



Department of Electrical Engineering

Academic Year 2022-23

FDP on “Research Scope in Electric vehicles”

Objective	To enlighten faculty with following scopes of research in electric vehicles: <ol style="list-style-type: none">1. Electric Vehicle Technology Basics and standards.2. Research scope in EV Power Quality studies.3. EV modelling - simulation and hardware implementation.4. Battery Management System for EVs.5. HIL testing Battery Management System controller using OPALRT.6. Electric Drives for EVs7. Issues and Research scope in EVs with respect to industrial perspectives.8. Issues and challenges in the Induction motor design procedure for electric vehicle and it's mitigation.9. EV hardware demo and Research Scope10. Hands on Practices Design and Development of Electric Drives for Electric Vehicles.
Organizer	Department of Electrical Engineering SVKM's Institute of Technology, Dhule
Participating Class & Division	Faculty from various colleges.
Date	05/12/2022 to 09/12/2022 (One Week)
Time	9:30 AM to 4:00 PM
Venue	Online – Microsoft Teams in Computer Lab (Room No. 414, Department of Electrical Engineering, SVKM's IOT, Dhule).
Coordinator/s	Mr. Sandeep Ushkewar Organizing Team: Mr. Gaurav Patil, Dr. Namra Joshi, Mr. Jagdish More, Ms. Farha Naz, Mr. T. N. Shubham, Mr. Shahid Akhtar, Mr. Ankush Kumar Mudholker, Mr. Rahul Thakur, Mr. Jayesh Patil, Mr. Pankaj Bhavsar.
Name of Speaker with Designation	<ol style="list-style-type: none">1. Dr. Shimi S.L, Assistant Professor, NITTTR Chandigarh2. Dr. Ravi Teja, Assistant Professor, IIT Ropar3. Dr. Pavitra Sukhla (Ph.D (IIT Delhi)), R&D Engineer, Caterpillar, India4. Dr. Tatiano Busatto, System Engineer at Unjo AB, Sweden5. Sai Teja, Application Engineer, OPAL-RT Technologies, Bangalore6. Khusro Khan, Manager, ABB, India7. Mr Kartikesh Kumar Jha, Application Engineer, ARK Infosolutions Pvt. Ltd.8. Ajay Godara, Director, Enovation Lab, LLP, Chandigarh



Department of Electrical Engineering

Brief report on activity	• The FDP was conducted in below sequence.			
	DAY & DATE	Live Session - 1 9.30 AM to 11.00 AM (IST)	Live Session - 2 11.30 AM to 1.00 PM (IST)	Live Session - 3 2.30 PM to 4.00 PM (IST)
	Monday 05/12/2022	Electric Vehicle Technology Basics and standards (SSL)	Research scope in EV Power Quality studies (SSL)	EV modelling - simulation and hardware implementation (AG)
	Tuesday 06/12/2022	Battery Management System for EVs (PS)	HIL testing Battery Management System controller using OPAL-RT (ST)	Electric Drives for EVs (RT)
	Wednesday 07/12/2022	Issues and Research scope in EVs with respect to industrial perspectives (TB)	Issues and challenges in the Induction motor design procedure for electric vehicle and it's mitigation (KK)	EV hardware demo and Research Scope (Expert V Instruments, TN)
	Thursday 08/12/2022	Hands on Practices Design and Development of Electric Drives for Electric Vehicles (ARK / Ansys Expert / SSL)		
	Friday 09/12/2022	Hands on Practices Design and Development of Electric Drives for Electric Vehicles (ARK / Ansys Expert / SSL)		Valediction, Feedback and Quiz (SSL)
Duration of Program	One Week			
Total No. of participants	50			
 Mr. Sandeep Ushkewar Coordinator	 Dr. Vishal Moyal Department Coordinator	 Dr. Nilesh Salunke Principal & Patron Principal		

SVKM's Institute of Technology, Dhule

Attached:-

1. Details of the Event
2. Event poster
3. Event Memories/Pictures
4. List of Participants
5. Sample Certificate

1. Details of the Event

Name of Program: FDP on “Research Scope in Electric vehicles”.

Objectives: To enlighten faculty with following scopes of research in electric vehicles:

1. Electric Vehicle Technology Basics and standards.
2. Research scope in EV Power Quality studies.
3. EV modelling - simulation and hardware implementation.
4. Battery Management System for EVs.
5. HIL testing Battery Management System controller using OPALRT.
6. Electric Drives for EVs
7. Issues and Research scope in EVs with respect to industrial perspectives.
8. Issues and challenges in the Induction motor design procedure for electric vehicle and it’s mitigation.
9. EV hardware demo and Research Scope
10. Hands on Practices Design and Development of Electric Drives for Electric Vehicles.

Dates and duration: 05/12/2022 to 09/12/2022 (One Week)

Event Coordinator: Mr. Sandeep Ushkewar

Convener: Dr. Vishal Moyal.

Patron: Dr. Nilesh Salunke

Organizing Team: Mr. Gaurav Patil, Dr. Namra Joshi, Mr. Jagdish More, Ms. Farha Naz, Mr. T. N. Shubham, Mr. Shahid Akhtar, Mr. Ankush Kumar Mudholker, Mr. Rahul Thakur, Mr. Jayesh Patil, Mr. Pankaj Bhavsar.

Participants: Faculty from all Engineering branches of SVKM’s IOT, Dhule

Name and details of the speakers:

1. Dr. Shimi S.L, Assistant Professor, NITTTR Chandigarh
2. Dr. Ravi Teja, Assistant Professor, IIT Ropar
3. Dr. Pavitra Sukhla (Ph.D (IIT Delhi)), R&D Engineer, Caterpillar, India
4. Dr. Tatiano Busatto, System Engineer at Unjo AB, Sweden
5. Sai Teja, Application Engineer, OPAL-RT Technologies, Bangalore
6. Khusro Khan, Manager, ABB, India
7. Mr Kartikesh Kumar Jha, Application Engineer, ARK Infosolutions Pvt. Ltd.
8. Ajay Godara, Director, Enovation Lab, LLP, Chandigarh

2. Event Poster

DTE Code: 5449



Shri Vile Parle Kelavani Mandal's
INSTITUTE OF TECHNOLOGY, DHULE

Approved by AICTE, New Delhi, Govt. of Maharashtra and Affiliated to DBATU, Lonere
Behind Gurudwara, Mumbai-Agra Highway, Dhule 424001.

Nodal Centre
for
Faculty Development Program
Conducted By



Electrical Engineering Department
Short Term Course on
Research scope in Electric Vehicles

5 Days Course

05 to 09 December 2022

Registration Link - <https://fdp.nitttrchd.ac.in/backingup/>

Incase of any Queries Contact ▶ 9970045518

CIVIL ENGINEERING	COMPUTER ENGINEERING	ELECTRICAL ENGINEERING	INFORMATION TECHNOLOGY	MECHANICAL ENGINEERING
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WE HAVE MADE IT TO THE NATION'S TOP IN INNOVATION



 **9425685966 / 9764405069**

 iotdhule@svkm.ac.in

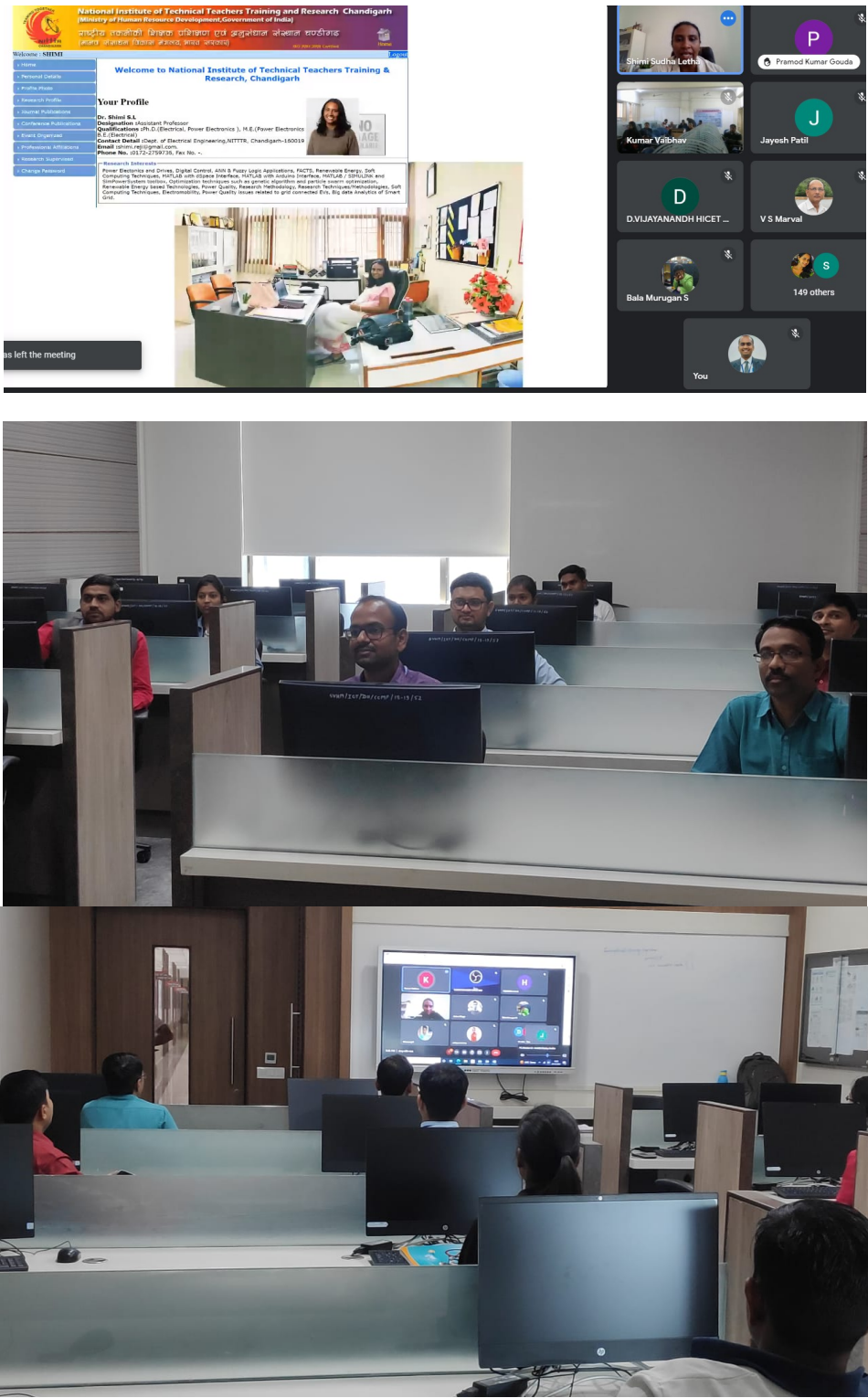
 www.svkm-iot.ac.in

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[/svkmiotdhule](https://www.youtube.com/channel/UC...)

3. Event Memories/ Pictures



4. List of Participants

Page No. 01

Attendance
 Name of the Course: Research Scope in Electric Vehicles (In collaboration with ANSYS)
 Dates: 05.12.2022 to 09.12.2022
 Venue (Nodal Centre): SVKM's Institute of Technology, Dhule Maharashtra
 Local Course Coordinator: Mr. Sandeep Ushkewar
 Supporting Staff: Mr. Jayesh Patil

Sr. No.	Name of the Participant	Name of the Institute	5/12/2022		6/12/2022		7/12/2022		8/12/2022		9/12/2022	
			09.30 am-11.00 am	11.30am-1.00pm	09.30 am-11.00 am	11.30am-1.00pm	09.30 am-11.00 am	11.30am-1.00pm	09.30 am-11.00 am	11.30am-1.00pm	09.30 am-11.00 am	11.30am-1.00pm
1	ACHAL AGRAWAL	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
2	ACHALA KHANDELWAL	Thakur College of Engrs. & Tech. Mumbai	A	A	A	A	A	A	A	A	A	A
3	AKSHAY BHARAT JAIN	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
4	AKSHAY JOSHI	Nikam Institute of Tech. (Polytechnic) Dhule	A	A	A	A	A	A	A	A	A	A
5	AMOL VASANT MAHAJAN	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
6	ANSARI RASHID ZAHID IQBAL	Nikam Institute of Tech. (Polytechnic) Dhule	A	A	A	A	A	A	A	A	A	A
7	ATUL ABHIMAN KHAIARNAR	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
8	BADGUJAR NITISH SUNIL	Nikam Institute of Tech. (Polytechnic) Dhule	A	A	A	A	A	A	A	A	A	A
9	DEEPAK ANIL CHAVHAN	Nikam Institute of Tech. (Polytechnic) Dhule	A	A	A	A	A	A	A	A	A	A
10	DEEPAK SINGH BAGHEL	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
11	DHIRAJ KESHAVRAO BHANDARKAR	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
12	DIGVIJAY SHAMIRAO DEORE	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
13	DNYANESHWAR RAGHUNATH TAYADE	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
14	DIR-NARAYAN RATANALALJI CHANDAK	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
15	DRNILESH SALUNKE	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
16	DR. MANOJ RAMBHAU SONAWANE	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
17	DR. SANTOSH SHANKARRAO CHOUDHARY	Government Polytechnic, Nanded	A	A	A	A	A	A	A	A	A	A
18	FARHA NAZ	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
19	GANESH BHIKA CHAUDHARI	Nikam Institute of Tech. (Polytechnic) Dhule	A	A	A	A	A	A	A	A	A	A
20	JAGDISH LAXMAN MORE	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
21	JAYESH NANA PATIL	SVKM's Institute of Tech. (Polytechnic) Dhule	A	A	A	A	A	A	A	A	A	A
22	KAMINI ANANDA SHINDE	Nikam Institute of Tech. (Polytechnic) Dhule	A	A	A	A	A	A	A	A	A	A
23	KIRTI SWAPNIL SHINDE	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A
24	KRUPAL BABU KANNOR	Nikam Institute of Tech. (Polytechnic) Dhule	A	A	A	A	A	A	A	A	A	A
25	M. ANKUSH KUMAR	SVKM's Institute of Technology, Dhule	A	A	A	A	A	A	A	A	A	A



Sandeep

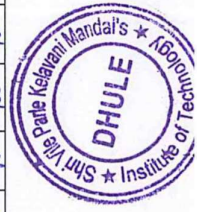
Principal
 SVKM's Institute of Technology, Dhule

Mrs. Sandeep Ushkewar
 [Local Program Coordinator]

Attendance

Name of the Course: Research Scope in Electric Vehicles (In collaboration with ANSYS)
 Dates: 05.12.2022 to 09.12.2022
 Venue (Nodal Centre): SVKM's Institute of Technology, Dhule Maharashtra
 Local Course Coordinator: Mr. Sandeep Ushkewar
 Supporting Staff: Mr. Jayesh Patil

Sr. No.	Name of the Participant	Name of the Institute	5/12/2022		6/12/2022		7/12/2022		8/12/2022		9/12/2022	
			09:30 am-11:00 am	2:30pm-4:00pm	09:30 am-11:00 am	2:30pm-4:00pm	09:30 am-11:00 am	2:30pm-4:00pm	09:30 am-11:00 am	2:30pm-4:00pm	09:30 am-11:00 am	2:30pm-4:00pm
26	MADHURI VISHNU PATIL	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
27	MAHENDRA DILIP PATIL	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
28	MAKARAND SHAHADE	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
29	NILESH SURESH PAWAR	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
30	PANKAJ NAVANTILAL BHAVSAR	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
31	PRADEEP DAGADU SURWADE	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
32	PRANALI PRAKASH CHAUDHARI	Nikam Institute of Tech. (Polytechnic) Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
33	PRATIK VILAS DEORE	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
34	PRERANA RAMDAS IKHAR	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
35	RAHUL MANOHAR THAKUR	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
36	RINKU MAHESH SHARMA	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
37	SACHIN DILIP NERKAR	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
38	SAMADHAN KHANDU RAJPUT	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
39	SANDEEP SUNIL USHKEWAR	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
40	SHAHID AKHTAR IQBAL AHMED	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
41	SHAKEELUR RAHEMAN ATEEQUR RAHEMAN	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
42	SHITAL VINODKUMAR PATIL	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
43	SNEHA KESHAV PAWAR	Gangamai College of Engineering, Nagaon	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
44	SNEHA PATIL	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
45	SURESH SHIVDAS PATIL	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
46	TEJVEERSINGH PRAVINSINGH TAVAR	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
47	THAKARE HITESH RAVINDRA	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
48	VIJAY BUCHANNA USHKEWAR	Government Polytechnic, Nanded	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
49	VISHAL MOYAL	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
50	YOGESH DILIPRAO SONAWANE	SVKM's Institute of Technology, Dhule	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present




Sandeep
Principal
 SVKM's Institute of Technology, Dhule

Sandeep
 Mr. Sandeep Ushkewar
 (Local Program Coordinator)

5. Sample Certificates

Certificate No: ICT-19669/22



**National Institute of
Technical Teachers Training and Research
Chandigarh**

MINISTRY OF EDUCATION, GOVERNMENT OF INDIA

Certificate

This is to certify that

DR NILESH SALUNKE

**SVKMS INSTITUTE OF TECHNOLOGY, DHULE
MAHARASHTRA**

Participated in the AICTE Recognized Faculty Development Programme

on

Research Scope in Electric Vehicles (In collaboration with ANSYS)

Conducted by


Electrical Engineering Department

from

05/12/2022 to 09/12/2022 (One Week)

at

SVKMs Institute of Technology, Dhule, Maharashtra



Shiv S.L.
Coordinator

[Signature]
Director

Certificate of in college participant.



Certificate No: ICT-19636/22

**National Institute of
Technical Teachers Training and Research
Chandigarh**

MINISTRY OF EDUCATION, GOVERNMENT OF INDIA

Certificate

This is to certify that

VIJAY BUCHANNA USHKEWAR

**GOVERNMENT POLYTECHNIC, NANDED
MAHARASHTRA**

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Shivani S.L.
Coordinator

[Signature]
Director

Certificate of other college participant.