FEBRUARY 2023

VOLUME: 01

MONTHLY E-NEWSLETTER

MACET MYSTICA





MAULANA AZAD COLLEGE OF ENGINEERING & TECHNOLOGY

EDITORIAL

It gives me great pleasure to present you our college magazine after a very long period of silence which was thrust upon us due to the covid situation. It was painful to see the whole world being paralyzed by the pandemic. It is indeed a new beginning after such a challenging period.

A very warm welcome to 2023, which I wish a year of increased blessings for all of us, as we all agree that 2022 has been a better year than 20-21. Every new day begins with a hope of enriching knowledge and ideas. Let the New Year usher us with bountiful joy, good health and peace that we aspire for. As the proverb goes "A journey of a thousand miles begins with a single step" so take the first step towards your goal and that will really take you to your dream jobs. Keep your mind open to every opportunity that comes your way.

This year has been a very remarkable year with our college being the only private college to introduce two new emerging branches Artificial Intelligence & Machine learning and Data Science in the state. Keeping pace with the changing technology, these courses will train students with next age of intelligence generated by machines and getting acquainted with the techniques and tools to handle large data. We also have the privilege to start NCC in our college for the overall personality development of our students and in the process making them a better citizen. Our focus will also be on exposing young minds to the new technology progressing faster than ever and we attempt to introduce new ideas and concepts with each edition.

Good luck with your new resolutions!!

EDITORIAL TEAM

CONTENTS

PATRON:

Prof. (Dr.) Asim Kumar

EDITOR-IN-CHIEF:

Prof. (Dr.) Md. Masood Ahmad

EDITOR:

Mrs. Saima Farzeen

SUB EDITOR:

Mr. Shahid Aziz (ECE) Dr. Naushad Hasin Khan (ME) Mr. Mohammed Waris Senan (EEE) Mr. Zeeshan Farooque (CE) Mr. Zaffar Abbas (CSE)

STUDENT MEMBERS:

Fahad Ahmad (CSE 2022) Shivangi Gupta (CSE 2022) Sana Azad (CSE 2022) Ayesha Naaz (EEE 2021)

EMERGING TRENDS:

• Quantum Computing

EVENTS:

- 26TH Jan. 2023
- IIT Patna Celesta 2023
- Edureka (Tech Ready Job Ready)
- Engineers Academy
- CAD Desk

PLACEMENT ACTIVITIES:

FACULTY ACTIVITIES:

- Invited Speaker from MACET
- FDPs / Research Papers

STUDENT'S CORNER:

- Printing the Aircraft
- Chat GPT

Announcement

• NCC

QUANTUM COMPUTING



Quantum computing is a rapidly-emerging technology that harnesses the laws of quantum mechanics to solve problems too complex for classical computers. Quantum computing is a type of computation whose operations can harness the phenomena of quantum mechanics, such as superposition, interference, entanglement. Quantum computers were proposed in the 1980s by Richard Feynman and Yuri Manin.



There are several models of quantum computation with the most widely used being quantum circuits. Other models include the quantum Turing machine, quantum annealing, and adiabatic quantum computation. Most models are based on the quantum bit, or "qubit", which is somewhat analogous to the bit in classical computation. A qubit can be in a 1 or 0 quantum state, or in a superposition of the 1 or 0 states.

Quantum computing is going to revolutionize more future quantum technologies and it's a game changer for the future world. QUANTUM COMPUTERS have the potential to impact our lives in so many ways like security needs, health care needs, etc. Banks such as JP Morgan, Well Fargo, Barclays have tested and complimenting unbreakable encryption for their private keys.

APPLICATIONS OF QUANTUM COMPUTING:

- Artificial Intelligence
- Better batteries
- Cleaner fertilization
- Cyber security
- Drug development
- Financial modelling
- Solar capture
- Traffic optimization
- Weather forecasting

Due to its benefits it is currently connected to over 17 billion devices. Recently, India is also making its mark in the world as a quantum frontier. There were reports that the Indian Army is developing cryptographic techniques to make its networks resistant to attacks by systems with quantum capabilities.



JOB OPPORTUNITIES IN QUANTUM COMPUTING:

- Quantum Machine Learning Scientist
- Quantum Software Engineer
- Qubit Researcher
- Quantum Control Researcher
- Quantum Computer Developer
- Quantum Computer Architects
- Quantum Microwave Engineer

SOME QUANTUM COMPUTING COMPANIES OF 2023:

| Universal Gate Based Quantum Computers Superconducting Architecture | | | Annealing | |
|---|--------------------------|----------|-----------------------------|--|
| | | | Quantum Annealing | |
| EL (inte | | | | |
| Trapped lons | Topological Microsoft | Photonic | The Quantum Computing Compa | |



REPUBLIC DAY CELEBRATIONS

'Har Ghar Tiranga Abhiyan' was started under the aegis of Azadi ka Amrit Mahotsav and the Hon'ble Prime minister of India encouraged people to bring the tiranga home and hoist it. Maulana Azad College of Engineering and Technology, Patna celebrated the 74th Republic Day of our country on 26th January 2023. The red letter event took place on the premises of the college at Neora, Patna. The august presence of the Hon'ble Director, Prof (Dr.) Asim Kumar, along with several teaching and non-teaching staff members of MACET Patna witnessed the national festival celebrations. To commemorate the Republic day celebrations, respected Director unfurled the national tricolor, which was followed by the recitation of the National Anthem. The whole atmosphere around was filled with patriotic vibes and everyone present was remembering the brave hearts who fought for the nation and made our country proud. In his speech, the Hon'ble Director emphasized the social responsibility and accountability of each citizen towards society and our country.



IIT PATNA TECHNO CULTURAL FEST "CELESTA 2023"

'Celesta' is the annual Techno-management fest of IIT Patna, to promote technical and managerial enthusiasm among young and bright minds of our nation and to provide a platform to transform their innovative ideas into a meaningful reality.



IIT Patna organized one day orientation session on techno management fest celesta 2023 on 12th Jan 2023 in the college seminar hall of MACET. In this orientation session ten coordinators of 'Celesta' from IIT Patna highlighted about the various events planned for the 'Celesta' 2023 and also invited MACET students to participate and enhance their technical knowledge in various activities of the event at their IIT Patna campus.



MACET students participated in the competition with the name 'Team Omega' represented by Akriti Jha and Asif Rahman (2019 B students) in "App development". There were overall 48 groups from across the nation who participated in 'Celesta' 2023. Eventually only four student groups where shortlisted and MACET was the only private college to be shortlisted besides three other IIT colleges. Our team Omega prepared '*PDF Pencil*' and through an online presentation on 30th Jan 2023 the demo of the project was showcased.



The objective of this PDF pencil is that at some point in our lives, we all have had to deal with PDFs. We may need a document in PDF format wherein we may require adding text, highlight important lines before sending it back. Also we can create sticky notes which will be pinned on the home screen. It helps us to note down daily tasks, important events etc. in addition to that we can also delete or save activities. It can all be done with the features of *PDF Pencil*.

TECH READY JOB READY

On 13th February 2023, the training & placement cell of MACET in collaboration with Edureka Learning Center, had organized a seminar on career options after Engineering in Data Sciences and Full stack Web-development. The expert, Mr. Sanjay Shwetank from Edureka interacted with the students and explained them about the recent trends in industries. He comprehensively discussed about the career options in data sciences and web development. He explained the students how to equip themselves to get high paying jobs. At last he advised the students to be determined towards their goals and make strategies to achieve that goal.







A Seminar on Career Guidance Conducted by ENGINEERS ACADEMY

On 15th February 2023, the training & placement cell of MACET had organized a seminar on career options Engineering. after The expert, Mr. Nitish Prakash Surya interacted with the students



and explained them about the career options on jobs (SSC-JE, State-AE/JE, and PSUs & UPSC), higher studies and research (M.Tech/PhD) and self-employment (Startup & Entrepreneurs). He explained the students how to crack GATE and various examination. At last he advised the students to be determined towards their goals and learn to be effective time managers.

GOLDEN STATEMENT

The biggest Search is always the search for success. Success is not important, success on time is important.





A Career Guidance Seminar Conducted by **CAD-DESK**

On February 16th, 2023, a seminar was held at the seminar hall of the MACET with the goal of making students aware of various recent CAD software packages in mechanical and civil engineering. The seminar introduced different packages such as CATIA, SOLIDWORKS, STAAD.PRO, Revit, and MEP, which are widely used in the industry. The seminar provided students with a brief introduction to the various CAD software packages that are commonly used in mechanical and civil engineering. The seminar aimed to give students a better understanding of the tools and technologies that are used in the industry and to prepare them for careers in engineering.



Resource Person Mr. Ashwani Kumar, Mr. Shubham Kumar,

Mr. Md Nawab, Mr. Sunil Raj



PLACEMENT ACTIVITIES

List of students placed from October 2022- January 2023

Branch: Computer Science Engineering

| | No. of students | Batch | Mode of Placement | Package | Name of companies |
|------------------|-----------------|-------|--|----------------------------|---|
| Oct 22-Jan 23 | 10 | 2018 | Pooled- campus- Drive.(DST, Bihar) | Max-6.0 Lac Min-2.5 Lac | HCL Technologies, Focus Edumatics, Mittsure Technologies LLP, mJunction services limited |
| | 25 | 2019 | Online-Campus-Drive (MACET)- 24 Pooled- campus- Drive01 | | |

Branch: Electronics & Communication Engineering

| | No. of students | Batch | Mode of Placement | Package | Name of companies |
|------------------|--------------------|-------|--|--------------------------------|--|
| Oct 22-Jan 23 | 8 | 2019 | Online-Campus-Drive (MACET)- 07 Pooled- campus- Drive- 01 | Max-4.95 Lac Min-2.5 Lac | Focus Edumatics, mJunction services limited |

Branch: Electrical & Electronics Engineering

| | No. of students | Batch | Mode of Placement | Package | Name of companies |
|------------------|--------------------|-------|------------------------------------|----------------------------|-------------------|
| Oct 22-Jan 23 | 1 | 2018 | Pooled- campus- Drive.(DST, Bihar) | Max-3.5 Lac Min-2.5 Lac | B, |
| | 8 | 2019 | Online-Campus-Drive (MACET) | | |

Branch: Civil Engineering

| | No. of students | Batch | Mode of Placement | Package | Name of companies |
|------------------|--------------------|-------|-----------------------------|----------------------------|-------------------|
| Oct 22-Jan 23 | 2 | 2019 | Online-Campus-Drive (MACET) | Max-2.5 Lac Min-2.5 Lac | Focus Edumatics, |

Branch: Mechanical Engineering

| | No. of students | Batch | Mode of Placement | Package | Name of companies |
|------------------|--------------------|-------|-----------------------------|----------------------------|-------------------|
| Oct 22-Jan 23 | 6 | 2019 | Online-Campus-Drive (MACET) | Max-2.5 Lac Min-2.5 Lac | Focus Edumatics |

FACULTY ACTIVITIES

Invited Speaker from MACET: Dr. Aamir Junaid Ahmad



Dr. Aamir Junaid Ahmad was invited to the TED Talk organized by the IITP Incubation Centre and Department of Industries, Govt. of Bihar on 17th Feb '23.TED, Technology Entertainment and Design, spread ideas that spark imagination and catalyze impact. It is devoted to curiosity, reason, wonder and pursuit of knowledge.

Conferences/Books/Chapters/Publications

Prof (Dr.) Md. Masood Ahmad:

- 1. Chapter 3 "Design of Smart Irrigation System in Sone Command Area Bihar for Paddy Crop", Book Title "Information Systems for Intelligent Systems", ISBM 2022, 978-981-19-7446-5, Publisher Springer.
- "Aeration Efficiency of Weirs A Critical Review with a Proposed Numerical Solution", Hydro 2022, 27th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering, held on 22-24, December 2022, at Dept of Civil Engineering, Punjab Engineering College Chandigarh.

Dr. Naushad Hasin Khan

 "Thermorheological Characterization and ANN Modeling of Aqueous Carbopol- Titania yield Stress Nanofluid." Thermochimica Acta, Volume 720, February 2023, 179418. (SCI Journal).

FDPs / Research Papers

Mr. Shahid Aziz (ECE Department)

• Has been selected as a reviewer in "*IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2023)" to* be held in Greece.

Mrs. Meena Prasad (ECE Department)

Microsoft, SAP and AICTE ATAL led FDP on "Cloud Computing" under Tech Saksham Program from 30th Jan - 03rd Feb 2023

Mr. Amit Kumar (CSE Department):

- Microsoft, SAP and AICTE ATAL led FDP on "Cloud Computing" under Tech Saksham Program from 30th Jan 03rd Feb 2023
- **FDP** on *"AI for Multimedia Processing and Security"*, organized by NIT, Patna on date 18th Feb. to 22nd Feb. 2023

Dr. Shabbir Hasan (CSE Department):

- FDP on "DevOps Engineering" organized by PHN Technologies on date 04 Feb. 2023.
- **FDP** on "Advanced Excel & Data Visualization" organized by EICT Academy and IIT Kanpur from on date 13th Feb to 17th Feb, 2023.
- **FDP** on "Cyber Security" organized by EICT Academy and IIT Kanpur from 20th Feb to 24th Feb, 2023.
- **FDP** on *"AI for Multimedia Processing and Security"*, organized by NIT, Patna on date 18th Feb. to 22nd Feb. 2023

Mr. Mazhar Eqbal (CSE Department):

- FDP on "DevOps Engineering" organized by PHN Technologies on date 04 February 2023.
- **FDP** on "Advanced Excel & Data Visualization" organized by EICT Academy and IIT Kanpur from on date 13th Feb to 17th Feb, 2023.
- FDP on "Machine Learning Using Python" organized by National Institute of Technical Teachers' Training and Research (NITTTR) Kolkata from 13- 02 2023 to 17 02 2023
- FDP on "Cyber Security" organized by EICT Academy and IIT Kanpur from 20th Feb to 24th Feb, 2023.
- **FDP** on *"AI for Multimedia Processing and Security"*, organized by NIT, Patna on date 18th Feb. to 22nd Feb. 2023

Mr. Rakesh Ranjan (CSE Department):

- FDP on "DevOps Engineering" organized by PHN Technologies on date 04 February 2023.
- **FDP** on *"AI for Multimedia Processing and Security"*, organized by NIT, Patna on date 18th Feb. to 22nd Feb. 2023

Mr. Hasibul Hasan Mansoori (CSE Department):

- **FDP** on "*DevOps Engineering*" organized by PHN Technologies on date 04th Feb.2023.
- **FDP** on "Advanced Excel & Data Visualization" organized by EICT Academy and IIT Kanpur from on date 13th Feb to 17th Feb, 2023.
- **FDP** on "Cyber Security" organized by EICT Academy and IIT Kanpur from 20th Feb to 24th Feb, 2023.
- **FDP** on *"AI for Multimedia Processing and Security"*, organized by NIT, Patna on date 18th Feb. to 22nd Feb. 2023

Dr. Md. Sadruddin Ahmad (CSE Department):

- FDP on "DevOps Engineering" organized by PHN Technologies on date 04 February 2023.
- **FDP** on "Advanced Excel & Data Visualization" organized by EICT Academy and IIT Kanpur from on date 13th Feb to 17th Feb, 2023.
- FDP on "Machine Learning Using Python" organized by National Institute of Technical Teachers' Training and Research (NITTTR) Kolkata from 13-02 2023 to 17 02 2023
- **FDP** on "Cyber Security" organized by EICT Academy and IIT Kanpur from 20th Feb to 24th Feb, 2023.
- **FDP** on *"AI for Multimedia Processing and Security"*, organized by NIT, Patna on date 18th Feb. to 22nd Feb. 2023

Mr. Zaffar Abbas (CSE Department)

- **FDP** on "Advanced Excel & Data Visualization" organized by EICT Academy and IIT Kanpur from on date 13th Feb to 17th Feb., 2023.
- **FDP** on "Cyber Security" organized by EICT Academy and IIT Kanpur from 20th Feb to 24th Feb, 2023.

Dr. Md Reyaz:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Md Aon Ahmad:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Firoz Akhtar:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. S Moazzam Hussain:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Md Shabbeer Ansari:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Ali Nezam:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mrs. Saima Farzeen:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Quaiser Suhail:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Dr. Naushad Hasin Khan:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Kashif Faridi:

• **FDP** on *"Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Firoz Alam:

• **FDP** on "*Estimating and costing of non-convention energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Md Irshad Alam Ansari:

• **FDP** on "*Estimating and costing of non-conventional energy*" organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Mr. Md Mojahid:

• **FDP** on *"Estimating and costing of non-conventional energy"* organized by NITTTR Kolkata from 16th Jan to 20th Jan, 2023.

Student's Corner

PRINTING THE AIRCRAFT

Mohammad Fahad Faroghi, Mechanical Department (2019-2023)

Have you ever wondered if the Aircraft you are boarding is manufactured and made by printing? It looks difficult but possible to do so. A whole aircraft to be manufactured using giant 3D Printers seems interesting. 3D Printing, also referred to as Additive Manufacturing is a technique to create a 3D solid object using a CAD model or a digital 3D model. This is done by sequentially laying down material layer by layer until object creation is completed. Even after having limitations in material selection, 3D Printing can be done with rigid, strong, or extremely tough metals and composite materials such as: Steel, Titanium, Carbon Fiber, Kevlar, Fiberglass, etc. to manufacture aircraft components.

Thor, which stands for Test of High-tech Objectives in Reality (THOR), is manufactured to be employed for endeavors, aviation analysis and aerodynamic investigations. This is to prove the world what a fully 3D printed aircraft will look like. This masterpiece consisted of:

"World's first 3-D printed miniaircraft THOR launched by aviation industry AIRBUS considering several benefits



Image credit: South China Morning Post

Only the electrical system is obvious, while the rest of complete structure is 3D printed. This Unmanned Aerial Vehicle (UAV), a windowless drone kind weighs 46 pounds and can be printed in less than a month.

"This is a test of what's possible with 3D printing technology," said Detlev Konigorski, who was in charge of developing Thor, and in attendance at the International Aerospace Exhibition and Air Show where this masterpiece was made available. "We want to see if we can speed up the development process by using 3D printing not just for individual parts but for an entire system" he further added.

Furthermore, in terms of review, Gunnar Haase, chief engineer of Thor, says that "the plane flies beautifully and is very stable." As we know the combination of 3D printing technology and the aerospace industry is as strong as that of medical industries. These kind of productions need to be of perfect quality and comfortable in terms of safety for those who will be benefitting from the construction.

According to a case study, the air traffic is steadily growing and the total volume is expected to roughly double over the next fifteen years. The industry is already facing challenges to build and maintain the huge passenger aircraft. The CO2 emissions from operating flights also need to be reduced.

In the aircraft construction sector, 3D PRINTING makes faster production processes possible. Also, the process allows lighter parts to be manufactured, which noticeably reduces the fuel consumption of the machines- the lower the weight the less fuel is burned. Apart from these features, 3D printing technology in aerospace industry will also result in overall cost reduction and time conservation.

Tests have shown that under certain conditions the final 3D printed metals were up to three times stronger than metals made by conventional techniques and yet still ductile, the scientists reported. Airbus, which is one of the leading international aircraft manufacturers, has been hopeful about its future plans around using 3D printing as part of their manufacturing process with a goal of making the entire aircraft from ground up with giant 3D printers by 2050.

So, in the upcoming decades we can experience a 3D printed aircraft to take you off above the ground.

Student's Corner

WILL CHAT GPT REPLACE US?

Akriti Jha, ECE (2019-2023)

"History repeats itself, but in such cunning disguise that we never detect the resemblance until the damage is done."- *Sydney J. Harris*

If we look back around 200–300 years back, the world was too different from today. They were recognized by their skills. If we understand with an example, it will be easier to explain. Let's take the example of clothing industry. Handmade clothes were the trend that time. The artisan would spend countless hours in their work.

And if let's say anyone (you had gone by time machine, you could choose time machine from your favourite science fiction movie) warned them beforehand.

"It would never happen."

"A machine can make clothes! The quality will not match anyway."

Most probably, the answer would be like this.

You know the scenario of today and there is nothing to explain, but the moral of the story is the artisans who had once made a living by crafting handmade garments found themselves struggling to compete with the new machine-made clothing.

The same is going to happen this time for the tech people.

AI-powered tools are here to replace those coders who struggle to adopt.

"It is not the strongest or the most intelligent who will survive but those who can best manage change."

- Leon C. Megginson

It is not that there will be no use of coders and I am saying that coding career is at its end. The Chat GPT is one such AI tool that has managed to attract the people's attention and give us a good time to think what we should change in our traditional learning skill.

I asked Chat GPT to build a To-Do app—have we finally met our replacement? | by Fernando Doglio | Bits and Pieces (medium.com)

Here is the link; you can read the medium blog by Fernando Doglio, where he has explained in a very decent manner that why should we not fear from the new AI tools.

The technology will change, and the change is universal. We just need to adapt to that change.

Announcement

National Cadet Corps (NCC) Activities

This is to inform all the students of our college that NCC activities are going to start soon. NCC is a national youth organization that aims to develop character, discipline, and leadership qualities among the youth of the country. It is a great opportunity for all the students to participate in these activities and develop their overall personality.

The activities that will be conducted as part of NCC in our college include drill and physical training, camps, social service activities, sports activities, and other outdoor activities. These activities will be conducted on a regular basis and will provide a platform for the students to develop their physical fitness, leadership skills, team spirit, and social responsibility.

Interested students are requested to register themselves for NCC activities by contacting the NCC coordinator Mr. Hasibul Hasan Mansoori. The registration process has already started, many students have already showed their interest and the activities will commence soon.

All the interested students are advised to make use of this opportunity and register themselves for NCC activities. For any further information or queries, please contact the NCC coordinator (Mr. Hasibul Hasan Mansoori).



Letter of Approval



Maulana Azad College of Engineering & Technology

Affiliated to Aryabhatta Knowledge University, Govt. of Bihar Approved by AICTE, New Delhi, Govt. of India

> Website: <u>www.macet.ac.in</u> Mail Us: contact@macet.ac.in