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MAULANA AZAD COLLEGE OF ENGINEERING & TECHNOLOGY

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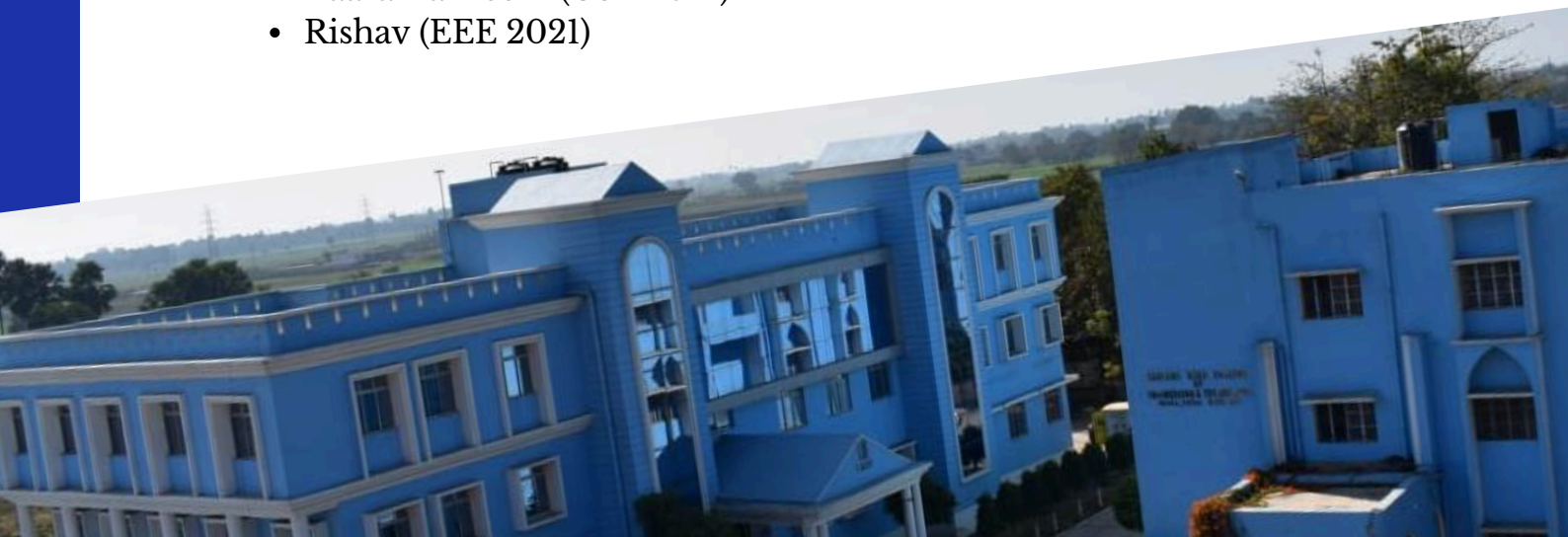

EDITORIAL

Engineering is a constantly evolving field. New discoveries, technological advancements, and emerging challenges require engineers to stay updated with the latest trends and tools. This is where a passion for learning becomes invaluable. A curious and inquisitive mind, eager to explore beyond textbooks and lectures, is what separates an average engineer from a great one.

Engineering plays a crucial role in enhancing technology. Engineers design, develop, and refine the tools that shape our world. From building faster processors to creating self-sustaining smart cities, their expertise ensures that technology evolves efficiently and ethically

Technology has become the backbone of modern civilization, shaping industries, improving lives, and driving progress across all sectors. As we step further into the digital age, enhancing technology is not just an option—it is a necessity. As technology rapidly evolves, staying updated is crucial for professionals and students alike. From artificial intelligence to sustainable energy solutions, continuous advancements in technology define the future of humanity. As we stand at the intersection of innovation and responsibility, engineers today are not only problem-solvers but also visionaries who shape the future with their ideas and ingenuity.

Enhancing technology is the key to a brighter future. By fostering innovation, investing in education, and engaging ethical development, society can harness the full potential of technology for the betterment of all.

Happy Learning!!

EDITOR
SAIMA FARZEEN
Assistant Professor
Mechanical Department

Contents

3D Printing in Construction: Revolutionizing the Future of Building

(Zeeshan Farooque, CE, MACET)

The construction industry is witnessing a profound transformation with the advent of 3D printing technology. Also known as additive manufacturing, 3D printing involves constructing structures layer by layer based on a digital design. This innovative method is not only changing the way buildings are made but also offering substantial benefits like reduced costs, faster construction timelines, and more sustainable building practices. As the technology advances, 3D printing is poised to revolutionize the future of construction.

The process of 3D printing in construction begins with a digital model created using Building Information Modeling (BIM) software. Once the design is complete, it is divided into thin horizontal layers, and the 3D printer extrudes materials such as concrete, cement, or recycled plastics to build the structure. The printer precisely lays down one layer at a time, gradually forming walls, floors, and other components. This additive process allows for intricate designs that would be difficult or expensive to achieve using traditional construction techniques.

One of the most significant advantages of 3D printing in construction is speed. Traditional construction projects can take months or even years to complete, but with 3D printing, buildings can be printed in a matter of days. For example, homes can be printed in less than 48 hours. This faster construction timeline leads to reduced labor costs and allows for quicker occupancy, which is especially important in areas where rapid housing solutions are needed, such as in disaster relief situations or developing urban centers.

Another key benefit of 3D printing is its potential for cost savings. By reducing material waste and minimizing the need for manual labor, the overall cost of construction can be significantly lowered. Traditional building methods often result in excess materials and expensive labor for tasks like bricklaying. In contrast, 3D printing uses only the exact amount of material needed, resulting in less waste and reduced costs for both materials and labor.

Furthermore, sustainability is a major advantage of 3D printing. The technology promotes eco-friendly practices by allowing for the use of recycled or sustainable materials. Since 3D printers work on-site, they also eliminate transportation costs and the carbon emissions associated with moving construction materials over long distances.

As 3D printing technology evolves, its potential in the construction industry is immense. It is already being used to create affordable housing, bridges, and emergency shelters, with the promise of reshaping the way we build in the future. With faster, cheaper, and more sustainable methods, 3D printing is truly revolutionizing the construction industry.

One Day Seminar

The Training & Placement Cell of **Maulana Azad College of Engineering & Technology (MACET)**, Neora, Patna, in association with the Department of **Mechanical Engineering** conducted a one-day seminar on February 22, 2025, at the New Seminar Hall, MACET.

The seminar, titled "**Recent Trends in 3D Printing of Polymers and Metals**" aimed to provide insights into the latest advancements in 3D printing technologies. The session was delivered by **Dr. Murshid Imam, Assistant Professor, Department of Mechanical Engineering, IIT Patna.**

The speaker **Dr. Murshid Imam** is a well-known Assistant Professor in the field of materials engineering. After completing his post-PhD research in March 2017, he joined the Indian Institute of Technology (IIT) Patna as an Assistant Professor in the Department of Mechanical Engineering on April 24, 2017. Since then, he has the privilege of supervising numerous students and contributing to the advancement of research in the fields of materials science and manufacturing.

One Day Seminar

The session began at 12:30 PM onwards, and students from the B.Tech Mechanical Engineering Department (Batches 2021(B), 2022(B), 2023(B), and 2024(B)) were invited to participate.

The seminar provided an excellent opportunity for mechanical engineering students to enhance their knowledge about 3D printing technologies, which have significant applications in modern manufacturing. The initiative taken by the Training & Placement Cell, in collaboration with the Mechanical Engineering Department, reflects the institution's commitment to fostering industry-relevant learning experiences for its students.

Placement of students

Our college takes pride in its successful placement record, providing students with opportunities in leading organizations.
Two students from the Mechanical Department, 2020 batch of MACET, have been selected by "**Snovac System Pvt. Ltd**." (a Pune/Dubai-based company) during the online campus placement drive held on February 15th, 2025.

- Ayub Khan
- Md. Atif Alam

Three students of Computer Science Department from MACET 2021 batch have been selected in Free Training & Placement Program (under CSR Project) in "**Global Quest Technologies**" (Bangalore based company) during Online campus placement drive held on 18th November, 2025.

- Md Shahzeb
- Kaenat Afzal
- Aliya Amjad

Two students of Computer Science Department from MACET 2021 batch have been selected in "**Convene India**" for job position Software Testing Trainee in Online campus placement drive held on 13th November, 2025.

- Md. Umar Farooq
- Md Shaz Anjum

CSE DEPARTMENT

FDP/RESEARCH PAPERS

Successfully completed the Faculty Development Program on "**Advance Excel with Data Visualization**" from 03-02-2025 to 08-02-2025 from E & ICT Academy, IIT Kanpur.

- Mr. Mazhar Eqbal
- Mr. Rakesh Ranjan
- Mr. Hasibul Hasan Mansoori
- Dr. Md. Sadruddin Ahmad
- Mr. Md. Farooque
- Mr. Md. Faiz

Successfully completed one week the Faculty Development Program on **"Data Science (ML&AI)"** from 27-01-2025 to 01-02-2025 from E & ICT Academy, IIT Kanpur.

- Mr. Mazhar Eqbal
- Mr. Hasibul Hasan Mansoori
- Mr. Faiz Ahmad
- Mr. Rakesh Ranjan

Successfully completed the Faculty Development Program on **"Advance Excel with Power BI"** from 10-02-2025 to 15-02-2025 from E & ICT Academy, IIT Kanpur.

- Dr. Md. Sadruddin Ahmad

Successfully completed the Faculty Development Program on **"Advance Excel with Tableau"** from 17-02-2025 to 22-02-2025 from E & ICT Academy, IIT Kanpur.

- Mr. Rakesh Ranjan

Successfully completed ATAL Faculty Development Program on **"The Role of AI&ML in Electric Vehicle Technology"** from 10-02-2025 to 15-02-2025

- Mr. Mazhar Eqbal
- Mr. Rakesh Ranjan

Successfully completed the Faculty Development Program on **"Fundamentals of Python"** from 17-02-2025 to 22-02-2025 from E & ICT Academy, IIT Kanpur.

- Mr. Rakesh Ranjan
- Mr. Md. Farooque
- Mr. Md. Faiz

CE DEPARTMENT

FDP/RESEARCH PAPERS

Mr. MD. EHRAZ AKHTAR

- Successfully completed 2 weeks online Faculty Development Program on "Technology-enabled Teaching, Learning & process for Institutes" jointly organized by Electronics & ICT Academies at IIT Guwahati, NIT Patna, MNIT Jaipur and IIITDM Jabalpur, held from 3rd February to 14th February, 2025.
- Successfully Completed one week FDP on "Technology Integration in Education" conducted by Association of Muslim Professionals, from 21st February to 27th February 2025.

EEE DEPARTMENT

FDP/RESEARCH PAPERS

Mr. Ozair Ahmad

- Successfully Completed One week FDP on "Cyber Security(On Premises Hacking)" organized by E & ICT Academy,IIT Kanpur from 27th January- 1st February 2025.
- Successfully Completed One week FDP on "Advance Excel with Power BI" organized by E & ICT Academy,IIT Kanpur from 10th February - 15th February 2025.

Mr. Md. Naushad Akhtar

- Successfully Completed One week FDP on "Electric Vehicle Technology and Lithium ion Batteries" organized by NITTTR, Chennai from 27th January – 31st January 2025.

Successfully Completed one week FDP on "Technology Integration in Education" conducted by Association of Muslim Professionals, from 21st February to 27th February 2025.

- Dr. Tajuddin Ali Ahmad
- Mr. Md. Nadeem Enam

Successfully Completed one week FDP on "Inclusive and Reflective Teaching Practices" conducted by Association of Muslim professionals, from 27th January to 31st January 2025.

- Mr. Md. Nadeem Enam
- Mrs. Meena Prasad
- Mr. Md. Naushad Akhtar
- Mr. Ehtesham Uddin Ahmad
- Mr. Md Zikrullah

HUMANITIES & SC. DEPARTMENT

FDP/RESEARCH PAPERS

- Dr. Motiur Rahman Ansari

Attended 5 Days National Level Online Teacher's Training Program on 'Inclusive and Reflective Teaching Practices' organized by Association of Muslim Professionals from January 27th to January to 31st January, 2025.

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON MODERN SCIENTIFIC DISCOVERY

-Sana Azad (CSE, MACET)

In today's era of advanced technology, artificial intelligence (AI) plays a pivotal role in revolutionizing scientific discovery. Its impact spans across various fields, offering both unprecedented advantages and posing significant challenges that shape its integration into research. In fields such as medicine and genetics, AI algorithms are adept at processing massive amounts of information to uncover intricate patterns and correlations. This capability not only accelerates research timelines but also reduces costs associated with traditional methods. Furthermore, AI-powered simulations are revolutionizing our understanding of complex systems. For example, in climate science, AI models can simulate various climate scenarios based on historical data, providing more precise predictions of future climate patterns. Similarly, in astrophysics, AI algorithms help simulate how galaxies form and evolve, offering profound insights into the universe's mysteries.

Despite these advancements, integrating AI into scientific research presents challenges. A major concern is the interpretability of AI-generated results. While AI can detect correlations, understanding the underlying reasons often requires human expertise to ensure accurate interpretation and decision-making. Additionally, bias in AI algorithms remains a significant issue. If AI systems are trained on biased data, they may inadvertently perpetuate or amplify existing biases, leading to unfair outcomes, especially in critical areas like healthcare and social sciences.

In conclusion, while AI offers tremendous potential to advance scientific discovery through faster data analysis and enhanced simulations, addressing interpretability challenges and mitigating bias are crucial for maximizing its benefits responsibly. By doing so, we can ensure that AI continues to drive groundbreaking discoveries while upholding ethical standards and reliability in scientific research.

ARTISTRY: THE RARE GIFT OF SEEING BEYOND

-Md. Saif (CSE, MACET)

Introduction

Artistry—true artistry—is more than just creating something beautiful. It is about seeing the world differently, recognizing patterns in chaos, and assembling ordinary elements into something extraordinary.

At its core, artistry is the ability to perceive what others miss, to put things together in ways no one else has, and to express these insights so that others can experience them too. It is about making people feel something new or do something differently because they now share in that unique perspective.

The Hidden Thread

The world is filled with infinite information—colours, sounds, words, and ideas. Yet, only a few can connect them into something that truly resonates.

A great artist, scientist, or innovator does not create from thin air; they see what was always there but in a way no one else has.

- A musician takes familiar notes and arranges them into melodies that evoke deep emotions.
- A scientist connects scattered data points and unveils a ground-breaking discovery.
- A writer captures ordinary moments and immortalizes them through storytelling.

This is the power of recognizing the hidden thread—the rare ability to see how things interconnect and transform them into something meaningful.

Giving Form to the Unseen

But having an insight is not enough. True genius lies in expression.

The greatest minds in history were not just thinkers; they were translators of perception. They took what was unique to them and made it accessible to the world. Without this ability, even the most brilliant ideas would remain locked inside a single mind, unable to shape the future.

- A filmmaker does not just record reality; they reshape it, making audiences feel something deeper.
- A designer does not just create visuals; they build experiences that impact emotions.
- A teacher does not just deliver knowledge; they ignite curiosity that transforms a student's way of thinking.

It is this act of bridging personal perception and collective understanding that defines genius.

Seeing What Others Cannot

Why does the artistry matter? Because insight grants power.

Those who see what others do not have an advantage—the ability to influence, inspire, and innovate in ways that seem effortless to them but impossible to others. This is why visionaries disrupt industries, redefine cultures, and alter the course of history.

To see differently is to be ahead.

To be ahead is to shape the future.

Embracing the Gift of Vision

The real question is not whether artistry exists—it does. The question is who is willing to cultivate it?

- To see deeply, one must look beyond the obvious.
- To express insight, one must refine their ability to communicate.
- To create impact, one must translate their vision into reality.

Not everyone will recognize this power. But those who do—those who embrace it—will shape the world in ways no one else can.

Because artistry is not just a skill; it is a force. And those who master it become unstoppable.

IMPACT OF SMARTPHONES IN DAILY LIFE

-Gulam Husain Ansari (AI & ML, MACET)

Smartphones have revolutionized the way we live, work, and interact with the world. It was initially used for communication, calculation, listening to music and ended up with doing almost everything whether entertainment, productivity, advertisement, shopping etc. It quickly became an important part of our lives.

With the ability to call, text, email, and connect via social media apps like WhatsApp, Instagram, Zoom, it is easier to stay in touch with our closed ones and others regardless of distance or time zones. The internet's vast knowledge is now available in the palm of our hand. This allows people to educate themselves and gain awareness of global issues anytime, anywhere in the world. Mobile access to emails, documents, and collaboration tools professionals to stay productive even when they are away from their desk. On the positive side, there are apps for managing fitness, diet, and even mental health. However, it also contributes to the problems such as short attention span, sleep disruption, digital addiction, loneliness, doomscrolling, and mental health concern due to overuse of social media. Instead of talking to friend or playing with friends in real life, people use social media to entertain themselves. Eventually, they are disconnecting with almost everyone around them in real life. So, too much social media can lead to loneliness despite being more "connected" than ever. The pressure to present idealized versions of life online can contribute to anxiety, depression, and a sense of inadequacy particularly among young generations.

CONCLUSION: - Smartphones have become indispensable in modern life, influencing communication, productivity, health, and entertainment. They enable global connectivity and provide access to vast knowledge of internet. However, their overuse also poses challenges, including sleep disruption, social isolation, and mental health issues. So, it is important to be aware of the potential drawbacks of smartphones so that it helps us to establish a balance between benefits and potential drawbacks of smartphones for the well-beings of our physical and mental health. Ultimately, smartphones are powerful tools that have reshaped daily life in countless ways.

Maulana Azad College of Engineering & Technology

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