

Department of Electronics and Communications Engineering



Faculty Development Programme(FDP) on Constructive Technologies in Electronics & Communications

Nov 29 - Dec 4, 2021.



J. B. Institute of Engineering & Technology
(UGC Autonomous)
Accredited by NAAC & NBA, approved by AICTE & Permanently Affiliated to JNTUH

Department of Electronics & Communication Engineering

Date: 24-11-2021

CIRCULAR

This is to inform all the faculty members of ECE and ECM Department that a faculty development program on Constructive Technologies in Electronics and Communications will be held on 29-11-2021 to 04-12-2021.

For Registration can contact Dr. M Salauddin.

circulate

Towheed.s
HOD ECE

HOD - ECE
JB Institute of Engineering & Technology
(UGC Autonomous)
(Accredited by NAAC, approved by AICTE,
Permanently Affiliated to JNTUH)
Bhaskar Nagar, Mothi Bunder Mandal,
Hyderabad - 500 075

③ *Soumya* 24/11/21

[Signature]
24/11/21

[Signature]

[Signature]

[Signature]

[Signature]

SM

Boucher

 One week FDP on “Constructive Technologies in Electronics and Communications” 29th NOV- 4th DEC, 2021 Registration Form Name of the Applicant: Name of Organization: Designation & Department: Experience : Address for correspondence : mobile : Mail Id : Category: UG/PG Student Faculty/Research Scholar Industry Participant Signature of the Applicant	Chief Patron Sri. J V Krishna Rao Patron Maj. Gen.Dr. S S Dasaka CEO,JBGEI Dr. P. C. Krishnamachary Principal, JBIET Co Patron Dr. Niraj Upadhayaya Dean, R&D Dr.Towheed Sultana HOD,ECE Conveners Dr.Md. Salauddin Mr.Rajkumar D Bhure Coordinators Mr.N Ramesh Babu Mr. Ravi Kiran	 One week FDP on “Constructive Technologies in Electronics and Communications” 29th NOV-4th DEC, 2021  Organized By IETE STUDENT FORUM  J B Institute of Engineering and Technology (UGC Autonomous, Accredited by NBA, NAAC, Approved by AICTE, Affiliated to JNTU(H)) Bhaskar Nagar, R.R Dist., Telangana - 500076. www.jbiet.edu.in
--	--	--

Date	Time	Speakers	Topic
29.11.2021	12:10pm-1:00pm	Inauguration	
	07:00pm-8:30pm	Dr.Sahana, Researcher, Robert Bosch TN	Deep Learning
30.11.2021	02:10pm-3:30pm	Dr. Niraj UpadhayayaDean R&D, JBIET Hyd	Machine Learning
01.12.2021	02:10pm-3:30pm	Dr. B. Khaleelu Rehman, Professor, Nalla Malla Reddy Engineering College	Xilinx IP cores and it'sapplications
	07:00pm-8:30pm	Pantech e learning, Hyd	Covid-19 Detection Using X-RayImages
02.12.2021	02:10pm-3:30pm	Dr.Ibrahim Sadhar Prof & IQAC, JBIET Hyd	Application of Vector Correlation in Optic DiscDetection
03.12.2021	02:10pm-3:30pm	Mr. Ravi Kiran Asst. Prof. ECE Dept. JBIET	FinFet Technologies
04.12.2021	2:10am-3:30pm	Dr. V Chandra Sekhar,Taasha Technologies, Ahmadabad	Optical Character Recognition / Deep Learning
	03:30pm-4:00pm	Concluding Session	

ABOUT COLLEGE

As one of the top ten most preferred institutions in Telangana, JBIET continues to strive to impart technical (engineering) and professional education of very high standards. The aim of JBIET is to mould young learners into globally competitive professionals who are professionally deft, intellectually adept and socially responsible.

The expert faculty at JBIET inculcate the best values and principles, ascribing to a modern curriculum; while the students imbibe pragmatic perception and a pro-active nature, which spurs them towards exploration and advanced inquiry, resulting in valuable insights.

The Placement record of JBIET over the years is proof of our right efforts in enabling the best in class engineering, technical and professional education to aspirants.

ABOUT DEPARTMENT

The Department of Electronics and Communication Engineering was established in the year 1998 with an intake of 60 in B.Tech. The intake was increased to 90 in the year 2000 and 120 in the year 2004. The M. Tech program in VLSI System Design was introduced in 2005 with an intake of 18 and it was raised to 24 in 2014. The B.Tech. Program was accredited by NBA in 2006 and 2021.

The Department of ECE is best known for its talented and dedicated professionals renowned for their excellence in various specializations in the field of Electronics & Communication Engineering. The faculties have completed two consultancy research projects and one more project is ongoing. 6 faculties have patents including National and Australian Govt. whereas, there are more than 50 research articles published in peer-reviewed Journal and Conferences for the last 3 years. ECE has also received AICTE grant under MODROB.

For the last ten years, the students of ECE, who walked out of the portals of the institute successfully, holding their degrees, were immediately inducted into the MNCs of high reputation in India & abroad.

ABOUT FDP

The 21st century is the age of information. However, as information technology accelerates, the hardware that supports it will consume infinite amount of power and communication bandwidth. A completely new hardware technology is required to create a sustainable society for the next 100 years. The operating principles of biological neural circuits are now attracting attention as a potential source of such technology. Their resilience and energy-saving properties, which have been refined through long evolution, are exactly what is required to build a sustainable society. In our laboratory, we are extracting useful technologies from neural circuits and applying them to the next generation of information processing hardware. We utilize highly versatile circuit technology and material technology to create a variety of functions

Objectives of the Programme

The objective of this FDP is to give hands on training to the faculty in Constructive Technologies in Electronics & Communications.

The topics to be covered are related to Electronic devices for AI hardware, IoT sensors using phase transition materials and Electronic circuits for edge learning

- Day 1: Deep Learning.
- Day 2: Machine Learning.
- Day 3: Xilinx IP cores and its applications.
- Day 4: FinFet Technologies.
- Day 5: Optical Character Recognition/ Deep Learning

Event Description / Report

Electronics and Communication Engineering (ECE) department, J B Institute of Engineering & Technology, Hyd organized One week Faculty development program (FDP) on “Constructive Technologies in Electronics & Communications.

The program (FDP) started with the Inauguration Function, Principal, Dean Academics, HOD, Coordinator and other dignitaries presented their views on the importance and objective of conducting the FDP and motivated all the participants to effectively utilize all the sessions and gain practical knowledge.

During First day, Dr. Sahana Prabhu

Research Scientist and Technical Architect at Robert Bosch Engineering and Business Solutions Private Limited Bengaluru, Karnataka has given the presentation on “Introduction to deep learning”. She has also provided exposé about its implementation.

During day two: Dr. Niraj Upadhyaya

Professor, CSE dept. JBIET has given the presentation on “Machine Learning” Highlighting about artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed and also how Machine learning focuses on the development of computer programs that can access data and use it to learn for themselves.

During day three: Dr. B. Khaleelu Rehman

Professor, Nalla Malla Reddy Engineering College has enlighten in the area “Xilinx IP cores and it's applications” how the evaluation IP cores can be fully simulated, implemented and tested in real hardware systems, i.e. different Xilinx evaluation kits or custom HW platforms.

During day four: Mr. Ravi Kiran

Asst.Prof. ECE Dept. JBIET delivered his talk on “FinFet Technologies” which was one of the emerging technology speaker has exposed how FinFet technology provides numerous advantages over bulk CMOS, such as higher drive current for a given transistor footprint, hence higher speed, lower leakage, hence lower power consumption, no random dopant fluctuation, hence better mobility and scaling of the transistor beyond 28nm.

During day five: Dr. Ibrahim Sadhar

Professor & IQAC i/c, JBIET Hyd presented a talk on “Application of Vector Correlation in Optic Disc Detection”. In this talk, compared the performance of various state-of-the-art deep-learning architectures for detecting the optic nerve head and vertical cup-to-disc ratio in fundus images

During day Six: Dr. V Chandra Sekhar

Taasha Technologies, Ahmedabad, Gujarat given exposure on the topic “Optical Character Recognition/ Deep Learning” explained how CNNs are one of the best techniques to use for deep learning OCR for the step of text detection. Convolution layers are commonly used for image classification tasks due to their efficiency in feature extraction. They allow detecting the meaningful edges in an image and (on a higher level) shapes and complex objects

FDP was concluded with the vote of thanks by convener Dr. Md. Salauddin, Associate Professor & Dean Academics, JBIET

Feedback / Suggestions

1. More number of FDPs on similar advanced tools.
2. Training program should be conducted for one week on every topic so that more practice is done.
3. One day is insufficient to learn both theoretical concepts and hands on training every topic .

Outcome of the Programme

1. The faculty's enhanced their knowledge in communication system, Deep learning, Optical Character Recognition, Application of Vector Correlation Concepts, and Machine Learning.
2. Faculty's got trained on Communication tools like GNU radio and NS3 and Mat lab Software.

Event Photographs



Sahana Prabhu is presenting

Machine Learning Types

- **Supervised learning**
 - Classification: Discrete labels
 - Regression: Real values
- **Unsupervised learning**
 - Clustering
 - Probability distribution estimation
 - Finding association in features
 - Dimensionality reduction

7:11 PM | vso-mzie-vgt

Reddy Kumar, Lavanya J, TOWHEED S..., Sahana Prab..., Satheesh N..., jaipal reddy, 33 others, You

Niraj Upadhyaya is presenting

Definition and Purpose of ML

Definition

- Machine learning (ML) is a type of artificial intelligence (AI) that allows software applications to become more accurate at predicting outcomes without being explicitly programmed to do so.

Purpose

- Generalization
- Classification
- Prediction
- Memory and Recall
- Feature Discovery

2:20 PM | swk-qghf-bwf

Niraj Upad..., Ibrahim Patel, Sowmya B, Sala uddin, ECE JBIET, Devarashett..., 9 others, You

ECE DR.B.KHALEELU REHMAN is presenting

Xilinx IP cores and its applications

One Week Faculty Development program
29th Nov-04th Dec 2021



Dr.B.KHALEELU REHMAN,
Associate Professor,
Nalla Malla Reddy Engineering College,
Dept of ECE.

01-12-2021

2:16 PM | nh-y-qztw-uov

ECE DR.B.K..., Sala uddin, TOWHEED S..., paru chandra, Anupama N..., SIRISHA DE..., SIRISHA DEVI CH joined

ECE JBIET is presenting

FDP on "Constructive Technologies in Electronics and Communications" 2 / 18 149%

OUTLINE

- Introduction
- Techniques of Diabetic Retinopathy
- DIARETDB1 Database
- Optic Disc Detection
 - i) Profile Based Method
 - ii) Generating Auto Vectors on the Reference Fundus Image
 - iii) Identification of Optic Disc based on Auto Vectors
- Blood Vessel Detection
- Contrast Stretching
- Automated Gradient Threshold

Sala uddin

samatha ga...

ECE JBIET

ramesh bab...

Lavanya J

TOWHEED S...

You

2:28 PM | rrs-emne-zrm



Activate Windows
Go to Settings to activate Windows.

Chandra Sekhar is presenting

Introduction

- Global effort to digitize and archive large collection of multimedia data
 - Most of them are printed books
- Emergence of large Digital Libraries like Universal Design for Learning (UDL), DLI(Digital Library of India) etc.
- Involvement of Google, Yahoo, Microsoft in massive digitization project
- The aim of **digitization** is for easier preservation and make documents freely accessible to the globe.



*courtesy: IIIT HYD

Chandra ...

TOWHEE...

anand g

ECE JBIET

manju ma...

Lavanya J...

samatha ...

7 others

You

7:06 PM | buw-yhnn-ktx



16
Activate Windows

Resource Persons and Participants Certificates:

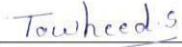
**JB INSTITUTE OF ENGINEERING & TECHNOLOGY**
UGC Autonomous
Accredited by NAAC & NBA, Approved by AICTE & Permanently Affiliated to JNTUH

CERTIFICATE OF PARTICIPATION

THIS IS AWARDED TO :

Name

has participated in a one week FDP on "Constructive Technologies in Electronics and Communications" conducted by the Department of ECE from 29-11-21 to 04-12-21.


Dr. Towheed Sultana
HOD, ECE

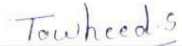

Dr. P. C. Krishnamachary
Principal, JBIET

**JB INSTITUTE OF ENGINEERING & TECHNOLOGY**
UGC Autonomous
Accredited by NAAC & NBA, Approved by AICTE & Permanently Affiliated to JNTUH

CERTIFICATE OF APPRECIATION

THIS IS TO CERTIFY THAT

Dr. V Chandra Sekhar, Taasha Technologies, Ahmedabad
Has SERVED as a **Resource Person** and delivered an expert talk on "**Optical Character Recognition/ Deep Learning**" in a one week FDP on "**Constructive Technologies in Electronics and Communications**" conducted by the Department of ECE from **29-11-21 to 04-12-21**.


Dr. Towheed Sultana
HOD, ECE


Dr. P. C. Krishnamachary
Principal, JBIET