

# **MIFOBIO: AN INTERDISCIPLINARY SCHOOL AROUND FUNCTIONAL MICROSCOPY IN BIOLOGY, PROVIDING LECTURES / TECHNICAL WORKSHOPS / ACADEMIC AND INDUSTRIAL NETWORKING**

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## **1. INTRODUCTION**

MiFoBio is an interdisciplinary school aiming to provide a common background of knowledge and know-how, in order to develop novel modalities to observe and understand biological processes. The MiFoBio school welcomes any researcher, professor, engineer, post-doc or PhD candidate working towards the development or the application of functional microscopy in biology. The heart of the school revolves around functional microscopy in biology. However, developing and applying techniques to the understanding of dynamic processes requires a wide portfolio or expertise: chemistry to synthesize novel molecular probes, optics and physics for the development of instruments and light sources, computer science for the acquisition, analysis and storage of imaging data, and modelling to interpret the extracted data. All these aspects are considered in the MiFoBio event.

## **2. DESCRIPTION**

Given such an interdisciplinary framework of emerging technologies, it comes naturally that a school mixing theoretical and experimental aspects is required. This surely explains the success of MiFoBio, put in place by the GdR-MIV since 2004.

MiFoBio provides a unique environment with an exceptional instrumental showcase sustaining scientific workshops animated by the participants themselves. Over 90 different workshops focus on the most advanced technologies in the represented fields (ultra-high resolution, light-sheet, adaptive & non-linear optics, correlative light-electron microscopy, etc.). Most of microscopy systems are provided by manufacturers (30 setups), but prototypes from academic research centers are also available (15 setups). Microscopy core facility engineers (also gathered together to form the CNRS "RTmfm" technology network, created in 2004) represent the main task force of Mifobio with respect to the workshops contents and implementation.

The idea is to physically setup a temporary interdisciplinary lab-space, providing the participants with a comprehensive environment going from the biological question to the instrument, the data acquisition, analysis and eventual modelling. This framework then adapts to each and every participant depending on their project and specialty, as it would in a real lab-space setting.

In 2016, MiFoBio daily brought together over 440 people (participants, organizers, speakers, industrials) throughout its 7-days duration. This is a highly notorious event in France, but we begin to face international demand that will force us to anticipate some extension.

**WEB SITE:** <http://www.mifobio.fr/>