

## MIAP Basic Imaging Techniques Workshop

The Life Imaging Center (LIC), a central core facility of the Albert-Ludwigs-University, hosts more than 20 microscope systems. For this reason, most modern microscopic techniques can be performed in the facility. The LIC has a major focus on live cell imaging of various cell types, organisms and culture systems used in signaling research, developmental biology and neurobiology.

To provide the best experience and teaching to over 300 users of the facility, MIAP offers various microscopy workshops throughout the year. This basic workshop is not limited to facility users and is equally suited for life science students, *Ph.D.* students, staff scientists and postdocs. In lectures and hands-on sessions, the 3-day workshop covers basic methods of imaging techniques on wide field and confocal systems and image analysis and visualization with specialized software.

**May 6th – 8th 2020**

Life Imaging Center (LIC), Center for Biological Systems Analysis (ZBSA)  
Albert-Ludwigs University Freiburg  
Habsburgerstr. 49, 79104 Freiburg im Breisgau

**Organization:** Microscopy and Image Analysis Platform (MIAP), University of Freiburg  
Life Imaging Center (LIC), University of Freiburg

**Teachers:** Roland Nitschke (MIAP, LIC)  
Iris Bierschenk (LIC), Sabine Haxelmans (LIC), Angela Naumann (LIC),  
Tobias Wernet (MIAP).

<b>Day 1: May 6<sup>th</sup>, 08:30 – 18:00</b>	
08:30 – 09:00	<b>Welcome &amp; General Workshop Introduction</b>
09:00 – 10:00	<b>Lecture Block A: Basics in Microscopy</b>
10:00 – 10:15	<b>COFFEE BREAK</b>
10:15 – 12:15	<b>Practical Part: Wide field or LSM Systems (Diatoms, Live Cell, DIC)</b>
12:15 – 13:15	<b>LUNCH BREAK</b>
13:15 – 14:15	<b>Lecture Block B: Sample Preparation</b>
14:15 – 16:15	<b>Practical Part: Wide field or LSM Systems (Fluorescent Beads, Fixed Fluorescent Cells)</b>
16:15 – 16:30	<b>COFFEE BREAK</b>
16:30 – 17:00	<b>Hands-on Session: Analysis with ZEN blue</b>
17:00 – 18:00	<b>Data Analysis</b>

<b>Day 2: May 7<sup>th</sup>, 08:30 – 18:00</b>	
08:30 – 10:00	<b>Lecture Block C: Imaging Technology (CCD, Camera, Pinhole, PSF)</b>
10:00 – 10:15	<b>COFFEE BREAK</b>
10:15 – 12:15	<b>Practical Part: Wide field or LSM Systems (Fluorescent Live Cells)</b>
12:15 – 13:15	<b>LUNCH BREAK</b>
13:15 – 14:15	<b>Lecture Block D: Image Acquisition (Dyes, Spectral Recording, Filter, FRAP)</b>
14:15 – 16:15	<b>Practical Part: LSM Systems (Fluorescent Live Cells and Live Cells Transfected with Dronpa)</b>
16:15 – 16:30	<b>COFFEE BREAK</b>
16:30 – 17:00	<b>Hands-On Session: Analysis with ZEN black</b>
17:00 – 18:00	<b>Data Analysis</b>

<b>Day 3: May 8<sup>th</sup>, 08:30 – 17:00</b>	
08:30 – 10:30	<b>Practical Part: Wide field and LSM Systems (Fluorescent Live Cells and Live Cells Transfected with Dronpa)</b>
10:30 – 10:45	<b>COFFEE BREAK</b>
10:45 – 12:15	<b>Software Demo: Image Analysis (Deconvolution, Huygens, Imaris)</b>
12:15 – 13:15	<b>LUNCH BREAK</b>
13:15 – 16:00	<b>Data Analysis, Preparation of Data Presentation</b>
16:00 – 17:00	<b>Participant's Data Presentations &amp; Open Discussion</b>

- This is a preliminary announcement / agenda, which may be subject to changes.
- For more information, please contact MIAP: <https://www.miap.eu> [info@miap.eu](mailto:info@miap.eu)

