Sri Venkateswara College of Engineering

Department of Electrical and Electronics Engineering

The Institution of Engineers (India)

Association of Electrical and Electronics Engineers

TWO DAYS WORKSHOP ON

"RECENT TECHNOLOGIES IN ELECTRIC VEHICLE AND SMART GRID"

Keynote Speaker:

Mr.P.S.Prem Kumar,
Division Manager - Industrial Automation,
Hydrotek Engineering Company,
Kuwait.

30 - 31 May 2022
8.45AM to 3.15 PM

Venue:
Function Hall

SCAN TO REGISTER

CONVENOR
Dr.KR.SANTHA
Vice Principal, HOD/EEE

IEI SVCE COORDINATOR
Dr.SUDHAKAR K B
Professor/EEE

IEI SVCE EEE STUDENT CHAPTER
Dr.S.G.BHARATHIDASAN
Associate Professor/EEE

PROGRAM COORDINATORS

Dr.S.G.BHARATHIDASAN
Asso Prof/EEE

Dr.S.KUMARAVEL
Asso Prof/EEE

Dr.M.SANKAR
Asst Prof/EEE

SRI VENKATESWARA COLLEGE OF ENGINEERING
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IEI SVCE EEE STUDENT CHAPTER
Two days workshop on
"RECENT TECHNOLOGIES IN ELECTRIC VEHICLE AND SMART GRID"

DAY 1 - 30/05/2022 – Monday

24/05/2022

Sl no	Time	Session	Expert Speaker
1	08.45AM – 08.55AM	Inauguration	Inaugural Address : Dr KR Santha Vice Principal, HOD/EEE, SVCE.
2	08.55AM-10.00AM	IOT for Electrical Engineers	Mr P.S.Premkumar Manager, Autonomous Division, Hydrotek Engineering Company, Kuwait.
3	10.30 AM – 12.00PM	Edge Computing Technology	Dr S.G.Bharathidasan, ASP/EEE
4	12.45 PM- 02.00PM	Block Chain Technology in Electrical Engineering	Dr N.Bhalaji Asso. Professor/IT SSN College of Engineering.
5	02.00PM – 3.15 PM	Advanced Communication Technologies for smart grid	Dr N. Kumaratharan Professor/ECE.

IEI SVCE EEE STUDENT CHAPTER

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DAY 2 - 31/05/2022 - Tuesday

Sl no	Time	Session	Speaker
1	09.00AM-10.30AM	Charging solutions for Electric Vehicle.	Ms S.Arulmozhi AP/EEE
2	10.45AM-12.00Noon	Digital Twin and Cyber physical systems	Dr KB Sudhakar Professor/EEE
3	12.45PM-02.00PM	Cyber security in smart grid	Dr S.Kumaravel Asso.Professor/EEE
4	02.00 PM-03.15PM	Deep Learning in Power System.	Dr M. Sankar, AP/EEE

10.30AM – 10.45 AM Tea Break
12.00 Noon– 12.45 PM Lunch Break

IEI SVCE EEE Coordinator

IEI SVCE Coordinator

HOD/EEE

25.5.22

SRI VENKATESWARA COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRICAL AND ELECTRICAL ENGINEERING

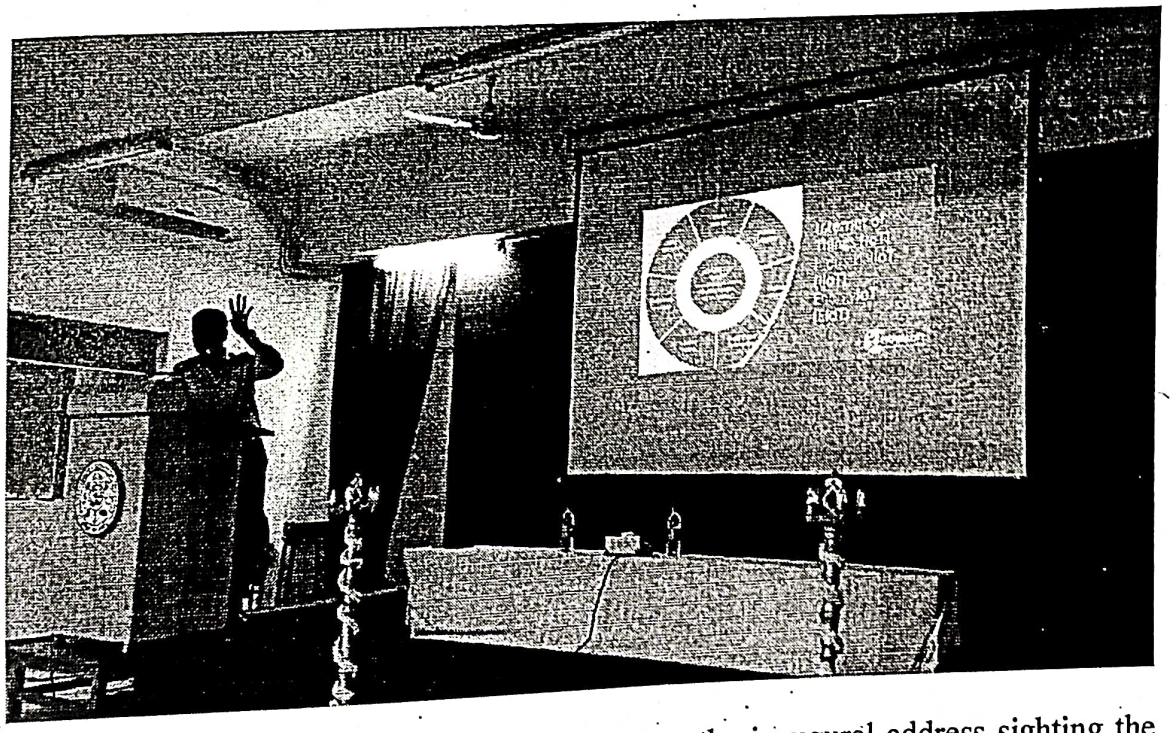
THE INSTITUTION OF ELECTRICAL ENGINEERS (IEI)

Two days workshop on "Recent Technologies in Electric Vehicle and Smart Grid"

REPORT

The two-day workshop on "Recent Technologies in Electrical Vehicles and Smart Grid" was conducted on 30th and 31st of May, 2022.

The event started by 9.00 AM on 30th May 2022. Mr.P.S.Premkumar, Division Manager - Industrial Automation, Hydrotek Engineering Company, Kuwait, the guest speaker of the first session was accompanied by Dr.KR. Santha, Vice principal and HOD/EEE, Dr.Sudhakar K Bharathan, Professor/EEE, Dr. S.G.Bharathidasan ASP/EEE, Dr. S Kumaravel ASP/EEE, Dr.M.Sankar AP/EEE along with other faculty members of the department and 165 registered student participants were present for the Inaugural session of the workshop at the college Function Hall.



Dr.KR.Santha,Vice principal and HOD/EEE gave the inaugural address sighting the importance of the workshop that is organized and briefed us about the topics of the workshop, after which the Kuthuvizhaku was lit by the dignitaries symbolizing successful inauguration of the workshop. Dr.S.G.Bharathidasan ASP/EEE introduced the Chief Guest.

The first session of the workshop was presented by the Chief Guest. Hepresented his expert lecture on the topic "IoT for Electrical Engineers" with basic expansions and meaning of the keywords like IoT, IIoT, EoT. Further, he gave detailed explanation on various applications of IoT and elaborated the areas where IoT can be implemented. He strongly insisted on learning programming language like python. He enumerated its importance from the industrial perspective.

The second session was presented by Dr.M.Sankar, AP/EEE on the topic "Deep Learning in Power Systems". It was an interactive session where the students shared their prior knowledge on the topic. Based on the students interaction, the speaker added further to it and gave them a clear idea on the difference between deep learning and machine learning, the advantages of deep learning over machine learning and its implications in power system.

Post lunch the session was on "Block Chain Technology in Electrical Engineering" by Dr.N.Bhalaji, Associate Professor at SSNCE. He sprinkled the concept of Block Chain and its existing applications. Popular examples like bitcoin and crypto-currency was quoted to understand the same. He also presented the various platforms used for implementing Block Chain Technology. Going a step ahead, he also showed live demo on creation and allocation of memory for blocks.

The fourth session was on " Advanced Communication Technologies for Smart Grid", by Dr.N.Kumaranathan, Professor, ECE. He presented the evolution of Data from 1G to 5G. He also presented about the advantages of 5G. He reiterated the benefits of internet and its existing applications and the way it has eased various processes.

On day 2, the first session was by Dr.S.G.Bharathidasan, ASP/EEE on "Edge Computing Technology". He presenteddetail explanation on smart grid and its types. He also presented the different types of networks and the importance of edge computing over cloud computing. He inculcated ideas on implementing smart grid and time-based tariff.

The second session of the day was " Charging Solution for Electric Vehicle" by Mrs. Arulmozhi, AP/EEE. She started explaining basics of the components and architecture of an EV. Moving further, she presented about the various types of batteries, methods to charge them along with their pros and cons. She also detailed on the various methods available for charging EVs.

The third session of the day was "Digital Twin and Physical System" by Dr. Sudhakar K Bharathan, Prof/EEE. As the topic was new to the audience, he presented the basics of Digital Twin technology. He explained the reason for the name, process to create a digital twin, software used and the run time of the software. He briefed about the merits and demerits of digital twin. He also briefed on the various types of memory elements and its fabrication.

The last session of the workshop was "Cyber Security in Smart Grid" by Dr.S.Kumaravel, ASP/EEE. He presented the importance of securing the data and also briefed on various cyber security threats that had occurred around the globe.

On the whole, the two-day workshop has instilled a lot of ideas among the young minds. The workshop was really helpful in identifying areas of interest and scope for research in the upcoming years.

HOD/EEE