NALLA NARASIMHA REDDY
Education Society's Group of Institutions - Integrated Campus
(Approved by AICTE, PCI, New Delhi. Affiliated to JNTU-Hyderabad)

Accredited by NBA NAAC

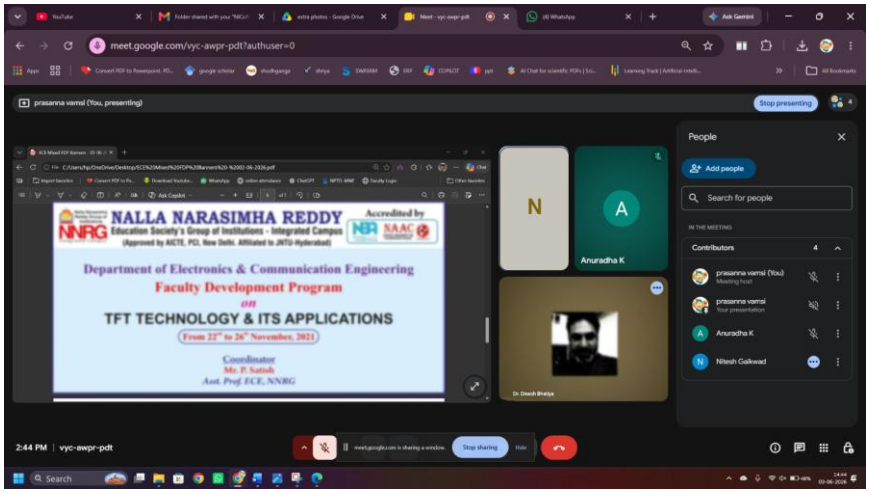
## Department of
## ELECTRONICS AND COMMUNICATION ENGINEERING

# A Report on
# 5 Days FDP on "*TFT TECHNOLOGY & ITS APPLICATIONS*"
# (*22 November 2021 to 26 November 2021*)


The Department of Electronics & Communication Engineering successfully conducted a Five-Day Faculty Development Program on 'TFT Technology & Its Applications'. The FDP provided an in-depth understanding of Thin Film Transistor (TFT) technology, LCD/TFT display systems, fabrication processes, device operation, industrial applications and recent developments in display engineering.

**Day–1&2:**

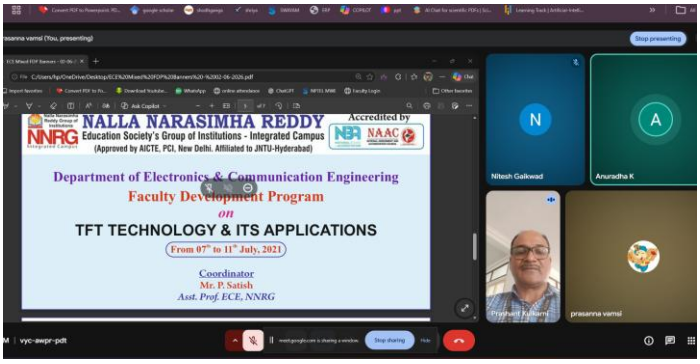
The inaugural session introduced participants to the fundamentals of Thin Film Transistor (TFT) technology and its importance in modern display systems. Dr. Dinesh Kumar Bhatia explained the evolution of TFT technology, the structure of LCD displays, active matrix technology, and the working principles of TFT-based displays. The session also covered the significance of TFTs in improving display resolution, image quality, and power efficiency. Participants gained a strong foundation for the remaining sessions. Supported by general TFT concepts.




Session by Dr. Dinesh Kumar Bhatia

The second day's sessions focused on the operation of TFT-LCD displays and pixel addressing techniques. Dr. Bhatia discussed liquid crystal behavior, pixel control mechanisms, display driving circuits, color reproduction, response time, viewing angle, and image enhancement techniques. Practical examples demonstrated how TFT technology improves

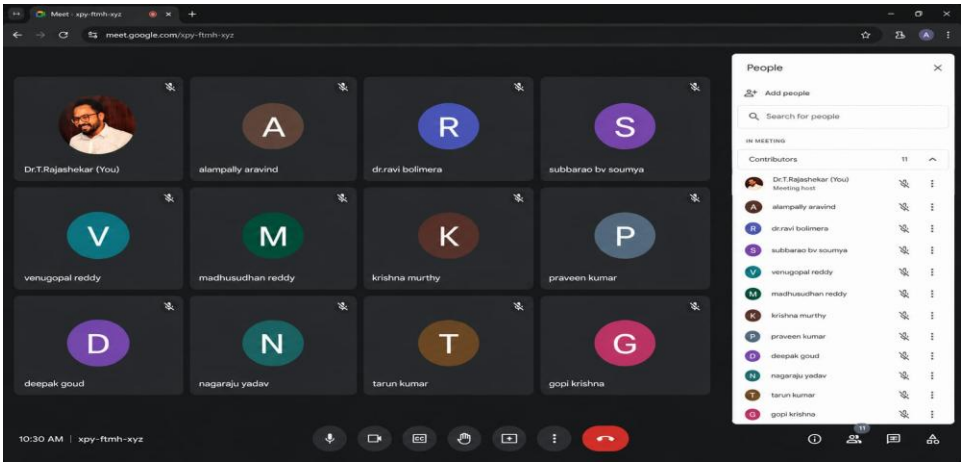
display performance in smartphones, laptops, televisions, and industrial applications. Participants actively interacted during the question-and-answer session.




Hands on Session by P K Kulakarni

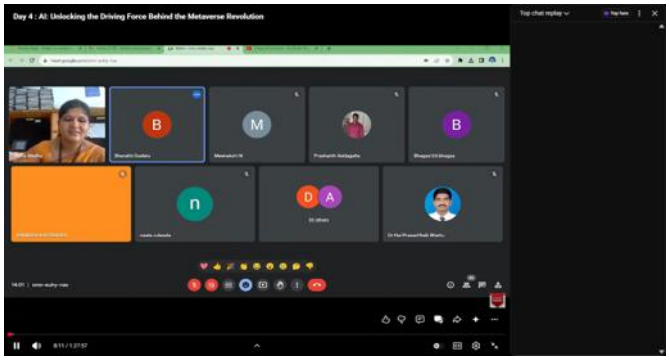
**Day–3&4:**

Dr. T. Rajashekar delivered detailed lectures on TFT fabrication processes and semiconductor materials used in display manufacturing. The session covered thin-film deposition techniques, photolithography, etching, dielectric layers, semiconductor materials, and manufacturing challenges. Participants were introduced to industrial fabrication methods and quality control practices followed in modern display industries.




Session by Dr.T.Rajashekar

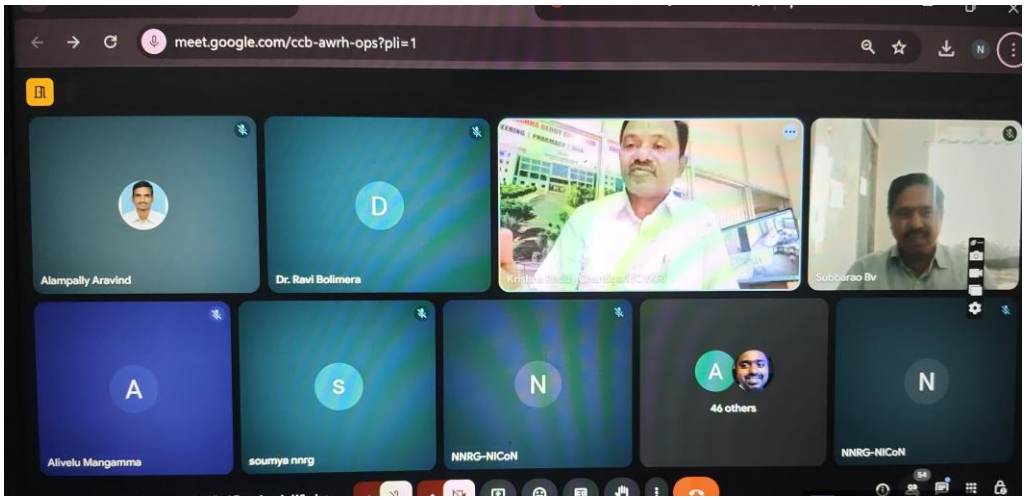
The fourth day emphasized advanced TFT technologies and recent developments in display engineering. Dr. Rajashekar discussed AMOLED displays, flexible displays, transparent electronics, oxide TFTs, wearable electronics, and future research opportunities. The session also highlighted the growing demand for TFT technology in automotive displays, medical equipment, consumer electronics, and next-generation smart devices.



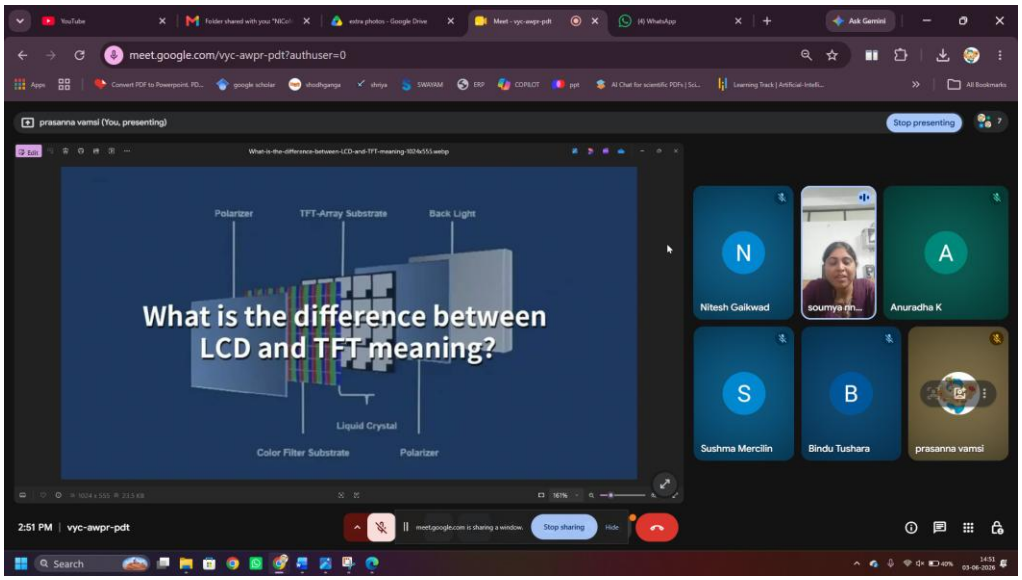

Hands on Session by K Madhavi

**Day–5**

The valedictory session was delivered by Dr. C. V. Krishna Reddy, who summarized the complete FDP and discussed the future scope of TFT technology. He explained recent advancements in display technologies, industrial applications, emerging research trends, and career opportunities in display engineering. The session concluded with participant feedback, certificate distribution, and a vote of thanks. Participants appreciated the comprehensive coverage of TFT technology and its practical applications across various engineering domains




Session by Dr.C.V.Krishna Reddy




Hands on Session by G Soumya

**Outcomes**

- Understanding of TFT fundamentals and LCD/TFT display operation.
- Knowledge of fabrication processes and display architectures.
- Awareness of industrial and consumer-electronics applications.
- Exposure to emerging trends in display technologies.

**Coordinator** **HOD-ECE**