ACHARYA

ACHARYA INSTITUTE OF TECHNOLOGY

Department of Electronics & Communication Engineering

NAAC A ACCREDITED

ATAL-FDP on Next Generation RF IC Design for 5G

Architectures, Challenges & Industry Applications

ATAL

18th February to March 1st, 2026 | 09:00 AM to 05:30 PM

Venue: MBA Seminar Hall, Acharya Campus

About the Program

The Faculty Development Program on "Next-Generation RF IC Design for 5G: Architectures, Challenges, and Emerging Industry Applications" aims to equip faculty members, researchers, and industry professionals with in-depth knowledge and practical insights into the design and development of radio frequency integrated circuits tailored for 5G technologies. With the exponential growth in wireless communication demands, the transition to 5G has introduced unprecedented challenges in RFIC architecture, mmWave design, beamforming, power efficiency, and system integration. This program will cover fundamental and advanced concepts, recent research breakthroughs, and real-world industry applications through expert-led sessions. Participants will gain exposure to the latest tools, simulation platforms, design methodologies, and compliance standards essential for innovating in this high-frequency, high-bandwidth era. The FDP also fosters interdisciplinary collaboration and encourages participants to engage with emerging trends such as AI-assisted RF design, antenna-on-chip integration, and thermal-aware circuit optimization..

Objectives of the Program:

- To provide comprehensive knowledge of advanced RF Integrated Circuit (RFIC) architectures used in 5G communication systems, with a focus on transceiver design, frequency synthesis, and front-end integration.
- To explore key design challenges and emerging techniques in high-frequency, low-power, and high-linearity RFIC development for millimeter-wave and sub-6 GHz 5G applications.
- To bridge academia and industry perspectives by highlighting real-world applications, design tools, and semiconductor technologies driving the evolution of 5G and beyond communication systems.

Expected Outcome of the Program:

- Participants will gain a strong conceptual and practical understanding of modern RFIC architectures and design principles relevant to 5G communication systems, including transceiver blocks and front-end components.
- Participants will be able to analyze key RFIC performance parameters such as noise figure, linearity, power efficiency, and bandwidth in high-frequency IC designs.
- Participants will become familiar with state-of-the-art RFIC design and simulation tools commonly used in industry for 5G and beyond communication systems.
- Participants will identify current research trends and potential innovation areas in RF circuit design, millimeter-wave integration, and system-on-chip (SoC) implementations.
- The FDP will strengthen collaboration between academia and industry by exposing faculty members to real-world design challenges, fabrication processes, and industrial application case studies.

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Committee Members

PATRONS +

ADVISORY COMMITTEE +

CONVENERS +

ORGANIZING SECRETARIES +

ORGANIZING COMMITTEE +

Resource Persons

Dr. S. R. Raghavan
Designation: Professor (HAG),
Retired NIT Trichy

Dr Radha Krishna Ganti
Designation: Professor of Electrical Engineering
IIT Madras

Dr. Debajit De
Designation: Senior R&D Engineer Mercedes-Benz R&D India, Bengaluru

Dr. Rakesh Kumar Jha
Designation: Associate Professor, Department of ECE, Shri Mata Vaishno Devi University, Jammu & Kashmir

Dr. Sudhindra K. R.
Designation: Professor
BMS College of Engineering (BMSCE), Bengaluru

Dr. Ravishankar
Designation: Professor,
Department of ECE,
RVCE, Bengaluru

Dr. Subbarao Boddu
Designation: Assistant Professor,
Department of EE, Mahindra University,
Ecole Centrale School of Engineering, Hyderabad.

Dr. Roseline Immaculate
Designation: Associate Professor,
MSRIT (MS Ramaiah Institute of Technology),
Bengaluru

Dr. Dhaval Patel
Designation: Associate Professor, Ahmadabad University

Dr.Adarsh Patel
Designation: Assistant Professor,
SCEE, IIT Mandi, HP

Mr. Ravikiran Annaswamy
Designation: CEO
Numocity Technologies,Bengaluru

Dr Rajeswari
Designation: Professor and Dean of Academics,
AIT, Bengaluru

Prof. Devasis Pradhan
Designation: Dean Research and Development, Acharya Institute of Technology, Assistant Professor Grade 1, Department of ECE, Acharya Institute of Technology Bengaluru

Dr. Jayalaxmi H
Designation: Professor,
Dept. of ECE, AIT, Bengaluru

Mr. Munavar Shariff I
Designation: Assistant Professor, Department of ECE Acharya Institute of Technology, Bengaluru

Program Schedules

1st WEEK +

2nd WEEK +

About the College

Acharya Institute of Technology is committed to excel in teaching, learning, research and developing professionals who make a difference globally. Faculty at Acharya is not only involved in teaching but they also pursue research to push the boundaries of human knowledge. The students are motivated to pursue academic research by taking up bigger challenges. Acharya Institute of Technology is the ultimate destination, located in the south Indian city 'Bangalore', known as "Silicon Valley of India". Acharya Institute of Technology was established in the year 2000 and offers 14 undergraduate programmes, 4 postgraduate programmes and 11 research programmes. The diverse academic programmes attract nearly 5000 students from 60+ countries as well as from all parts of India. Acharya is proud of having a large notable alumnus around the world.

Vision of the Institute

- To be a premier engineering department with excellence in teaching, research and innovation, to meet the global industrial standards and to have significant impact on the well-being of the society.

Mission of the Institute

- To provide student centric learning environment, inculcate profound knowledge in both fundamental and applied areas of science and technology.
- To train and mentor the students in developing leadership qualities and team building skill.

About the department/cell organizing the event

The Department of Electronics & Communication Engineering at Acharya Institutes established in the year 2000 affiliated to Visvesvaraya Technological University(VTU), recognized by All Indian Council for Technical Education(AICTE), offers regular full-time UG, PG & research program, has pioneered in carving the careers of its students and helping to acquire the necessary skills required for continuous growth with significant impact toward society.

Acharya is reputed as one of the best engineering colleges in Bangalore, the department has been strengthened by its reputed faculty members from recognized Universities and Organizations with diversified specializations like Communication & Networking, VLSI, Signal Processing Embedded System, etc., Students are trained for broad career opportunities through industry enabled labs like TEXAS- INSTRUMENTS Technology Lab, CADENCE, C-DAC, etc., and student exchange program with different foreign universities, skill development domain training, apart from regular academics to make them competitive and industry-ready.

The Department is well-equipped with laboratories as per VTU, AICTE standards, and industry. The department handshakes with industry and institutes for ongoing research activities in the area of Artificial Intelligence, Communication & Wireless Networks, VLSI, etc. Join the best Electronics and Communication engineering college in Bangalore. Department aims at a holistic approach toward the development of students and society at large through building technical skills and managerial quality.

Acharya Institute of Technology

Acharya Dr. S. Radhakrishnan Road, Acharya P.O
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LOCATE US

Event Coordinator

Mr. Jagadish M
Assistant Professor,
Department of ECE, AIT