

Maharaja Surajmal Institute of Technology

National Conference on Integrating Technologies, Ideas and Disciplines for Engineering Innovation (NCI-TIDE 2025) Report

The Department of Electronics and Communication Engineering at **Maharaja Surajmal Institute of Technology (MSIT)** successfully organized the **National Conference on Integrating Technologies, Ideas and Disciplines for Engineering Innovation (NCI-TIDE 2025)** on **November 18–19, 2025**. The two-day national event provided a vibrant platform for intellectual exchange and brought together leading academicians, researchers, industry experts, and technologists from across the country.

Objective and Scope of the Conference

NCI-TIDE 2025 aimed to foster interdisciplinary collaboration, inspire innovative thinking, and promote advancements in emerging engineering domains. The conference focused on contemporary research challenges and emphasized the importance of integrating multiple disciplines to build next-generation solutions. The themes spanned a wide spectrum of modern engineering areas, including:

- Smart Embedded Systems and Real-Time Applications
- Advanced Communication Networks
- Cybersecurity and Computing
- Sustainable Energy and Green Technologies
- Healthcare Engineering
- Digital Metrology and Data-Driven Measurement Systems
- Intelligent Computing
- Modern Educational Technologies
- Defence and National Security Technologies

By addressing these diverse yet interconnected domains, the conference encouraged the development of impactful innovations aligned with national and global technological needs.



Inaugural Ceremony (Day 1 – November 18, 2025)

The inaugural ceremony set an inspiring tone for the conference. The event was graced by eminent members of **SMES Management**, including:

- **Sh. Kaptan Singh**, President, SMES
- **Smt. Esha Jakhar**, Senior Vice President, SMES
- **Sh. Raj Pal Solanki**, Treasurer, SMES

They were joined by:

- **Prof. (Dr.) Avanish Kumar Srivastava**, Director, MSIT
- Distinguished guests from academia and research organizations
 - **Dr. Subhash Chander**, chief Guest & Keynote speaker, Scientist 'G', SSPL–DRDO
 - **Mr. Sunil Kumar**, Guest of Honour and keynote, Assistant Director, MSME
 - **Prof. Perna Gaur**, Keynote Speaker, Director, NSUT West Campus

The conference was meticulously planned and executed under the leadership of **Prof. (Dr.) Archana Balyan**, Organizing Chair, and **Prof. (Dr.) Neeru Rathee**, Convener, NCI-TIDE 2025.

In his address, **Sh. Kaptan Singh** expressed gratitude toward Garmin for their sustained support in fostering academic excellence through scholarships and learning initiatives.



Chief Guest's Address

The Chief Guest, **Dr. Subhash Chander (Scientist 'G', SSPL–DRDO)**, delivered a highly insightful keynote highlighting breakthroughs in RF technologies, microwave devices, and semiconductor research. He emphasized the indispensable role of indigenous technological

development in bolstering India's defence and aerospace capabilities. His remarks motivated participants to contribute meaningfully towards national technological self-reliance.



Guest of Honour and Keynote Speaker

Mr. Sunil Kumar, Guest of Honour, shared thoughtful perspectives drawn from his rich experience in scientific research and national-level administrative responsibilities. The Assistant Director MSME, keynote speaker, discussed participation in the e-Mudra scheme when the business needs quick, collateral-free funding for starting, expanding, or strengthening operations. He added that e-Mudra scheme benefits MSMEs by offering collateral-free loans up to ₹10 lakh with quick online approval, low interest rates, and flexible repayment. It supports business startup, expansion, and working capital needs, provides a MUDRA Card for easy fund access, and promotes entrepreneurship and financial inclusion for small enterprises.





The conference's **Keynote Speaker, Prof. (Dr.) Prerna Gaur**, provided expert insights into the rapidly escalating significance of Internet of Things (IoT) technologies. She discussed their transformative impact on intelligent systems, automation, and future engineering applications, inspiring attendees with real-world examples and research possibilities.

Research Contributions and Publications

NCI-TIDE 2025 invited original, high-quality, and unpublished research papers from scholars across multiple disciplines. After rigorous peer review, high quality research papers will be published in reputed journals, including:

- **MAPAN – Journal of the Metrology Society of India (SCI indexed)**
- **PES – Proceedings of Engineering Sciences (Scopus indexed)**
- **SATYAM – MSIT Journal of Research (Special Issue)**

This academic contribution strengthens MSIT's commitment to promoting impactful research and ensuring recognition of scholarly work at national and international levels.



Sponsors

Sponsors play a vital role in the organization and success of a conference. Their contributions often extend beyond financial support, influencing program quality, attendee experience, and the conference's overall reach. The following organizations sponsored NCI-TIDE 2025:

1. DRDO
2. Dwarka Motors
3. Mikronix Associates
4. Elegance spark Innovation
5. Empower Panchayat

We proudly acknowledge the sponsorship (**Elegance spark Innovation**) support provided by our ECE department alumni **Mr. Varun Bansal**. Such contributions reflect the enduring bond between mentors and learners.



Media Coverage:

Our media partners have been instrumental in supporting this conference—through coverage, features, stories, and continuous engagement. Their contribution has helped us extend our vision beyond this hall and into the wider world. The following are the media partners of NCI-TIDE2025

1. Broadcastmsit
2. First India
3. Delhi sanwad



Technical Sessions

The conference featured a remarkable **102 research papers** organized into **nine specialized parallel technical sessions**:

1. Communication, Computing, and Cyber Security
2. Digital Metrology and Data-Driven Measurement Systems
3. Smart Embedded Systems and Real-Time Applications
4. Technology for Defence and National Security
5. Engineering Innovations for Transforming Modern Education
6. Soft Computing in Uncertain and Dynamic Environments
7. Healthcare in Engineering Applications
8. Multi-Domain Applications of Signal and Image Processing
9. Sustainable Energy and Green Technology

Of the 09 technical sessions scheduled, 04 sessions were successfully conducted on Day 1 across multiple venues. These diverse sessions offered a multidisciplinary platform for researchers to present their innovations, exchange scientific perspectives, and discuss breakthroughs shaping the future of engineering and technology. Prof. (Dr.) Puneet Azad, Co-convenor, delivered the vote of thanks to the august gathering.

Day 2 Highlights (November 19, 2025)

The second day witnessed high-energy intellectual engagement, with **five parallel paper presentation sessions** conducted across multiple venues. Participants actively discussed their research, received feedback from experts, and explored possibilities for interdisciplinary collaborations.

Valedictory Ceremony

The valedictory session was honoured by the presence of:

- **Sh. Kaptan Singh**, President, SMES
- **Smt. Esha Jakhar**, Senior Vice President, SMES
- **Prof. (Dr.) Avanish Kumar Srivastava**, Director, MSIT
- **Prof. (Dr.) Archana Balyan**, Organizing Chair
- **Prof. (Dr.) Neeru Rathee**, HOD ECE & Convener, NCI-TIDE

Dignitaries shared their reflections on the success of the conference and emphasized the importance of continuous innovation and collaborative research in solving societal and technological challenges. **Best Paper Awards** were presented to outstanding contributors from each session, acknowledging excellence in research and presentation. Prof.(Dr.) Pardeep Sangwan, Co-convenor, delivered the vote of thanks to conclude the 2 days event.



Conclusion

NCI-TIDE 2025 stands as a milestone event in MSIT's journey of promoting academic excellence, cutting-edge research, and interdisciplinary collaboration. The conference successfully brought together brilliant minds from across India and beyond, fostering constructive dialogue, sharing of knowledge, and exploration of new technological frontiers.

Through such initiatives, **MSIT continues to uphold and strengthen its legacy as a premier institution dedicated to nurturing innovation, research competence, and holistic engineering education.**



Prof. (Dr.) Neeru Rathee
HOD ECE, Convener NCI-TIDE 2025