

MARCH 2023

VOLUME: 02

MONTHLY E-NEWSLETTER

MACET MYSTICA



MAULANA AZAD COLLEGE OF
ENGINEERING & TECHNOLOGY



EDITORIAL

It is a great honour to speak to you through the college Magazine. Hope there is lots of new changes, positive changes in terms of habits and everything. Try to improve your eating habits, reading habits, the way to conduct yourself and try to achieve excellence in each and everything you do because striving for excellence every single moment of your life should be your aim.

The experience of life teaches us “No shortcuts to hard work and no gains without pains”.

Remember that you are precious, you have the talent. You have everything that you need to face the trials and difficulties. You may fail sometimes but you always have a chance to rise and shine again.

If you want something you never had you must be willing to do something you have never done. You don't have to be great to start but you have to start to be great.

Learn to believe in yourself.

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ALUMNI NEWS FLASH:

Green Hydrogen: The Game-Changing Solution to Climate Change and How It Can Help Save the Planet

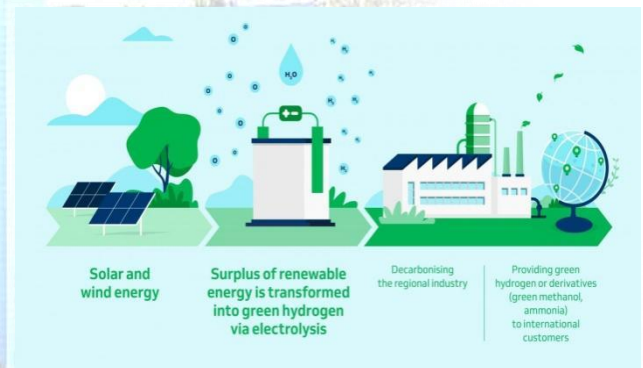
Dr. Naushad Hasin Khan, Department of Mechanical Engineering

Climate change is one of the most pressing issues facing our planet today. It is already having an impact on our environment, economies and societies around the world. The effects of climate change are being felt in different ways, from extreme weather events to rising sea levels and melting glaciers. To tackle this global challenge, we must take action now to reduce emissions and shift to a more sustainable way of living. We must also work together to find solutions that will help us adapt to the changing climate and mitigate its impacts.



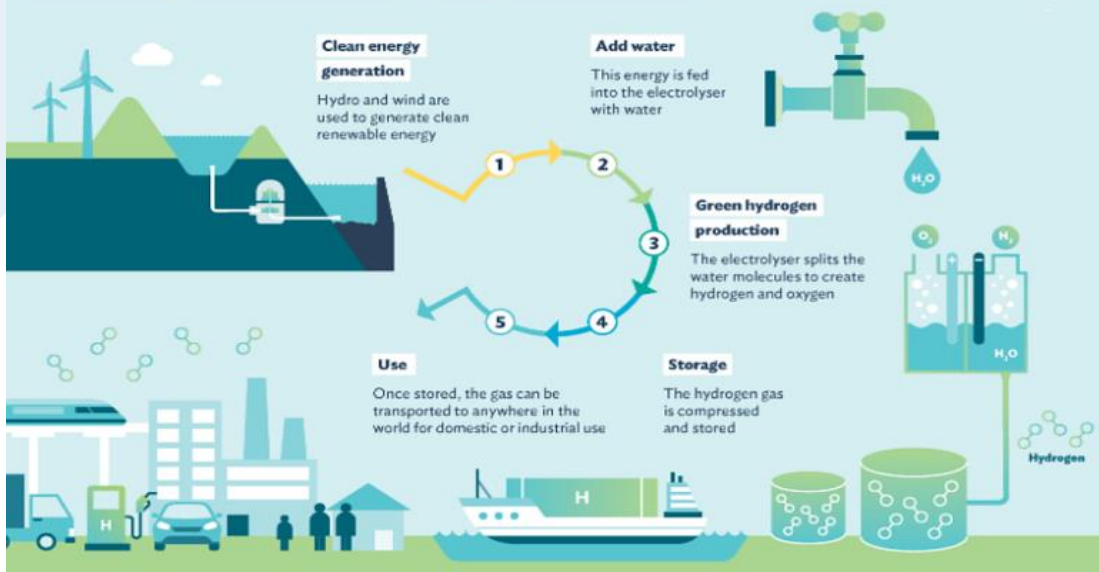
Green hydrogen is becoming increasingly important as the world looks for ways to reduce carbon emissions. As an energy source, it is clean and renewable, making it an attractive option for many industries. It can be used to power vehicles and buildings, generate electricity, and even store energy from renewable sources like solar and wind. With its potential to reduce emissions significantly, green hydrogen is becoming a key part of the global effort to combat climate change.

Green hydrogen is a clean, renewable energy source that has the potential to help reduce climate change. It is created through the electrolysis of water using renewable energy sources such as solar or wind power. This process produces hydrogen gas which can be used for a variety of applications, including transportation and electricity generation. In addition, green hydrogen can be stored for long periods of time and used when needed, making it an ideal source of clean energy for both residential and commercial use.

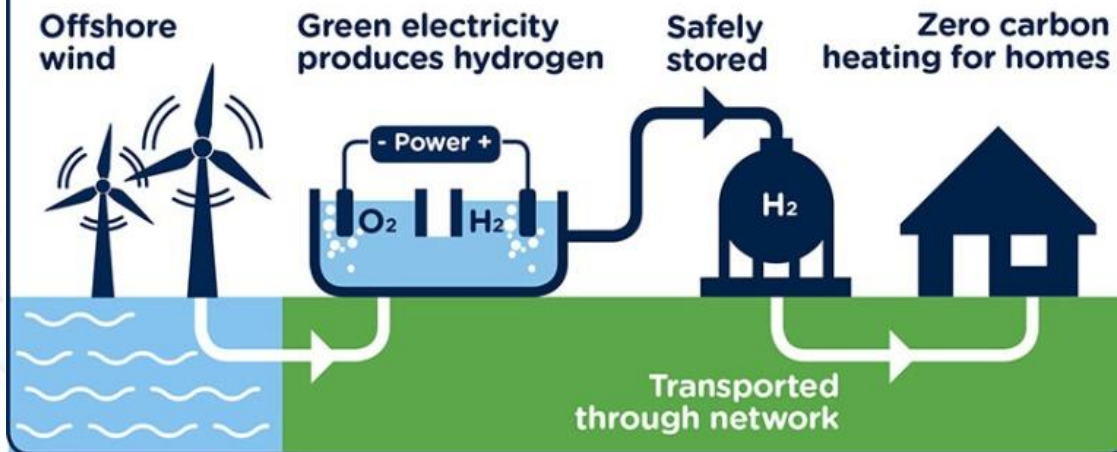


Climate change is one of the most pressing issues of our time, and it is becoming increasingly important to find solutions that can help us reduce emissions. Green hydrogen production is one such solution that can provide clean energy sources and zero-emission power. By utilizing green hydrogen technology, we can reduce our dependence on fossil fuels and lower our carbon footprints.

How is green hydrogen produced?



A world-first for green hydrogen

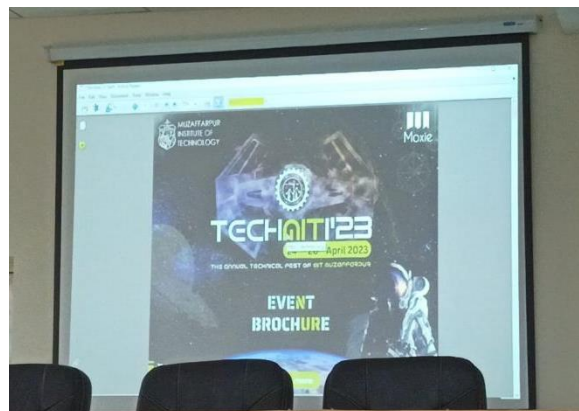


Green hydrogen production has the potential to revolutionize the way we generate energy, as it is a renewable energy source that does not produce any harmful emissions. It also has the potential to create jobs in the green economy, helping to boost economic growth while reducing environmental damage. With its many benefits, green hydrogen technology could be an important tool in helping us tackle climate change and protect our planet for future generations.

Discovering TECHMITI-2023: MIT Muzaffarpur's Annual Technical Fest

On Sunday, March 19th, 2023, MIT Muzaffarpur organized a seminar in the new seminar hall of MACET as part of their Annual Technical Fest "TECHMITI-2023". The session was hosted by TPO Mr. Md. Nadeem Enam (TPO, MACET) and was anchored by Mr. Sudhanshu, a final-year student of MIT Muzaffarpur. The seminar began with a brief introduction of MIT and then moved on to a PowerPoint presentation highlighting the various programs included in the fest. Mr. Sudhanshu gave a cursory detail about each of the twenty-five events, which were designed to attract the interest of students from every branch of engineering, as well as some events related to fun and games.

Several events caught the attention of the students, including Robo-soccer, RC Plane, Truss bridge, Robo race, Treasure hunt, Logic Loader, and Scratch coding. The event was sponsored by the Development Management Institute of Patna, which meant the fest winners could receive further support in their career and studies from DMIP. The website URL, <https://techmiti.org/>, was provided for



The session concluded with a concise experience shared by a student from our college (MACET) named Danish Akhtar, who attended the fest last year. He gave insight into how valuable the trip was for him. Then, a few Q&A rounds were held, allowing students to clear up any doubts regarding the fest.

Overall, the seminar was useful for students from the perspective of analytical development and real-world problem-solving. It encouraged many minds to explore their creative side and dive into the world of STEM studies. As said by Mr. Sudhanshu himself, "Just give it a try and explore your creative side." It was an opportunity-grabbing session where everyone had a brief insight into the real race going on in the world of STEM studies and had their skills tested.

MUZZAFFARPUR INSTITUTE OF TECHNOLOGY

Moxie

TECHMITI'23
24th - 26th April 2023

CAMPUS AMBASSADOR

 **MACET**
Patna

2020 Batch
Computer
Science
Engineering

Contact :
8083857067

Md DANISH AKHTER
TM23CADNR19

[t.me/techmiti](https://techmiti.org/) https://techmiti.org



Symposium Committee of IIT

**Webinar Organized by IIT Mumbai
on 3rd Mar. 2023****Topic: How to get placement in MNCs****Takeaways for Students:**

- Demonstration of a case study to students on why fresh engineering graduates flounder to get a decent job.
- What is the plethora's of ways in which an aspiring student may bag placement?
- Students made aware about the qualities company look for among all the aspirants.
- The budding engineers being enlightened about the Application Tracking System (ATS). A demonstration given on how the companies use ATS software to shortlist profiles.
- Emphasis given on mentioning 'keywords' to be written on resume so that it quickly gets shortlisted by the companies.
- Dedicated session on the ways and means of tackling interview questions like a pro. Students made aware of what to speak and what not to speak in an interview.
- A practical exhibition of how the companies use the various online job portals like Naukri.com, Monster.com, Shine, Linked-In platforms to carry out recruitment.

The students of final year 2019(B) & pre final year 2020 (B) of all branches registered in this online webinar and attended the event which will eventually be helpful to them in their job hunting.

C-DAC Courses

Students were provided a platform to get registered in two basic Certificate courses in Augmented and Virtual Reality (AR VR) and Artificial Intelligence (AI) offered by C – DAC, Patna (Authorized Training centre), Govt. of India.

(i) C-DAC, Pune (Govt. of India) is offering these two courses at a very nominal fee (Rs 80/- only) for making an awareness among all the branches of technical graduates.

(ii) Certificate of participation will be provided to all the successful candidates after the completion of their course.

These being a wonderful opportunity to up skill their knowledge as the two courses are in demand courses to enhance employ ability.

(iii) Faculties have also got a wonderful opportunity to upgrade their knowledge by registering themselves in these courses which are absolutely free for them.



FDPs / Research Papers

ECE Department

Mr. Md. Nadeem Enam

- (a) Attended **Workshop** on “Auto CAD -2D” organized under LEARN DELTA and scored Agrade in examination held on 29th March 2023.
- (b) Attended **FDP** on “*Teaching-Learning Process using Instructional Media*” organized by NITTR, Kolkata held from 13th March 17th March 2023.

Mr. Ozair Ahmad

Attended **Webinar** on “*Last Mile Preparation for Civil Services Prelims*” organized under Wiley Webinar Series held on 4th March 2023.

Attended **FDP** on “*AI for Multimedia Processing and Security*” organized by EICT Academy and IIT Kanpur from 18th Feb to 22nd Feb., 2023 by the following:

- **Dr. Tajuddin Ali Ahmad**
- **Mr. Shahid Aziz**
- **Mr. Md. Naushad Akhter**
- **Mr. Ozair Ahmad**

Attended **FDP** on “*Cyber Security*” organized by EICT Academy and IIT Kanpur from 20th Feb. to 24th Feb., 2023 by the following:

- **Mr. Md. Naushad Akhter**
- **Mr. Md. Nadeem Enam**
- **Mr. Ozair Ahmad**

Mrs. Meena Prasad:

Attended **FDP** on “*Refresher Course on MATLAB & LABVIEW Applications*” organized by NITTR, Kolkata held from 6th March to 10th March 2023.

CSE Department

Mr. Amit Kumar:

- (a) Attended **FDP** on “*Recent Advancements in Science and Technology*” from March 6-10, Alliance University, Bengaluru
- (b) Attended **FDP** on “*Rethinking Curriculum in line with NEP 2020*” from 20-22 March 2023 from NITTTR, Kolkata

Attended **FDP** on “*IOT & Drone*” organized by EICT Academy and IIT Kanpur from 27th Feb to 04th Mar., 2023 by the following:

- **Dr. Shabbir Hasan**
- **Mr. Mazhar Eqbal**
- **Mr. Rakesh Ranjan**
- **Mr. Hasibul Hasan Mansoori**
- **Dr. Md. Sadruddin Ahmad**

EEE Department

Attended **FDP** on “*Refresher course on MATLAB and LABVIEW applications*” organized by NITTTR Kolkata from 6th March to 10th March, 2023 by the following:

- **Mrs. Aaisha Tasneem**

Student's Corner

AUTONOMOUS FLYING CAR

Mohammad Fahad Faroghi, ME, 2019 Batch

We are just sitting in our rooms, dreaming the fantasy of electric vehicles in search of an element that could be used as an EV Battery to make the vehicle more efficient, but the automobile industries are now launching **Flying Cars** back to back. You have just seen these crazy technologies in fantasy movie like Star Wars but now it comes in reality. Let us know how?

Each one of us at least once have suffered from the day-to-day issue of congested roadways, leading us late to our workplaces, office, homes, etc. We are also aware of the daily road rages and accidents happening on highways taking away lives of many innocents. Also, the time consumed in travelling through covering up distances instead of travelling through a minimum displacement path is a major issue which will not solve unless until we think of flying in the sky. The automobile and autonomous industries need to resolve these problems and for that we now have flying cars instead. But imagine, can your mother fly a car who is just a house wife and a secondary school degree holder? No. To solve this problem, the automobile industries and startups are out with **Autonomous Flying Cars** which asks you just to tighten your seat belts and command them where you'd like to go. If the concept is bouncing above your head, let us simplify it by understanding from scratch.

“World's first Chinese made passenger carrying Autonomous Flying Car EHANG-216”



Image credit: paultan.org

The concept of car was introduced in the late 19th century and the first airplane took off by Wright Brothers over the plains of Kitty Hawk, North Carolina in the year 1903. These two concepts combined together led some engineers to think and build a flying car. Till date, there are up to 80 patents on file at The U.S Patent and Trademark Office for a variety of flying cars in which only some have actually flown.

Curtiss Autoplane- In 1917, **Glenn Curtiss**, who could be called the **father of flying car** approached with the first attempt for such vehicle. His Autoplane consisted of aluminum body with three wings that spanned 12.2 meters, and a motor with a four-bladed propeller which never truly flew, but managed to make some jumps.

Furthermore, the **Arrowbile** by Waldo Waterman in 1937, the **Airphibian** by Robert Fulton in 1946, the **ConvAirCar** in 1947, and finally the **Aerocar** inspired by the Airphibian and Rober Fulton in 1970 were the failures but also inspired the modern world automobile industry enthusiasts, that after some modifications in lightweight material, computer modelling and aerodynamics; the dream can be achieved to take off a car in the sky above the ground. After such mass failures, our automobile industries are now capable of developing flying cars successfully which can function to eliminate various issues.

This masterpiece needs to be designed with prior safety for those who will be benefitting from this as a minor fault of engineering could lead to major incidents if not functioned properly.

AEROMOBILE 4.0, ALAUDA MK3, AUTOGYRO DRIVE, DELOREAN DR-7, CARTIVATOR SKYDRIVE, LILIUM, TERRAFUGIA TF-X, EHANG 184, FLIKE, PAL-V LIBERTY; etc. are only some of the amazing Aerial Autonomous Cars developed by many Italian, Chinese, Slovakian, Russian and U.S companies.

Student's Corner

HAPPY WOMEN'S DAY 2023

“Embracing equity is the right thing to do”

Shivangi Gupta, CSE, 2022 Batch

International Women's Day is a day to celebrate women's achievements, but also to reflect on the inequalities that still exist. It is important to recognize that women around the world still face discrimination and oppression in various forms, from unequal pay to lack of access to education, healthcare, and political representation.

Embracing equity means recognizing and valuing diversity in all its forms, and working to remove barriers that prevent individuals from achieving their full potential. This requires addressing systematic inequalities that have been perpetuated over time, such as gender, race, ethnicity, and socio-economic status. One of the most pressing issues facing women today is the gender pay gap. In the United States, women earn only 82 cents for every dollar earned by men. Closing the gender pay gap requires addressing the root causes of the disparity, such as discrimination and bias in hiring and promotions.

Another important aspect of embracing equity is promoting gender diversity in leadership positions. According to a 2020 report by Catalyst, women hold only 29% of senior management roles globally. This lack of representation not only limits women's opportunities, but also perpetuates gender stereotypes and biases. To achieve gender equity, we must work to increase the number of women in leadership roles and

Finally, embracing equity means recognizing and valuing the unpaid care work that women do, which is often overlooked and undervalued. Women around the world spend more than twice as much time as men on unpaid care work, such as childcare and household chores. This work is essential for the functioning of society and the economy, yet it is often invisible and unrewarded. Affordable childcare, parental leave, and other support systems must be provided to achieve equity.

In conclusion, embracing equity is the right thing to do on International Women's Day, and every day. By addressing the inequalities that women face, we can create a more just and inclusive society where everyone has equal opportunities to thrive. Let us work together to create a world where women's contributions are valued and celebrated, and where all individuals are empowered to achieve their full potential.

Student's Corner

Reminiscing first day at college

Zaara Tahreem, CSE, 2021 Batch

The inception of our collegiate journey commenced with the unveiling of a new epoch in our lives. We were escorted to the conference hall of our esteemed institution, where the decorum was enlivening and conducive to a fresh start. The inauguration commenced with an address from the erudite Dean, followed by the venerable Director. Subsequently, the emcee conducted an introduction of each individual present.

The program included diverse workshops and webinars from various start-ups and illustrious alumni of our institution, who shared their triumphant achievements. Furthermore, a day was dedicated to a college excursion to Bihar Museum, where we were acquainted with the cultural legacy of our state. Additionally, we were escorted to a theater room for a documentary highlighting the customary and traditional features of our state.

The program also encompassed a modest competition, consisting of a quiz, extempore, and painting. In the extempore competition, I was honored to secure the first position. The prize distribution ceremony was graced with the presence of our esteemed institution's President, Dr. Ahmad Abdul Hai.

The induction program provided us with a comprehensive overview of the new phase in our lives, and it was a rejuvenating experience for all the novices. It had a positive impact on the budding minds of the "To-Be Engineers."

Student's Corner

Theme: URJA Shakti

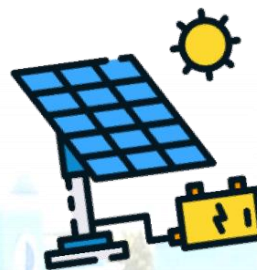
Titles: Energy storage & utilization (Storage for CO₂ capture and utilization)

Priyanka Chandra, EEE, 2019 Batch

INDIA is rapidly shifting its focus to green energy alternative for which there is need of development of "ENERGY STORAGE SYSTEMS". India has archived its target of achieving 40% of its installed electricity capacity from non-fossil energy sources by 2030 in November 2021. Energy policy and climate policy are closely linked because the majority of U.S greenhouse gas (GHG) emissions are in the form of carbon dioxide (CO₂) emission resulting from the combusting of fossil fuels. Energy use and climate change is inextricably linked. Energy policies can reduce CO₂ emissions by for example, increasing energy efficiency, reducing reliance on fossil fuels, and shifting from high-carbon to lower-carbon fuels. Conversely, energy policies that miss opportunities to make such changes will leave unchecked the trend of increasing CO₂ emissions.

Overall, 64% of U.S adults say reducing the effects of climate change need to be "a top priority to ensure a sustainable planet for future generations, even if that means fewer resources for addressing other important resources for addressing other important problems today". By contrast, 34% say that reducing the effects of climate change needs to be "a lower priority, with so many other important problems facing Americans today, even if that means more climate problem for future generations."

"All of you will also agree – that energy access should not be the privileged of the rich only – a poor family has the same rights on energy. It is more important to remember this" Mr.Modi said, referring to spike include prices following the Ukraine crisis. In recent years, India has repeatedly pushed developed countries to do more to meet climate action goal, including providing more funds and transferring technology to boost the adoption of green energy. Renewable electricity is growing at a faster rate in India than any other major economy, with new capacity addition on track to double by 2026.



The green energy transition, the process of shifting away from fossil fuels to renewable energy such as solar, wind, hydroelectric, geothermal, hydrogen or biomass energy, is critical to emitting global.

India is currently ranked 4th in renewable energy capacity globally. Currently, the renewable energy capacity in India is 136 GW, which is 36% of the total energy capacity in India. Prime minister recently inaugurated the 3rd global renewable energy investment meeting and expo (Reinvest 2020), where he stressed on the opportunities in the renewable energy sector. He said that there is a business opportunity of almost \$ 20 billion every year for investors, developers and business in the renewable energy sector.

STRATEGIES FOR CO₂ CAPTURE AND UTILIZATION

Carbon capture, utilization, and storage (CCUs) are a suite of technologies that capture CO₂ from facilities, including industrial or power application or directly from the atmosphere.

According to a study conducted by RADBOD UNIVERSITY, most carbon capture and utilization and storage (CCUS) technologies, which suck carbon dioxide (CO₂) from the atmosphere and convert it into fuel or other valuable products, might fail to help the world reach net zero emission by 2025.

ALUMNI NEWS FLASH

Startup Awards, Wales (UK)

Syed Sameer Rahman (Alumni 1997 Batch – CSE) is CEO at Data Monet. Founded in 2021 in Cardiff, United Kingdom.

Mr. Sameer has been voted by Corinium Global and Top 100 Innovators in Data in 2022 and by Data IQ as Top 100 Data leaders and influencers in the UK in 2021 and 2020.

Recently his company DataMonet has been shortlisted in two categories in Startup Awards Wales 2023.

Profile on DataIQ - <https://www.dataiq.global/dataiq100-2021/profile/sameer-rahman-interim-director-of-insights-the-royal-mint>

Awards details & category - <https://businessnewswales.com/wales-national-startup-awards-finalists-revealed/>



The banner features a dark purple background with pink and white geometric shapes. On the left, the text 'StartUp Awards Wales' is displayed in white, with 'StartUp' and 'Awards' in a larger font. Below this, a pink ribbon contains the text 'FINALIST 2023'. Further down, the text 'Professional Services StartUp of the Year' and 'Datamonet' are shown in white. On the right side, there is a circular portrait of Syed Sameer Rahman, a man with glasses wearing a suit and tie. Below the portrait is a small square logo for 'DataMonet' with the tagline 'DATA IN THE BOARDROOM'. The website address 'www.startupawards.uk' is located in the top right corner.

StartUp Awards
Wales

FINALIST 2023

Professional Services StartUp of the Year

Datamonet

www.startupawards.uk

DataMonet
DATA IN THE BOARDROOM



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