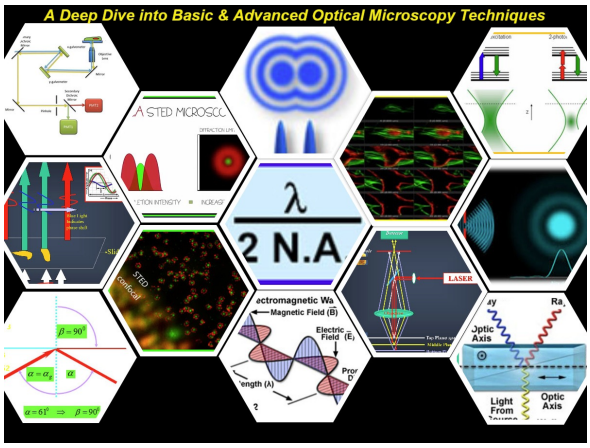
STAI

tifr
tata institute of fundamental research

SEMINARS ON TECHNOLOGICAL ADVANCES AND INNOVATION

A Deep Dive into Basic & Advanced Optical Microscopy Techniques



N. R. Chakravarthi

Head, Instrumentation
CCMB - Hyderabad

Inside Optical Microscopy: Technology and Techniques

- Basics Concepts of Microscopy – Technical details on Magnification, Resolution & Contrast
- Details on Optical components- Technical details on Microscope Objectives, light sources
- Types of Microscopes – Upright, inverted & stereo
- Details on Optical microscopy Techniques- Bright/Dark field, Phase Contrast, DIC, Fluorescence
- Confocal Microscopy – Principles , How it works, , FRAP, FRET , and advancements in Lasers, Detectors
- Multiphoton Microscopy
- TIRF
- Super resolution Microscopy—Brief introduction on technical details of Super resolution Microscopy: SIM, STED & PALM
- SPIM: Selective Plane illumination Microscopy (Light Sheet)

.

Apr 15 2026

TIFRH Auditorium 16:00 Hrs Tea/Coffee 15:45 Hrs