PMRF-ISSS Teaching Programme

Prime Minister Research Fellowship students' teaching requirement facilitated by the Institute of Smart Structures and Systems

Module PMRF-ISSS159/2024

Modalities of Super-resolution Imaging

Name of the PMRF student

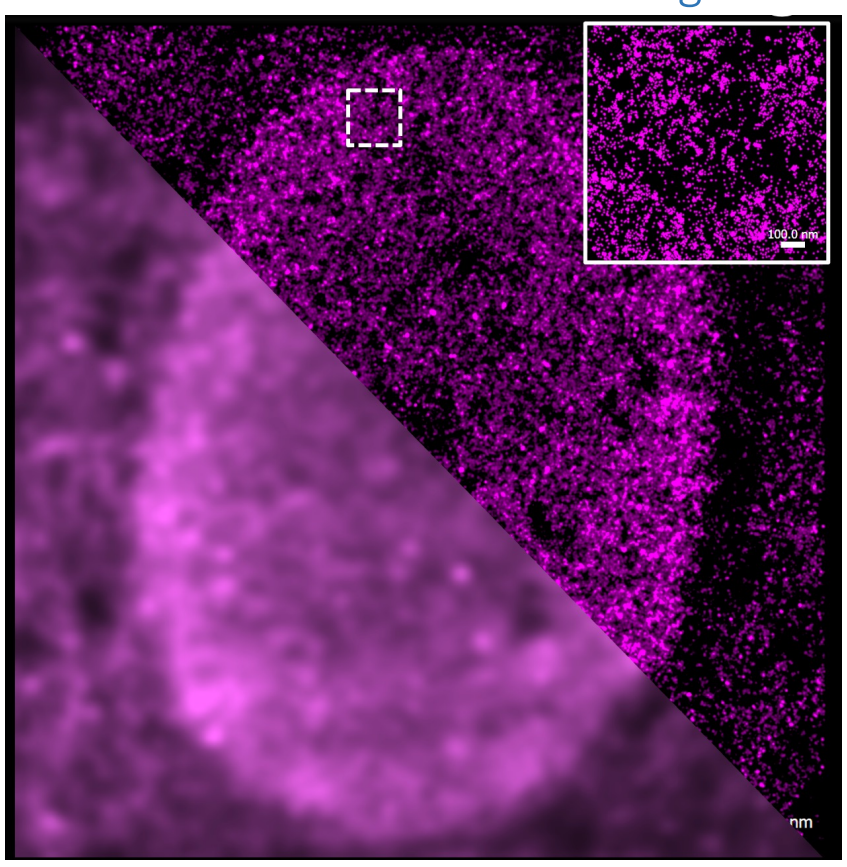
Micky Anand

Required background of the students taught

Any student with basic higher secondary level Chemistry, Biology and Physics knowledge along with light mathematics can take up this course for gaining knowledge and technical know-how on microscopy.

Online session coordinator

Will be chosen from the list of registrants



Details of the content of the module

Super-resolution microscopy embarks biology into the new age of seeing what has never been seen. This module will guide you through the following areas:

1. Introduction to principles of Microscopy and the diffraction limit of conventional imaging
2. Strategies to breach the diffraction limit to get sub-diffraction level images
3. Various SMLM techniques (STORM, PALM, SIM, PAINT, etc.) and their case studies.
4. Demonstration of image reconstruction from SMLM data

Mode Of Delivery: Lectures (twice a week)

Additional Problem-solving sessions based on the request of the students can be held.

Schedule of the module

ONLINE LECTURES- **TUESDAY (6-7:30 P.M.)**

AND SATURDAY (5-6:30 PM.)

Starting Date: 29th October 2024

Ending Date: 1st February 2025

Meeting link : Will be shared later

Contact email ID: isss.forum@gmail.com

Registration link: https://forms.gle/ct5gKqYtTQ1FuD5R9