership of **Dr. Afroza Shelley**. Personal license of the latest version of Monte Carlo N-Particle® MCNP6.2 has been granted for five years. This lab has also received the official permission of Japanese simulation Code **SRAC2006**. Present focus of this laboratory is the R&D of **VVER-1200** reactor which is currently under construction as Rooppur Nuclear Power Plant.



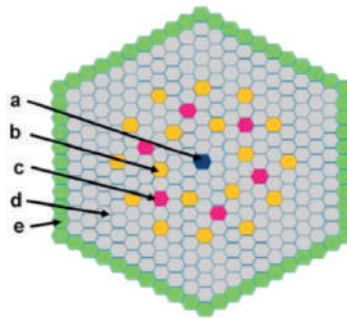
Recent Q1 Publications of RLNR Lab

Three stage fuel option



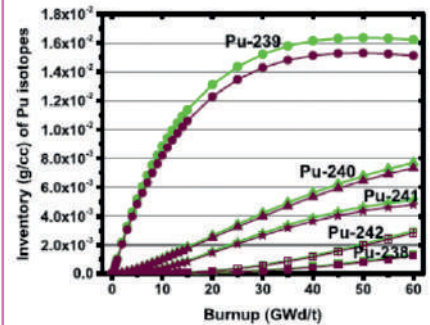
A. Shelley, M.H. Ovi (2022). Three stage fuel option for VVER-1200 reactor. *Annals of Nuclear Energy*, 171, 109025.

AmO₂ as a burnable absorber



A. Shelley, M.H. Ovi "Use of Americium as a Burnable Absorber for VVER-1200 Reactor", *Nuclear Engineering and Technology*, 53(2021) 2454-2463

CmO₂ as a fuel



A. Shelley, M.H. Ovi. (2022). Possibility of curium as a fuel for VVER-1200 reactor. *Nuclear Engineering and Technology*, 54(1), 11-18.



Faculties of NE visited Rooppur Nuclear Power Plants to see the progress of the construction.

Department of Nuclear Engineering Award and Achievement of Faculties

Professor Dr. Md. Shafiqul Islam has been awarded a highly prestigious **Fulbright Fellowship** for a nine-month from 1 October 2022 to 30 June 2023 at the **Massachusetts Institute of Technology (MIT)** under the Fulbright Visiting Scholar Exchange Program administered

by the U.S. Department of State's Bureau of Educational and Cultural Affairs. Professor Islam will study and develop economic and analytical models for estimation of investment tradeoffs between large and small nuclear reactors projects in the context of the nuclear energy program.



Professor Islam recently presented a research paper on "Assessment of Operators' Opinion on Threats at Nuclear and Radiological Facilities of Bangladesh" at the "International Conference on Safety and Security of Radioactive Sources: Accomplishments and Future Endeavors" from 20-24 June 2022 with the invitation and financial support of the **International**

Atomic Energy Agency (IAEA) in Vienna, Austria. Professor Islam also presented a research paper on "Methods and Tools to Conduct Research in the Field of Nuclear Security at the annual meeting of the **International Nuclear Security Education Network (INSEN)**" held in Vienna, Austria on 18-22 July 2022.



Dr. Animesh Pal is an Assistant Professor of NE who received a highly prestigious **JSPS (Japan Society for the Promotion of Science)** post-doctoral fellowship from June 2022 for two years at the International Institute for Carbon-Neutral Energy Research (WPI-I2CNER) of Kyushu University. His research areas include thermal engineering, radioactive waste management, thermodynamics & heat transfer, and carbon-neutral energy-saving technologies.



Dr. Pal has already published **39+ articles** in peer-reviewed high impact international journals, **4 book chapters in Elsevier**, and several conference proceedings. He also received 6+ international prestigious fellowships/awards, including the Bronze Award for young researcher energy research from KU (2017), Best Paper Award in the international conference in Italy, 2016 and the Japanese government fellowship for Ph.D. and Master degrees (2013-2018).

Ms. Farhana Islam Farha has completed her B.Sc. and M.Sc. in Nuclear Engineering at the University of Dhaka and joined as a Lecturer. She was awarded the **Prime Minister Fellowship** for pursuing the Master of Engineering degree in Nuclear Engineering at the University of California Berkeley. Ms. Farha was also awarded the



Marie-Sklodowska-Curie Fellowship by the IAEA. Currently, she is pursuing her Doctor of Philosophy degree in Nuclear Engineering at the University of Michigan Ann Arbor with the **Bill Martin Fellowship**.



Department of Nuclear Engineering Student's Awards and Achievements



Umme Mahbuba Nabila (2022) an M.Sc. Student of NE, was awarded the “Nuclear Nonproliferation Education and Research Center” Summer Fellowship at KAIST, Korea.

She also participated in a training course on “Technological Aspects of AES-2006 (VVER-1200), Development of Nuclear Curricula on VVER Technology” organized by the ROSATOM Technical Academy.



Prime Minister Gold Medal (2020) is awarded by Nazmul Hossain, students of NE

Farshid Reza (2022) graduated from the department of NE is received “Distinguished Graduate Fellowship” from the Pennsylvania State University, USA.



Md.Towhid Hossain and Kazi Kamrun Naher Ononna received “Best Paper Award” in ICIET (2019)



Established Community Club “OKLO” for the residential students of Nuclear Engineering. The main purpose of this community is to unite the students of NE who reside in halls. The majority of university students come from Bangla medium backgrounds, they must adapt to the new system. Through this organization, students can share their problems with senior members. OKLO aims to satisfy this need for the family by planning various cultural and sporting events. We also go out on tour every year.



Student of NE received “Innovative Project Award” in MIST Nuclear Fest (2018)

Department of Nuclear Engineering



Alumni Achievements

Department of Nuclear Engineering is the pioneer in nuclear engineering education in Bangladesh. Since 2012, a total of 80 students have completed their B.Sc. and 82 students finished their M.Sc., contributing in various fields both home and abroad.




Working at Intel
USA

Sanjoy Sarkar

Lecturer, Institute of
Nuclear Power
Engineering, BUET

Kazi Azman Rafee




Post Doctoral Research
Fellow, NASA Goddard
Space Flight Center,
Maryland, USA

Sanjoy Sarkar




Engineer, (Nuclear)
BAERA

Labibuzzaman Mustabeen

Over 21 graduates (BSc. and MSc.) of NE joined Nuclear Power Company Bangladesh Limited (NPCBL), which is a Bangladesh government-owned company nuclear energy company responsible for building and operating nuclear power plants in Bangladesh



Md. Shaifur Rahman
Senior Assist.
Manager



Md. Kawsar Hamid
Senior Assist.
Manager



Md. Zakaria Chowdhury
Senior Assist.
Manager



Mohammad Abu Eusuf
Lead Engineer



Nazmum Nahar Tonni
Assist. Manager



Md. Al Amin Hossain
Assist. Manager



Lima Akter
Assist. Manager



Captain Shahriar Alam
Bangladesh Army



Ms. Suranjana Saha
Assistant Commissioner
of Police, Dhaka
Metropolitan Police,
Dhaka

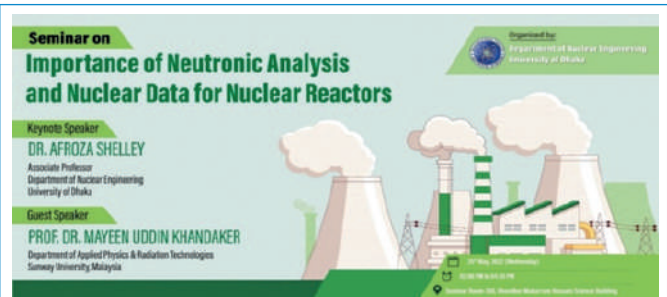


Ridwanur Rahman Ayon
Planning Commission

Department of Nuclear Engineering Events and Activities



Department of NE organized a seminar (September 2022): “Opportunity and admission process in USA”



Department of NE organized a seminar (May 2022): “Importance of Neutronic Analysis and Nuclear Data for Nuclear Reactors.”



Prof. Dr. Mayeen Uddin Khandaker, Sunway University, Malaysia shared his research experience with the students of NE, DU (2022).




As a part of course work, Students of NE attended Training program at AERE, BAEC, Savar.



Md. Iqbal Hosan, Assistant Professor of NE, presenting his research project outcomes (2022).



Students of NE visited Shiddhirgonj 2x120 MW Peaking Power for industrial training.




Mujib 100 Online Nuclear Quiz Competition 2021

Group 1: B.Sc. Students, NE, DU	Registration Deadline
Group 2: M.Sc. Students, NE, DU	24 March 2021

Date: 26th March 2021, Time: 11:00 AM

Crest and Certificate will be provided among participants	Registration Link
	https://forms.gle/3Qd24RfwwCYK7oFY9

Organized by  Department of Nuclear Engineering University of Dhaka.

Department of NE organized (March 2021): “Mujib 100 Online Nuclear Quiz Competition”



Football Team of NE celebrating after winning the first round (2022) of “DU Inter Department Football Tournament”

DEPARTMENT OF
ROBOTICS AND MECHATRONICS ENGINEERING





DEPARTMENT OF
ROBOTICS AND MECHATRONICS ENGINEERING



Department of Robotics and Mechatronics Engineering (RME)

Quick Facts

- Established in 2015 as Mechatronics Engineering
- Renamed as Robotics and Mechatronics Engineering
- No of Faculties: 9, PhD per faculty ratio: 1.8
- Degrees Offered: B.Sc., M.Sc., M.Phil., Ph.D.
- Current Students: 114, Awarded: 37

Research Outcome

Books: 3
Book Chapters: 12
Journal Articles: 88, Q1 Ranked: 25
Conference Proceedings: 87
Average Citations per Faculty: 243

Projects Conducted

Research Projects successfully conducted: 14
Research Projects Running: 4

Major Research Area

- Artificial Intelligence
- Smart Intelligent Sensors
- Medical Robotics
- 3D Mapping and Robot Navigation
- Human Activity Recognition
- Human Robot Interaction
- Robotics System Design
- Robotic Visual Servoing
- Control and Automation

What's new in the Department of RME?



The Department of Robotics and Mechatronics Engineering organized a seminar on CRG project Dissemination on August 2022. Two projects titled AIBrainS and IHABOT were presented at the seminar.



A four-day training to build the skills required in the automated manufacturing industry was arranged by FESTO and RME. Students are given training on how to use the FESTO Pneumatic and Electric Automation Training Machine as well as a range of hydraulics, sensors and PLC programming concepts.



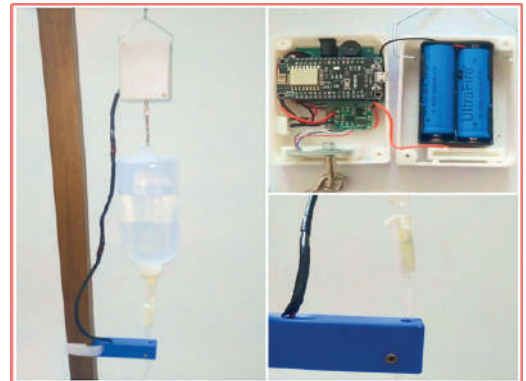
MoU signed between the Department of Robotics and Mechatronics Engineering, University of Dhaka, and the Department of Mechatronics Engineering, Kyungshung University, South Korea.

What's new in the Department of Robotics and Mechatronics Engineering?

Professor Dr. Lafifa Jamal completed the project named **An Automatic System Design to Protect Intravenous Infusion Therapy Administration for Liquid Flow in Human Body**. She submitted a patent application to Bangladesh's Department of Patent, Design, and Trademarks. The invention has already received **preliminary patent approval**. This project was funded by the ICT Division, Government of the People's Republic of Bangladesh.

In this project, a complete saline monitoring and management system have been invented, which monitors every patient who is undergoing intravenous therapy and displays the remaining saline levels in a web interface.

The device automatically stops the saline flow when saline levels drop critically low to prevent the backflow of blood without any human intervention. The saline flow can also be turned off manually using the web interface from a distant area.



Dr. Sejuti Rahman and Sujan Sarker with their team, introduced **IHABOT: Intelligent Hospital Assistance Robot to Fight Contagion by Reducing Doctor-Patient Interaction**. The robot has four



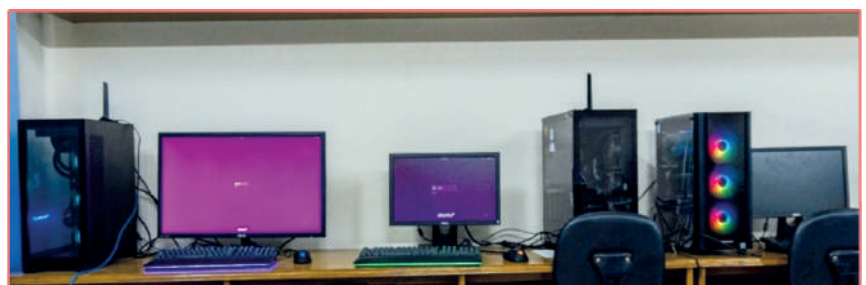
functions: automated navigation, post-stroke rehabilitation exercise assessment and guidance, automated analysis of vital signs, and COVID-19 diagnosis from chest x-ray images. This project was funded by the Centennial Research Grant, University of Dhaka.



Dr. Shamim Ahmed Deowan and Mr. Ariful Islam successfully conducted and completed the project: **Artificial Intelligence Supported Climate-smart Agriculture (AIAGri)**

It was under Special Allocation for Science & Technology from the Government of the People's Republic of Bangladesh.

High-Performance Computers to Facilitate AI Research

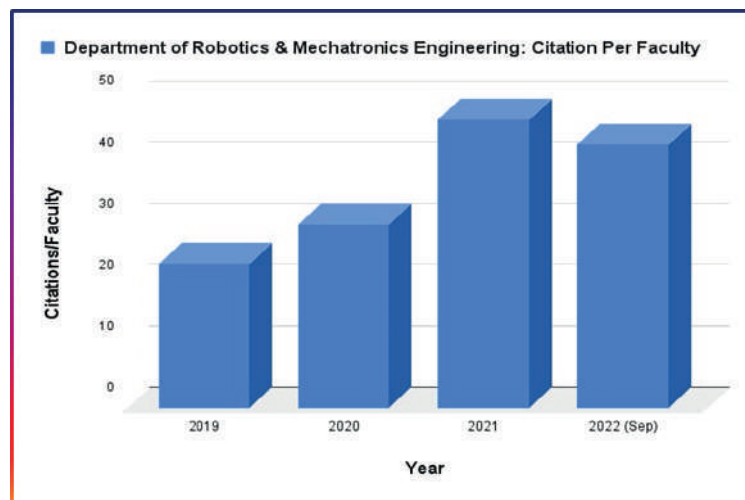


Deep Learning research computers equipped with Nvidia RTX 3080 and RTX 3090

Department of Robotics and Mechatronics Engineering Research Accomplishments (2019-Present)



- ### Name of the Universities
- University of Dhaka, BD
 - Imperial College London, UK
 - Australian National University, AUS
 - University of New South Wales, AUS
 - University of Virginia, USA
 - University of Calabria, IT
 - International Islamic University, ML



High Impact Journals by Current Faculty Members

Springer Cognitive Computation 4.980	IEEE Internet of Things 10.238	IEEE Transactions on Computational Imaging 5.640	ScienceDirect Computer Vision and Image Understanding 3.121	IEEE Transactions on Neural Systems and Rehabilitation Engineering 4.528
ScienceDirect Pattern Recognition Letters 4.757	ScienceDirect Robotics and Autonomous Systems 3.12	ScienceDirect Journal of Network and Computer Applications 6.281	ScienceDirect Journal of Systems Architecture 3.777	ScienceDirect Computer Networks 4.474
ScienceDirect Computer Communications 3.167	MDPI Sensors 3.576	Springer Contactless Human Activity Analysis 4.980	PLANT METHODS Plant Methods 5.904	SAGE journals SAGE journals 3.183
MDPI Applied Sciences 2.921	ABS American Behavioral Scientist 3.686	MDPI Processes 2.847	Springer Journal of Applied Water Science 3.874	IEEE Access 3.367

Department of Robotics and Mechatronics Engineering

One Selected Q1 Journal by Faculty Members



Dr. Sejuti Rahman



Prof. Dr. Lafifa Jamal



Dr. Shamim Ahmed Deowan



Sujan Sarker



Abhishek Kumar Ghosh



Dr. Md Mehedi Hasan



Shifat E Arman



Department of Robotics and Mechatronics Engineering

Faculty Achievements



Dr. Sejuti Rahman was awarded the prestigious “Dean’s Award 2017”

Dr. Sejuti Rahman, Assistant Professor, Department of Robotics and Mechatronics Engineering, was awarded the prestigious “Dean’s Award-2017” from the Faculty of Engineering and Technology of the University of Dhaka for her outstanding contribution to research.

Professor Dr. Lafifa Jamal delivered a keynote speech titled “বঙ্গবন্ধুর শিক্ষা দর্শন: ৪র্থ শিল্প বিপবের চ্যালেঞ্জ মোকাবেলায় মাতৃভাষায় বিজ্ঞান ও প্রযুক্তি চর্চা” in the presence of Hon'ble Prime Minister at the national program organized on the occasion of International Mother Language Day. She delivered nine International Keynote Speeches and Invited talks (2 offline and 7 online) in 2020-2022.



Professor Jamal also received “অনন্যা শীর্ষ ১০ সম্মাননা” for the year 2020. Professor Jamal has made a significant contribution to the popularization of robotics in Bangladesh and to the success of the Bangladesh team in the International Robot Olympiad. Ananya Award in Technology was given to her for this role.

Abhishek Kumar Ghosh pursuing his Ph.D. research at the Imperial College London, UK.



Sujan Sarker is on temporary leave to pursue his Doctoral degree at The University of Virginia, USA. We wish him good luck in his future endeavor.



Student Achievements

♦ 1st Runner up, Roborace, AUST Mindsparks 2019



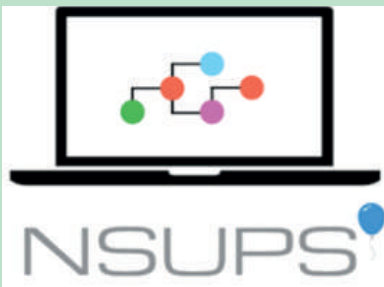
♦ Champion, Techsurgence 2019, BUP



♦ Champion, Intra University Project Showcasing, 24th at NSU Cybernauts National Programming Contest 2019

♦ Runner up, Digital Khichuri Challenge 2019

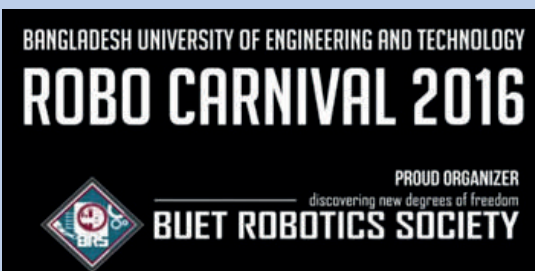
Department of Robotics and Mechatronics Engineering Student Achievements



1st Runner up, Line Following Robot competition in Robolution 2019, MIST



2nd Runner up at DUET TechFest 2017 organized by DUET



Semifinalist at Robocarnival 2016 organized by BUET



Semifinalist at Esonance 2016 organized by IUT

First Runner up at Business Idea Challenge organized by Bangladesh Innovation Forum

Best student award at Microcontroller training course conducted by Planters BD

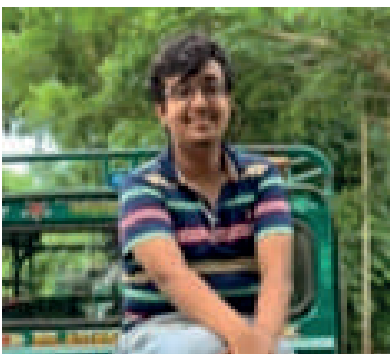


Department of Robotics and Mechatronics Engineering Alumni Achievements



Md. Tahmeed Abdullah has joined as a contractual lecturer in CSE at BRAC University. He is also the CEO of LazyChat Ltd. and Managing Director of Minecraft Labs. He also received the “**Azfar Alam Gold Medal**” in 2022 for getting the highest CGPA in B.Sc.

Omar-Ibne-Shahid is currently pursuing his Ph.D. degree in Industrial & System Engineering at the University at Buffalo. He was a former engineer at DataSoft Manufacturing & Assembly (DMA).



Ragib Amin Nihal is currently a Postgraduate Student at the Tokyo Institute of Technology. He has been awarded the prestigious MEXT Scholarship.

Moniruzzaman Akash is working as a remote Robotics Engineer at 'Future Concepts Technology', based in Adelaide, Australia. He is also working as a part-time Engineer at DataSoft Manufacturing & Assembly (DMA).



Riad Ahmed is currently working as a Machine Learning Engineer at Headless Technologies Limited. He is also a part-time engineer at Pranon Group.

Department of Robotics and Mechatronics Engineering

Hi-Tech Lab Facilities

- ✓ Robotics Lab
- ✓ AI and Machine Learning Lab
- ✓ Computer Programming Lab
- ✓ Mechatronics Lab
- ✓ Machine Shop and Workshop Practice Lab
- ✓ Electronics and Electrical Engineering Lab



Robotics Lab



Mechatronics Lab

Department of Robotics and Mechatronics Engineering Events by RME & RME Student Club

Bangladesh Robot Olympiad

Department of Robotics and Mechatronics Engineering is the joint organizer of the Bangladesh Robot Olympiad. The young talents selected from here participate in the International Robot Olympiad (IRO) representing Bangladesh. During 2019-2021, they won multiple golds, silver, and bronze awards.



23rd International Robot Olympiad (IRO)



Winners from Team Bangladesh

Hosted in: Daegu, South Korea

4 Gold Medals

2 Silver Medals

5 Bronze Medals

4 Technical Awards

জাতীয় কন্যা শিশু দিবসে স্কুল অব রোবটিক্স ক্যাম্প



International Seminar on
“Mechatronics and Industry 4.0:
Practice-oriented Education and
Training for Employment”

Department of Robotics and Mechatronics Engineering Events by RME & RME Student Club

Recent BDRO Event hosted in the Department of Robotics & Mechatronics Engineering



জাতীয় কন্যা লিঙ্গ উন্নয়ন উদযাপনে
স্কুল এবং য়োবাটিক্স

৩০ সেপ্টেম্বর - ১ অক্টোবর, ২০২২
 সন্ধ্যা ৯০ টা - বৈকাল ৫ টা
 য়োবাটিক্স এবং ছোফট্রানিং ইন্সটিটিউট
 বিংশন, ঢাকা বিশ্ববিদ্যালয়

আয়োজক **BdRO** MAS



Panel Discussion on
 “Diversity and Women Leadership”
 and Workshop on
 "Design Thinking"



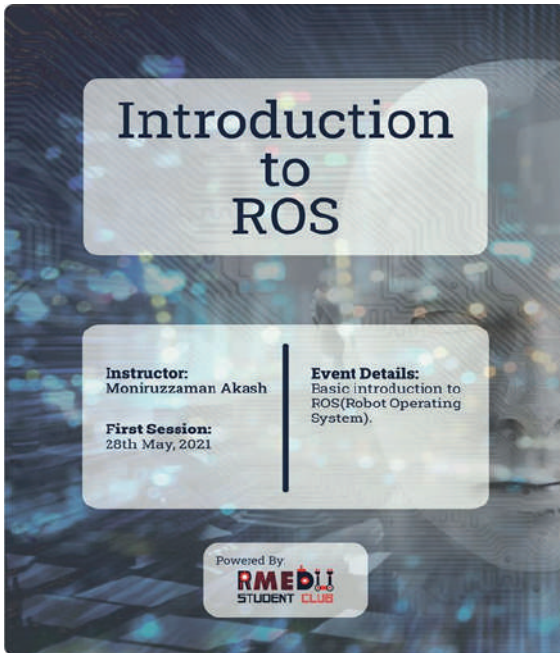
Joint Program with
 Channel I
 “এসো রোবট বানাই”



Department of Robotics and Mechatronics Engineering

Events by RME & RME Student Club

RMEDU Student Club (RMEDUSC) strives to arrange and coordinate various events and programs, keeping our students and community in mind. Activities of RMEDUSC range from organizing workshops on topics and fields, which are in line with the 4th Industrial Revolution and Vision 2021 to seminars and webinars collaborating with companies abroad, such as Airbus and FESTO.



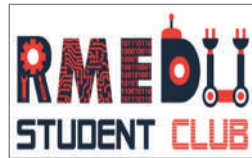
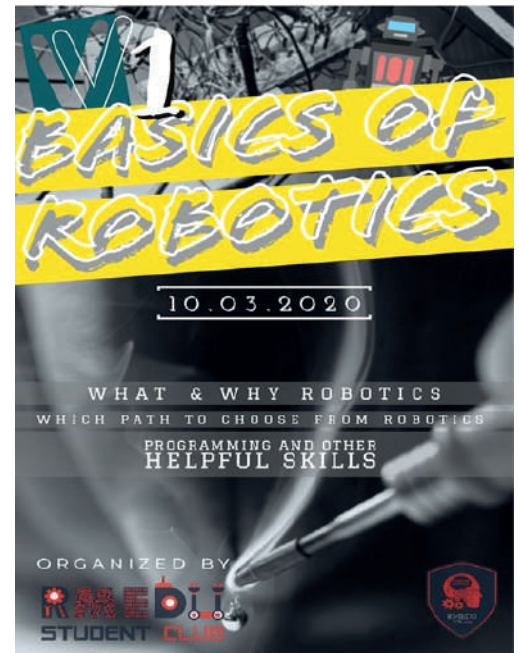
Introduction to ROS

Instructor:
Moniruzzaman Akash

Event Details:
Basic introduction to ROS (Robot Operating System).

First Session:
28th May, 2021

Powered By
RMEDU STUDENT CLUB

BASICS OF ROBOTICS

10.03.2020

WHAT & WHY ROBOTICS
WHICH PATH TO CHOOSE FROM ROBOTICS
PROGRAMMING AND OTHER HELPFUL SKILLS

ORGANIZED BY
RMEDU STUDENT CLUB



18 February 2021 8:00 P.M. BST

**Webinar on Mental Health:
Balancing Academic and Social Life**

Speaker

 **Muhammad Tanjeer Abedin**
CEO & Internationally Certified Life Coach
Life Coach Bangladesh

RMEDU STUDENT CLUB



INTRA DEPARTMENT SOCCERBOT CHAMPIONSHIP 2019

DEPARTMENT OF ROBOTICS AND MECHATRONICS ENGINEERING
UNIVERSITY OF DHAKA



WEBINAR On
ROAD to Amazon :
A comprehensive outline on how to apply at a FAANG company

21 February, 2022
AT 08:00 PM

Organised By:

 **Tareq Rahman Joy**
Software Development Engineer
Amazon

RMEDU STUDENT CLUB



WEBINAR
Topic: Experience sharing session on how to get started with Competitive Programming

start your journey to competitive programming with

 **Reyad Hossain**
(team leader)
Team: DU_FlareBlitz_4.0

1st position in ICPC Dhaka Regional 2020

8th October, 2021 at 10 PM

available on:  

Powered by **RMEDU STUDENT CLUB**

FoET Newsletter

Vol 1 | Issue 1, 2022

Editorial Board

EDITOR

Professor Dr. Hafiz Md. Hasan Babu

ASSOCIATE EDITORS

Professor Dr. Md. Abdur Razzaque

Dr. Ahsan Habib

ASSISTANT EDITORS

Dr. Afroza Shelley

Dr. Md. Mosaddek Khan

Dr. Mainul Hossain

Dr. Khandoker Samaher Salem

Dr. Md Mehedi Hasan

© Faculty of Engineering and Technology

<https://du.ac.bd/faculty/FACENGG>

Design & Production

APEKKHC Media Com.

+880 1711459012



Editorial Board

Faculty of Engineering and Technology

University of Dhaka
Dhaka-1000, Bangladesh

+880 1715 008195
+88 09666 911 463

deanengg@du.ac.bd
<https://du.ac.bd/faculty/FACENGG>