



SREE VIDYANIKETHAN ENGINEERING COLLEGE (Autonomous)

Sree Sainath Nagar, Tirupati – 517 102.



Department of Electronics and Communication Engineering

Council of Scientific and Industrial Research (CSIR)

Sponsored

TWO DAY NATIONAL WORKSHOP

ON

“VLSI Architectures for Biomedical Image Processing Applications”

The Department of Electronics and Communication Engineering of Sree Vidyanikethan Engineering College has organized a Two-Day national Workshop titled “VLSI Architectures for Biomedical image Processing Applications” during 08-09 August 2019, which is sponsored by council of Scientific and Industrial Research (CSIR).

Objectives of this workshop is

- To identify those emerging VLSI technology and Bio medical applications which are considered as having the greatest potential in providing broad equitable social benefits
- To promote the researchers towards developing the knowledge and ability in addressing the health care needs using VLSI and medical image processing and to solve the latest research issues and happenings relevant to bio-medical image processing through VLSI Architectures.
- To promote research collaboration and partnerships among VLSI and Bio medical professionals for proving the solutions for Bio medical issues through VLSI technologies.

A total of 40 delegates including PG scholars, research scholars and faculty from various institutions have participated in the Workshop. Dr.P.Nagarajan, Associate Professor organized this workshop as convener and Dr.N.Ashok kumar, Associate professor, Dr.N.Vithya Lakshmi , Associate professor and Ms.K.Neelima , Assistant Professor are organized as coordinators under the guidance of Dr. P. V. Ramana, Professor and Head, Department of Electronics and Communication Engineering.

The resource persons constitutes of scientists, Experts, senior faculty members and eminent guest speakers from different R&D organizations, Premier Academic institutions of Engineering and Sciences. The feedback on participants understanding and learning, resource person’s knowledge, knowledge sharing and organization of the workshop is extraordinary and encouraging to organize many workshops of this kind.

Overall, the event has proved successful. The program schedule and photographs of workshop are as follows.

Program Schedule

DATE	TIME SCHEDULE	SESSIONS	TOPIC
Day - 1			
08.08.2019	09:00 AM – 09:30 AM	Inaugural Function	
	09:30 AM- 11:00 AM	Session 1	Introduction to Biomedical image processing and Sources of medical images
	11:00 AM – 11:15 AM	Tea Break	
	11:15 AM – 12:45 PM	Session 2	Design Methods of Bio-Medical image Processing Algorithms and Architectures
	12:45 PM – 01:45 PM	Lunch	
	01:45 PM – 03:00 PM	Session 3	Quick tour on VLSI Design (Analog / Digital / Mixed)
	03:00 PM – 03:15 PM	Tea Break	
	03:15 PM – 04:30 PM	Session 4	Design of VLSI circuits and systems for CT & MRI Scan Biomedical images
Day - 2			
09.08.2019	09:00 AM – 10:30 AM	Session 5	Design of VLSI architectures for Ultrasound Biomedical images
	10:30 AM- 10:45 AM	Tea Break	
	10:45 AM – 12:30 PM	Session 6	Design of VLSI architectures for Bio signals & Biomedical images
	12:30 PM – 01:30 PM	Lunch	
	01:30 PM – 03:15 PM	Session 7	Mixed signal VLSI Circuits and Architectures for Biomedical images (Data conversion)
	03:15 PM – 03:30 PM	Tea Break	
	03:30 PM – 04:00 PM	Valedictory Function	







MEDICAL Vs ENGINEERING

- Application oriented systems used for diagnosis purpose
- Paperless charts to maintain medical records
- Developing regenerative tissues by **tissue engineering**
- Robotic systems to manipulate the single cells
- Early detection tools to analyse cells for the presence of
- Contact sensors used in catheters
- Flow sensors used in IntraVenous (IV) lines
- Touch sensors in surgical tools
- Genetic manipulation by **genetic engineering**
- Neural system enhancement by **neural engineering**
- Interdisciplinary drug by **pharmaceutical engineering**
- Improving the medical images to pinpoint the exact spot or injury















A man in a blue shirt and dark trousers stands in a room, presenting. He is holding a small device in his hands. To his left is a whiteboard on a stand. To his right is a projector screen on a stand. The screen displays the title of a presentation and the presenter's name and affiliation. The room has a white wall and a patterned curtain in the background.

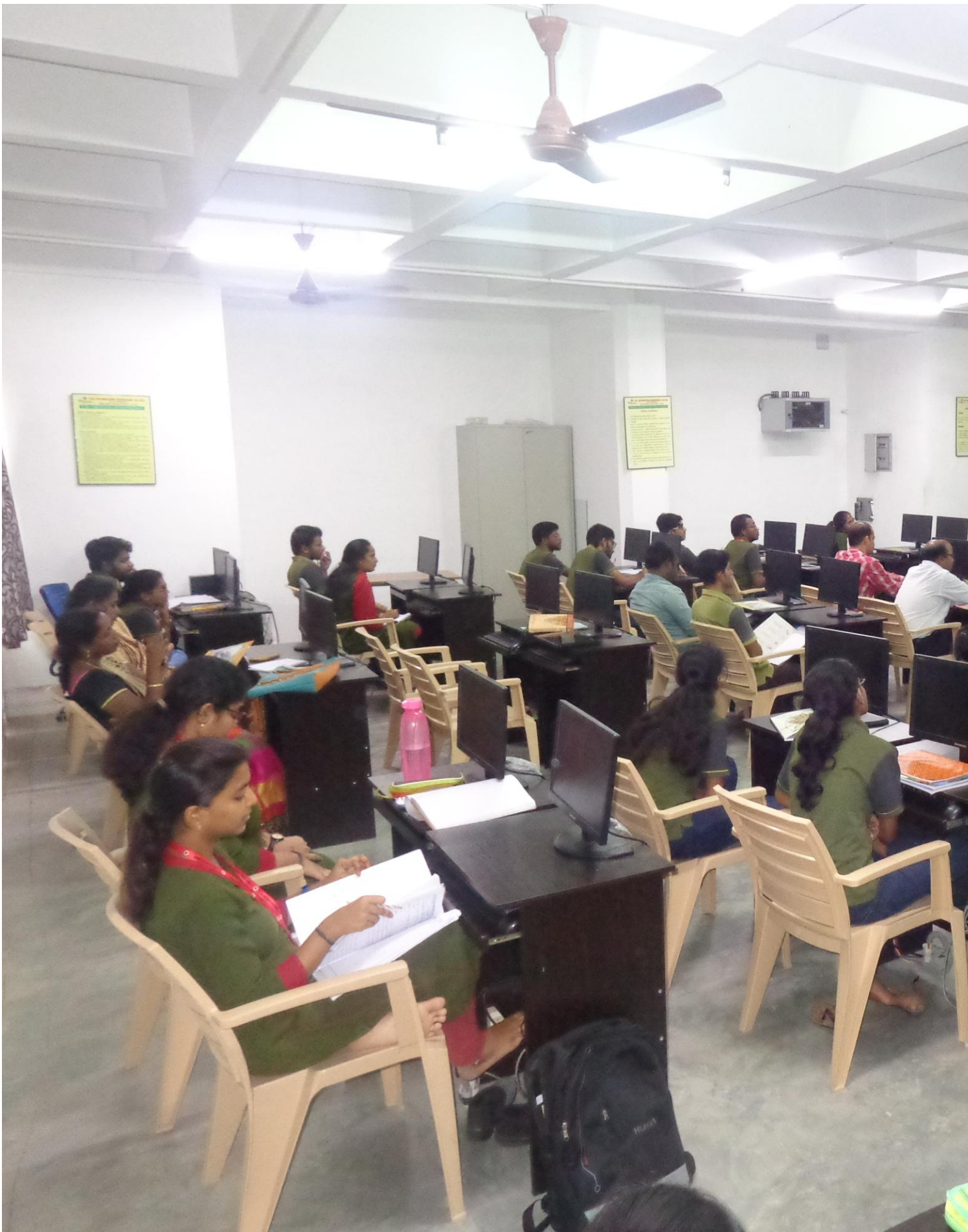
MIXED SIGNAL VLSI CIRCUIT
ARCHITECTURES FOR BIOMEDIC

PERESNTED BY

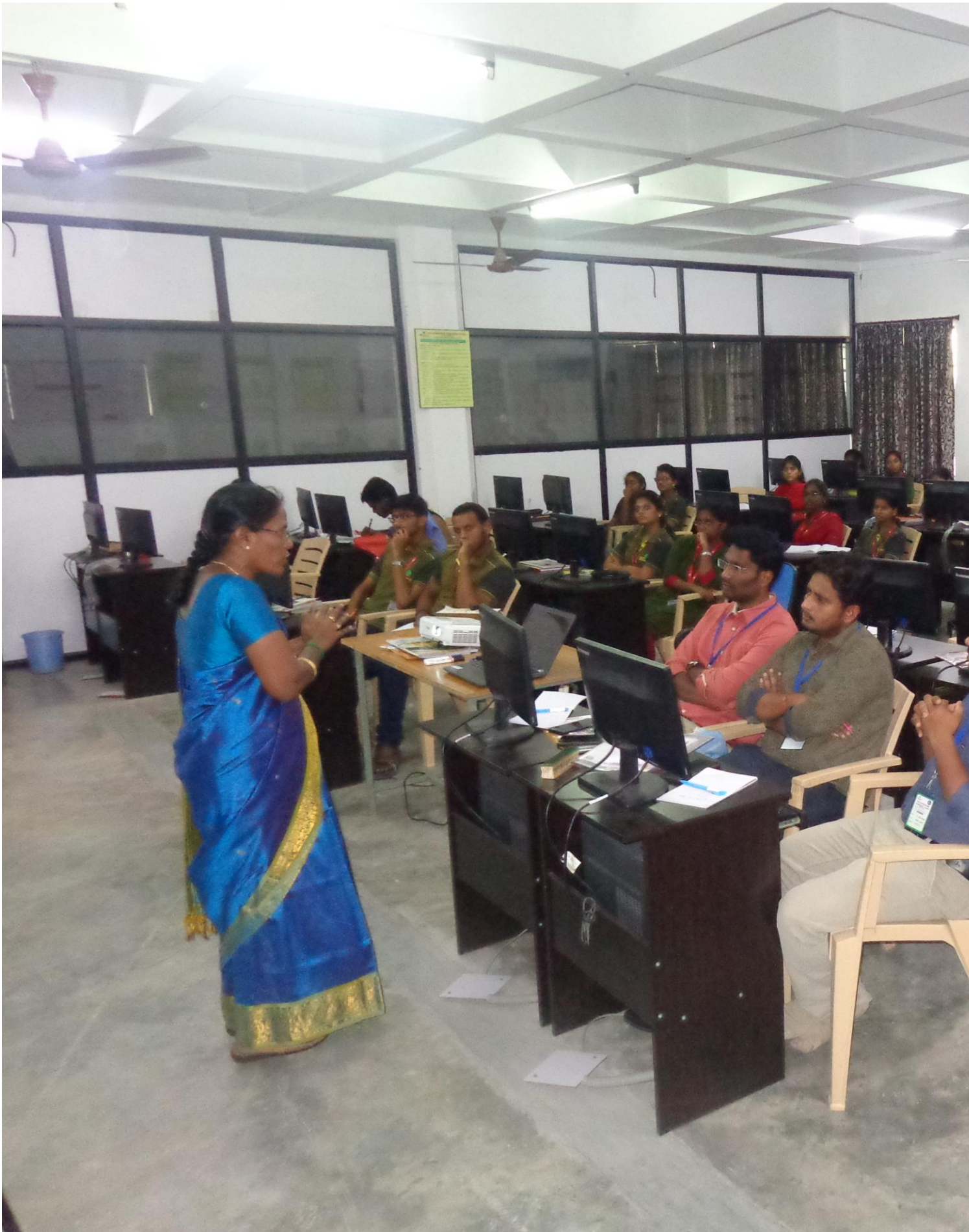
Dr. P.Nagarajan M.E., Ph.D.,
Asso.prof., Dept of ECE,
Sree Vidyanikethan Engineering
Tirupati.













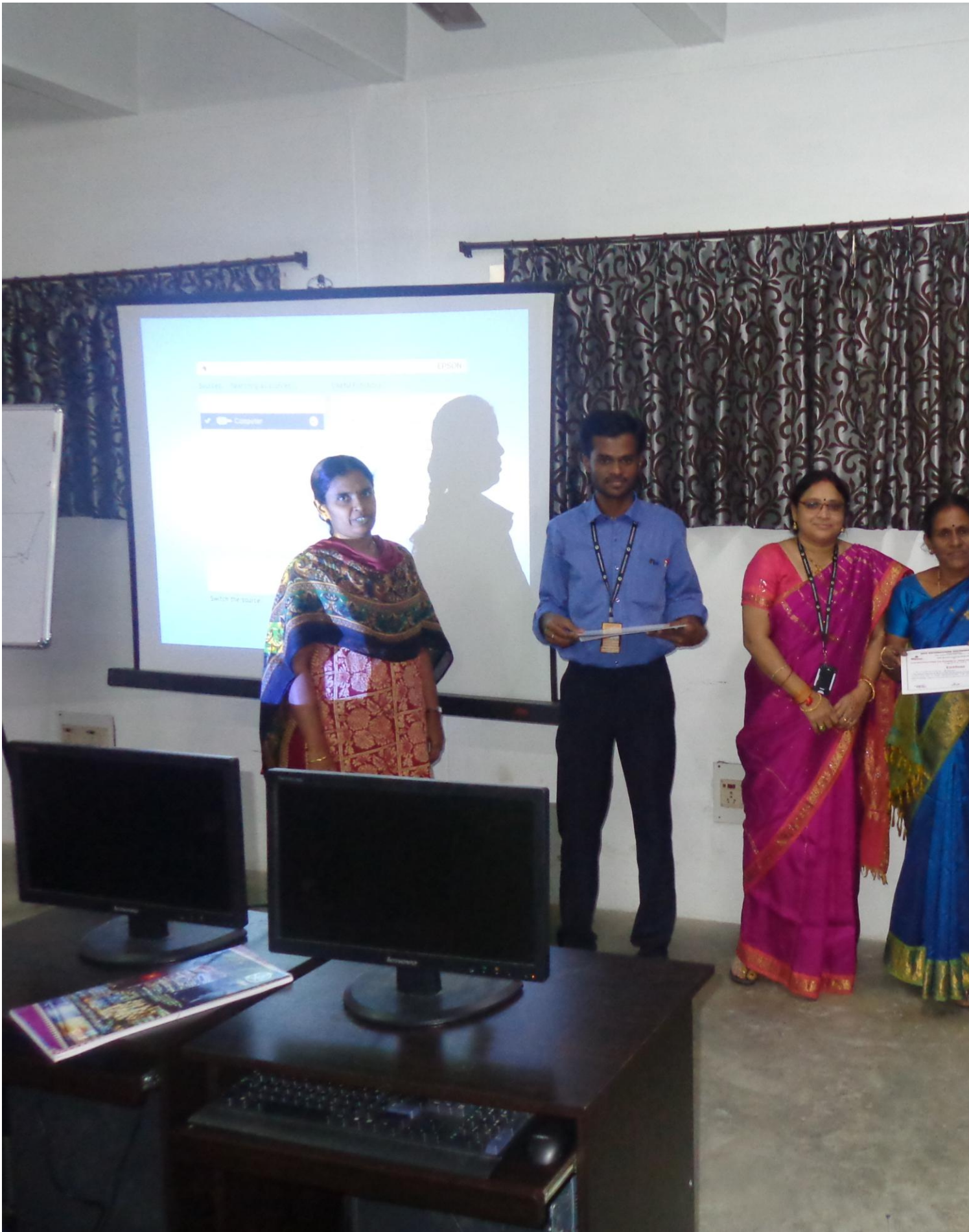




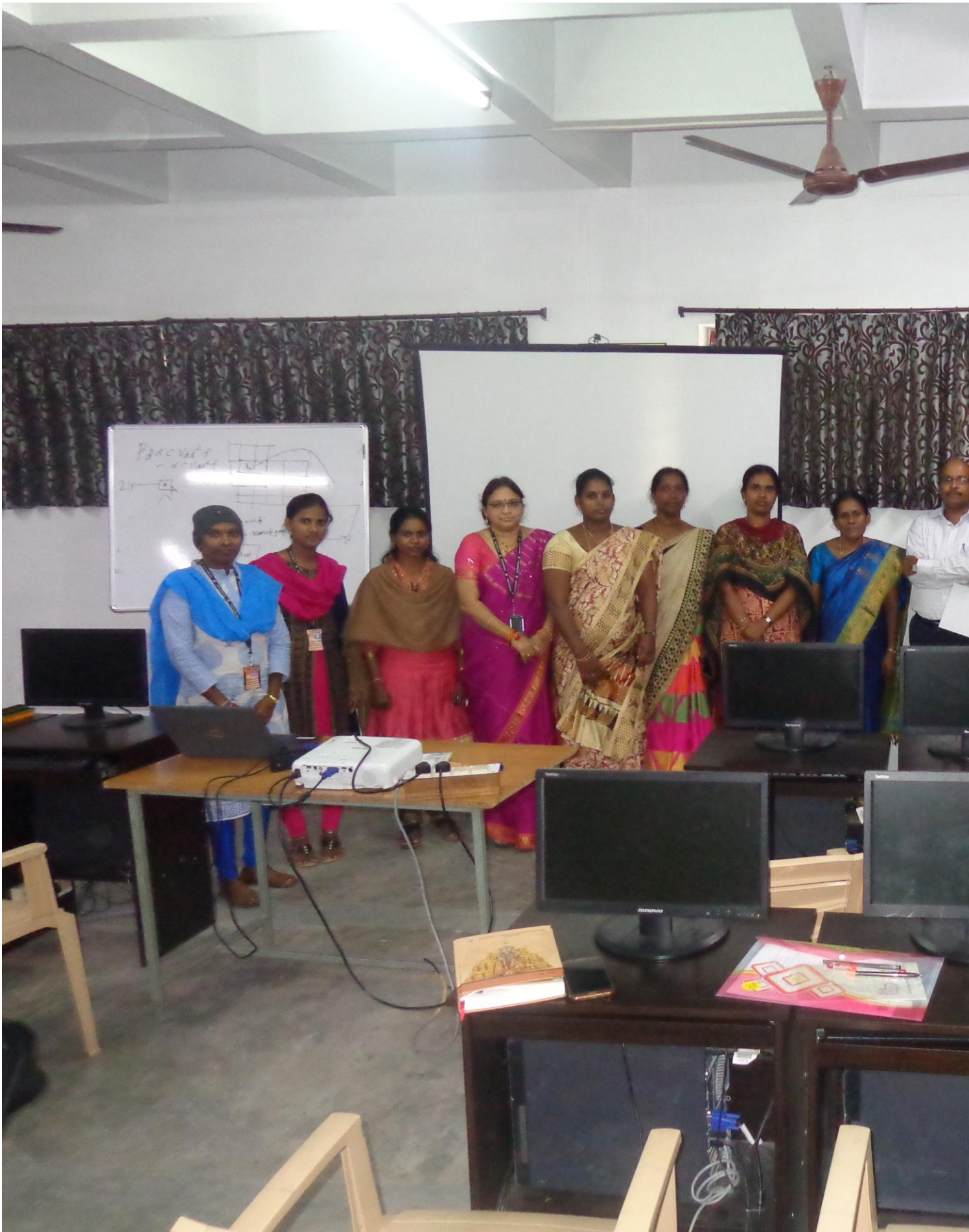












Practical - circuit

21 - [Diagram]

[Diagram]

