

# Monthly Updates The Bulletin A Newsletter from

### **Electronics & Communication Engineering Department.**

# RESEARCH INNOVATION NEW IDEAS PLACEMENTS GOALS EVENTS WORKSHOPS SILICON SYMPHONY: POWERING THE WORLD WITH SEMICONDUCTOR

#### Why Electronics and Communication Engineering Matters

In today's hyper-connected digital era, Electronics and Communication Engineering (ECE) is the backbone of all modern technologies. Whether it's smartphones, space communication, Al systems, or autonomous vehicles – ECE lies at the core. This field perfectly blends theoretical knowledge with practical innovation. From signal processing to embedded systems and chip design, ECE engineers are the architects of the digital revolution.



ISSUE: 6 Vol. 4

Article By:-Nikunj Agrawal Pre-Final Year B-Tech (ECE)

#### VLSI: The Heart of Modern Electronics

Very-Large-Scale Integration (VLSI) is the art of integrating millions or even billions of transistors onto a single silicon chip. It's what makes our devices compact, fast, and power-efficient

- from smartphones and smartwatches to AI accelerators and space-grade processors. Whether it's front-end logic design or back-end layout, VLSI demands both creativity and analytical thinking. It truly forms the foundation of today's digital world.

#### My Journey into the Semiconductor World

- Internship at Semiconductor Laboratory (SCL) – worked on Silvaco TCAD

- Industrial Training at CSIR-CEERI – worked on Semiconductor Fabrication

- Winner of Smart India Hackathon with Team Electrovision

- Projects on RISC-V Processor and Phase-Locked Loop (PLL)

- Participant at DVCon India – worked on FPGA-Based AI Accelerator

#### Semiconductor Trends Shaping the Future

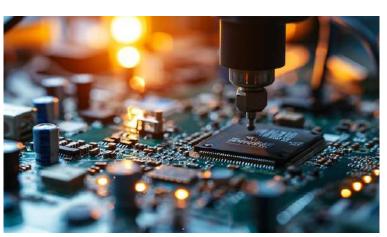
- Advanced Process Nodes (5nm, 3nm): Enabling smaller, faster, and more power-efficient chips.

- AI and Machine Learning Integration: Custom hardware accelerators like ASICs and FPGAs are transforming deep learning applications.

- System-on-Chip (SoC): Combining CPU, GPU, memory, and I/O on a single chip – ideal for compact and efficient systems.

#### The Road Ahead: Future of Semiconductors

The future of semiconductors is incredibly promising. Technologies like AI, IoT, 5G, autonomous systems, and quantum computing all revolve around advancements in semiconductor-design.



# **Techtronica Society**

www.techtronicaglau.in

Engineering excellence through innovation



#### $Techtronica\,Society\,2024-25:\,Pioneering\,Excellence\,in\,Technical\,Innovation$

This academic year, Techtronica Society hosted 11 successful events, engaging 1,000+ participants and establishing 3 institutional collaborations.

#### Key Highlights:

- Orientation: Welcomed 100+ freshers
- IoT/Arduino Workshops: 165+ participants gained hands-on skills
- Art-Tech Fusion: 85+ creative entries in Kratikala & Brushstroke
- IEEE CCIS 2024: Supported 900+ paper submissions
- CodeQuest: 55+ coders, 10K+ expected submissions
- UDAAN Outreach: Impacted 150+ school students

#### Achievements:

- √ 5,000+ social media reach
- √ 82% average attendance
- √ 100+ GitHub stars

## A STELLAR ACHIEVEMENT: DR. KUMAR Recognized Among World's top 2% scientists

Congratulations to Dr. Anjan Kumar on his well-deserved promotion to Associate Professor! With more than 15 years of teaching experience and over 100 research articles published in peer-reviewed SCI journals, Dr. Kumar has consistently demonstrated excellence in both academics and research. His commendable contributions to the field of perovskite solar cell research have earned him national and international recognition. Notably, he has also been featured among the top 2% of scientists in the world, as per the prestigious list jointly published by Stanford University and Elsevier. The department is proud of his achievements and looks forward to his continued leadership in advancing research, innovation, and quality education.



# **BOARDBUILDER BOOTCAMP**

#### PCB Designing Workshop - A Grand Success!

We are thrilled to announce that our PCB Designing Event at GLA University has successfully concluded! The event brought together bright minds and passionate learners who delved into the intricacies of PCB design and its applications in real-world electronics. From hands-on experience to insightful discussions, the workshop provided a platform to enhance skills, ignite creativity, and forge connections in the world of electronics engineering.

A big thank you to our participants, faculty, and organizers for making this event a resounding success! Here's to more such impactful sessions that shape the engineers of tomorrow.



# HONORING OUR ESTEEMED VISITORS: WELCOME NXP TEAM

GLA University, Mathura is privileged hosting an esteemed delegation from **NXP Semiconductors**, **Noida** on **25th April 2025**, marking a significant step towards forging a potential academic collaboration between the two institutions. The visit will be centred around exploring opportunities for mutual growth, academic synergy, and the enhancement of student-industry interaction in the ever-evolving semiconductor domain.



During this visit, the delegates will interact with faculty members and students and discuss about the future of the semiconductor industry in India.

This interaction will provide students with valuable insights into the current industry trends, career opportunities, and the skillsets in demand. The Delegates will share their technical expertise and encourage students to pursue innovation-driven projects and also the discuss the importance of aligning academic training with industry needs and assured their support for internships, workshops, and collaborative initiatives.

This visit will be a positive note on future collaborations, including curriculum alignment, joint research projects, and talent nurturing programs.

GLA University extends heartfelt gratitude to the NXP Semiconductors team for their visit and look forward to a promising partnership aimed at empowering students and contributing to India's semiconductor mission.

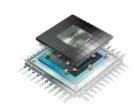


**EC department's IDEA Lab** is equipping students with the skills to shape the future of drone technology! **Drone assembly**, **development**, and operation - all under one roof!





EC department's Texasl instruments Lab & National Instruments Lab are pushing boundaries in IoT, Radar, and Satellite Communication! Cuttingedge tech, endless possibilities!



EC department's VLSI Design Lab is shaping the future of semiconductor technology! With Cadence Virtuoso tools, students bring innovative ideas to life.



## **OUR TOP RECRUITERS**

	cādence°	וה	SILICON LABS	<b>3</b> EULER
PROMINI VNA MECHATRONICS	SONY		HAVI DESIGN	
	Cognizant	KPIT	SKETCH	adani
Tech Mahindra	TRINITY <sup>™</sup> TOUCH	Capgemini	5 incerface	Azîsta
Zia Semiconductor Complete Tp Solutions	sıfy	LG Soft India	orange Business Services	<b>X</b> amber
<b>Synopsys</b> <sup>®</sup>	HLS <sup>®</sup>		accenture	cummins

and many more...

#### EDITORIAL TEAM

Chief Editor : Dr. Manish Kumar, Associate Professor Editor : Mrs. Sweta, Assistant Professor

MATHURA CAMPUS (9+91-9027068068) **GR.NOIDA CAMPUS** () +91-9027068068 **GLAU ONLINE** (2) +91-9568536853

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING