

Imaging Facility

Institute of Experimental Botany ASCR - IFIEB, Prague

www.ueb.cas.cz/if

Multi-modal light microscopy imaging in plant research

October 18-19, 2023

Preliminary Program

Day 1

- 09:30 - 09:45 Introduction and organization details
09:45 - 10:45 Pavel Krist - Introduction to fluorescence microscopy / Partner' lecture
10:45 - 11:00 Coffee break
11:00 - 11:20 Kateřina Malínská – At the crossroads of light microscopy methods for plant research / Theory
11:20 - 12:00 Lunch break
12:00 - 14:00 Hands-on session A (4 parallel groups)
14:00 - 16:00 Hands-on session B
16:00 - 17:00 Imaging of participants' samples

Day 2

- 09:30 - 10:00 Kateřina Schwarzerová - Actin, peroxisome and beyond / Invited lecture
10:00 - 10:30 Jan Petrášek - The nanodomain organization of PINFORMED auxin efflux carriers
10:30 - 10:45 Coffee break
10:45 - 12:45 Hands-on session C
12:45 - 13:30 Lunch break
13:30 - 15:30 Hands-on session D
15:30 - 16:00 Final discussion, feedback form

Hands-on parallel sessions

- LONG-TERM IMAGING** Adriana Jelínková/Ivan Kashkan: vertical-stage microscopy; long term imaging with tile-scan or tracking algorithm; application of gravistimulus; live cell staining.
- FAST&GENTLE** Jan Petrášek/Matěj Drs: spinning disc microscopy experimental setup; ultrafast simultaneous two channel imaging; deconvolution; SRRF; perfusion chamber.
- HIGH RESOLUTION** Kateřina Malínská/Pavel Krist: sample preparation; high-resolution microscopy with Airyscan 2 detector with multiplex mode; photo manipulation; Vaheat.
- IMAGE ANALYSIS** **Maurizio Abbate**/Pavel Krist: data processing and visualization in Arivis; Virtual reality.

Institute of Experimental Botany ASCR, Building B1, Imaging facility, Rozvojova 263, Prague 6, Czech Republic

The workshop is supported by the National Infrastructure for Biological and Medical Imaging (Czech-Biolmaging, MEYS, LM2023050).