

TUESDAY, Dec 6, 2022

Theoretical part

09:00-09:15 Introductory word and practical organization notes. *Ivan Novotny*09:15-09:45 Fluorescence microscopy and optical sectioning. *Ivan Novotny*09:45-10:15 Spinning disc microscopy. *Michaela Blazikova*

COFFEE BREAK

10:30-11:00 Lightsheet. *Jiri Cerny*11:00-11:30 2-Photon microscopy. *Daniel Hadraba*

LUNCH

Practical part: 12:30-20:00 (3 parallel groups, 3x 2.5h)2-Photon confocal microscope. *Daniel Hadraba*Confocal scanning & spinning disc. *Ivan Novotny* | *Jan Valecka*Lightsheet. *Jiri Cerny*

COFFEE BREAK AND SANDWICH DINNER ARE INCLUDED



WEDNESDAY, Dec 7, 2022

Theoretical part

09:00-09:30 Superresolution & live cell. *Ivan Novotny*09:30-10:00 Quantitative phase imaging. *Martin Capek*

COFFEE BREAK

10:15-10:45 3x scientific flash talks covering the field:

Visualization and photo-kinetic experiment on cilia in live cells. *Martina Huranova*Visualizing of immunological synapse formation using two camera spinning disc confocal microscopy. *Ondrej Balek*

10:45-11:15 Presentations of partners (2x 15 min)

11:15-12:00 Photo-kinetics measurement in live cell. *Michaela Blazikova*

LUNCH

Practical part: 13:00-19:00 (3 parallel groups, 3x 2h)Super-resolution room (STED, SIM). *Ivan Novotny*Photo-kinetics and FLIM applications. *Michaela Blazikova*Quantitative phase imaging - qPI and HoloMonitor, TIRF. *Martin Capek* + *Jan Valecka* + *KRD*

COFFEE BREAK IS INCLUDED

SOCIAL EVENT

THURSDAY, Dec 8, 2022

Theoretical part I

09:00-09:30 Image Deconvolution. *Ivan Novotny*09:30-10:00 3D visualization. *Jan Valecka*

10:00-11:15 Presentations of partners (6x 15 min talk + 1 short talk) + coffee

11:15-11:30 **Scientific flash talk:** Detection of bacteria in live cell time-lapse experiment. *Ondrej Cerny*11:35-12:10 High resolution computational methods in LM. *Michaela Blazikova*

LUNCH

Practical part: 13:00-17:30 (3 parallel groups, 3x 1.5h)NIKON spinning disk Crest Optics X-light V3 with DeepSIM. *NIKON application specialist*Leica STELLARIS 8 - LasX Lightning. *Ivan Novotny*Andor Dragonfly SRRF-tream2. *Michaela Blazikova*

COFFEE BREAK IS INCLUDED

Theoretical part II

17:30-18:00 Discussion/Conclusions/Final evaluation + pizza

The course is organized by the **Institute of Molecular Genetics of the Czech Academy of Sciences** in the framework of the **Czech-BioImaging** research infrastructure supported by **Ministry of education youth and sports (LM2018129)**



We make it visible.

