

**AICTE Vibrant Advocacy for Advancement
and Nurturing of Indian Languages (VAANI)**

**Two-day National Workshop on
"Emerging Semiconductor Technologies for
Smart Sustainable Systems: AI-IoT Integration"**

25-09-2026 to 26-09 -2026

Organized by

**Department of
Electronics & Communication**
(NBA Accredited)



Technical Associations



V.V.P.
ENGINEERING COLLEGE
AICTE Approved & Affiliated to GTU, Ahmedabad

NBA Accredited Electrical,
Electronics & Communication, Civil Departments

**V.V.P. Engineering College
Rajkot - 360005 (Gujarat)**

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Organizers

Patron

Dr. Piyush B. Vanzara (Principal, VVPEC)

Organizing Committee

Dr. Charmy H. Changela (HODEC)

Workshop Coordinator: Prof. Sheron H. Christy

Workshop Co-coordinator: Dr. Vishal D. Nimavat

Registration and Guidelines

Registration is open to: Faculty Members of AICTE Approved Institutions, Research Scholars, M.Tech Scholars/Research Fellows, Working Professionals from Industry interested or working in area of Workshop theme.

No Charge for Registration, Course and Certification
No TA DA shall be provided

Registration Process:

Participant can register for the AICTE VAANI Workshop as per the specified process of ATAL Academy

Visit: www.aicte-india.org/atal for registration

Refer ATAL Scheme document for assessment criteria to receive certificate

-: Timings of Two-day Workshop :-

10 AM to 5 PM each day

Venue :- V.V.P. Engineering College, Rajkot

Mode :- Offline

For Correspondence



Prof. Sheron Henry Christy
8780639335



Dr. Vishal Dineshchandra Nimavat
9313973603

Objective of the Workshop

This Workshop aims to bridge the gap between academic research and industrial application by empowering participants with comprehensive knowledge of emerging semiconductor technologies, AI-IoT integration, and advanced hardware design. The workshop objective is to foster expertise in AI-native IoT, Smart connected systems, and 3D IC trends, while providing hands-on training in CMOS digital design, Verilog, and FPGA-based system implementation to build sustainable, intelligent solutions from sensors to silicon. Attendees will explore the future of AIoT hardware, learn to bridge lab-scale designs to real-world applications, and gain practical expertise in Quick Start Xilinx FPGA design to create highly efficient, and sustainable next-generation systems.

Outcomes of the Workshop :

This Workshop will successfully equip participants with foundational and advanced knowledge in AI-native hardware, enabling them to transition from conceptualizing AIoT systems to designing functional silicon, with a specific focus on low-power CMOS design and Xilinx FPGA-based prototyping. Participants will gain practical insights into bridging sensors with real-world applications using AIoT essentials, explored cutting-edge 3D IC trends, and developed hands-on skills in Verilog HDL, FPGA logic implementation, and edge AI deployment. Through industry-driven sessions on smart sustainable hardware and 3D semiconductor trends, attendees will establish a solid understanding of how AI optimizes semiconductor manufacturing to enhance energy efficiency and reduce e-waste. The workshop will effectively bridge the gap between lab research and industry-relevant AIoT applications, preparing participants to contribute to India's indigenous chip design capabilities, aligned with Viksit Bharat 2047 goals.

About V.V.P. Engineering College

Vyavasayi Vidya Pratishthan is established by Rajkot Nagrik Sahakari Bank Ltd to promote excellence in engineering education. The trust was founded in 1996 with the objective of meeting the technical requirements of Gujarat. V.V.P Engineering College has been marching ahead with a vision of transforming aspiring engineers into industry-ready engineers, serving the nation at large. In 2025, Institute's 3 Departments Electronics and Communication, Electrical and Civil are Re-Accredited by NBA. The Institute has taken initiative to offer Minor/Honors programs in various emerging fields by EC/Electrical/Mechanical/Civil and Chemical branches in 2025. Department of Electronics and Communication has offered course on Internet of Things under above initiative. The Institute being an active IIRS-ISRO Nodal Center since June 2020, more than 135 IIRS-ISRO Outreach Programmes have been coordinated with more than 1000 successful participations amongst students & Staff. The Institute has also an active ISRO-START programme Nodal Center since 2023. The Institute has received Best IIRS Nodal Center Award 2022 all over India in 2023. In 2025, the Institute has successfully hosted IIC Regional Meet organized by Innovation Cell, AICTE, Ministry of Education, Government of India.

Institute Vision:

To be an exemplary institute, transforming students into competent professionals with human values.

Institute Mission:

1. To provide a conducive academic environment for strengthening technical capabilities of the students.
2. To develop industry academia linkages for imparting industrial exposure to the students.
3. To organize various co-curricular and extra-curricular activities for overall development of the students.
4. To practice good governance and conduct value-based activities for making students responsible citizens.

About Department of Electronics & Communication Engineering

Department of Electronics and Communication of V.V.P. Engineering College, Rajkot has been the most efficient and progressing department. EC Department has highly qualified and Experienced Staff among which 5 Faculties are Doctorate. The Department maintains a strong placement record, consistently facilitating opportunities for students in reputable multinational and core companies. In 2025, the Department received ReAccreditation by NBA. The Department is committed to fostering awareness and advancements in cutting-edge technologies, benefiting students, faculty, research scholars, and industry professionals. EC Department has successfully organized STTPs/Workshop/Seminar / FDP sponsored by GUJCOST (2020, 2021, 2022), CSIR, New Delhi (2024), AICTE ATAL Online FDP (2025) in thrust areas of recent technologies in Remote Sensing, GIS, AI, ML, IoT and Medical Image Processing. In 2025, EC Department has collaboratively and successfully organized AICTE Sponsored National Conference on Recent Trends and Innovations in IoT. Prof. Sheron H. Christy (EC) has received the Annual Outreach Award 2022 as a Nodal Coordinator for her significant contribution in IIRS Outreach Programmes from IIRS-ISRO, Dehradun.

Department Vision:

To evolve as a recognized Electronics and Communication Engineering Department preparing capable engineers with good human qualities.

Department Mission :

1. To facilitate adequate infrastructure, well equipped laboratories, experienced staff and technical experts for development of technical knowledge and skills in the students.
2. To collaborate with industries and alumni to stay updated with the latest skills and technology.
3. To organize technical and nontechnical activities for overall grooming of the students and to make them good citizens.

Resource Persons



Dr. Yagnesh Shukla
Professor and Dean, Department of Electrical Engineering
Atmiya University, Rajkot, Gujarat.
Experience: 27 years



Dr. Mahesh Jivani
Professor and Head, Department of Electronics
Saurashtra University, Rajkot, Gujarat.
Experience: 28 years



Dr. Shahera Patel
Professor, Department of Electronics
Sardar Patel University, Vallabh Vidyangar, Gujarat.
Experience: 34 years



Dr. Hetal N. Patel
Professor, Electronics and Communication Engineering
A.D. Patel Institute of Technology
New Vallabh Vidyangar, Gujarat.
Experience: 25 years



Mr. Jayesh Chauhan
Lead Engineer, ASIC Physics Design
E-Infochips, Ahmedabad, Gujarat.
Experience: 12 years



Mr. Hiral Kumar Patadiya
Senior Tech. Manager, FPGA/IP Core design,
System level solutions India Pvt. Ltd.
Vithal Udyognagar, Anand, Gujarat.
Experience: 16 years

Workshop Contents

- AI Native IoT: The future of Smart Sustainable Hardware
- AIoT Essentials: Building Smarter Connected Systems
- Sensors to Smart IoT systems: Bridging lab to real world applications
- Designing Intelligent Systems: CMOS Digital Design and Verilog for AI-IoT Applications
- Quick Start Lab: Xilinx FPGA Design
- 3D IC: Emerging trends in Semiconductor
- Field Programmable Gate Array (FPGA) in Semiconductor Applications
- Hands on FPGAs: from Logic to Silicon