

## MIAP Live Cell Imaging and Cell Migration Workshop

The aim of the workshop is to learn about requirements and special features of live cell imaging, in respect to microscopy techniques as well as sample preparation. As exemplary applications, the focus will be on migration assays, transfection assays, 3D cell culture and video microscopy, including set-up of an overnight experiment, cell tracking and data analysis. The workshop will feature practicals (wet-lab, cell culture and imaging facility) and seminars with live cell imaging experts from ibidi GmbH and the Life Imaging Center (LIC).

**April 4<sup>th</sup> – 5<sup>th</sup> 2019**

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

**Keywords:** Directed and undirected cell migration assays, transfection assays, live cell imaging & microscopy, 3D cell culture models

**Organization:** Microscopy and Image Analysis Platform (MIAP), University of Freiburg

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Roland Nitschke (MIAP/LIC, University of Freiburg)  
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| <b>Day 1: April 4<sup>th</sup>, 09:00 – 18:00</b> |  |
|---|--|
| 09:00 – 09:30                                     | <b>Welcome &amp; Introduction</b>  |
| 09:30 – 10:15                                     | <b>Seminar: Basics in microscopy (confocal, wide-field, live-cell)</b>   |
| 10:15 – 10:30                                     | <b>COFFEE BREAK</b>  |
| 10:30 – 11:15                                     | <b>Seminar: Labware and assays for 2D/3D migration and time-lapse microscopy</b>   |
| 11:15 – 12:00                                     | <b>Seminar: Analysis of migration data, tracking and output parameters</b>   |
| 12:00 – 13:00                                     | <b>LUNCH BREAK</b>   |
| 13:00 – 15:00                                     | <b>Practical: Transfection assays (mitochondria) with ibidi <math>\mu</math>-Dish Quad in Biostation for overnight experiments</b> |
| 15:00 – 15:15                                     | <b>COFFEE BREAK</b>  |
| 15:15 – 17:30                                     | <b>Practical: Migration assay with ibidi culture-inserts incl. setup on microscopes for overnight imaging</b>                      |
| 17:30 – 18:00                                     | <b>Final remarks, Q&amp;A, closing workshop day 1</b>  |

| <b>Day 2: April 5<sup>th</sup>, 09:00 – 16:00</b> |  |
|---|--|
| 09:00 – 10:30                                     | <b>Practical: 3D collagen-gel cell culture experiment with LifeAct for actin visualization and 3D-tracking</b>                                   |
| 10:30 – 10:45                                     | <b>COFFEE BREAK</b>  |
| 10:45 – 12:30                                     | <b>Practical: Imaging of transfection and migration assays and own Samples at confocal and wide-field microscope systems of the LIC facility</b> |
| 12:30 – 13:30                                     | <b>LUNCH BREAK</b>   |
| 13:30 – 15:30                                     | <b>Analysis: Evaluation of migration and transfection data &amp; images from overnight experiments</b>   |
| 15:30 – 16:00                                     | <b>Final remarks, Q&amp;A, closing workshop day 2</b>  |

This is a preliminary agenda, which is subject to changes.

For more information, please contact MIAP: <http://www.miap.eu> [info@miap.eu](mailto:info@miap.eu)

