



# **DR. S. & S. S. GHANDHY COLLEGE OF ENGINEERING & TECHNOLOGY, SURAT**

## **Report On Short Term Training Program on**

# **“ELECTRIC VEHICLE TECHNOLOGY AND ITS ADVANCES”**

**Duration :19-02-2024 to 23-02-2024**

**Organized by**  
**Electrical Engineering Department**  
**(NBA Accredited)**  
**&**  
**Automobile Engineering Department**  
**(NBA Accredited)**



**Vision:**

To make the participants aware about EV and its technology advances

**Outcome:**

- Emphasis design and control aspects for electric vehicle drives
- Understand drive system & power sources of EVs/HEVs.
- Make hands-on training for participants regarding safety, maintenance, battery management system.
- Acquire knowledge on EV Charging infrastructure & its Grid integration.

**Introduction:**

The Electrical Engineering Department & Automobile Engineering Department jointly organized one-week short term program (STTP) on "ELECTRICAL VEHICLES & IT'S ADVANCES" from 19<sup>th</sup> Feb-2024 to 23<sup>rd</sup> Feb-2024 approved by CTE Gandhinagar & partially sponsored by Alumni Association of Dr. S & S.S. Ghandhy college of Engineering & Technology, Surat in which total 33 faculties from Electrical Engineering, power electronics, Automobile Engineering, Mechanical Engineering programmes of various Diploma & Degree engineering institute across Gujarat State have participated. Various eminent speakers from IITs, SVNIT Surat & Industrial Experts were invited to share their knowledge & expertise on various topics explaining Electric Vehicle domains.

As a part of the training one-day visit to Pramukh TATA Motors workshop, Udhna (UnderJBGO Pvt.Ltd) was organized, where participants gained knowledge about Indian Automobile Industry at a glance, EV Market share & options available, EV Technology, Hybrid Technology & practical session on introduction of safety & Maintenance tools, battery maintenance, motors used in EV, Application of scanner.

This event was started with video message from principal of the institute Dr. P. P. Kotak & Joint Director of CTE Dr. Sachin Parikh in which they laid emphasis on importance of training for faculties and motivated us.

**Organizing Committee:**

Name	Designation	Event Designation
Dr. P. P. Kotak	Principal	Patron
Mr. J. S. Doshi	HOD Electrical Dept.	Convener
Mrs. S. S. Ganatra	HOD Automobile Dept.	Convener
Mr .G. A. Kapadia	Lecturer Automobile Dept.	Coordinator
Miss. U. M. Patel	Lecturer Electrical Dept.	Coordinator
Mr. Shrikant Modi	Lecturer Automobile Dept.	Co- Coordinator
Mr. D. J. Prasad	Lecturer Electrical Dept.	Co- Coordinator
Mrs.T.H.Patel	Lecturer Electrical Dept.	Committee Member
Mr. Kiran Jadav	Lecturer Automobile Dept.	Committee Member

**Number of Participants:**

Institute Type	Degree/Polytechnic	No. of Participant
Government	Polytechnic	23
Government	Degree	04
Self-Financed	Degree	05
Self-Financed	Polytechnic	01
<b>Total</b>		<b>33</b>

## Training schedule:

DR. S. & S. S. GHANDHY COLLEGE OF ENGINEERING & TECHNOLOGY, SURAT					
ELECTRICAL ENGINEERING DEPARTMENT & AUTOMOBILE ENGINEERING DEPARTMENT					
<i>CTE Approved</i> STTP on " <b><u>ELECTRIC VEHICLE TECHNOLOGY &amp; ITS ADVANCES</u></b> "					
TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	19/02/2024	20/02/2024	21/02/2024	22/02/2024	23/02/2024
09:30 AM - 11:00AM	Registration & Inauguration	Power Source For EVs/HEVs 2 (Dr. Varsha Shah, SVNIT Surat)	Opening winding IM Drive on EVs Dr. Suresh Kumar, SVNIT Surat.	IND VISIT	EV Charging Infrastructure and its Grid Integration Dr. Zakir Rather, IIT, Mumbai
11:00 AM - 11:15 AM	TEA BREAK				
11:15 AM - 12:45 PM	Introduction to EVs/HEVs Dr. Nikunj Patel SSASIT, Surat.	Vehicle to Home Dr. Priyesh Chauhan IIITRAM, Ahemdabad.	Battery Management System Mr. Ritul Shah CEO, Spark Innovation	IND VISIT	EV charging Dr. Kashyap Mokaria GEC, Valsad
12:45 PM - 1:45 PM	LUNCH BREAK				
1:45 PM - 3:15 PM	Mechanical Aspects of EV Dr. M. Krishna Kishor, SVNIT, Surat.	Power Electronics in EVs Dr. Praveen Kumar, SVNIT, Surat.	Emerging skills sets and competencies for EV MR.Jasmin Panchal TATA Motors Sanand	IND VISIT	Quiz
3:15 PM - 3:30 PM	TEA BREAK				
3:30 PM - 5:00 PM	Power Source For EVs/HEVs 1 Dr. Varsha Shah, SVNIT Surat	Energy Management System for EVs Dr. Varsha Shah, SVNIT Surat	Safety & Maintenance of EVs Dr. Sukanta Halder, SVNIT, Surat.	IND VISIT	Valedictory & Feedback

## List of Participants:

Sr. No.	Name of Participant	Designation	Institute Name
1	Ms. Dipaben Jayantibhai Kapupara	LEE	A. V. Parekh Technical Institute, Rajkot
2	Mrs. Punita Vishal Ladani	LEE	A. V. Parekh Technical Institute, Rajkot
3	Mrs. Pallavikumari Keshavbhai Gamit	AP - ELECT.	Government Engineering College , Bharuch
4	Mr. Vilashkumar Narsingbhai Chaudhari	AP - ELECT.	Government Engineering College, Bhuj
5	Mr. Anilkumar Namdev Navle	AP - ELECT.	Government Engineering college, Dahod
6	Mr. Ankit Narendrakumar Brahmbhatt	AP - ELECT.	Government Engineering College, Godhara
7	Mr. Alpeshbhai Rameshbhai Mahyavanshi	LEE	Government Polytechnic, Dahod
8	Mr. Rushabhkumar Dineshbhai Vanara	LEE	Government Polytechnic, Junagadh
9	Mr. Sunil Kantilal Singal	LEE	Government Polytechnic, Junagadh
10	Mr. Mayurkumar Dayabhai Muchhadiya	LEE	Government Polytechnic, Junagadh
11	Mrs. Rinku Ratnesh Shukla	HOD - ELECT.	Government Polytechnic, Valsad
12	Mrs. Parula Denish Vachhani	LEE	Government Polytechnic, Valsad
13	Mr. Himanshukumar Natvarlal Chaudhari	LEE	Government Polytechnic, Vyara
14	Ms .Rushita Narsinhbhai Surti	LEE	Government Polytechnic, Vyara
15	Mr. Vijaykumar Hamirbhai Dhanani	LAE	Dr. J .N. Mehta Government Polytechnic, Amreli
16	Mr. Ajaysinh Haribhai Parmar	LEE	Dr. J. N. Mehta Government Polytechnic, Amreli
17	Mr. Sanjaykumar Chandubhai Patel	HOD - ELECT.	Shri K. J. Polytechnic, Bharuch

18	Ms. Roshanibahen Ratilal Patel	LEE	Shri K. J. Polytechnic, Bharuch
19	Mrs. Zankhana Parthkumar Shah	LEE	Lukhdhirji Engineering College (Diploma), Morbi
20	Mr. Hirenkumar Ramanbhai Patel	LEE	R. C. Technical Institute, Ahmedabad
21	Mr. Kevinkumar Chetankumar Gandhi	LAE	Dr. S. & S.S. Ghandhy College Of Engineering & Technology, Surat
22	Ms. Supriti Subrata Maitra	LAE	Dr. S. & S.S. Ghandhy College Of Engineering & Technology, Surat
23	Mr. Kirankumar Vajubhai Jadav	LAE	Dr. S. & S.S. Ghandhy College Of Engineering & Technology, Surat
24	Mr. Chinmay Devprasad Shukla	LEE	Dr. S. & S.S. Ghandhy College Of Engineering & Technology, Surat
25	Ms. Vrutika Rameshbhai Patel	LEE	Dr. S. & S.S. Ghandhy College Of Engineering & Technology, Surat
26	Ms. Priyanka Rajeshbhai Goswami	LEE	Dr. S. & S.S. Ghandhy College Of Engineering & Technology, Surat
27	Mr. Shailesh Laljibhai Dhoriyani	LPE	Dr. S. & S.S. Ghandhy College Of Engineering & Technology, Surat
28	Ms. Mamtabahen Ramsinh Vansiya	LEE	A.Y. D. Technical Institute, Kosamba
29	Mr. Shivam Jayeshbhai Patel	LAE	B.V.P.I.T(D.S) Umarakh, Bardoli
30	Mr. Bhavin Satyendra Trivedi	AP - ELECT.	GIDC Degree Engineering College, Navsari
31	Mr. Vatsal Jhinabhai Patel	AP – AUTO.	Laxmi Institute Of Technology, Valsad
32	Mr. Gauravkumar Prafulchandra Patel	AP - MECH.	Laxmi Institute Of Technology, Sarigam
33	Mr. Hiteshkumar Prabhubhai Patel	LEE	B.V.P.I.T.(D.S.) Umrah, Bardoli



## Day:01 (19-02-2024) Training Inauguration



Virtual message from:



Principal sir Dr. P. P.Kotak

Join Director of CTE Dr. Sachin Parikh



**Day:01 (19-02-2024 - Time: 11:15 AM to 12:45 PM)**

**INTRODUCTION TO EVs/HEVs - DR. NIKUNJ PATEL, SSASIT, SURAT**





## **Day:01 (19-02-2024 - Time: 1:45 PM to 03:15 PM)**

### **MECHANICAL ASPECTS OF EV - DR. M. KRISHNA KISHORE, SVNIT, SURAT**



## **Day:01 (19-02-2024 - Time:03:30 PM to 05:00 PM)**

### **POWER SOURCE FOR EVS/HEVS 1 - DR. VARSHA SHAH SVNIT SURAT**





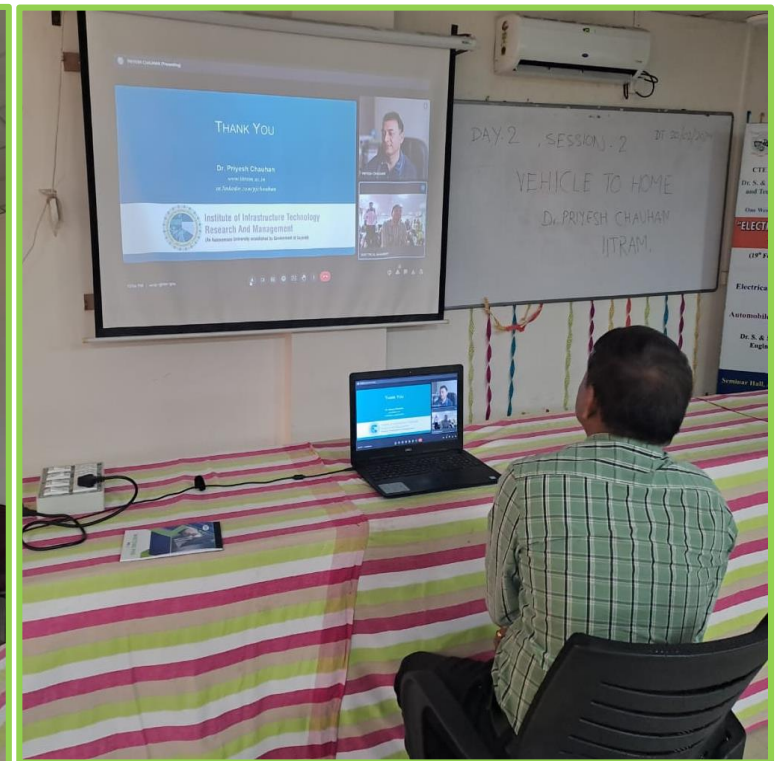
**Day:02 (20-02-2024 - Time: 09:30AM to 11:15 AM)**

**POWER SOURCE FOR EVS/HEVS 2 - DR. VARSHA SHAH, SVNIT, SURAT**



**Day:02 (20-02-2024 - Time: 11:30AM to 12:45 PM)**

**VEHICLE TO HOME - DR. PRIYESH CHAUHAN, IITRAM, AHMEDABAD (ONLINE MODE - GOGGLE MEET)**





**Day:02 (20-02-2024 - Time: 01:45 PM to 03:15 PM)**

**POWER ELECTRONICS IN EVS - DR. PRAVEEN KUMAR, SVNIT, SURAT.**



**Day:02 (20-02-2024 - Time: 03:30 PM to 05:00 PM)**

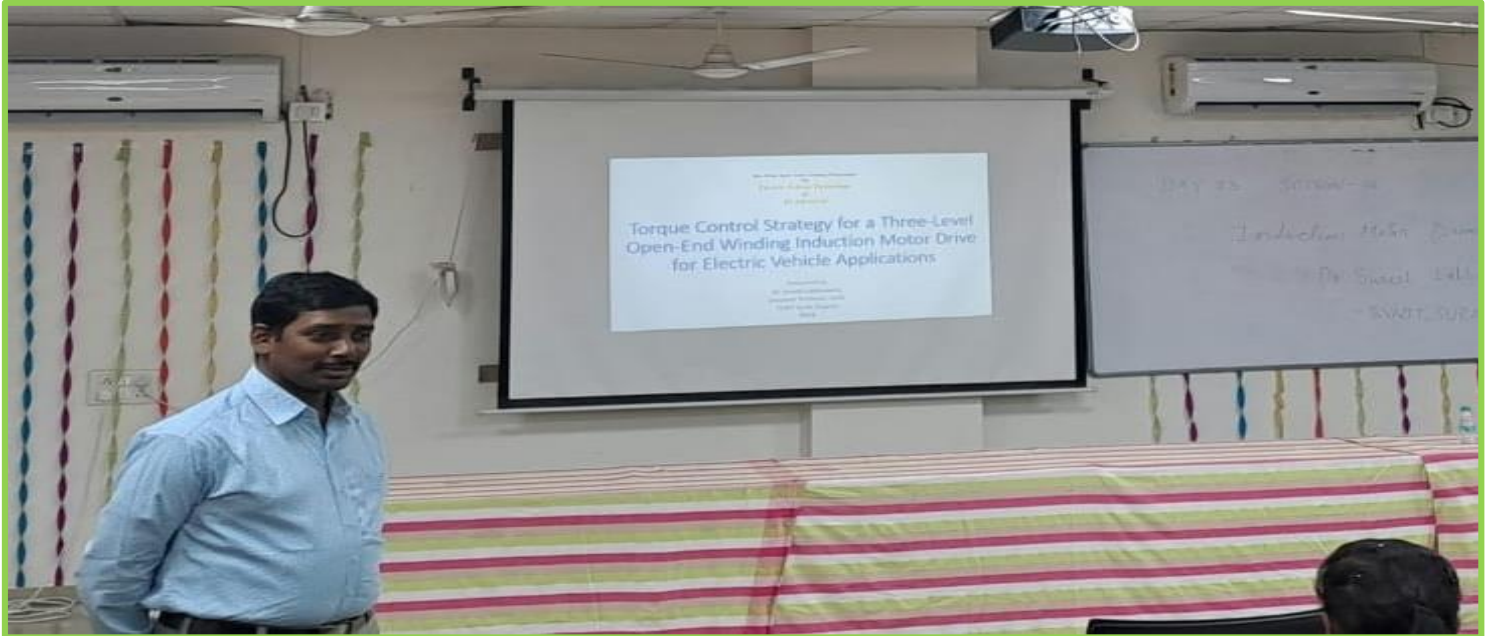
**ENERGY MANAGEMENT SYSTEM FOR EVS - DR. VARSHA SHAH, SVNIT, SURAT**





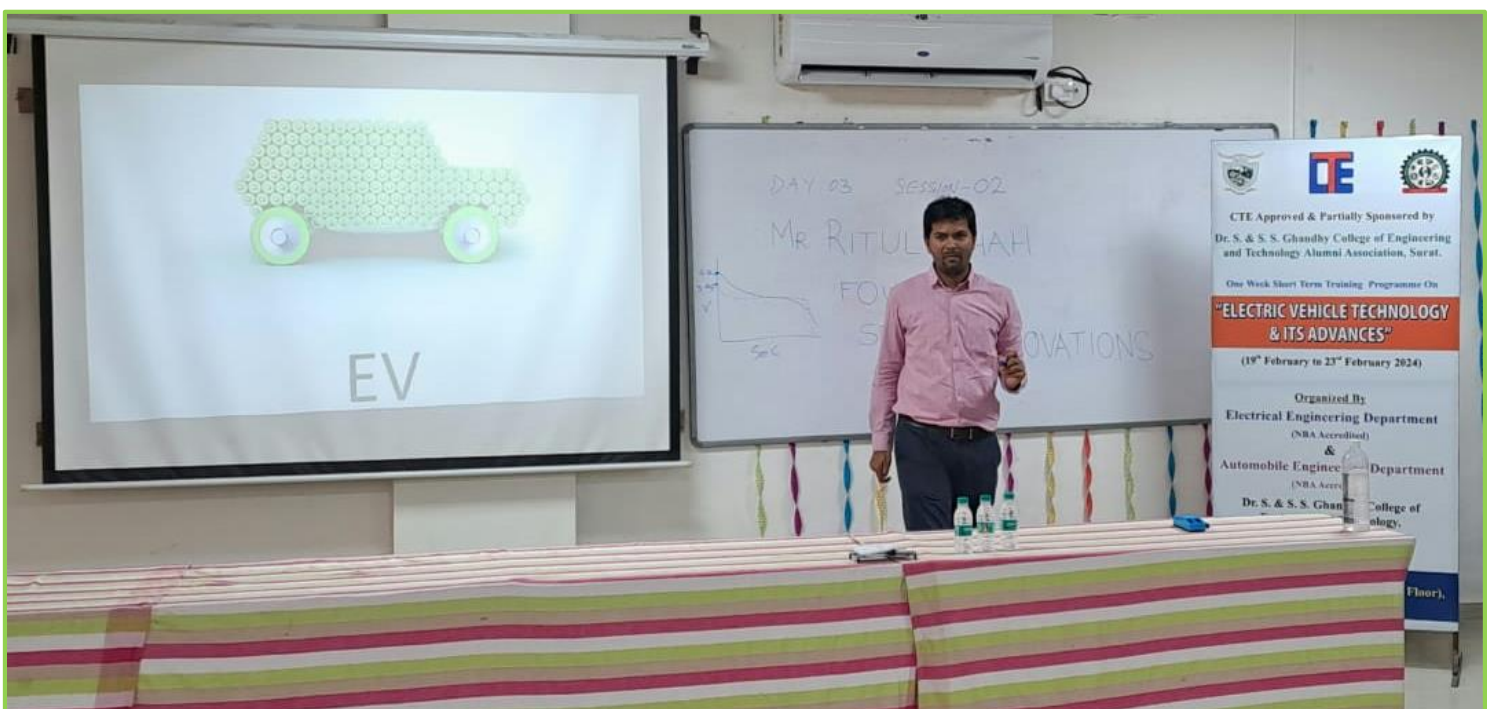
**Day:03 (21-02-2024 - Time: 09:30 AM to 11:15 AM)**

**OPEN WINDING INDUCTION MOTOR DRIVE FOR EV'S  
- DR. SURESH KUMAR, SYNIT, SURAT**



**Day:03 (21-02-2024 - Time: 11:30 AM to 12:45 PM)**

**BATTERY MANAGEMENT SYSTEM - MR. RITUL SHAH,  
CEO, SPARK INNOVATION**





**Day:03 (21-02-2024 - Time: 01:45 PM to 03:15 PM)**

## **EMERGING SKILL SETS AND COMPETENCIES FOR EV**

**MR.JASMIN PANCHAL, TATA MOTORS, SANAND**



**Day:03 (21-02-2024 - Time: 03:30 PM to 05:00 PM)**

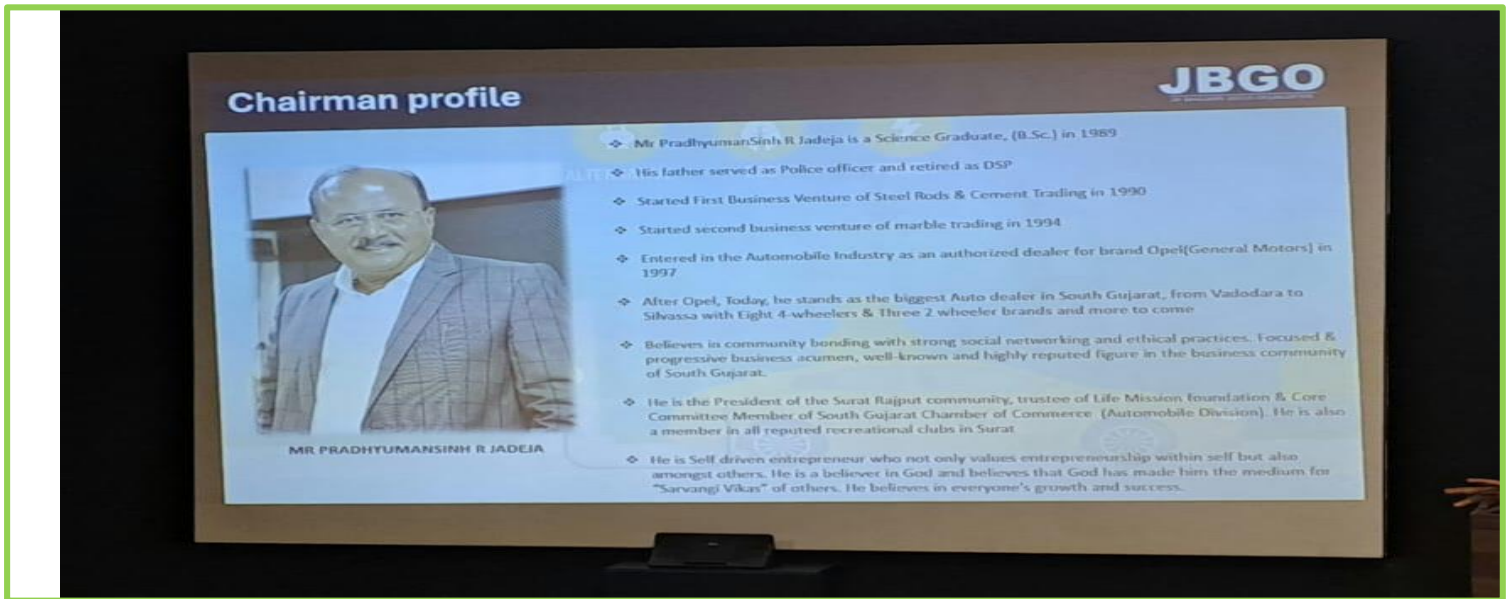
## **SAFETY & MAINTENANCE OF EVS - DR. SUKANTA HALDAR, SVNIT, SURAT**





**Day:04 (22-02-2024 - Time: 09:30 AM to 05:00PM)**

## **INDUSTRIAL VISIT JBGO AT PRAMUKH -TATA MOTORS,**

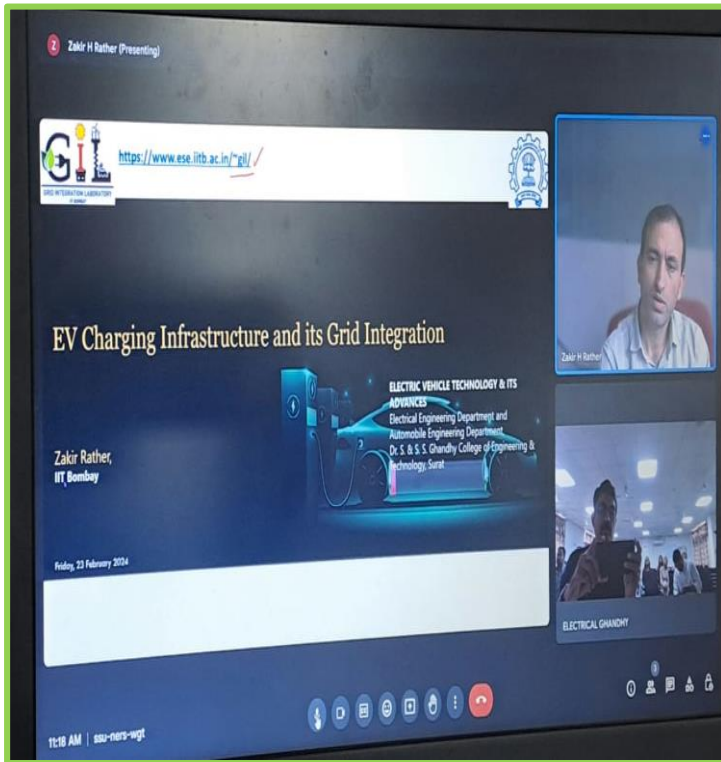




**Day:05 (23-02-2024 - Time: 09:30 AM to 11:15 AM)**

## **EV CHARGING INFRASTRUCTURE AND ITS GRID INTEGRATION**

**ZAKIR HUSSAIN, IIT, MUMBAI**



**Day:05 (23-02-2024 - Time: 11:30 AM to 12:45 PM)**

## **EV CHARGING DR. KASHYAP MOKARIA, GEC, VALSAD**



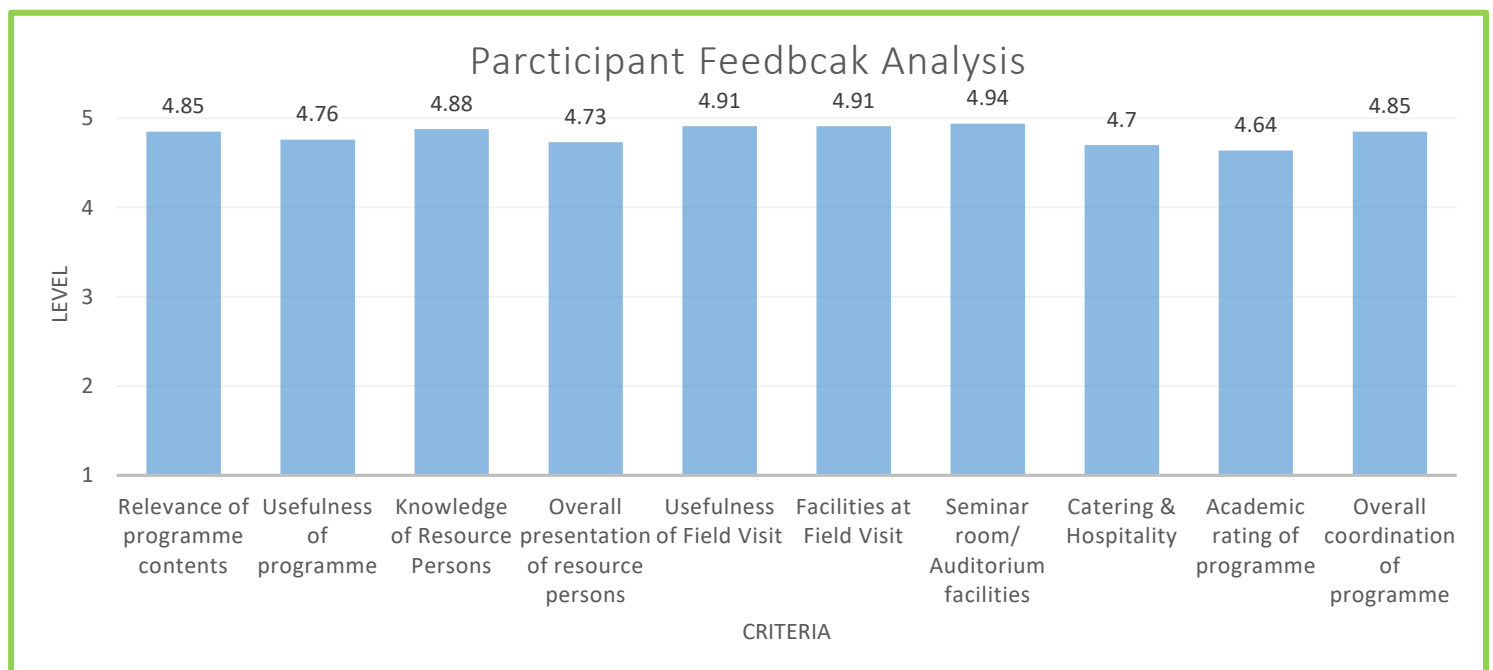


## Day:05 (23-02-2024 - Quiz) (Online Mode)

[https://docs.google.com/forms/d/e/1FAIpQLSex6hqcl\\_7c5SdJN0wBjp8tu\\_sXzS5eRwezchV-HL-e85x7Qw/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSex6hqcl_7c5SdJN0wBjp8tu_sXzS5eRwezchV-HL-e85x7Qw/viewform?usp=sf_link)



## Feedback Analysis





## Oral Feedback - Participants





## Valedictory









## Vote of Thanks by Convener

HOD Automobile Engineering Dept.



**Mrs. Sweety Ganatra**

HOD Electrical Engineering Dept.



**Mr. Jayesh Doshi**



## Group -Photo



## STTP TEAM

