

## FDP/Workshop Objectives

- ❖ To provide a strong foundation in optimization techniques and machine learning concepts relevant to engineering problems.
- ❖ To familiarize participants with classical and modern optimization algorithms used in engineering design and decision-making.
- ❖ To impart hands-on experience using MATLAB for implementing optimization and machine learning models.
- ❖ To expose participants to recent trends and applications of optimization and machine learning in core engineering domains.
- ❖ To bridge the gap between theoretical concepts and practical implementation through case studies and lab sessions.
- ❖ To encourage research orientation and interdisciplinary applications in optimization and machine learning.

## FDP/Workshop Outcomes

After completion of this workshop, participants will be able to:

- ❖ Understand and explain fundamental concepts of optimization and machine learning techniques.
- ❖ Develop and implement machine learning models using MATLAB for classification, regression, and prediction tasks.
- ❖ Apply optimization techniques to tune and improve ML models for enhanced performance.
- ❖ Use MATLAB toolboxes effectively, such as Optimization Toolbox, Global Optimization Toolbox, and Machine Learning Toolbox.

## Contact Details

Mobile: +91-9885308964/9885785450

Email Id: [balasubbareddy\\_eee@cbit.ac.in](mailto:balasubbareddy_eee@cbit.ac.in)

## Chief Patron

**Sri. N. Subash**

President, CBIT

## Patron

**Prof. C. V. Narasimhulu**

Principal, CBIT

## Coordinators

**Dr. M. Balasubbareddy**

Professor & HoD, Dept. of EEE

**Dr. K. Krishnaveni**

Professor & Vice Principal (Academics)

## Co-coordinators

**Dr. P. Kowstubha**

Associate Professor, Dept. of EEE

**Dr. T. Sukanth**

Assistant Professor, Dept. of EEE

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**CHAITANYA BHARATHI  
INSTITUTE OF TECHNOLOGY**  
An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad-500075, www.cbit.ac.in

COMMITTED TO  
RESEARCH,  
INNOVATION AND  
EDUCATION

**47**  
years

## Department of Electrical and Electronics Engineering

**One Week**

**National FDP/Workshop  
on**

**Optimization and Machine  
Learning Techniques for  
Engineering Applications**

**05<sup>th</sup> – 09<sup>th</sup> January 2026**



**Chaitanya Bharathi  
Institute of Technology**

(Autonomous under UGC)

Affiliated to Osmania University

Kokapet (Village), Gandipet,

Hyderabad – 500075

Telangana State, India.

[www.cbit.ac.in](http://www.cbit.ac.in)

## Chaitanya Bharathi Institute of Technology (CBIT)

CBIT is one of the premier Engineering Institutes in India, a pioneer in Telangana State, which is at the idyllic surroundings of Gandipet Lake, Hyderabad. The college offers 12 UG and 10 PG programs. It has been standing as a temple of knowledge for the past 45 years by producing more than 25,000 Eminent and skillful Graduate Engineers, who are successful in their Careers, serving all over the world. CBIT Students are prepared and perfected to secure Placements in reputed MNCs. The Institute has been accredited by NAAC – UGC with 'A++' Grade and several programs are accredited by NBA – AICTE. The UGC has granted Autonomous Status from the Academic Year 2013-14 onwards. Stringent Academic Standards, Industry Compliant Teaching Methodology, Research Projects from Private and Public Sector organizations Industries in Engineering and Management and Consultancy Practice, enabled the Institute to establish its Identity in Technical Education and is ranked as one of the best amongst Private Engineering Colleges in both the Telugu Speaking States.

### About Department

CBIT started the Electrical & Electronics Engineering UG program in 1994 and has been accredited 5 times since 2004 by NBA. The recent accreditation in 2021 is for 6 years. The intake was increased from 60 to 120 in the Academic Year 2013-14. The Department started offering a PG course in Power Systems and power Electronics in 2006 with an intake of 18 and was accredited by the NBA in the year 2016. The department has received grants worth around ₹90 lakhs from AICTE under RPS, SPARC, MODROBS, FDP, STTP, etc. The Department is offering consultancy services worth ₹21 lakhs in collaboration with Foreign Universities in Renewable Energy Systems. The Department is also certified by ISO 9001:2015. The Department is recognized as a Research Centre in 2017 by Osmania University to carry out research for the award of Ph.D. degrees.

## About FDP/Workshop

The One Week National FDP/Workshop on Optimization and Machine Learning Techniques for Engineering Applications is designed to equip faculty members, researchers, students and industry professionals with comprehensive knowledge and practical skills in modern optimization and machine learning methodologies. With the rapid advancement of intelligent systems and data-driven engineering solutions, optimization and machine learning have become essential tools across all engineering disciplines.

This FDP/workshop emphasizes a balanced blend of theory and hands-on practice using MATLAB, enabling participants to understand, implement, and analyze optimization algorithms and machine learning models effectively. Through expert lectures, practical MATLAB sessions, case studies, and interactive discussions, participants will gain insights into recent trends, research challenges, and industrial applications of optimization and machine learning. The FDP also aims to enhance teaching effectiveness, promote interdisciplinary research, and

### Workshop Registration Link

<https://forms.gle/5GZJu2LJezYwTiDx5>

### Registration Fee

**CBIT Participants: No Fees**

**Other participants: ₹100**



**Merchant Name:** CBITSTUDENTACTIVITIES  
**Mobile Number:** 8466997204

## Resource Persons

### Dr. Sumit Bhardwaj

Manager – Analytics, Concentrix India, Former Postdoctoral Research Scholar, Lund University, Sweden

### Dr. Gaurav Kumar

Founder of Magma Research and Consultancy Services, Ambala

### Dr. Jagriti Saini

Founder Eternal RESTEM, Sunder Nagar, HP

### Dr. M.Balasubbareddy

Professor, Electrical and Electronics Engineering CBIT, Hyderabad



**EEE department Front View**