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FACULTY DEVELOPMENT PROGRAMME

On

AdvancedParadigmsin AI-Integrated Information Security Systems

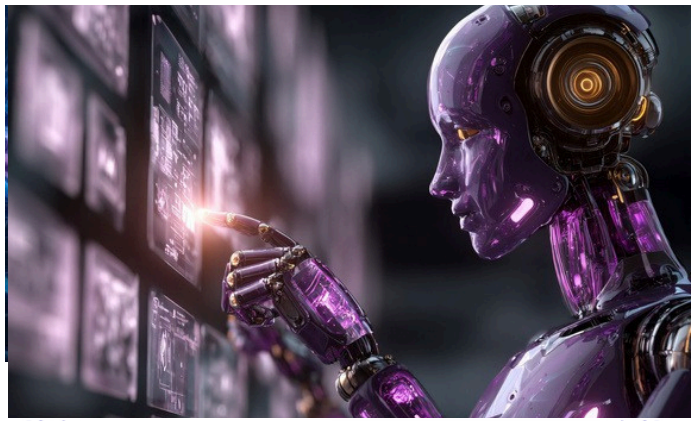
(HYBRID MODE)

ISEA PHASE-III PROJECT SPONSORED

26.12.2025 To 31.12.2025

26&31 (Offline),27,29&30(Online)

10 AM- 12 PM, 2 PM - 4 PM



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&

Department of CSE

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(Autonomous)

(Spoke Institute)

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ABOUT LBRCE

Lakireddy Bali Reddy College of Engineering (LBRCE) was founded through Lakireddy Bali Reddy Charitable Trust in 1998 by eminent philanthropist and NRI Entrepreneur Sri Lakireddy Bali Reddy, a Chemical Engineer by qualification. Since the inception, LBRCE aims at co-creating value-based technical excellence, which ultimately leads to the development of the rural area where the college is situated. Lakireddy Bali Reddy College of Engineering (LBRCE), approved by AICTE and affiliated to JNTUK, Kakinada is an Autonomous Institution since 2010 and has been accredited by NAAC with 'A' Grade (3.20 / 4 in Cycle-2), NBA (ASE, CE, CSE, IT, ECE, EEE, & ME) under Tier-I and ISO 21001:2018, 14001:2015, 50001:2018 Certified.

PARTICIPANTS

- The faculty members, Research scholars & PG Scholars of the AICTE approved institutions and Industry Personnel Attendance is mandatory
- All participants will receive the certificate of participation
- Follow the updatesinWhatsApp Group

REGISTRATION:

Register Here: **https://forms.gle/g1hM3oRDDbTQQff99**
Registration Fee: **FREE**
Registration Last Date: **24.12.2025.**
Accommodation and TA for the 3rd AC ticket fare will be provided to outside participants.

ABOUT FDP

The Faculty Development Program (FDP) titled "Advanced Paradigms in AI-Integrated Information Security Systems" is a five-day intensive technical program designed to equip faculty members, researchers, and industry professionals with cutting-edge knowledge in the convergence of artificial intelligence and cybersecurity.

This FDP focuses on emerging paradigms, including agentic AI for autonomous cyber defence, adversarial machine learning, AI-driven drone and radar security, cognitive RF systems, and digital forensics for authenticating synthetic media. Participants will gain exposure to next-generation security architectures, real-world attack vectors on AI systems, and robust defence mechanisms that ensure resilience, trust, and accountability in intelligent systems.

The program emphasises theoretical foundations, practical frameworks, and real-world case studies, enabling participants to integrate advanced AI-enabled security concepts into teaching, research, and applied system development.

OBJECTIVES

- Tohelp and understand the role of autonomous and agent-based AI in modern cyber defense and self-healing security systems. To introduce common attacks on AI models and train participants in basic techniques to improve model security, data integrity, and privacy. To familiarize participants with AI-based security solutions used in emerging areas such as drones,radar systems, RF communication, and edge computing.
- To strengthen faculty knowledge in digital forensics and deepfake detection, including biometric security challengesand ethical compliance.

FDP OUTCOME

- To understand and apply AI-based security techniques for automatic threat detection and response.
- To recognize attacks on AI systems and use basic methods to protect models and data.
- To gain knowledge of securing AI-enabled systems
- To understand AI-based digital forensics and ethical practices.

5 - DAY SCHEDULE

- **Day 1: Autonomous Cyber Defense and Agentic AI Architectures**
  - Agentic AI in Security Operations
  - Reinforcement Learning for Network Resilience
  - Next-Generation SOC Automation
  - Integrating LLMs into Security Operations Centers
  - Identity Management for Machine Agents
  - Day 1 Reflection
- **Day 2: Adversarial Machine Learning and Model Robustness**
  - Taxonomy of Attacks on LLMs
  - Data Integrity and Poisoning Defenses
  - Model Inversion and Privacy Preservation
  - Resource Depletion Attacks
  - Day 2 Reflection
- **Day 3: Security Frameworks for Unmanned Aerial Systems (UAS)**
  - Securing Swarm Intelligence
  - Navigation Security against Spoofing
  - Adversarial Computer Vision
  - AI-Enabled Counter-UAS Systems
  - Day 3 Reflection
- **Day 4: Cognitive Radar and AI in Signal Processing**
  - Principles of Cognitive Radar
  - RF Fingerprinting and Device Identification
  - Spectrum Sensing and Management
  - Day 4 Reflection
- **Day 5: Digital Forensics and Synthetic Media Authentication**
  - Deepfake Detection Methodologies
  - Real-Time Biometric Security
  - Media Provenance Standards
  - Ethical and RegulatoryImplications

Contact

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