SVCE | Sri Venkateswara College of Engineering

(An Autonomous Institution Affiliated to Anna University, Chennai)
Post Bag No. 1, Pennalur, Sriperumbudur, Kanchipuram (Dt) – 602117

Department of Electrical & Electronics Engineering

AICTE-ISTE INDUCTION / REFRESHER PROGRAMME
on
SOLAR PV SYSTEM DESIGN USING IoT
Phase-III: May 5th to May 11th 2021

Chief Patron
Dr. M. Sivanandham, Secretary, SVEHT

Patron
Dr. S. Ganesh Vaidyanathan, Principal, SVCE

Convener
Dr. KR. Santha, Vice-Principal

Coordinators

Dr. KR. Santha, Professor & Head / EEE
Dr. C. Gopinath, Associate Professor / EEE
Mr.D.S.Purushothaman, Asst.Professor / EEE

ABOUT THE INSTITUTION

Sri Venkateswara College of Engineering (SVCE), a premier self-financing Engineering College was started in the year 1985 and is managed by Sri Venkateswara Educational and Health Trust. The college conducts 11 B.E / B.Tech Degree Courses and 8 PG Courses in Engineering. The college has 11 Research Centers approved by Anna University cater to MS (by Research) and PhD programmes. The courses are approved by AICTE and affiliated to Anna University, Chennai. The college received Autonomous status in 2016. The college is accredited by National Assessment and Accreditation Council (NAAC). The college is situated in serene environment about 37 km from Chennai and situated on the way of Chennai – Bangalore National Highway (NH4) at Pennalur, Sriperumbudur, in Kanchipuram district.

ABOUT THE DEPARTMENT

The Department of EEE was started in the year 1994. The post graduate program (M.E) in Power Electronics and Drives was started in 2002. The department has secured permanent affiliation with Anna University and accredited by National Board of Accreditation (NBA) for the third consecutive time of Full Accreditation for five years. The Department has well equipped state-of-the-art laboratories and recognized as a Research Centre by Anna University. The Department has well qualified and experienced faculty and staff of proven ability and profound skills.

ABOUT THE REFRESHER PROGRAM

The AICTE-ISTE refreshment program is essential for the teachers in technical institution for their professional enhancement. The program provides an opportunity for teachers to familiarize themselves with modern engineering technologies including technical advancement adopted by the industry keeping in view the national needs and priorities and relevant technologies. The mission of the program is to impart the knowledge and proper training and enable the participants to become a solar professional and this program shall be a guide for those ambitious researchers who are looking for a challenging research area in solar sector.

OBJECTIVES:

❖ To create awareness about renewable energy.
❖ Disseminate the architectures of Solar PV system using Internet of Things.
❖ Inculcate the recent advancements in Solar PV technologies.
❖ Familiarize participants about the off grid system, on grid system and hybrid system of solar PV system.
❖ Training participants in the design of Solar PV through hands on session.
❖ Expertise participants for the design and simulation of Solar PV system using IoT.

TOPICS:

- Renewable Energy – an overview
- National policy and guidelines for solar power plant installation
- Theoretical background of PV systems
- Recent advancement in Solar PV technologies
- Solar cell efficiency enhancement
- Hands on training for PV system design
- Design of OFF-Grid, ON- Grid and Hybrid system
- Internet of Things
- Role of IoT in Solar PV system
- Hands on training for design of Solar PV system using IoT
- National Educational Policy 2020

RESOURCE PERSONS

Sessions will be handled by experts from National Institute of Solar Energy, National Institute of Wind Energy, Central Power Research Institute and Eminent faculty from IIT's, IIITDM, NIT's, Anna University and other reputed institutions.

ELIGIBILITY

This AICTE-ISTE sponsored refresher program is open to Faculty members of AICTE approved Institutions, ISTE members, Research scholars and persons from Industries from all over the country. As per AICTE-ISTE guidelines no registration fee will be charged from the participants.

Registration link: https://forms.gle/5t7KMTGuxufETPvR6   Scan QR

CERTIFICATE

A test shall be conducted at the end of the refresher program and the certificates shall be issued to those participants who have attended all the sessions of the refresher program and have qualified in the test. The number of participants will be limited to 100 for each Phase. Online meeting link will be sent to Whatsapp contact/Registered email. *For any queries: svceaicteiste@svce.ac.in*

ADDRESS FOR COMMUNICATION

The Coordinator, AICTE-ISTE Refresher Program

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REPORT OF AICTE-ISTE INDUCTION/REFRESHER PROGRAMME
on
"SOLAR PV SYSTEM DESIGN USING IoT" – Phase –III

The AICTE-ISTE INDUCTION/REFRESHER PROGRAMME on **"SOLAR PV SYSTEM DESIGN USING IoT"** – Phase -III has been organized by the Department of Electrical and Electronics Engineering, Sri Venkateswara College of Engineering, Sriperumbudur in online mode from **05th May to 11th May2021**. The event was planned with the foremost aim to enrich the participants in the field of Solar Energy and we believe that the goal has been achieved.

The inaugural function of the Refresher Programme was held on 05th May2021 at 9:30 AM. Thewelcome address was delivered by the **Programme Coordinator Dr. C. Gopinath**, Associate Professor from the Department of EEE/SVCE.

Dr. KR. Santha, the **Vice Principal, Professor and Head, Department of EEE/SVCE as well as Coordinator** of this program briefed the participants on the happenings of the past two phases of the event and the success of it. Madam also spoke about the objectives of the event and the use of Solar energy to meet the current energy crisis hitting the globe.

Dr. Sudhakar K Bharatan, Professor and Assistant Head, Department of EEE, SVCE introduced the **Chief Guest, Dr. K.Srinivas Reddy, Keynote Session Professor, Indian Institute of Technology- Madras** who inaugurated the event and delivered the inaugural address to the eager audience.
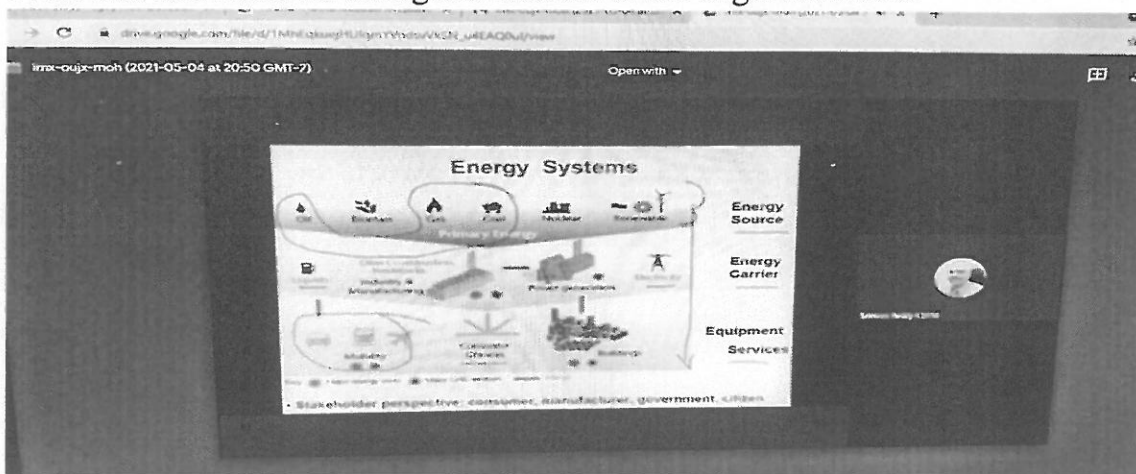
Inaugural address by Dr. K.Srinivas Reddy, Keynote Session Professor, ndian Institute of Technology- Madras

After an elaborate keynote session, the Vote of Thanks wasdelivered by the Coordinator **Mr. D.S. Purushothaman**, Asst. Prof/ EEE, SVCE.

Session # 2 on 05.05.2021, **Dr. PG. Nikhil, Assistant Director (Technical), National Institute of Solar Energy,** discussed in detailed about the **"Design Checks of Data Monitoring in a Solar PV Power Plants: An Overview".**In which Solar PV Power Plant's various parameter monitoring cum adjustments were discussed.

Session #3 on 05.05.2021, **Dr. M. Srinivasan, Research Associate, SSN Research Centre** discussed on "Solar Cell Efficiency Enhancement" in detail. He discussed about the various materials used for the fabrication of solar cell and technologies for improvement of cell efficiency.

Session #1 on 06.05.2021,**Dr.V.S.K.V.Harish,Department of Electrical Engineering, PanditDeendayal Energy University**delivered a lecture on **"Harnessing Solar Energy for Rural Electrification".** The lecture detailed on how solar energy could be used to light up the rural parts of India and across the world.

Session #2 on 06.05.2021, **Dr. P. Karuppannan, Associate Professor, Motilal Nehru National Institute of Technology, Allahabad**presented the lectureon **"Recent Advances in Solar PV Technologies".** He briefed on the recent advancements in Solar PV technologies under grid-connected as well as stand-alone configurations.

Session # 3 on 06.05.2021,**Dr.K.Padmanathan, Agni Institute of Technology &Nestlives Pvt. Ltd**addressed **on "Research Challenges in IoT based Solar PV Systems"** where he briefed about how IOT is helping to revolutionize the field of Solar.

Session # 1 on day 3, the first session was handled by **Dr. Chetan Singh Solanki, Department of Energy Science and Engineering, Indian Institute of Technology, Bombay** who delivered a speech on **"Solar PV System Design".** He elaborated on the importance of the solar energy and its impact on the environmental changes.
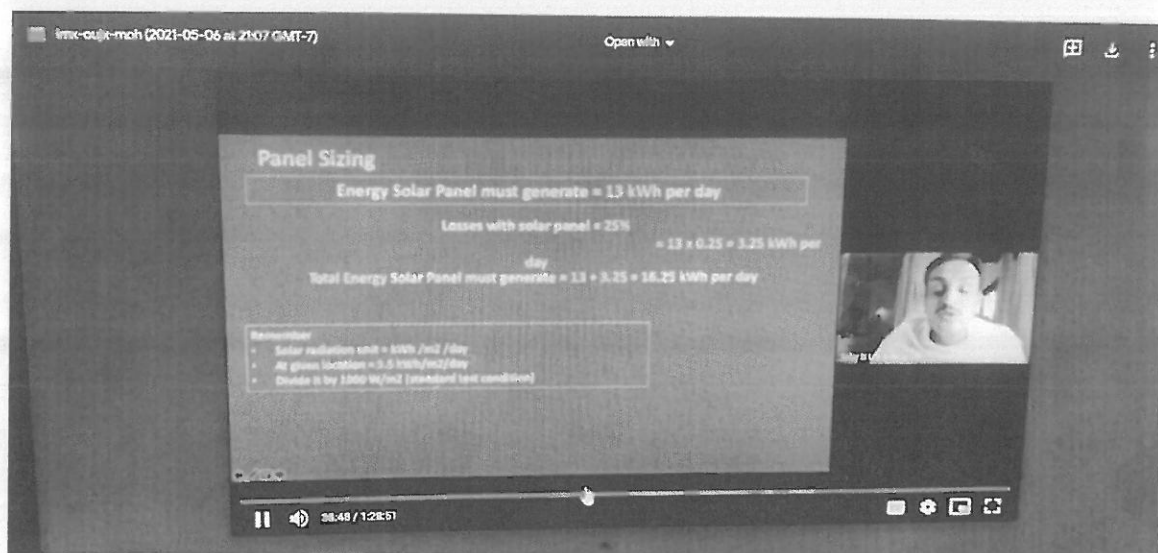
Dr. Chetan Singh Solanki, Department of Energy Science and Engineering, Indian Institute of Technology, Bombay delivering the speech on "Solar PV System Design "

On day 3, Session #2, **Dr. PG. Nikhil, Assistant Director (Technical), National Institute of Solar Energy**delivered a lecture to the participantson **"Design of Solar PV system using simulation software"**. He taught the use of Heliscope Software, which gave an insight to the participants in solar PV systems design.

TheSession #3 on Day 3, **Dr. Tapan Kumar Jain, Indian Institute of Information Technology, Nagpur** delivered a session on **"IoT Fundamentals"**. Based on present scenario, the significances of the Internet of Things in various fields were discussed in detail.

On 08.05.2021 (Day 4), the first and second session was handled by **Thiru. Sumit Gupta, Pragya Solar**on the topic**"Role of IoT in Solar PV System Design"**. The design of a string inverter system and how IOT is being used to export the power output from PV and the effect of environmental conditions were explained clearly. He also discussed the different types of analytics for solar utilities which were demonstrated to the participants.

The session 3 on 08.05.2021, **a program on Yoga for Stress Management** was conductedby the **Vethathiri Maharishi Foundation,**as per the guide lines of AICTE-ISTE Induction/Refresher Program.**Thiru.K. Manohar** discussed managing **Mental & Emotional Development, Stress management, Meditation, Human values and Ethics, Health and Happiness etc.,**

Thiru. S. Selvakumar, Power Projects handled the **"Hands on Session on IoT based Solar PV systems"** which gave an insight to the participants in

integrating IoT with solar PV systems on all the three sessions on **10ᵗʰMay 2021**.

On the last day of the program, 11ᵗʰMay 2021, an online Assessment test was conducted and feedback was received from the participants.

The session 2 on 11ᵗʰ May 2021 was handled by **Col. B Venkat, Director (Faculty Development),AICTE, New Delhi** on the **National Educational Policy 2020.**

National Educational Policy 2020 by Col.B.Venkat, Director (Faculty Development) AICTE, New Delhi.

The valedictory function of AICTE-ISTE INDUCTION/REFRESHER PROGRAMME on **"SOLAR PV SYSTEM DESIGN USING IoT"** – phase -3 was organized on 11.05.2021 (Tuesday) at 2.00 PM. The function started with 'Thamiz Thai Vazthu' followed by the welcome address by **Mr. D.S. Purushothaman**, Asst. Prof/ EEE, SVCE. The report of the program was presented by **Dr. KR. Santha**, Vice Principal, Professor and Head, Department of EEE/SVCE. **Dr. S. Ganesh Vaidyanathan, Principal, SVCE** delivered the presidential address. **Dr. Sudhakar K Bharatan**, Professor and Assistant Head, Department of EEE, SVCE introduced the **Chief Guest, Prof. Rajive Kumar Member Secretary, All India Council for Technical Education, New Delhi AICTE, New Delhi.** The valedictory speech was given by **Prof. Rajive Kumar.** He appreciated Sri Venkateswara College of Engineering and the Department of Electrical and Electronics Engineering for having organized the Refresher Program which is the need of the hour. Vote of Thanks was given by

the Coordinator **Dr. C. Gopinath**, Associate Professor; Department of EEE/SVCE.
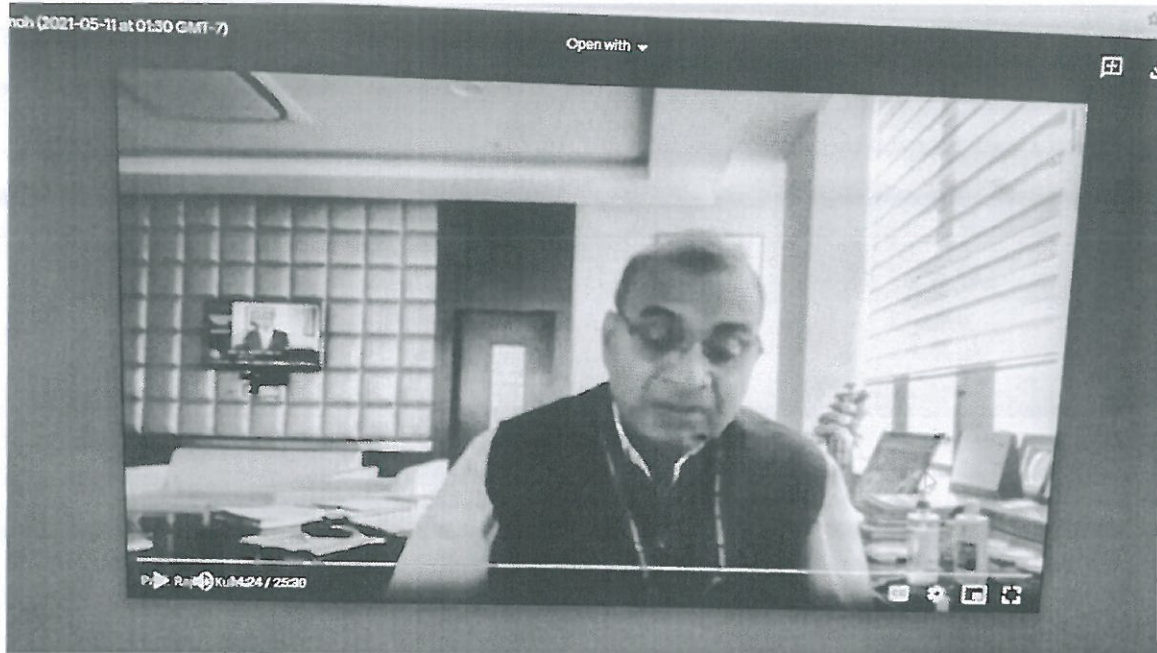
The valedictory speech by Prof. Rajive Kumar Member Secretary, AICTE, New Delhi.

I thank AICTE and ISTE for having the trust in us and motivating us to conduct this Refresher Programme on "SOLAR PV SYSTEM DESIGN USING IoT".

We look forward to working and delivering many more similar kind of knowledge sharing events which would help us grow together to build a stronger nation.

K.R. Sar
29.7.21

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