

Format: 9014/0

A Report on Invited Lecture on "Unlocking IoT: Concepts, Technologies, and Future Pathways"

Organized by : Department of Electronics & Communication Engineering

Speaker : Dr. Ch. Naga Srinivasa Rao, SRM University AP.

Venue : VI -203

Date : 7th October 2025

Time : 9.30 PM to 4.30 PM

Conducted for : II year students of ECE

No. of participants : 64

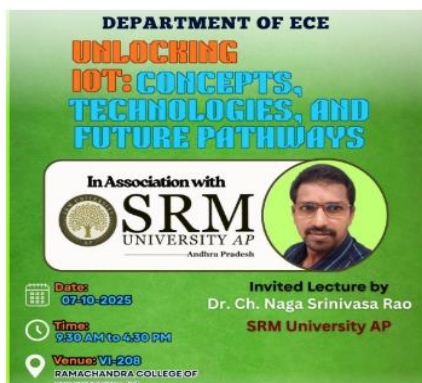
Faculty Coordinators: Mrs. Y. Lavanya, Associate Professor

1. Report in brief by Organizer / Coordinator / Convener

The Department of ECE conducted an invited Lecture on "Unlocking IoT: Concepts, Technologies, and Future pathways" on 7th October 2025 at Ramachandra College of Engineering (A), Eluru for the second students of ECE. This event is conducted to commemorate Engineer's Day. This lecture provided the students with a comprehensive understanding of the Internet of Things (IoT), covering its foundational concepts, enabling technologies, hardware and software platforms, networking and security aspects, and its real-world applications. The lecture will also highlight emerging trends, industry tools, certifications, and career opportunities in IoT.

This lecture covered the key concepts including the definition, scope, and applications of IoT in smart cities, healthcare, agriculture, and industry. It explored the enabling technologies like sensors, actuators, embedded systems, wireless protocols (RFID, Bluetooth, ZigBee, LoRa, 5G), and computing models (cloud, edge, AI). Hardware platforms such as Arduino, Raspberry Pi, and ESP32 are introduced with sensor integration demos. Software modules include IoT operating systems, programming tools (Arduino IDE, Python, Node-RED), and data analytics. Networking topics focus on MQTT, CoAP, HTTP, topologies, and security challenges. Real-world projects include smart home automation and environmental monitoring. Emerging trends feature AI/ML, blockchain, digital twins, and metaverse. The course concluded with industry tools (AWS, Azure, and Google Cloud), certifications, and career pathways.

2. Few Glimpses of the Event:



3. Feedback from Participants:

The students appreciated the lecture on the Internet of Things (IoT) for its comprehensive and well-structured coverage of concepts, technologies, and applications across multiple domains. They valued the clear explanations of hardware platforms, networking protocols, and emerging trends, which provided a strong theoretical foundation. While the session was primarily conceptual, students expressed enthusiasm for the idea of adding hands-on exercises, live demonstrations, and interactive labs in future lectures. They felt that such practical components would complement the rich theoretical knowledge gained, enhance their technical skills, and give them the opportunity to directly apply what they learned in real-world scenarios.

.....Student Participants

Savarni
Coordinator

Reddy
HOD

Saravali
Dean- Academics

Heavenlydharma
Principal