IEEE SIES GST
Presents

EPSILON 2026

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What is EPSILON?

EPSILON 2026 is a three-day academic convention, scheduled from **13th to 15th February 2026**, bringing together industry experts, academicians, and technology leaders on a common platform. Guided by the theme *Dimensions of Discovery*, the event explores diverse technological domains through expert talks, interactive sessions, hands-on workshops, and panel discussions, fostering innovation and interdisciplinary learning.

About the Theme: *Dimensions of Discovery*

The theme *Dimensions of Discovery* represents the exploration of emerging technologies across multiple dimensions of science, engineering, and innovation. It highlights advancements in Computing, Cybersecurity, Power Electronics, Holistic Well-Being, and Earth Observation, encouraging cross-domain learning and impactful real-world solutions.

Learning Outcomes

Participants will:

- Gain **deep conceptual and practical insights** from expert-led sessions
- Engage in **hands-on learning** across diverse technological domains
- Experience **interdisciplinary exposure** aligned with emerging industry trends
- Strengthen **technical, analytical, and professional skills**
- Benefit from **peer learning and expert interaction**

Track 1: CS   Topic: Cyber Security

About: The *IEEE Computer Society* Chapter of SIES GST aims to strengthen students' foundations in computing while addressing modern digital challenges. This track focuses on **Cybersecurity**, a critical pillar in today's interconnected world.

TIMELINE for Cyber Security (Track 1-CS)

DATE & TIME	TOPICS	SUBTOPICS TO BE COVERED
DAY 1: **13-02-26** **10:00 AM -11:30 AM** **Talk Session**	• **Inside Modern Cyber Attacks: How Systems Are Compromised Today**	• Real attack chains • How breaches actually happen • Attacker mindset → defender response • Minimal tools, maximum insight (great for senior speakers)
DAY 2: **14-02-26** **10:00 AM -11:30 AM** **Hands-On Workshop**	• **Hands-On Web Application Penetration Testing (VAPT Basics)**	• Web app architecture basics • OWASP Top 10 • Burp Suite hands-on • Simple vulnerability exploitation • Defensive takeaways after each attack
DAY 3: **15-02-26** **10:00 AM -11:30 AM**	• **The Future of AI in Cyber Defense**	• Discussion on the evolving AI arms race in cyber defense by 2026

Panel Discussion		- Role of Agentic AI and autonomous response systems in modern security - Shift from traditional security tools to AI-driven defense mechanisms - Challenges of maintaining human oversight against machine-speed attacks - Future implications of AI on cyber resilience and security strategy

Track 2: MTT-S   Topic: Power Electronics

About: The *IEEE MTT-S* **Chapter** promotes advancements in electronic systems, microwave technologies, and energy-efficient solutions that drive modern engineering innovations. This track highlights **Power Electronics** as a critical backbone of contemporary electrical and electronic systems, enabling efficient power conversion, control, and management across applications such as renewable energy, electric vehicles, industrial automation, and smart grids.

TIMELINE for Power Electronics (Track 2 MTT-S)

DATE & TIME	TOPICS	SUBTOPICS TO BE COVERED
DAY 1: **13-02-26** **12:00 PM -1:30 PM** **Talk Session**	● **Smart BMS for Electric Vehicles: Design, Challenges & Future Trends**	● BMS basics in EVs ● Power electronics in BMS ● Monitoring, protection & balancing ● Safety, thermal & fast-charging challenges ● Smart & AI-enabled BMS trends ● Interactive Q&A
DAY 2: **14-02-26** **12:00 PM -1:30 PM** **Hands-On Workshop**	● **Design & Simulation of DC-DC Converters Using LTSpice**	● Overview of DC–DC converters and applications ● LTSpice simulation basics ● Buck converter design & simulation ● Boost converter design & simulation ● Ripple, regulation & efficiency analysis ● Role of DC–DC converters in BMS & EVs

DAY 3: 4-04-21 Conclusive Seminar/Scope Discussion 12:00 PM -1:30 PM	• **Panel Discussion**	• Evolution of power electronics in EVs • BMS, charger & converter integration • Role of wide bandgap devices • Industry skills and expectations • Future scope in power electronics

Track 3: WIE   Topic: Holistic Health and Well-Being

About: This *IEEE WIE track* focuses on **holistic and preventive healthcare**, addressing **physical, mental, and emotional well-being** across *genders and life stages*. The program blends **foundational concepts of holistic health**, *gender-sensitive health awareness*, and **mental well-being**, along with **practical learning** through a *hands-on Ayurvedic wellness workshop* and an *interactive panel discussion* on balancing **personal well-being with academic and professional aspirations**.

TIMELINE for Holistic Health and Well-Being (Track 3 WIE)

DATE & TIME	TOPICS	SUBTOPICS TO BE COVERED
DAY 1: **13-02-26** **2:00 PM -3:30 PM** **Talk Session**	• **Inclusive Health Awareness and Preventive Care**	• Fundamentals of Holistic Health and Preventive Healthcare • Physical and Mental Health Across Life Stages (Inclusive Perspectives) • Gender-Sensitive Health Awareness: Similarities and Differences
DAY 2: **14-02-26** **2:00 PM -3:30 PM** **Hands-On Workshop**	• **Designing Ayurvedic Wellness**	• Understanding individual doshas (Vata, Pitta, Kapha) • Self-assessment for personal imbalances • Group discussion on modern lifestyle challenges • Personalized daily routines (*Dinacharya*) • Simple home remedies & kitchen pharmacy • 30-day personalized wellness roadmap

DAY 3: **15-04-26** **2:00 PM -3:30 PM** **Conclusive Seminar/Scope Discussion**	• **Panel Discussion**	• Balancing personal well-being with academics and careers • Managing expectations and long-term goals • Handling challenges in demanding environments • Importance of mentorship and support systems • Sustaining motivation, growth, and well-being

Track 4: GRSS   Topic: Evolution of Sensors in Geoscience & Remote Sensing

About: This *IEEE GRSS track* explores the evolution of **remote sensing sensors** and their role in **precise Earth observation**. Covering multispectral, hyperspectral, and SAR technologies, the program integrates **fundamental concepts, hands-on analysis, and future innovations**. Through a webinar, practical workshop, and expert panel discussion, participants will gain **theoretical insight and practical exposure** to modern tools, applications, and emerging trends in geoscience and remote sensing.

TIMELINE for Evolution of Sensors in Geoscience & Remote Sensing (Track 4 GRSS)

DATE & TIME	TOPICS	SUBTOPICS TO BE COVERED
DAY 1: 13-02-26 4:00 PM -5:30 PM **Talk Session**	• **Evolution of Remote Sensing Sensors – From Multispectral to Hyperspectral & SAR**	• Remote sensing & sensor evolution • Multispectral sensors: basics & uses • Hyperspectral imaging: spectral insights • SAR: principles & advantages • Optical vs radar sensors • Applications in Earth observation • Interactive Q&A
DAY 2: 14-02-26 4:00 PM -5:30 PM **Hands-On Workshop**	• **Hands-on Remote Sensing with Google Earth Engine**	• Introduction to Google Earth Engine • Exploring the GEE interface • Accessing Landsat and Sentinel datasets • Visualizing satellite imagery • Understanding bands and resolution • Basic analysis and interpretation of satellite data

DAY 3: **15-04-21** **4:00 PM -5:30 PM** **Conclusive Seminar/Scope Discussion**	● **Panel Discussion**	• Next-generation Earth observation sensors • AI & ML in remote sensing • Data accuracy and volume challenges • Advances in hyperspectral & SAR • Careers & research opportunities

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