Where dreams find their path to reality

Electrical and Electronics Engineering

May 2022-Aug 2022 (Vol-13)

VISION

The Department of Electrical and Electronics Engineering strives to be a Centre of Excellence in Electrical Engineering in producing competent engineers.

MISSION

1. *Adopt good teaching and learning methods*
2. *Ensure competency in the emerging technologies*
3. *To be accountable through self-evaluation and continuous improvement.*

Learning Strategies

Chief Editor

Dr.O.P. SURESH, HOD

Editors

Ms. P. MADHAVI, Asst. Professor

HITAM-EEE News Letter

HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

EEE DEPARTMENT

Program Educational Objectives

PEO1: Graduates will have a successful technical or professional career, including supportive and leadership roles on multidisciplinary teams.

PEO2: Graduates will be able to acquire, use and develop skills as required for effective professional practices.

PEO3: Graduates will be able to attain holistic education which is an essential prerequisite for being a responsible member of society.

Program Specific Outcomes

PSO1: Analyze, Model, Test and provide engineering solutions in the areas related to electric drives, control, and power systems.

PSO1: Apply fundamentals of electrical engineering to simulate and develop electrical and electronic systems using MATLAB, and PSPICE tools.

Department Activities

The Electric Vehicle (EV) market is still facing two significant challenges: cost and driving range. The latter is considered to be the major trend for full EV adoption. One way to reduce costs and increase system efficiency is to integrate the powertrain. The powertrain system of an EV involves several solutions, from the onboard charger to the battery and its management system. Today's battery drives the overall cost, and this is mainly determined by the cost per cell and its mechanical protection casing. The size of a battery is a compromise between autonomy and cost: more cells mean more autonomy but at the same time more costs. "There has to be a good compromise in terms of battery size. There are several variables in the overall equation; certainly, the battery is more expensive today, but there are other areas we need to consider," says Jyoti Ranjan. The main function of BMS is to ensure that the battery is protected and any operation out of its safety limit is prevented. It monitors the battery pack's state of charge (SOC) along with the state of health. BMS also manages battery optimization via cell balancing which improves the life of the battery in the long run. The BMS will also monitor voltage, different temperature parameters, and coolant flow.

Recent Developments in Renewable Energy Technologies touch nearly every part of our daily lives. The growing energy crisis arising due to the mismatch in demand and supply of electricity is a major hindrance to sustaining the current socio-economic growth of developing countries like India. The integration of renewable energy sources like wind and solar has shown their effectiveness in achieving the aforesaid targets within their limits with the adoption and development of more advanced technology. The geographical map of India provides us with tremendous potential to tap the wind energy available along the long coastline and solar energy is almost uniformly available in most parts of northern India. The aim of this faculty development program is to provide exposure to faculty members & practicing engineers to the concepts of Recent Advances in Renewable Energy Technologies and Microgrids.

In association with PES/IAS/PELS Joint chapter & IEEE Hyderabad Section

PES/IAS/PELS JOINT CHAPTER

IEEE HYDERABAD SECTION

REGISTRATION FEE: ₹1000 /-

FOR IEEE MEMBERS: ₹900 /-

Account Holder Name: Hyderabad Institute of Technology and Management

Bank Name: South Indian Bank, Quthbullapur Branch

Acc.No.: 0547053000004269

IFSC Code: SIBL0000547

Registration link & Fee Payment:

https://docs.google.com/forms/d/1EBu-C4bkqWcfr5_NHUmmvp4pNTYaxATIi95bsE6JLAQ/edit

CHIEF PATRON

SRI. PRASHANTH ARUTLA
Chairman, HITAM

PATRON

DR. P RAJESH KUMAR
Principal, HITAM

CO-ORDINATORS

DR. OP SURESH
Professor & HOD(EEE)

DR. M SREERAMULU
Professor & HOD(ME)

ORGANIZING TEAM:

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Asst. Professor, HITAM

MR. M. CHIRANJIVI
Asst. Professor, HITAM

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Asst. Professor, HITAM

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DEPARTMENTS OF EEE AND ME

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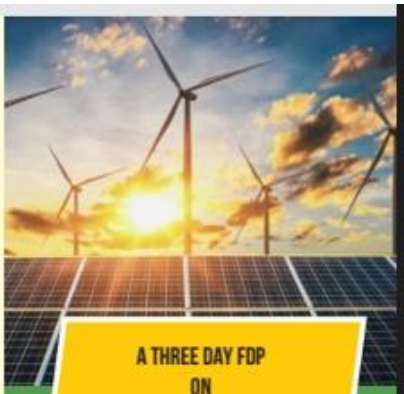

A THREE DAY FDP ON RECENT DEVELOPMENTS IN RENEWABLE ENERGY TECHNOLOGIES

28TH TO 30TH JULY, 2022

Organized by

HITAM

HYDERABAD INSTITUTE OF TECHNOLOGY & MANAGEMENT

Gowdavelly, Near Kompally, Medchal, Hyderabad. India.

About FDP

Recent Developments in Renewable Energy Technologies touches nearly every part of our daily lives. The growing energy crisis arising due to the mismatch in demand and supply of electricity is a major hindrance to sustain the current socio-economic growth of developing country like India. The integration of renewable energy sources like wind and solar have shown their effectiveness in achieving the aforesaid targets within their limits with the adoption and development of more advanced technology. The geographical map of India provides us tremendous potential to tap the wind energy available along the long coast line and solar energy is almost uniformly available in most of the parts of the northern India.

The aim of this faculty development programme is to provide exposure to faculty members & practicing engineers to the concepts of Recent Advances in Renewable Energy Technologies and Microgrids.

SPEAKERS

1. **Dr. RAVIKUMAR BHIMASINGU**
IIT Hyderabad
2. **Dr. D. SWATI DEVABHAKTHUNI**
NIT Warangal
3. **Mr. G.SURYAPRAKASH**
CEO, Archimedes Green Energys Pvt. Ltd.
4. **Dr. PAWAN KUMAR CHAUHAN**
Hyderabad Institute of Technology & Management, Hyd.
5. **Dr. MADHURI BAYYA**
Geetanjali College of Engineering & Technology, Hyd.
6. **Dr. KIRAN KUMAR N**
Vardhaman College of Engineering, Hyd.

TOPICS OF INTEREST

- Solar Energy Systems
- Doubly Fed Induction Generator WECS
- Hydrogen Storage Systems
- Significance of small wind turbines in urban and rural applications
- Integration of Renewable Energy Sources
- AI techniques applications for power systems
- Multilevel Inverters for Renewable Energy Sources
- Hybrid Systems

ELIGIBILITY:
The Program is open to the Faculty of AICTE approved Institutions, Participants from Government and Industry interested in the field of EEE and ME disciplines and staff of host institution.

REGISTRATION:
Only online Registration for this FDP

CERTIFICATION:
The Certificates shall be issued by IEEE Hyderabad Section to those participants who have attended the program with minimum 80% attendance and scored minimum 60% marks in the test conducted at the end of the FDP.

About HITAM

Hyderabad Institute of Technology and Management is situated in a sprawling lush, green campus at Medchal in Telangana State. It was started in 2001 as Royal College of Engineering at Medak. This institution sought to impart qualitative education in the field of Engineering and Management. Transformation at HITAM does not stop with mere physical infrastructure; it extended far beyond. It has manifested as best practices, which have evolved with continuous refinement, be it in education, embracing eco-consciousness, facilitating career planning and ensuring faculty development, all from a perspective of overall growth of its students and faculty.

HITAM is the first campus in India that was certified as a Silver-Rated Green Building in the category of educational institutions, by LEEDS, US Green Building Council.

About Departments

The Electrical & Electronics Engineering and Mechanical Engineering departments are witnessing a period of exciting growth and opportunity propelled by the growth of technology and its recognition through excellence with the mission to create a learning environment to transform the students with strong fundamentals in Engineering problem solving skills. EEE and ME have been Accredited by NBA.

Hyderabad Institute of Technology and Management

(Approved By AICTE, Affiliated to JNTUH)

Gowdavelly (Village), Medchal (Mandal),Ranga Reddy (Dist.) ,www.hitam.org

Faculty Development Programme on

RECENT DEVELOPMENTS IN RENEWABLE ENERGY TECHNOLOGIES

PES/IAS/PELS JOINT CHAPTER

IEEE HYDERABAD SECTION

Certificate of Participation

This is to Certify that

Dr. O.P. Suresh

Professor, EEE Dept

has attended a three Day Faculty Development Programme on "Recent Developments in Renewable Energy Technologies" from 28-07-2022 to 30-07-2022 organized by Departments of EEE & Mechanical Engineering, HITAM in association with PES/IAS/PELS Joint chapter, IEEE Hyderabad Section.

Dr.M.SREERAMULU
HOD-ME

Dr.O.P.SURESH
HOD -EEE

Dr.P.RAJESH KUMAR
Principal

Students were enthusiastic and got practical knowledge in the field of manufacturing transformers. Students got knowledge about the various types of transformers such as CSP and Conventional types. They got to know the conservative tank to store oil, and the radiator used for cooling transformers. Field visits offer a great source to gain practical knowledge. Students can observe and learn how theoretical concepts are put to into action, thereby aiding their practical learning by visiting the Shapur Substation on 27th Jube 2022.