ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY: VIJAYAWADA – 520 008

Department of Electrical & Electronics Engineering

Five-Day National Level online FDP on
Cutting-Edge Technologies for Electrical Engineering
From 18th to 22nd May, 2020.

About ALIET

Andhra Loyola Institute of Engineering and Technology (ALIET) - a sister Institution of Andhra Loyola college vijayawada, Loyola College Chennai, St. Xavier's Mumbai, St. Xavier's Calcutta, XLRI, St. Joseph's Bangalore - is one of the premier Institutes that sets high standards in Engineering Education, in and around the Capital Region of Amaravati, A.P. ALIET was established in the year 2008 by the Loyola College Society, Guntur-Vijayawada, to realize the Jesuit vision and with an aim to take technical education to students, especially to the under privileged and the more deserving youth of the State.

Vision:

In accordance with the Jesuit vision of higher education ALIET imparts technical education with integral formation which involves academic excellence, spiritual growth and social commitment.

Mission:

The mission of our Jesuit education is to form 'men and women for others' and mould them as global citizens with competence, conscience and compassionate commitment. Special concern is shown towards socially and economically marginalized students.

About the Department

The Electrical & Electronics Engineering Department was started with UG programme in 2008 with an intake of 60. The department has well qualified, experienced & dynamic faculty along with skilled technical supporting staff who spearhead the process of achieving the vision of the department. The department has well equipped labs & infrastructure. Till now 6 batches have passed out. Many of our student's technical papers have been published in various national & international technical symposiums. A good number of students are being placed through campus placements in core MNC companies every year.

Department Vision:

To mould the students as eminent Electrical & Electronics Engineers by providing quality education with skills and character to serve the society.

Department Mission:

M1 - To provide high quality teaching and services that render students a supportive environment.

M2 - Making the effort to mould the students to be the problem solvers, to be able to apply engineering principles to electrical systems.

About FDP

In this advanced era, groundbreaking technologies are introduced on a daily basis. Therefore it is necessary to stay up-to-date with these technologies and remain ahead. In this regard, **a five-day national level FDP** is planned by the **Department of EEE, Andhra Loyola Institute of Engineering and Technology, from 18th to 22nd May, 2020.** This FDP paves a platform for the Electrical Engineers to get connected with the technology advancements in the field of Electrical Engineering. The FDP aims at delivering quality sessions on undertaking the basic concepts of SCADA, Artificial Neural Networks, Grid integrated renewable sources, Multi-level inverters, Electric Vehicle Technologies, key issues and challenges in microgrids.

Cutting-Edge Technologies for Electrical Engineering

Resource Persons:

Dr. K. Siva Kumar
EED, IIT Hyderabad.

Dr. K. Siva kumar, completed M.Tech from NIT Warangal and Ph.D from IISc Bangalore and currently working in the Department of Electrical Engineering, IIT Hyderabad. His research interests include PPM Induction Motor drives, Multi-level inverters and microgrids.

Er. K. Ramakrishna Reddy
DEE, SLDC, AP Vidyut soudha

Er. K. Ramakrishna Reddy completed M.Tech from NIT Warangal and currently working as Deputy Executive Engineer in AP Vidyut soudha . His research interests include real time SCADA management and load scheduling management.

Dr. D. Rakesh Chandra
KITS Warangal

Dr. D. Rakesh Chandra completed his M.Tech and Ph.D from NIT Warangal and currently working in Kakatiya Institute of Technology and Science, Warangal. His research interests include, Grid Integration of Renewable sources and AI Techniques in Power Systems.

Dr.P. Padmagirisan.
University of Surrey, U.K.

Dr. P. Padamagirisan completed his M.Tech and Ph.D from NIT Trichy and currently working as a Post Doctoral Fellow at University of Surrey, U.K. His research interests include, Optimization Techniques in Electric vehicles.

Dr. B. Durga Hari Kiran
Vagdevi College of Engineering, Warangal.

Dr. B. Durga HariKiran completed his M.Tech and Ph.D from NIT Warangal and currently working in Vaagdevi College of Engineering, Warangal. His research interests include, AI Techniques in Power systems, and Renewable sources.

Cutting-Edge Technologies for Electrical Engineering

Dr. PESN Raju

R&D Department, OPAL–RT Technologies, Bangalore.

Dr. PESN Raju completed his Ph.D from IIT Indore and Post Doc. from University of Manchester, U.K and currently working in R&D Division, OPAL-RT Technologies Bangalore. His research interests include Energy storage system management, Micro Grids with HIL Techniques.

Major Topics to be covered by the Resourse persons:

1. Real-time Grid monitoring and control by SCADA.
2. Multi-Level Converter Topologies.
3. Electric Vehicle Technologies
4. Grid Integrated Renewable sources.
5. Forecasting using Neural Networks.
6. Microgrid: Key issues and challenges. OPAL-RT Laboratories, etc.

Organizing Committee:

Chief Patron

Rev. Fr. P. Bala Showry, S. J., Rector, Andhra Loyola Institutions.

Chief Coordinator

Rev. Fr. Dr. A. Francis Xavier, S.J., Secretary & Director, ALIET

Chairman

Dr. O. Mahesh, Principal, ALIET

Patron

Rev. Fr. J. Chiranjeevi, S.J., Assistant Director

Rev. Fr. M. Anand, S.J., Assistant Director

Coordinator

Dr. M. Ajay Kumar, Associate Professor, Dept. Of EEE.

Convener

Dr. G. Naveen Kumar, HOD, EEE.

Advisory Committee / Technical Support:

Mrs. V. Ananta Lakshmi, Asst Prof., Dept. of EEE.

Sri. G. Gantaiah Swamy, Asst Prof., Dept. of EEE.

Sri. L. Karunakar, Asst Prof., Dept. of EEE.

Sri. T. Krishna Mohan, Asst Prof., Dept. of EEE.

Sri. M. Rama Krishna, Asst Prof., Dept. of EEE.

Note:

1. FDP is for all **Teaching faculty** from Private/ Govt. Engg. Colleges.
2. There is **No Registration fee.**
3. The programme will be **conducted online mode** only.
4. The daily program is for **1hr 30 min**. on all Five days (**from 6 PM to 7:30 PM**)
5. **E-certificates** will be given only to the faculty who successfully complete the programme.

For any queries, you may contact:

Dr. M. Ajay Kumar / Dr. G. Naveen Kumar

9491827298/9030104738 **e-mail** - ajaykumar@aliet.ac.in

Registration Link:

https://bit.ly/ALIETEEE Kindly click on the link for submission of **Registration form**.

Last Date for Registering the FDP is **18th May 2020 up to 12PM**.

Stay Home Stay Safe

Cutting-Edge Technologies for Electrical Engineering

ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY: VIJAYAWADA – 520 008

Department of Electrical & Electronics Engineering

Five-Day National Level online FDP on Cutting-Edge Technologies for Electrical Engineering

during 18th-22nd May 2020 between 6:00pm - 7:30pm.

Five Days Schedule:

Day 1 (18-05-2020):	**Inaugural speech: 6:00pm-6:02pm** **6:02pm-6:04pm** **Introduction of Keynote speaker: 6:04pm-6:06pm** **Technical Session on: Multi-Level Inverter Topologies 6:06pm- 7:20pm.**	**Dr.G. Naveen Kumar, HOD, EEE.** **Dr. O. Mahesh, Principal, ALIET.** **Dr. M. Ajay Kumar, Assoc.prof., EEE, ALIET.** **Dr. K.Siva Kumar, Assoc.Prof., IIT Hyderabad.**
Day 2(19-05-2020)	**Introduction of Keynote speaker: 6:00pm-6:02pm** **Technical Session on: Forecasting using AI techniques in Electrical Engineering. 6:03pm- 7:20pm.** **Question & Answers: 7:20pm-7:30pm.**	**Dr. M. Ajay Kumar Assoc.prof., EEE, ALIET.** **Dr.B.Durga HariKiran, Asst. Prof., Vaagdevi College of Engineering, Warangal**
Day 3(20-05-2020)	**Introduction of Keynote speaker: 6:00pm-6:02pm** **Technical Session on: Wind power Grid Integration Issues. 6:03pm- 7:20pm.**	**Dr. M. Ajay Kumar Assoc.prof., EEE, ALIET.** **Dr. D. Rakesh Chandra, Assoc Prof., KITS Warangal.**

	Question & Answers: **7:20pm-7:30pm.**	
Day 4(21-05-2020)	**Introduction of Keynote speakers: 6:00pm-6:03pm** **Technical Session-1 on:** **Electric Vehicle Technologies.** **6:03pm-6:45pm** **Technical Session-2 on:** **Real time Power System Operation and Control using SCADA:** **6:50pm- 7:40pm** **Question & Answers:** **7:40pm-7:50pm.**	**Dr. M. Ajay Kumar** **Assoc.prof., EEE, ALIET.** **Dr. P. Padmagirisan,** **Post Doc. Fellow, University of Surrey, UK.** **Er. K. Rama Krishna Reddy, Deputy Executive Engineer, AP Transco.**
Day 5(22-05-2020)	**Introduction of Keynote speakers: 6:00pm-6:02pm** **Technical Session on:** **Microgrid: key issues and OPAL-RT applications.** **6:03pm-7:15pm** **Question & Answers:** **7:15pm-7:25pm.** **Vote of Thanks:** **7:25pm-7:30pm**	**Dr. M. Ajay Kumar** **Assoc.prof., EEE, ALIET.** **Dr. P E S N Raju** **R & D, OPAL-RT Technologies, Banglore.** **Mr. M. Rama Krishna** **Asst. Prof., EEE, ALIET.**

Coordinator:

Dr. M. Ajay Kumar
Assoc.prof., EEE, ALIET.

Convenor:

Dr. G. Naveen Kumar
Assoc.Prof.&Head, ALIET.

ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY: VIJAYAWADA – 520 008

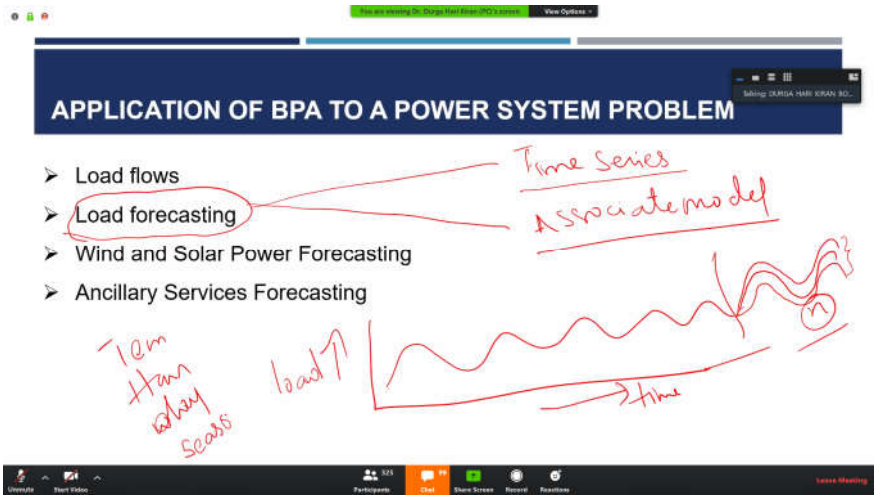
Department of Electrical & Electronics Engineering

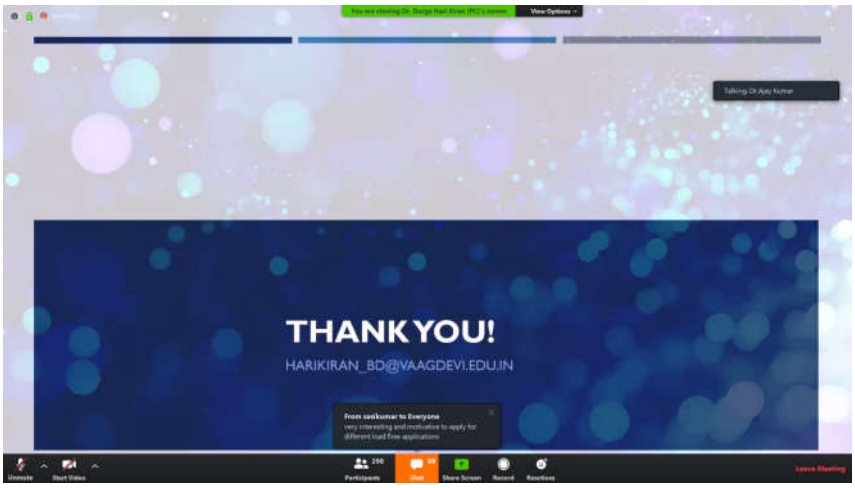
Five-Day National Level online FDP on

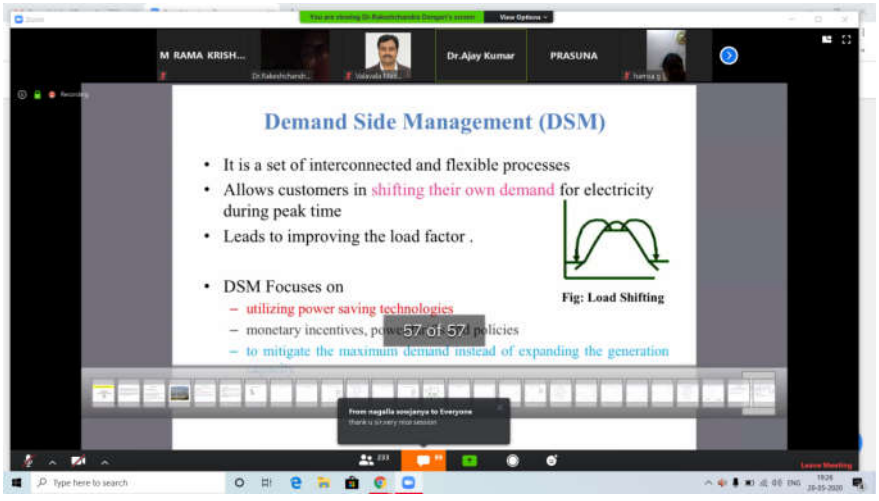
Cutting-Edge Technologies for Electrical Engineering

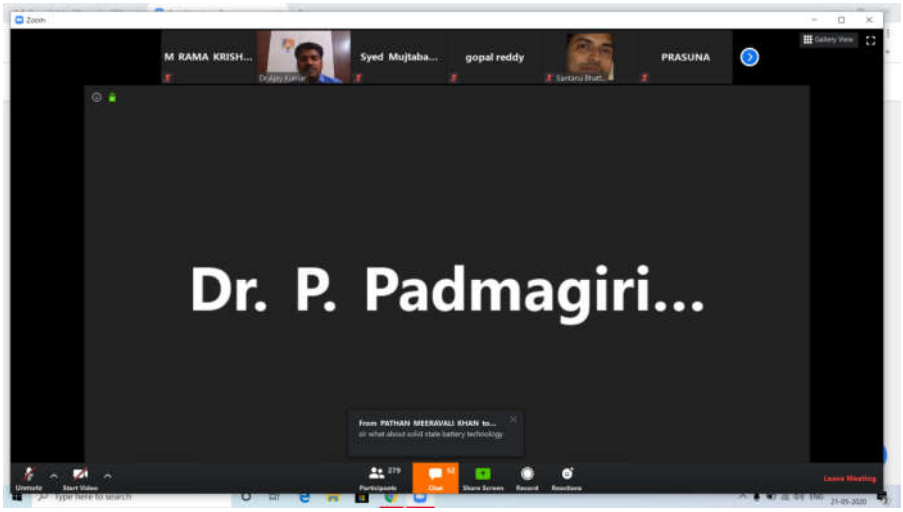
Time: 18th to 22nd May, 2020; 6pm-7:30pm.

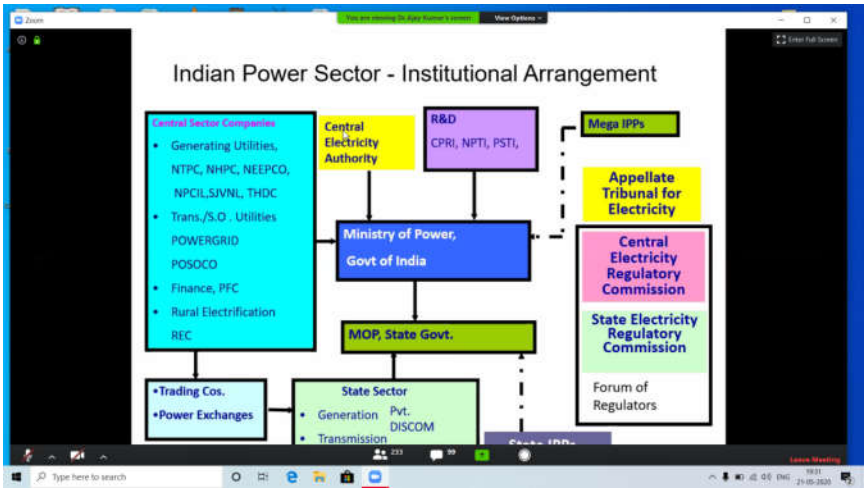
Photo Gallery

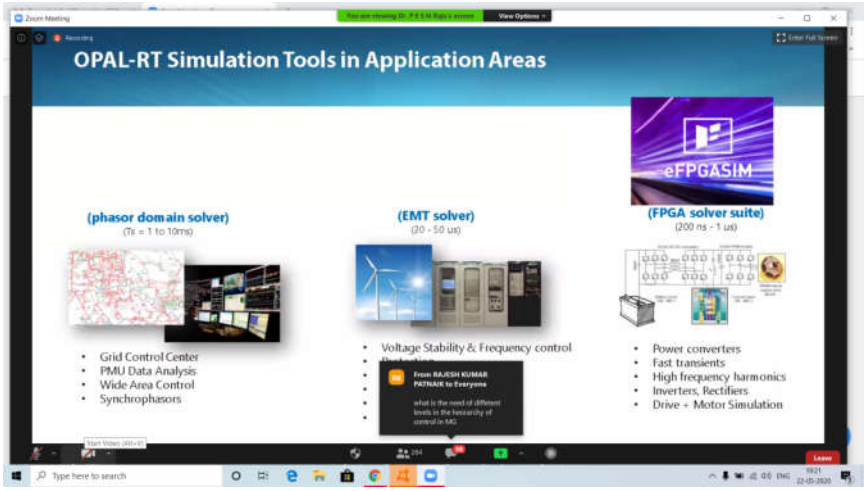

APPLICATION OF BPA TO A POWER SYSTEM PROBLEM
Load flows
Load forecasting
Wind and Solar Power Forecasting
Ancillary Services Forecasting
Time Series
Associate model
load
time


THANK YOU!
HARIKIRAN_BD@VAAGDEVI.EDU.IN


M RAMA KRISH...
Dr.Ajay Kumar
PRASUNA
Demand Side Management (DSM)
It is a set of interconnected and flexible processes
Allows customers in shifting their own demand for electricity during peak time
Leads to improving the load factor .
DSM Focuses on
utilizing power saving technologies
monetary incentives, power
to mitigate the maximum demand instead of expanding the generation
Fig: Load Shifting
57 of 57


M RAMA KRISH...
Syed Mujtaba...
gopal reddy
PRASUNA
Dr. P. Padmagiri...


Indian Power Sector - Institutional Arrangement
Central Sector Companies
• Generating Utilities, NTPC, NHPC, NEEPCO, NPCIL,SJVNL, THDC
• Trans./S.O . Utilities POWERGRID POSOCO
• Finance, PFC
• Rural Electrification REC
Central Electricity Authority
R&D
CPRI, NPTI, PSTI,
Mega IPPs
Appellate Tribunal for Electricity
Ministry of Power, Govt of India
Central Electricity Regulatory Commission
State Electricity Regulatory Commission
Forum of Regulators
MOP, State Govt.
•Trading Cos.
•Power Exchanges
State Sector
• Generation Pvt. DISCOM
• Transmission


OPAL-RT Simulation Tools in Application Areas
eFPGASIM
(phasor domain solver)
(Ts = 1 to 10ms)
• Grid Control Center
• PMU Data Analysis
• Wide Area Control
• Synchrophasors
(EMT solver)
(20 - 50 us)
• Voltage Stability & Frequency control
(FPGA solver suite)
(200 ns - 1 us)
• Power converters
• Fast transients
• High frequency harmonics
• Inverters, Rectifiers
• Drive + Motor Simulation