

About ATAL FDP

As the world moves towards **renewable energy**, **IoT** is helping transform the sector through remote asset monitoring and management, better automation and control, improved efficiency, better load management, and improved cost-efficiency. Since the world is moving more towards renewable energy; in order to expand renewable energy all over the world, we need to embrace IoT data quickly and correctly. Internet of Things (IoT) is a computing concept that can connect numerous and various physical objects to the Internet thanks to sensors and other wireless technologies. That idea can be implemented in smart grids to increase their performance and cooperation with smart loads, electric vehicles (EV) and renewable energy resources (RES).

COURSE CONTENT

- Introduction to IoT
- Introduction to Green Energy Technologies (GET)
- IoT in Green energy Technologies
- Big data analytics and cloud in IoT-aided GET systems
- IoT and non-IoT communication technologies for GET systems
- Open issues, challenges of IoT-aided GET systems
- Future research directions of IoT-aided GET systems
- Articles discussion related to the selected theme

OBJECTIVE

The main objective of this FDP is to give the importance of IOT on Green Energy Technologies. The use of IoT in renewable energy production will help meet the energy demands of these smart cities efficiently. The benefits of using IOT In Renewable Energy Solutions include Automation, Cost efficiency, Grid management, Distributed system, Residential solutions.

Key Takeaways

- ✓ Real-Time Data Collection and Storage
- ✓ Real-time load flow data for grid planning and operation.
- ✓ In addition, real-time monitoring offers considerable potential for optimising existing planning and operation processes.
- ✓ The connecting all homes and appliances to the Internet and makes homes like smart homes.
- ✓ Implement IOT in smart grids

TARGET PARTICIPANTS

The program is open to all Faculties, PG and PhD scholars.

DETAILED SESSION PLANNING

Week 1 – 17-10-2022 to 22-10-2022 Online
(7:00 pm – 9:30 pm)

17-10-22	18-10-22	19-10-22
7:00 – 7:50 Session 1 (I)	7:00 – 7:50 Session 2 (I)	7:00 – 7:50 Session 3 (I)
8:00 – 8:50 Session 1 (II)	8:00 – 8:50 Session 2 (II)	8:00 – 8:50 Session 3(II)
9:00 – 9:30 Session 1 Interactions	9:00 – 9:30 Session 2 Interactions	9:00 – 9:30 Session 3 Interactions
20-10-22	21-10-22	22-10-22
7:00 – 7:50 Session 4 (I)	7:00 – 7:50 Session 5 (I)	7:00 – 7:50 Session 6 (I)
8:00 – 8:50 Session 4(II)	8:00 – 8:50 Session 5 (II)	8:00 – 8:50 Session 6(II)
9:00 – 9:30 Session 4 Interactions	9:00 – 9:30 Session 5 Interactions	9:00 – 9:30 Week 1MCQs

Week 2 – 25-10-2022 to 29-10-2022
Offline (9:30 am – 4:30 pm)

25-10-22	26-10-22	27-10-22
9:00 – 9:30 Inauguration	9:30 – 12:00 Session 8	9:30 – 12:00 Session 10
9:30 – 12:00 Session 7	12:00 – 1:00 Article 1,2 Discussion	12:00 – 1:00 Article 3,4 Discussion
12:00 – 1:00 Lunch	1:00 – 2:00 Lunch	1:00 – 2:00 Lunch
1:00 – 2:00 Travel for Visit	2:00 – 4:30 Session 9	2:00 – 4:30 Session 11
2:00 – 4:00 Visit	4:30 – 5:00 Teaching Practice	4:30 – 5:00 Teaching Practice
4:00 – 5:00 Travel back		
28-10-22	29-10-22	
9:30 – 12:00 Session 12	9:30 – 12:00 Session 14	
12:00 – 1:00 MCQs	12:00 – 1:00 Visit Report(Team)	
1:00 – 2:00 Lunch	1:00 – 2:00 Lunch	
2:00 – 4:30 Session 13	2:00 – 3:00 Reflection Journal	
4:30 – 5:00 Teaching Practice	3:00 – 4:00 Feedback	
	4:00 – 5:00 Valedictory	

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING (AUTONOMOUS)
MYLAVARAM – 521 230
Department of Electrical and Electronics Engineering
organizing

Two Week FDP on
“ Internet Of Things Based Green Energy Technologies”
[Week 1 – Online (17-10-2022 to 22-10-2022)
&
Week 2 – Offline (25-10-2022 to 29-10-2022)]

In Collaboration
with Efftronics Systems Pvt. Ltd



Chief Patrons

Sri L.Jaya Prakash Reddy, Honorary Chairman

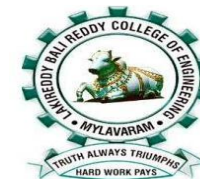
Sri L.N.R.K. Prasad Reddy, Chairman

Patrons

Sri G. Srinivasa Reddy, President, LBRCT

Dr. K.Appa Rao, Principal

Dr. K.Harinadha Reddy, Vice-Principal



Coordinator & Convener

Dr.J.Sivavara Prasad, Prof. & EEE HOD

Co-Coordinator

Dr.K.Ramalingeswara Prasad, Prof.

Department of Electrical and Electronics Engineering
Lakireddy Bali Reddy College of Engineering
(Autonomous)

TOPICS TO BE COVERED

- ✓ Introduction to IoT
- ✓ Introduction to Green Energy Technologies (GET)
- ✓ IoT Role in Green energy Technologies
- ✓ IoT in Green Energy Technology Model
- ✓ Prototypes for IoT-aided GET systems
- ✓ Big data analytics and cloud in IoT-aided GET systems
- ✓ IoT and non-IoT communication technologies for GET systems
- ✓ Open issues, challenges of IoT-aided GET systems
- ✓ Future research directions of IoT-aided GET systems

Article 1 &2- Discussion:

* Renewable Energy Integration Into Cloud & IoT-Based Smart Agriculture

*Hierarchical Control of Microgrid Using IoT and Machine Learning Based Islanding Detection

Article 3&4- Discussion:

* Smart Energy Management and Demand Reduction by Consumers and Utilities in an IoT-Fog-Based Power Distribution System

* Grid operation 4.0 – IOT technology and innovation combined in a low-voltage grid

Address for Correspondence:

Dr.J.Sivavara Prasad,
Coordinator, Professor & HOD
Department of EEE
Lakireddy Bali Reddy College of
Engineering (Autonomous)
Mylavaram- 521 230, Krishna (Dt) A.P.
E-mail:
janapatisivavaraprasad@gmail.com
8500230515

ABOUT THE INSTITUTE

The LBR College of Engineering (LBRCE) is located at Mylavaram, and is spread over 56 acres of sprawling lush green landscape spotted with orchids and grooves. LBRCE received Autonomous status from the academic year 2010-11. Institution certified by **ISO 9001:2015**, **permanent** affiliation to **JNTUK**, Accredited by **NAAC with 'A' Grade** and **AAA** graded by **NPTEL**, Recognized as College for Potential Excellence by UGC.As part of Green energy initiative,400kwp grid connected solar PV installation is done. LBRCE has a profound focus on research and has **7 advanced labs** in various Departments and 4 departments (EEE, ECE, CSE, and MECH) are recognized as **Research Centers** by JNTUK, Kakinada. The place is a hub of leading power plants like NTPS, LANCO Power and Industries like APHMEEL, HPCL and Bharat Petroleum.

ABOUT DEPARTMENT

The Department of Electrical and Electronics Engineering offers an undergraduate program in Electrical & Electronics Engineering and a Post-graduate program in the specialization of Power Electronics & Drives. The Department has well qualified faculty and state of art laboratory facilities. EEE Department is accredited by NBA (under TIER-I) and is recognized as research centre by JNTUK, Kakinada. Department has 8 licensed software: MATLAB (R2016a), PSCAD/EMTDC, LABVIEW, ETAP, MULTISIM, Xilinx, DIGSILENT and ANSYS. The department regularly conducts Guest Lectures / Seminars / Workshops / Technical paper contests/Trainings for the benefit of both faculty and student communities. Department has established two advanced labs Green Energy Technology Centre and e-Yantra Embedded Systems and Robotics Lab for enabling students to learn content beyond the syllabus .MOUs are signed with major industries to facilitate the Industry-Institution interaction for arranging Industrial visits, Internships, project works and to offer trainings to faculty and staff.

RESOURCE PERSONS

1. Dr.G.Gurunath, Professor, IISc Bangalore
2. Dr.Abdul Gafoor, Assoc. Professor, IIT Jodhpur
3. Dr.Jayabhartha Reddy, Professor, NIT Tiruchy
4. Dr.Ch.Ramulu, Asst.Professor, NITW
5. Dr.Srikumar, Professor & Principal, JNTU Vijayanagaram
6. Mr.D. Ramesh Babu, Sr.Engineer, CISCO, Bangalore

HANDS ON SESSIONS

- ✓ Efftronics, Mangalagiri, Guntur
- ✓ Microchip Technology pvt ltd, Chennai
- ✓ ORB Energy, Bangalore

REGISTRATION LINK

<https://tinyurl.com/atal-fdp-eee-lbrce>

Note: No registration fee

Maximum participants: 50

Note: The participants must attend 5 days off line sessions in the 2nd week of FDP.

STEPS TO REGISTER

- Login by using ATAL account
- Select October Month in FDPs / CPDPs/ Workshops.
- Apply for FDP under LBRCE.