



# Workshop on "Exploring Cells through Advanced Imaging Techniques"

Date: 23<sup>rd</sup> & 24<sup>th</sup> February, 2026

Venue: Central Instrumentation Facility, Utkal University

## Brief Objective & Importance:

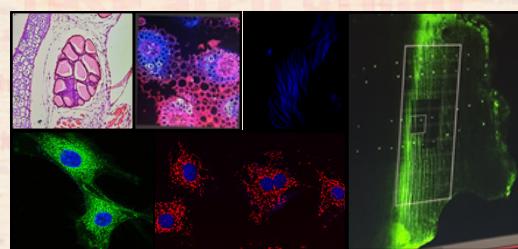
This workshop aims to provide hands-on training and conceptual understanding of Confocal Microscopy as a core imaging technology in modern Biological and Biomedical research. Confocal microscopy enables high-resolution 3D visualization of cells and tissues, allowing researchers to study subcellular structures, protein localization, and dynamic cellular processes with exceptional clarity. The technique plays a vital role in immunofluorescence studies, and quantitative analysis, supporting investigations in cancer biology, neuroscience, infectious diseases, and drug discovery. Upon mastering confocal imaging, participants will gain essential skills to explore cellular mechanisms, analyze disease-related changes, and enhance the accuracy and impact of their research.

## Workshop Highlights:

- Confocal Microscopy Principles
- Sample Preparation Techniques
- Immunofluorescence and Confocal imaging
- Super-Resolution Imaging
- Z-stack Optical Section Imaging
- Image Analysis
- Simple errors and their precautionary measures during imaging, etc.

## Speakers:

- Dr. Monalisa Mishra, Associate Professor, Department of Life Sciences, NIT-Rourkela
- Dr. Chandan Goswami, Professor, School of Biological Sciences, NISER, Bhubaneswar
- Dr. Sebastian Raja, Application Scientist, Advanced Workflow, Leica Microsystems



**Registration Fee: ₹ 1000/-**

\*Registration fee will be collected at the venue.

\*Certificates will be distributed upon the successful completion of the workshop.

\*No TA/DA & accommodation will be provided to the participants.

## Who can register:

Research Scholars, Post-doctoral fellows, Faculty members

## Registration Link:



<https://forms.gle/j4HYmCXm3GS3VnE7A>

**No. of Participants: 10**

*"First Come, First Serve" basis*

## Workshop Benefits:

This interactive workshop will provide expert-led demonstrations and hands-on training to build practical proficiency in confocal microscopy. Participants will learn core to advanced techniques including imaging principles, clean sample preparation, 3D reconstruction, time-lapse & lightning imaging, and image analysis. The training will strengthen research capability, data analysis ability, improve quality of publications, workflow efficiency and career opportunities in scientific fields. The workshop offers a valuable platform for interaction with eminent scientists and technical experts, enriching knowledge in advanced confocal imaging applications.

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