

# SPECTRUM

**ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT**

**2025**

Welcome to the 2nd edition of **SPECTRUM!**

As the Electronics and Communication Engineering Department (Batch 2024–2028) at LBS Institute of Technology for Women, Poojappura, we take pride in compiling and sharing the highlights, achievements and activities that reflect the vibrant spirit of our department. This edition features a celebration of innovation, academic excellence and collaborative efforts that continue to shape our journey forward.

We invite you to explore, reflect, and be inspired. Stay informed. Stay engaged. Happy reading!



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# From Labs to Devices: India's RISC-V Chips Enabling Smarter Edge AI

**Edge AI** is rapidly transforming how smart devices think, act and respond—right where the data is generated. From wearable health trackers to autonomous drones, intelligent edge devices need processors that are fast, efficient and secure. That's where India-designed RISC-V chips are making a bold impact. RISC-V, an open-source chip architecture, is enabling India to build custom, affordable, and energy-efficient processors tailored for AI at the edge. No longer dependent on imported chip designs, Indian startups and institutions are now designing their own silicon for next-gen devices.

## Why Indian RISC-V Chips Are Game-Changers:

- **Low Power, High Efficiency:**  
Ideal for edge devices that run on batteries, like fitness bands or smart cameras.
- **Custom AI Capabilities:**  
Indian designers are tailoring RISC-V chips for tasks like vision processing, sensor fusion and lightweight neural networks.
- **Cost-Effective Innovation:**  
Open-source design reduces licensing fees, empowering Indian startups to compete globally.
- **Secure by Design:**  
Local teams are embedding advanced security at the hardware level—vital for healthcare, automotive, and smart home systems.

## India's Growing RISC-V Ecosystem

The Indian government (via MeitY) is backing local chip development, while IIT Madras leads R&D and talent development. Homegrown companies like Mindgrove and Vyoma are launching RISC-V SoCs aimed at AI, IoT and vision-based applications.

## Real-World Impact:

- AI in wearables and home automation
- Robots and drones powered by smart chips
- ADAS and infotainment in vehicles
- Medical devices with real-time edge intelligence

## Innovation Highlight: Neuromorphic Edge Chip

A recent design combines a RISC-V core with a lightweight AI accelerator for Spiking Neural Networks, enabling real-time sensor data processing with low power usage—ideal for energy-sensitive edge devices.

India's RISC-V chips aren't just "Make in India"—they're "Think in India." As AI meets the edge, Indian silicon is leading the way.





# TINK-HER-HACK 3

On January 25th, the campus of LBSITW buzzed with energy and creativity as young women came together for TinkerHack 3.0, Kerala's largest women-only hackathon. The event saw great participation from students across different branches. The response was overwhelmingly positive, with many first-time coders expressing newfound confidence and interest in tech.

The event provided a vibrant platform for learning, problem-solving, and peer collaboration and left everyone inspired for more. It was more than just coding — it was a space for collaboration, confidence-building, and innovation. The energy, enthusiasm, and talent on display were truly inspiring.



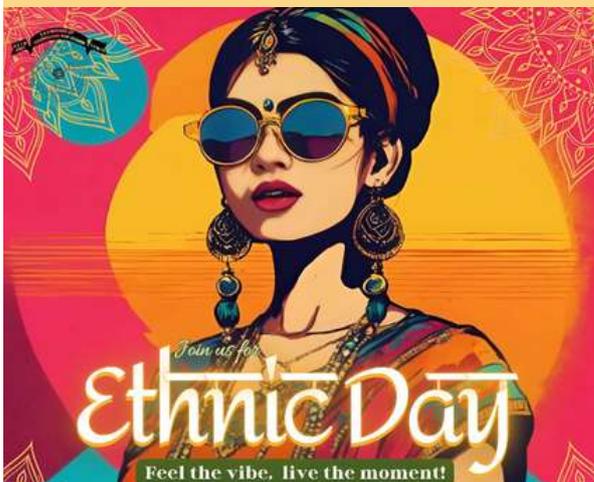
We thank all the organizers, mentors, and volunteers who brought this event to life — and a big cheer to our students for making LBSITW proud once again. Here's to more events that celebrate learning, leadership, and the limitless potential of women in tech!

## ETHNIC DAY

On March 7th, the campus blossomed into a vibrant canvas of colours as we celebrated Ethnic Day.

Gracefully draped in elegant sarees, the young women filled every corner, their captivating dance moves perfectly capturing the spirit of the day.

The campus echoed with lively music and the joyful energy of the festivities, creating an unforgettable atmosphere of culture, unity, and celebration.



## KICK-OFF

On February 1st, lbsitw proudly launched the "Under 25" initiative with a lively and fun filled kickoff event! The evening buzzed with exciting games, shared laughter, and the blossoming of new friendships.

We were honored to welcome the core teams from CET and SCT, who brought inspiration and valuable insights to the gathering. The event ignited a fresh wave of creativity and innovation among the young attendees, setting the stage for a promising journey ahead.





## IEFK 2025: LBSITW's Green Mission

The 2nd edition of International Energy Festival, Kerala (IEFK) was a landmark 3-day event held between Feb 7 to 9 bringing together global energy professionals, policymakers, and innovators, highlighting Kerala's commitment to becoming a 100% renewable energy-based State by 2040 and carbon neutral by 2050. As part of the festival, over 1,000 women from Haritha Karmasena were trained in LED bulb self-repair through a hands-on workshop organized by EMC Kerala and EMC LBSITW. The initiative aimed to empower women with technical skills and promote a sustainable economy. Our students played a key role in this initiative, following a training session at EMC Trivandrum on Jan 29, under mentor Mr. Sabeer, and guided by coordinator Prof. Mujeeb Rahuman.



The efforts and enthusiasm shown by our students were truly commendable and played a significant role in the resounding success of the workshop. Their contribution not only brought technical education to the forefront but also helped unlock the untapped potential of women, paving the way for a more empowering and greener future.

## MUN at LBSITW: Uniting Minds, Inspiring Action

The Model United Nations (MUN) at LBSITW is a dynamic simulation where students represent countries, debate global issues, and work together to draft resolutions. This platform helps participants develop essential skills in public speaking, diplomacy, negotiation, critical thinking, and leadership. By stepping into the role of UN delegates, students gain real-world insights into international relations and the decision-making processes of global institutions. They learn to navigate complex challenges, build alliances, and strive for consensus on pressing global matters. LBSITW MUN not only enhances academic and personal growth but also inspires young minds to become confident, collaborative, and globally aware leaders of tomorrow.





# Inspيريا 3.0

On the occasion of International Women’s Day 2025, Inspيريا 3.0 brought together a dynamic blend of inspiration, innovation, and inclusion under the theme ‘Redefine Possible’. Hosted by Women Techmakers in collaboration with GDG LBSITW and creative partner Riglabs, the event served as a powerful platform for students, tech professionals, and especially women in technology, to explore the ever-evolving landscape of Artificial Intelligence and emerging technologies. The event began with an interactive ice-breaking session, helping participants ease into the day with vibrant minds and open communication. This energetic start fostered new connections and set the tone for a collaborative and engaging experience. Following this, a compelling panel discussion titled “The Power of Community: Women’s Networks as Catalysts for Change” brought together voices of influence including Sruthy S Nair, Arundhathi Krishna, Deepika S R, and Shreya Krishnan, moderated by Arathi Krishna A M.



The panel shed light on the importance of women-led communities in driving impact and supporting growth in the tech ecosystem. Attendees then dove into the world of Python with Cerin Sara Santosh during the session “Python Hacks: Do More in Less Time”, which offered practical tips and efficient strategies for enhancing productivity in coding.

The afternoon featured two hands-on workshops running in parallel. In “Prompts are All You Need”, Vedanta S P introduced participants to the art of prompt engineering and how to effectively interact with AI models. Simultaneously, Ashish Abraham led “Building with GenAI: Hands-on Creation & Essentials Tools”, guiding attendees through essential tools and workflows for creating with generative AI. The event wrapped up with a closing session that included reflections, feedback, and photo moments, capturing the essence of learning, connection, and celebration. Inspيريا 3.0 wasn’t just another tech event—it was a celebration of potential, a space for emerging minds to connect, and a powerful reminder that with community and curiosity, we can truly redefine what’s possible.

**Redefine Possible** **INSPERIA 3.0**  
International Women's Day 2025

**The Power of Community: Women's Networks as Catalysts for Change**

**SPEAKER**  
**Sruthy S Nair**  
Project Manager @ UST,  
WTM Ambassador

**SPEAKER**  
**Arundhathi Krishna**  
Program Manager, TinkerHub

**SPEAKER**  
**Deepika S R**  
Associate Product Manager,  
Lascade

**SPEAKER**  
**Shreya Krishnan**  
Managing Director,  
AnitaB.org India

**MODERATOR**  
**Arathi Krishna A M**  
GDG On Campus Organizer, LBSITW

#Panel Discussion



# DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

## Vision

To become the centre of electronics communication and instrumentation and computer engineering to facilitate professional education and research keeping higher level of value systems

## Mission

**M1:** To transform young women to high quality engineers, entrepreneurs, researchers with ethical values.

**M2:** To contribute creative engineering solutions to industry by keeping pace with latest technological advancements.

**M3:** To provide intellectual services to the society by the application of Electronics, Communication, Instrumentation and Computer Engineering.

