



## EDITORIAL DESK

Greetings, Readers!

I am delighted to present to you Volume 2 Issue 4 of the ECE Department's e-Newsletter, "Bits and Bytes." The core objective of our Department is to cultivate energised engineers with the unrelenting desire to fulfil their objectives and aspirations. Furthermore, we aim to revitalise their vivid minds, leading them to spectacular achievement in the fields of Electronics and Communication. I would like to express my deepest gratitude to our renowned Principal, Dr. Manpreet Singh Gujral, and the Department Head, Dr. Davinder Singh Saini, for their essential assistance in vigorously encouraging student participation in this edition. I also want to thank the diligent students and staff members whose passionate involvement and prompt efforts helped bring the undertaking to fruition. The student committee's relentless dedication deserves special recognition for achieving the e-Newsletter's spectacular success.

Within its pages you will find the exceptional participation of students in the annual college fest APRATIM-2023 and more. I would like to thank the staff and the students of the department to make the fest a grand success. Readers, you will also discover a rich tapestry of events that have shaped our department's journey, like Faculty Development Programs (FDPs)/Workshops organised, Book Chapters, Journal/Conferences attended by the faculty members of the department, Workshops attended, Sessions Chaired, Student Achievements, and Tech news from all around the globe.

This issue also involves, the inauguration of our sprawling new academic wing by the Honourable Home Minister of India, Shri Amit Shah. He reiterated the government's commitment to providing world-class infrastructure and opportunities to the youth.

I am filled with pride looking back at all that we have achieved this festive season. The incredible success of APRATIM and the inauguration of the new building mark a watershed moment in our college's journey toward excellence. As we step into a new year, I am confident that with the right support, our students will continue to reach new heights and make us proud.

We eagerly await your valuable feedback on this e-newsletter, and our editorial board is thrilled to assist you in any way possible.

Wishing you Pleasant Nostalgia, and Best Wishes.

Dr. Shilpa Jindal (Editor Departmental Newsletter)

## **JURY MEMBERS AT IPD-EXPO 2023**

DR. D S Saini ,Professor DR. Shilpa Jindal, Assistant Professor & DR. Anil Kumar Vaghmare, Assistant Professor acted as the Jury Member at IPD-EXPO , November 2023

## **IIC REGIONAL MEET-2023 AT PANJAB UNIVERSITY, CHANDIGARH:**

DR. Shilpa Jindal, Assistant Professor and Dr. Irfan Ahmad Khan, Assistant Professor attended the IIC Regional Meet - 2023 at Panjab University, Chandigarh on November 21, 2023. The Ministry of Education's (MoE's) Innovation Cell and AICTE have successfully concluded the 1st IIC Regional meet at Panjab University, Chandigarh on 21st November 2023. More than 600 participants from IIC and non-IIC institutions, ATL-Schools, 60+ YUKTI Innovations and startups and 30+ Ecosystem Enablers participated in the meet.

## **EXTERNAL JURY MEMBER AT NATIONAL INDIAN OF FASHION TECH., P'KULA:**

Dr. Irfan Ahmad Khan, Assistant Professor acted as the External Jury Member at National Indian of Fashion Tech. (NIFT), P'Kula during December, 2023.

## **ISB INSIGHTS FORUM-2023 AT INDIAN SCHOOL OF BUSINESS (ISB), MOHALI:**

Dr. Irfan Ahmad Khan, Assistant Professor attended the ISB INSIGHTS Forum- 2023 with an agenda "The World in 2047" organised by Indian School of Business (ISB), Mohali on November 24, 2023. The event was conceptualised as an annual research showcase event with an objective to curate the research agenda of 'The World in 2047'.

## INTERNATIONAL DESIGN PATENT GRANTED:

An International UK Design Patent has been granted to Dr. Irfan Ahmad Khan, Assistant Professor and team on the design “AI DRIVEN DRONES FOR EFFECTIVE FOG DISPERSAL” by the Comptroller General of patents, Intellectual Property Office/ Patent Office, U.K. on 16th Nov. 2023.

## INTERNATIONAL BOOK CHAPTER(S): FORTHCOMING GEI BOOKS 2024:

[1] I. A. Khan, et. al., “IoT Based Smart Controller for Agricultural Storage to Combat Impacts of COVID-19,” International Book chapter in the Book titled “The Impact of COVID-19 on Agriculture Sector” (via easychair), Green Economics Institute, U.K.; 2024 (Accepted).

[2] I. A. Khan, et. al., “IoT and UAV Technologies for Precision Farming during and Post COVID era: A Review,” International Book chapter in the Book titled “The Impact of COVID-19 on Agriculture Sector” (via easychair), Green Economics Institute, U.K.; 2024 (Accepted).

## REVIEWER

Dr. Irfan Ahmad Khan, Assistant Professor - Journal of Renewable Energy and Environment” (Scopus Indexed). and “Electric Power Components and Systems” (SCI Indexed).

## **STUDENT ACHIEVEMENTS**

### **INNOVATIVE PRODUCT DESIGN, IPD EXPO-2023 (Project Exhibition)**

#### **2020-2024 Batch (Present 4th Year):**

- 1.Aayushi Sharma (CO20501) and Mahima (CO20534) won the first prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.
- 2.Kamaldeep (CO20531), Palkin Gautam (CO20541) and Rhythm Bisht, (LCO20579) won the second prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.
- 3.Rudransh (CO20549), Inderjeet Singh (CO20528) and Shaurya Singh (CO20557) won the third prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.

#### **2021-2025 Batch (Present 3rd Year):**

- 1.Sakshi Kumari (MCO21577), Vanshika Sharma (CO21570), and Sparsh Mehta (MCO21579) won the first prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.
- 2.Kritika Thakur (CO21542), Manseerat Kaur (CO21545), Manveer Singh (CO21546), and Nakul Rawat(CO21549) won the second prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.
- 3.Lokesh (LCO21592), and Lavanya (CO21544) won the third prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.

#### **2022-2026 Batch (Present 2nd Year):**

- 1.Mohanisha (CO22528) and Shriya (CO22553) won the first prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.
- 2.Avleen Kaur (CO22513), Harshit Kumar (LCO22556), Gunnika Thakur (LCO22555) won the second prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.
- 3.Sahil (LCO22559) and Rajan Gupta (LCO22558) won the third prize in Innovative Product Design, IPD Expo-2023 (Project Exhibition) held at CCET, Sector-26, Chandigarh on 22nd November 2023.



## **STUDENT ACHIEVEMENTS**

### **Winners of Achintyam Organised Events at APRATIM (COLLEGE FEST-2023)**

#### **PHOTOGRAPHY COMPETITION:**

##### **2021-2025 Batch (Present 3rd Year)**

- Namay Chaudhary (MCO21574) won the first position in the Photography Competition organised at APRATIM, held at CCET, Sector-26, Chandigarh on 22nd November 2023.
- Kanishk Nagpal (CO21328) won the second position in the Photography Competition organised at APRATIM, held at CCET, Sector-26, Chandigarh on 22nd November 2023

#### **VIDEOGRAPHY COMPETITION:**

##### **2022-2026 Batch (Present 2nd Year)**

- Sachin Simar (CO22538) won the first position in the Videography Competition organised at APRATIM, held at CCET, Sector-26, Chandigarh on 22nd November 2023.

#### **PHOTOHUNT COMPETITION:**

##### **2021-2025 Batch (Present 3rd Year)**

- Mihir Verma (CO23535) and Deepanshu (CO23519) won the first position in the Photo-Hunt Competition organised at APRATIM, held at CCET, Sector-26, Chandigarh on 23rd November 2023.
- Arpit Kamboj (CO21519) won the second position in the Photo-Hunt Competition organised at APRATIM, held at CCET, Sector-26, Chandigarh on 23rd November 2023.
- Namay Chaudhary (MCO21574) and Abhinash (CO21504) won the third position in the Photo-Hunt Competition organised at APRATIM, held at CCET, Sector-26, Chandigarh on 23rd November 2023.

### **Winners of Apostle of Speech (AOS) Organised Events at APRATIM (COLLEGE FEST-2023)**

#### **DASTAN (Short Story Writing Competition)**

##### **2020-2024 Batch (Present 4th Year):**

- Sakshi (CO20552) won the second prize in Short Story Writing Competition, on 22nd November 2023.
- Rhythm (LCO20579) won the third prize in Short Story Writing Competition on 22nd November 2023.

## STUDENT ACHIEVEMENTS

### Winners of Sports Inter-Year Events on 22nd November 2023

#### Inter-Year Basketball:

##### 2020-2024 Batch (Present 4th Year):

Ruman Sidhu (CO20550) won the first prize in inter-year basketball match held on 22nd November 2023.

##### 2021-2025 Batch (Present 3rd Year):

- Lavanya (CO21544) won the first prize in inter-year basketball match held on 22nd November 2023, Arshia (CO21520) and Pranjal (LCO21598) won the second prize in the same.
- Sukhjot Singh (CO21565) won the first prize in inter-year basketball match held on 22nd November 2023.

##### 2022-2026 Batch (Present 2nd Year):

- Sneha (CO22546) won the first prize in inter-year basketball match held on 22nd November 2023, and Kabya (CO22524) won the second prize in the same.
- Dhruv Sharma (CO22518) secured the second position in Chess as part of Inter-Year Sports Event held at Chandigarh College of Engineering and Technology.
- Nandan Maurya (CO22529) had an outstanding accomplishment in Stage Play at IIT Delhi, and Street Play (PECFEST), on 22nd November 2024.
- Subhrajeet (CO22547) had an outstanding accomplishment in Stage Play at IIT Delhi, and Street Play (PECFEST), on 22nd November 2024.
- Saksham Kohli (CO22540), Shivam Singh (CO22542), Sudhakar Yadav (CO22548), Kanhiaya (CO22525), and Harshit (CO22521) won third position in Inter-Year Basketball Competition held on 22nd November 2024.

# HYPER REAL PLATFORM MAKING THE METAVERSE MORE REAL

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Santosh (CO22541)

Hyper real platforms making the metaverse more real :

We are on the verge of a future in which the distinction between the real and virtual worlds becomes increasingly hazy, creating countless opportunities for how we might live, work, and play. Hyper-real platforms are continuing to push the limits of immersion and interaction in the metaverse.

In recent years, the idea of the metaverse—a virtual shared environment where users can communicate with each other in a computer-generated world—has become incredibly popular. Hyper-real platforms have a lot of potential as the metaverse keeps developing. These platforms seek to produce immersive, incredibly lifelike experiences that conflate the virtual and real worlds. We examine how hyperreal platforms in the metaverse might change different industries and examine their transformational use cases..

The link between the hyper-real platform and the metaverse creates a plethora of opportunities for communication, education, and entertainment. Through it, users can enter an immersive, hyper-realistic virtual world where they can interact with others, try new things, and push the envelope of what's possible. We may anticipate even more seamless and fascinating virtual experiences as these technologies advance and the metaverse and hyperreal platforms gradually entwine.

Characteristics of hyper-real platform

Hyper-real platforms, which use a combination of cutting-edge technologies to bring virtual environments to life and blur the lines between the digital and physical realms, have emerged as a revolutionary technology in the constantly changing metaverse. They elevate the user experience to unprecedented levels of immersion and realism. The qualities that set hyper-real platforms apart in the metaverse are as follows..

**High-fidelity visuals** Delivering aesthetically attractive and hyper-realistic virtual environments is the core function of hyper-realistic platforms. Modern rendering methods and graphics are used by these platforms to provide finely detailed textures, realistic lighting, and complex visual effects.

**Immersive audio**-Hyper-real platforms understand the role that sound plays in producing a fully realistic experience. By precisely placing sound sources in three dimensions, spatial audio systems enable users to perceive sounds from various angles and distances.

**Haptic feedback**- A major development in hyper-real platforms is the incorporation of haptic feedback. Haptic devices, like gloves, vests, or controllers, allow users to experience feedback and tactile sensations. With the help of this technology, users can interact with virtual objects and feel their weight, resistance, and texture, giving the metaverse a new degree of realism and interaction.

**Real Time interaction** – hyper-real platform priorities real time interaction, enabling user to seamlessly interadction with the virtual environment and object within it .

# TECH NEWS

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- 1) Approximately 68% of the organizations listed in the IT-BPM 2023 poll on India's finest workplaces have a strong commitment to employee development at all levels. Within the IT service industry, Accenture and Wipro rank in the top 25%. -DEBANGANA GHOSH
- 2) India's Minister of State for Skill Development and Entrepreneurship, Rajeev Chandrasekhar, stated that it is doubtful that the eagerly anticipated Digital India Act will be introduced for passage before the 2024 general elections. --money control news
- 3) IPO-limited According to the company's audited financial statement shared with bankers and investors, Ola Electric reported consolidated revenue of Rs. 2782 crore, up nearly 510 percent in the fiscal year that ended in March 2023 (FY23). However, the company's net loss increased to Rs. 1472 crore due to an increase in expenses news
- 4) New Gemini AI, according to Google, "thinks more carefully" has unveiled a kind of artificial intelligence (AI) that it says has more sophisticated "reasoning capabilities" and can "think more carefully" when responding to challenging queries.-techinfo.
- 5) The Department of Electronics, Information Technology, Biotechnology, and Science (Karnataka Innovation and Technology Society, or KITS) has requested proposals from startups that are interested in developing solutions for government agencies. The proposal submission date is January 4, 2024. –money control news
- 6) Rajesh Gopinathan, the former CEO of TCS, is making headlines again after he was appointed Head of Translational Research and Entrepreneurship at IIT Bombay. Gopinathan also started a part-time position as a senior advisor with Boston Consulting Group earlier this week, serving the telecom, media, and technology practise.-India Times
- 7) Chips to Startup program underway; electronics manufacturing to hit \$300 billion by 2026-85,000 industry-ready workers with expertise in embedded system design, chip design, and very-large-scale integration VLSI are the target audience for the C2S program. – IT MOS



Chandigarh College of Engg. & Tech.



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