BITS Pilani
Pilani Campus

ZEISS

Three-Day Workshop on Widefield Microscopy to Confocal Microscopy

Organized by

Central Instrumentation Facility & Department of Biological Sciences, BITS Pilani, Pilani Campus, in Association with Carl Zeiss

Date: 24th – 26th July, 2025 **Venue: BITS Pilani, Pilani Campus, Rajasthan**

About the Training Program

The proposed training program aims to enhance research skills in microscopy, organized by the Central Instrumentation Facility and Department of Biological Sciences at BITS Pilani, Pilani campus, Rajasthan, in association with Carl Zeiss India. The program includes hands-on training sessions to guide participants in advanced, sophisticated techniques such as live cell imaging systems, widefield microscopy to confocal microscopy.

The program has been divided into three days.

- **1st Day:** Basic theoretical and practical aspects of **Confocal microscopy, Time-lapse microscopy, & Apotome microscopy**. Hands-on training & demonstrations will begin on the same day, focusing on the essential components of the transition from **Widefield microscopy to Confocal live-cell imaging systems.**
- **2nd Day:** Cell and multi-scale imaging across different dimensions, spanning from 2D to 3D using **Confocal microscopy**.
- **3rd Day:** Data acquisition and processing, troubleshooting, and microscope maintenance with a questionnaire session.

Participants will learn fundamental principles and applications through research lectures by external (Zeiss) and internal experts. The workshop aims to train young scientists in advanced techniques like fluorescence and confocal microscopy to generate high-resolution 3D images of organelles within cells or tissues, encompassing fixed and live cell imaging. The workshop will discuss recent trends and new developments in the field, thereby providing the participants with an opportunity to keep themselves updated with the latest advancements in the field of microscopy.

Registration process:
Last date of registration: 17th July, 2025
Registration Charges: ₹ 1000/-
Registration link: **https://forms.gle/4zGrGE9xLYVWnJTM8**
For any further queries, please write to: cifservices@pilani.bits-pilani.ac.in
Or, call us at: +91-1596-255587

About BITS Pilani

Birla Institute of Technology and Science (BITS) Pilani is one of India's foremost institutions for higher education and research, declared a Deemed University under Section 3 of the UGC Act. Established in collaboration with MIT (USA), it was recognized as an Institute of Eminence by the Ministry of Education, Government of India, in 2020. BITS Pilani fosters a vibrant research environment with well-equipped laboratories in various scientific and technological domains. The institute regularly attracts significant research funding from national agencies and private organizations, providing ample opportunities for scholars to pursue advanced research.
For more details, please visit: https://www.bits-pilani.ac.in/pilani

Central Instrumentation Facility

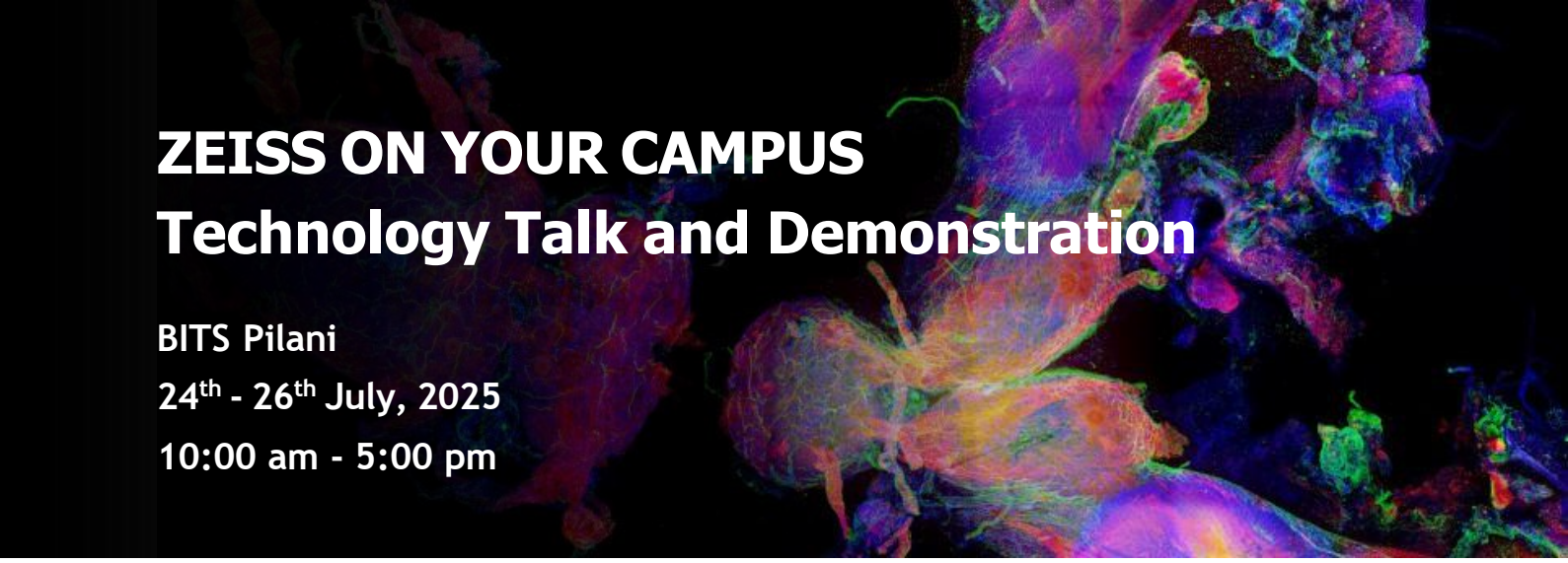
The Central Instrumentation Facility (CIF) at BITS Pilani supports advanced research and teaching in Science and Engineering. It comprises the Sophisticated Instrument Facility (SIF), offering paid services to internal and external users, and the Central Analytical Laboratory (CAL), supporting academic research. CIF provides centralized access to high-end instruments and technical expertise for interdisciplinary research.
For additional information and to book an instrument, please visit: https://www.bits-pilani.ac.in/pilani/central-instrumentation-facility/

Department of Biological Sciences

The Department of Biological Sciences at BITS Pilani is committed to excellence in both research and teaching, with a strong focus on interdisciplinary approaches and innovation. The department aims to be a premier destination for highly motivated students and faculty. State-of-the-art research facilities, Apotome microscopy, Fluorescence Microscopy, & Light Microscopy are housed within the department to support cutting-edge biological research.. For more details, please visit: https://www.bits-pilani.ac.in/pilani/biological-sciences/

Only a limited number of seats are available:
Registration will be closed after the available number is reached

You can find more details & updates on the website: : https://tinyurl.com/confocal-microscopy-workshop



ZEISS ON YOUR CAMPUS
Technology Talk and Demonstration

BITS Pilani

24th - 26th July, 2025

10:00 am - 5:00 pm

Trending Microscopy Technologies

From Widefield Microscopy to Confocal Microscopy

Widefield microscopy utilizing fluorescence imaging have become a cornerstone in life science research, providing unprecedented insights into cellular and subcellular processes. The ability to label specific molecules or structures with fluorescent markers has opened new avenues for studying biological phenomena, making fluorescence microscopy an invaluable tool in fields ranging from cell biology to neuroscience.

Traditional widefield microscopy approach captures light from all planes of the sample, both in-focus and out-of-focus which can result in blurred images with reduced contrast and resolution. Optical sectioning tool (including Confocal Microscopy), a technique that selectively extracts information from a specific plane within the specimen. By removing out-of-focus light, optical sectioning (including Confocal Microscopy) significantly improves the contrast and resolution of the resulting images particularly in the examination of thicker specimens. This allows researchers to visualize intricate details of biological samples, enhancing our understanding of complex cellular dynamics and interactions.

Systems To Be Demonstrated:

Axio Observer 7

Highlights of this technology

- Flexible and inclusive inverted platform
- Equipped with live imaging tools for long-term experiments

Axio Observer with Apotome 2

Highlights of this technology

- Widefield Structured-Illumination based Optical Sectioning method
- Fast and easy to use modality on ZEISS widefields

LSM 880 Confocal

Highlights of this technology

- Flagship spectral confocal imaging system
- Multimodal tool for a diverse range of applications

Demonstration and talk by :

- Rishi Kant - Product Application & Sales Specialist LM Life Sciences, APAC
- Suparno Gupta - Senior Product Application & Sales Specialist

Organized by :

- Pankaj Khajuria - Sales Account Specialist

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Seeing beyond