



SARANATHAN COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)

Venkateswara Nagar, Panjapur, Tiruchirappalli - 620 012.

Department of Electrical & Electronics Engineering

“ Industrial Practices & Learning of State - of - Art LV and HV Switchgear”



VENUE: SWITCHGEAR TRAINING & RESEARCH LAB

Department of Electrical and Electronics Engineering

Vision

Will strive continuously in pursuit of creativity, innovations and ethics in the field of Electrical and Electronics Engineering to blossom into Centre of Excellence.

Mission

1. To impart total quality education through broader exposure, value additions and effective teaching learning process.
2. To mould students to meet professional challenges and to become outstanding Engineers and Technocrats.
3. To pursue research in the field of Electrical and Electronics Engineering to serve the needs of the industry, scientific community and society.

About The College

Saranathan College of Engineering was founded by philanthropist Vidya Seva Ratnam Shri.K.Santhanam, in the year 1998 and was named after the great educationist Prof. V. Saranathan. The campus is located on Trichy – Viralimalai – Madurai highway having an area of 21 acres with a built up area of 2,60,000 Sq.ft.. Seven U.G Programmes and Four P.G programmes are offered. Six eligible UG courses are NBA accredited. All the programmes are affiliated to the Anna University, Chennai, and have the approval of the AICTE, New Delhi.

About The Department

Department of EEE was started in the year 1998. It is equipped with modern facilities besides conventional infrastructures. The department has well qualified experienced faculty, supporting staff and it is a recognized Research Centre by the Anna University. The department has received grants from central and state government organizations like MNRE, DRDO, CSIR, AICTE and TNSCST for carrying out research work and organizing National Conferences / Workshops / Seminars. The sheer hard work and enthusiasm of the faculty and students of the department has helped in making it as one of the best departments in the campus. There are about 25 Faculty members in the department. Among them six are Ph.D. holders and twelve are pursuing Ph.D. The Department has been extending consultancy services in the field of energy auditing and power quality auditing to various industries.

Outline of the training programme

Our Faculty members are actively involved in training and preparing the students/practicing Engineers to meet out the requirements of real life situation, by taking them through various rigorous training and exercises. In today's world, barriers are breaking down and business environment is becoming highly competitive. In such a post-modern scenario, it is imperative to formulate new perspectives to add values through application oriented approaches to meet the challenge of changes and dynamism. Electrical and Electronics Engineering department will continue to help students and Engineers in shaping them as future professionals and assist them to improve their performance by imparting career oriented courses periodically. The switchgear training programme provides the basic skills required to operate and test the switchgear and protective devices. Hands on experience on practical circuit breakers and protective relays are employed. Sample HT/LT modern circuit breakers are

provided for testing, trouble shooting and maintenance. Proper procedural methods to carryout insulation resistance tests, contact resistance measurements, polarity checking and terminal marking of current transformers, testing of relays, etc will be demonstrated to the participants.

Infrastructure and vision

- To train the students to meet the challenges and demand for industrial skills in terms of quality of professional, safety, time & technical excellence.
- To identify the training needs of professional workforce and set standards to monitor occupational competencies and the technical skills deployed in the industries.
- To disseminate knowledge and appropriate skill practices through recognized systems of training, testing and certification.
- To serve the social objectives of the institution through channelizing the potential and strength of the students for producing trained professionals, who are capable of delivering results, conforming to the industrial standards.

Scope of Training Programme

- Familiarize Switchgear and its Specifications
- Perform Electrical and Mechanical operation of Circuit Breakers
- Testing of Switchgear
- Checking of various Switchgear interlocking requirements
- Interpretation of Electrical wiring and Schematic diagrams of Switchgear
- Testing of protective relays and establishing characteristics
- Learning programming of Numerical relays
- Design and selection of protection transformers
- Understanding single line diagrams of distribution substation
- Demonstration of sequential substation interlocks
- Field measurements at prevailing load conditions
- Design and execution of control and power wiring of LT switchgear
- Insulation measurements on HT Switchgear
- BDV test on mineral oil
- Extensive hands on training with lucid presentations

Key takeaways

Acquire exposure and knowledge on

- Design of control and power circuits
- Fault diagnosis in Electrical Circuits
- Switchgear maintenance practices
- Testing of circuit breakers as per National standard
- Calibration of protective relays
- Single line diagrams of Distribution substation
- Various interlocking requirements for Switchgear and substations
- Distribution Boards and Terminations
- Distribution Transformer Protections
- Bus bar Layouts
- Selection of Current Transformers for Protection and Metering

Duration of Training

Two days

Eligibility Criteria

Third year, Final year and PG students of Electrical Engineering stream/practicing Engineers from Industries

Registration

Rs 1500 / Participant

Participant Strength: Limited to twenty numbers in view of practical Demos

Course Material: Soft copy of two days learning.

Patron: Shri. S. Ravindran, Secretary

Advisory board

Dr. D. Valavan, Principal

Dr. C. Krishnakumar, Professor & Head/ EEE Dept.

Course coordinator

Dr. D.Kalyanakumar

Organizers

Prof. R.Venugopal

Prof. T.Tamilarasan

Prof. P.Ramprakash

Prof. R.Sridhar



SARANATHAN COLLEGE OF ENGINEERING-TRICHY
DEPARTMENT OF EEE

SWITCHGEAR TRAINING WORKSHOP - BRIEF REPORT

The Department of Electrical and Electronics Engineering, Saranathan College of Engineering has conducted a value-added Two Days training programme for the EEE students on **INDUSTRIAL PRACTICES AND LEARNING OF STATE-OF- ART OF LV & HV SWITCH GEAR** on **20-07-18 and 21-07-2018** at Switchgear Research Laboratory and exposed the students to the modern trends and Cutting Edge Technologies in the Switchgear front. The students were trained and exposed to calibration of various relays, understanding the modern design of control and power circuits, testing of HV Circuit breakers as per the international Standards, substation requirements, field measurements of electrical parameters at the prevailing load conditions, various interlocking arrangements in the switchgear, hands-on training in wiring practices of LV switchgear, HV testing of insulation, selection of CTs for protection and metering, etc.

This switchgear training in an Engineering college is the first and only of its kind in India to expose future Engineers of our nation in every aspect of switchgear and protection engineering through the state-of-art training facilities, a well-equipped laboratory and testing systems. The students have enthusiastically participated and this training will help the students to broaden their technical skills to meet out the prevailing industrial demands, professional challenges and expectations and give them a new and positive attitude towards the work culture to enhance the productivity, energy efficient operation and reduced downtime of machinery. We received a very good feedback for this value-added program from participants as this program is intended to give the practical feel to students regarding modern trends on low voltage and High voltage switchgear products.



SARANATHAN COLLEGE OF ENGINEERING

DEPARTMENT OF EEE

SWITCHGEAR WORKSHOP (25.09.2019-26.09.2019)

SL.NO	BATCH NO	NAME	DEPT	SIGNATURE
1	193004	ANANTH. T	IV EEE A	
2	193015	CHANDRAMOHAN. P	IV EEE A	
3	193049	MADHURANTHAKI. T	IV EEE A	
4	193022	DINESH KUMAR. R	IV EEE A	
5	193029	GURUPRASAD. S.K	IV EEE A	
6	193036	IRSHATH ALI. K	IV EEE A	
7	193039	KARTHICK. S	IV EEE A	
8	193046	KUMARAN. R	IV EEE A	
9	193126	PERUMAL RAJA. S	IV EEE A	
10	193052	MANISH .A.E	IV EEE A	
11	193069	PRADEEPA. L	IV EEE B	
12	193079	RISHIKESH KUMAR. R	IV EEE B	
13	193080	ROHIT MALLYA	IV EEE B	
14	193081	SACHIN. S	IV EEE B	
15	193082	SANTHOSH KUMAR. K	IV EEE B	
16	193087	SHABASH KHAN. H	IV EEE B	
17	193092	SIDDHARTHAN. M.A	IV EEE B	
18	193102	SUDHARSON. N.A	IV EEE B	
19	193119	VISHNU CHANDER. R	IV EEE B	
20	193028	R. GUHAN	IV EEE A	



SARANATHAN COLLEGE OF ENGINEERING
DEPARTMENT OF EEE

SWITCHGEAR WORKSHOP (29.08.2019-30.08.2019)

SL.NO	BATCH NO	NAME	DEPT	SIGNATURE
1	193027	GOWTHAM. K	IV EEE A	<i>Gowtham</i>
2	193032	HARIHARAN. K	IV EEE A	<i>K. Hariharan</i>
3	193059	MONIKA. M	IV EEE A	<i>Monika.M</i>
4	193061	NARMATHA DEVI. K	IV EEE A	<i>K. Narmatha</i>
5	193005	ANITHA. J	IV EEE A	<i>J. Anitha</i>
6	193012	BECCA. R	IV EEE A	<i>Becca.R</i>
7	193053	MEENATCHI. V	IV EEE A	<i>V. Meenatchi</i>
8	193010	ATCHAYA. S	IV EEE A	<i>S. Atchaya</i>
9	193054	MEGADHARSHINI. S	IV EEE A	<i>S. Megadharshini</i>
10	193023	ESWAR. M	IV EEE A	<i>M. Eswar</i>
11	193056	MUHAMED NASRULLAH. N	IV EEE A	<i>N. Muhammed Nasrullah</i>
12	193057	MOHAMED SUHAIL. A	IV EEE A	<i>A. Muhammed Suhail</i>
13	193024	GANESAN. S	IV EEE A	<i>S. Ganesan</i>
14	193044	KISHORE KUMAR. U	IV EEE A	<i>U. Kishore Kumar</i>
15	193025	GANESHKUMAR. V.	IV EEE A	<i>V. Ganesh Kumar</i>
16	193040	KARTHIKEYAN. N	IV EEE A	<i>N. Karthikeyan</i>
17	193125	SHANMUGARAJESHWARAN M	IV EEE A	<i>M. Shanmugarajeshwaran</i>
18	193026	GOKUL NATH. A.J	IV EEE A	<i>A.J. Gokul Nath</i>
19	193021	DILIP. R	IV EEE A	<i>R. Dilip</i>
20	193009	ARULRAJA. K	IV EEE A	<i>K. Arul Raja</i>
21	193001	AADIMAATHAVAN. K	IV EEE A	<i>K. Aadimaathavan</i>
22	193014	BOOMA. G	IV EEE A	<i>G. Booma</i>
23	193042	KEERTHANA. M	IV EEE A	<i>M. Keerthana</i>
24	193043	KEERTHI MALINI. S	IV EEE A	<i>S. Keerthi Malini</i>
25	193002	ABHIRAMI. V	IV EEE A	<i>V. Abhirami</i>



SARANATHAN COLLEGE OF ENGINEERING-TRICHY
SWITCHGEAR TRAINING WORKSHOP - BATCH 4
(19.03.2019-20.03.2019)

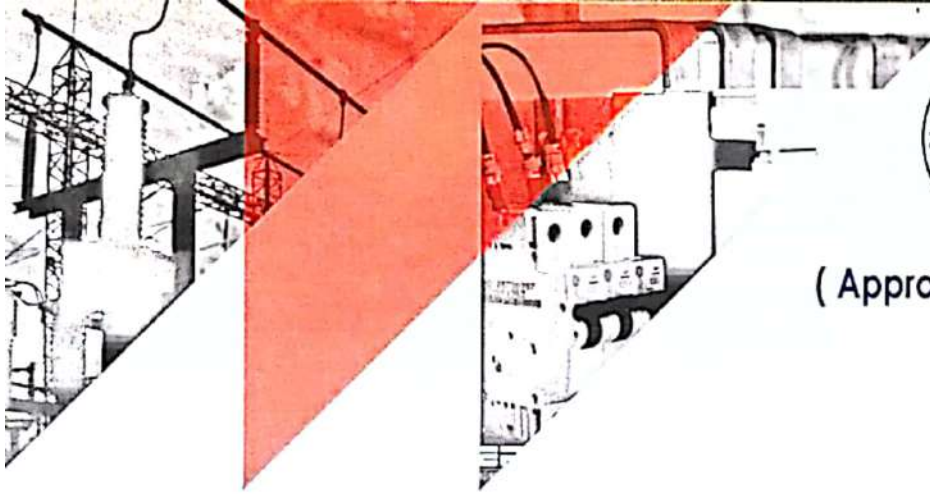
S.No	Batchno	Dept	Student Name	Batch	Signature
1	183008	IV EEE A	AJITH ARUMUGAM.A ✓	IV	<i>Ajith</i>
2	183017	IV EEE A	BHAVADHARINI.P ✓	IV	<i>Bhavadharini</i>
3	183067	IV EEE B	X NIVETHA.R X	IV	<i>R. Nivetha</i>
4	183073	IV EEE B	PRADEEP RAAJ. K ✓	IV	<i>K. Pradeep Raj</i>
5	183077	IV EEE B	PRINCE THOMSON.J ✓	IV	<i>Prince Thomson</i>
6	183105	IV EEE B	SURENDRAN. K.R ✓	IV	<i>Jessy</i>
7	183025	IV EEE A	DINESHKUMAR. V ✓	IV	<i>V. Dinesh Kumar</i>
8	183047	IV EEE A	X MADHANRAJ. S X	IV	<i>S. Madhanraj</i>
9	183058	IV EEE A	MUTHU KARUPPAN .N. ✓	IV	<i>N. Muthukaruppan</i>
10	183038	IV EEE A	KAVYA.V ✓	IV	<i>V. Kavya</i>
11	183053	IV EEE A	MEENACHI.R ✓	IV	<i>R. Meenachi</i>
12	183127	IV EEE A	VIGNESH. V ✓	IV	<i>Vignesh</i>
13	183128	IV EEE A	SARAVANAN. R ✓	IV	<i>R. Saravanan</i>
14	183032	IV EEE A	JANE MIRIAM.J ✓	IV	<i>Jane Miriam</i>
15	183040	IV EEE A	KIRTHIKA.R ✓	IV	<i>R. Kirthika</i>
16	183041	IV EEE A	KIRUTHIKA .G. ✓	IV	<i>G. Kiruthika</i>
17	183044	IV EEE A	KRISHNA PRIYA. V ✓	IV	<i>V. Krishna Priya</i>
18	183039	IV EEE A	KEERTHANA. V ✓	IV	<i>V. Keerthana</i>
19	183003	IV EEE A	AATHREYA. S ✓	IV	<i>S. Athreya</i>
20	183122	IV EEE A	PRADEEP KUMAR M ✓	IV	<i>M. Pradeep Kumar</i>
21	183056	IV EEE A	MOHAMED ASIF .K ✓	IV	<i>A. Asif</i>
22	183126	IV EEE A	ISHWARYA. S ✓	IV	<i>S. Ishwarya</i>
23	183060	IV EEE A	MUTHULAKSHMI. M ✓	IV	<i>M. Muthulakshmi</i>
24	183016	IV EEE A	BHARANIDHARAN. M.S ✓	IV	<i>M. Bharanidharan</i>
25	183014	IV EEE A	BARATH. R ✓	IV	<i>R. Barath</i>
26	183022	IV EEE A	DHINESH KUMAR. R ✓	IV	<i>R. Dhinesh Kumar</i>



SARANATHAN COLLEGE OF ENGINEERING-TRICHY
SWITCHGEAR TRAINING WORKSHOP - BATCH 3
(15.10.2018-16.10.2018)

S.No	Batchno	Dept	Student Name	Batch	Signature
1	183004	IV EEE A	ABINAYA. K	III	K. Abinaya
2	183005	IV EEE A	ABINAYA. T	III	T. Abinaya
3	183015	IV EEE A	BARJANA BEGAM.S	III	B. Begam
4	183063	IV EEE B	S. NANDA	III	Nanda S.
5	183024	IV EEE A	DHIVYA. A	III	D. Divya
6	183027	IV EEE A	EAZHILARASIJ	III	J. Eazhilarasij
7	183030	IV EEE A	HARITHA.R	III	Haritha R.
8	183033	IV EEE A	KALAISELVI. K	III	K. Kalaiselvi
9	183036	IV EEE A	KARTHIKHAINI. K	III	K. Karthika
10	183054	IV EEE A	MERLIN ANTONITA. X	III	M. Antonita
11	183080	IV EEE B	PRIYADHARSHINI. K	III	K. Priyadharsini
12	183087	IV EEE B	RAMYAPRABHA. R	III	R. Ramya Prabha
13	183089	IV EEE B	REKHA. L	III	L. Rekha
14	183090	IV EEE B	SAJITHA NILOFER.S	III	Sajitha Nilofer S.
15	183095	IV EEE B	SHAHID HASSAN .T	III	Shahid Hassan T.
16	183099	IV EEE B	SIVASUBRAMANIAN.S	III	S. Sivasubramanian
17	183101	IV EEE B	SRIMATHI. S	III	Srimathi S.
18	183018	IV EEE A	BOOPATHINAVANEETHAN. S	III	S. Boopathinavaneethan
19	183048	IV EEE A	MAHALAKSHMI. C	III	C. Mahalakshmi
20	183045	IV EEE A	LAKSHMI NARAYANAN. T	III	T. Lakshmi Narayanan

(Handwritten signature)



SARANATHAN COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)
Venkateswara Nagar, Panjapur, Tiruchirapalli - 620 012.

Department of
Electrical & Electronics Engineering

CERTIFICATE OF PARTICIPATION

.....
participated in the training programme entitled
“ **Industrial Practices & Learning of State - of - Art LV and HV Switchgear** ”
held on at
Saranathan College of Engineering.

Dr.D.KALYANAKUMAR
Professor / EEE dept

Dr.C. KRISHNAKUMAR
Professor & Head / EEE

Dr.D. VALAVAN
Principal



SARANATHAN COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

**Cordially Invite You For The
Two day Workshop**

“MULTIFUNCTIONAL DIGITAL MEASURING INSTRUMENTS”

On

Date: 04-09-2019 & 05-09-2019

Venue: CONTROL & INSTRUMENTATION Laboratory

**Head of the Department
Dr.C.Krishnakumar**

**Coordinators:
Dr.S.Vijayalakshmi Asso.Prof/EEE
Ms.R.S. Priyaa Dharshini AP/EEE
Ms.A.R.Danila Shirly AP/EEE**



**SARANATHAN COLLEGE OF ENGINEERING
TRICHY
RESEARCH CELL-EEE**

Department of Electrical and Electronics Engineering

Certificate

This is to certify that

has Participated in the 2 day Workshop on

MULTIFUNCTIONAL DIGITAL MEASURING INSTRUMENTS

conducted by Research Cell-EEE during 04-09-2019 to

05-09-2019 at Saranathan College of Engineering and

**has successfully implemented a concept validating
prototype of Digital Frequency Meter/Tacheter.**

Dr.S. Vijayalakshmi
(Workshop Convener)

Dr.C. Krishnakumar
(Head- Dept of EEE)

Dr.D. Valavan
(Principal)



**SARANATHAN COLLEGE OF ENGINEERING
TRICHY**

RESEARCH CELL-EEE

Department of Electrical and Electronics Engineering

Certificate

This is to certify that

has Participated in the 2 day Workshop on

MULTIFUNCTIONAL DIGITAL MEASURING INSTRUMENTS

conducted by Research Cell-EEE during 04-09-2019 to

05-09-2019 at Saranathan College of Engineering and

**has successfully implemented a concept validating prototype
of Digital Frequency Meter/Tacheter.**

**Dr.S. Vijayalakshmi
(Workshop Convener)**

**Dr.C. Krishnakumar
(Head- Dept of EEE)**

**Dr.D. Valavan
(Principal)**



**SARANATHAN COLLEGE OF ENGINEERING
TRICHY**

RESEARCH CELL-EEE

Department of Electrical and Electronics Engineering

Certificate

This is to certify that

has Participated in the 2 day Workshop on

MULTIFUNCTIONAL DIGITAL MEASURING INSTRUMENTS

conducted by Research Cell-EEE during 04-09-2019 to

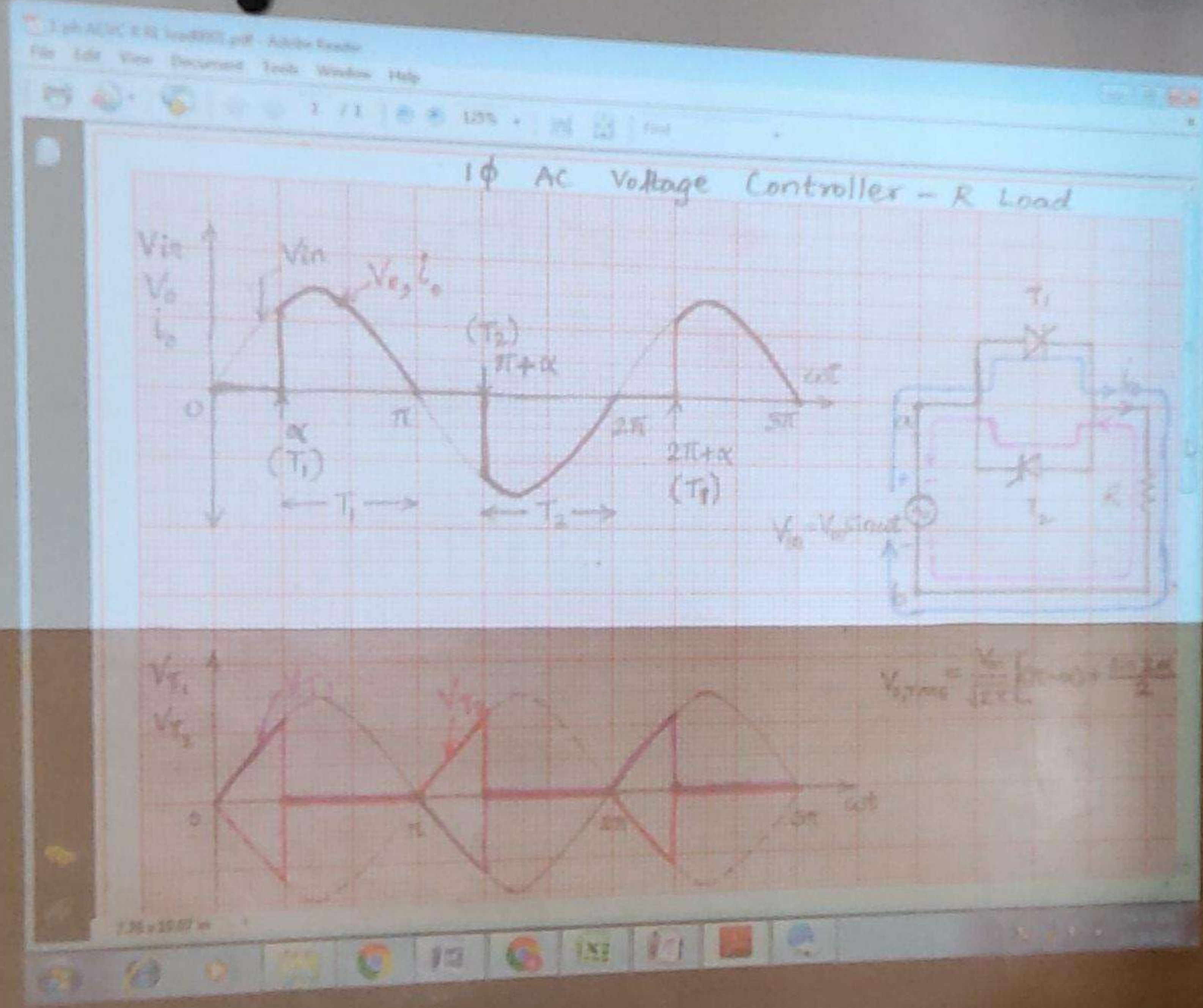
05-09-2019 at Saranathan College of Engineering and

**has successfully implemented a concept validating prototype
of Digital Frequency Meter/Tacheter.**

Dr.S. Vijayalakshmi
(Workshop Convener)

Dr.C. Krishnakumar
(Head- Dept of EEE)

Dr.D. Valavan
(Principal)



GPS Map Camera

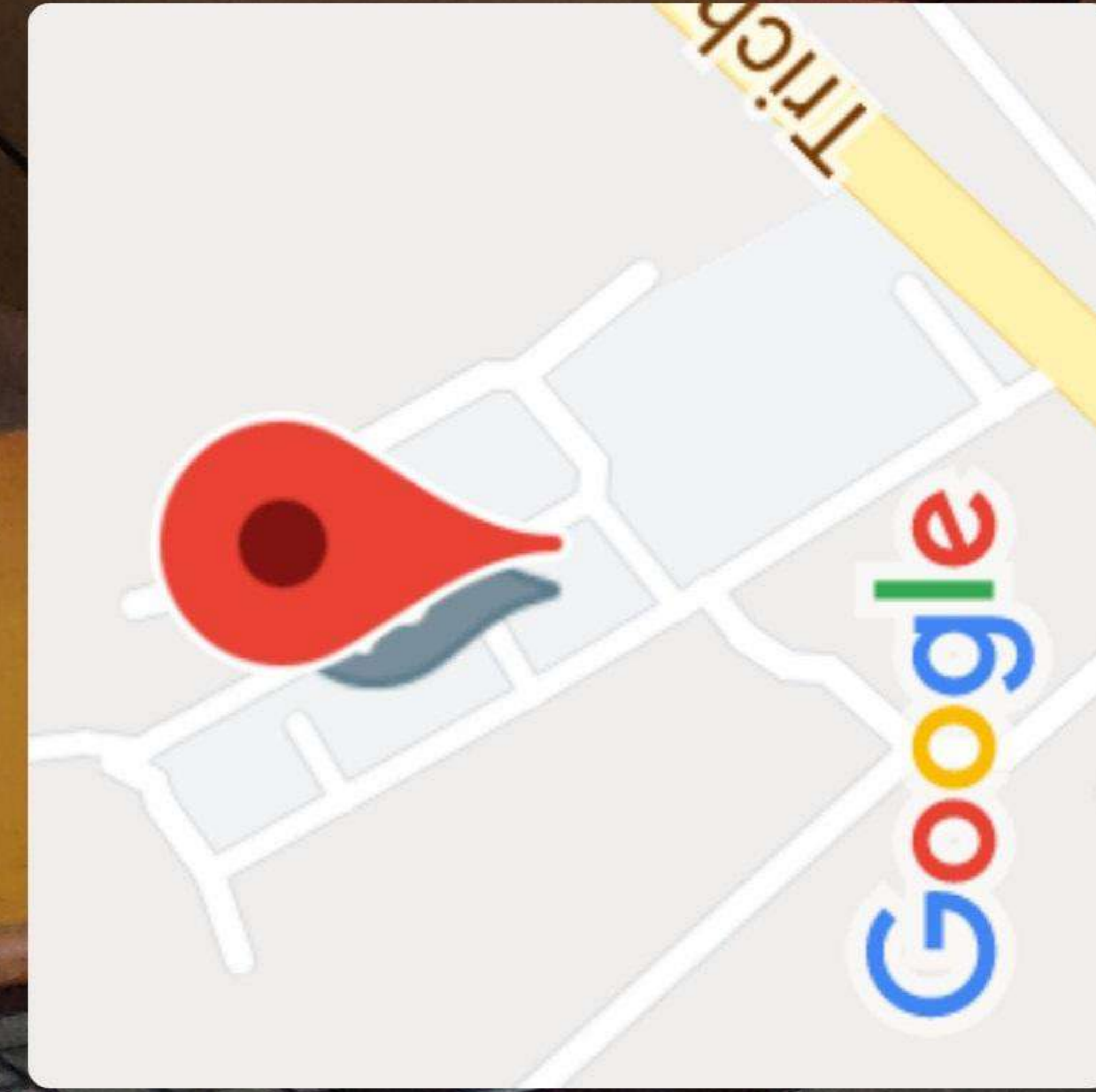
Panjappur, Tamil Nadu, India

QM42+9J8, Panjappur, Tamil Nadu 620012, India

Lat 10.756005°

Long 78.651519°

24/12/21 10:34 AM





GPS Map Camera

Panjappur, Tamil Nadu, India

QM42+9J8, Panjappur, Tamil Nadu 620012, India

Lat 10.756002°

Long 78.651529°

24/12/21 10:36 AM

