AICTE Training and Learning (ATAL) Academy Sponsored

6 Days Online Faculty Development Program

On

"Recent Trends in Solar Energy Conversion: From Silicon to Perovskite Photovoltaics"

5th – 10th January, 2026

(Application No: 1748499118)

Organized by

Department of Electronics & Telecommunication Engineering

ACPatil College of Engineering

Jawahar Education Society's

A. C. PATIL COLLEGE OF ENGINEERING

(NAAC accredited with B+ Grade for 5 years)

Kharghar, Navi Mumbai – 410210

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About ACPCE

The 3-acre ACPCE campus features modern infrastructure and a prime location in Kharghar, Navi Mumbai. Set up in 1992 by the eminent leader, Honorable Shri Rohidasji Patil. Jawahar Education Society's A. C. Patil College of Engineering is a distinguished technical institute offering graduate programs in Engineering, postgraduate programs in Management, and doctoral research opportunities in Engineering. The institute is approved by the apex bodies, AICTE New Delhi and DTE Maharashtra State. The institute is affiliated to the University of Mumbai. As an outcome of our efforts for enhancing the quality in education, the institute has been granted accreditation for five years by NAAC. Recently our Institute has received an Educational iCON award as 'Best Engineering College' for Industry Interaction.

Vision of the Institute

To create skilled professionals and engineers for catering the needs of industries and society.

Mission of the Institute

- To provide qualified faculty and required infrastructure to impart quality education inculcating continuous learning attitude
- To provide platform for the interaction between academia and industry
- To inculcate social values and responsible attitude amongst students through co-curricular and extracurricular activities

About Department

Electronics & Telecommunication department established in year 2003. It is one of the best teaching and learning centres with extensive reputation. Department develops skills and intensify knowledge of student in the field of Electronics & Telecommunication Engineering. It has been instrumental in producing quality engineers of global standards with capabilities of facing new challenges in the Telecommunication engineering and technology. Several students who have passed out successfully of this department are holding significant positions at esteemed companies.

Vision of the Department

To create socially responsible Telecommunication engineers.

Mission of the Department

- Ensure quality education by maintaining quality control and retaining good staff
- Maintain continuous interaction with industries and technology developers and to provide platform for interaction of student and faculties with industry experts
- To encourage the students to participate in extracurricular and co-curricular activities for personality development

Chief Patrons

Hon. Vinay Rohidasji Patil
President, Jawahar Education Society

Hon. Kunal Rohidasji Patil
Secretary, Jawahar Education Society

Patron

Dr. V. N. Pawar
Principal, A. C. Patil College of Engineering

About the Program

The Faculty Development Program (FDP) on **"Recent Trends in Solar Energy Conversion: From Silicon to Perovskite Photovoltaics"** aims to provide an in-depth understanding of emerging solar technologies. This program will explore the evolution of photovoltaic materials, highlighting advancements from conventional silicon-based solar cells to cutting-edge perovskite photovoltaics. It will feature expert sessions on device physics, fabrication techniques, simulation tools, and performance analysis. Designed for faculty, researchers, and industry professionals, the FDP will foster knowledge sharing, innovation, and collaboration in the field of solar energy conversion, aligning with global sustainability goals and the future of renewable energy technologies.

Program Objective

- To introduce participants to the fundamentals and advancements in solar energy conversion technologies.
- To explore the transition from traditional silicon-based photovoltaics to next-generation perovskite solar cells.
- To enhance knowledge of fabrication methods, simulation tools (SCAPS-1D), and device performance analysis.
- To promote research-driven teaching and interdisciplinary collaboration among faculty and researchers.
- To encourage innovation and adoption of sustainable energy technologies aligned with national and global energy goals.

Eligibility

- Faculty members, PG and Research scholars from AICTE-approved institutions
- Industry Professionals

Visit for More Information

https://atalacademy.aicte-india.org/FAQs

Experts from Academia and Industry

Overseas Experts

Dr. K C Bhamu, University of Ulsan, South Korea
Dr. C P Chen Ming Chi, University of Technology, Taiwan

Academia and Industry Experts

Prof. Anil Kottantharayil, IIT Bombay
Dr. Amit Soni, Manipal University, Jaipur
Dr. C S Malvi, MITS, Gwalior
Dr. Ashutosh Srivastava, Bennett University, Delhi
Dr. Sushil Kumar, CSIR NPL, Delhi
Dr. Dheeraj Magare, RAIT, Navi Mumbai
Mr. Kunal Khandelwal, DesignTech Sys Pvt Ltd, Pune
Dr. Deepak, Jasiv Green Energy, Agra
Dr. Tusharika Bannerjee, Sweekriti Asset, Navi Mumbai

Registration Process

1. Sign up

   https://atalacademy.aicte-india.org/signups
2. Login as Participant
3. Click on FDPs section, select FDP type - ATAL Online, Select Month - January, Select Thrust Area - Engineering and Management, select mode - Online
4. Identify FDP on "**Recent Trends in Solar Energy Conversion: From Silicon to Perovskite Photovoltaics", With Application No. 1748499118**
5. **Click on + button to apply for it**
6. **Upload ID card instead of NOC**

Contact

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Topics

- **Introduction to Solar Energy**
  Fundamentals and significance of solar power
- **Evolution of Solar Cell Technologies**
  From silicon to emerging materials.
- **Silicon Solar Cells**
  Design, fabrication, and advancements.
- **Perovskite Solar Cells**
  Technology, novel materials, and applications.
- **Density Functional Theory (DFT)**
  Basics and use in solar material prediction.
- **2D Energy Materials**
  Role in next-gen photovoltaic devices.
- **SCAPS-1D Hands-on Session**
  Simulation of solar cells using SCAPS.
- **Applications of Solar Cells**
  Use in domestic and industrial sectors.

Instructions for Participants as Per Guidelines of ATAL FDP Scheme

- There is "No Charge for Registration, Course and Certification" for any participant
- Notification about selection will be sent by email
- Attendance for sessions is mandatory as per AICTE ATAL guidelines.
- Exam will be conducted for certification.

Coordinator

Dr. D. S. Marathe
Associate Professor and Head
Dept. of Electronics & Telecommunication Engineering

Co-Coordinators

Prof. P. N. Ghate Assistant Professor

Organizing Committee

Prof. A. G. Patil Assistant Professor

Prof. H. T. Mahajan Assistant Professor

Prof. Rajni Maurya Assistant Professor