UNIL | Université de Lausanne

Cellular Imaging Facility

CHUV

Introduction to fluorescence imaging for the analysis of living cells

Prof. Jean-Yves CHATTON

Dept. Fundamental Neurosciences, Univ. Lausanne

- The course will be given online with one in-person Q&A session at the end of the course
  - Recorded video lectures (~ 2h each week) will be available every week from Tuesdays on
  - In-person/hybrid Q&A session with Prof. Chatton on February 14, 2023 (12:15 -14:00)
- Lectures will be given in English
- Validation of *ONE* credit for students at the local doctoral schools (FBM and LNDS)

Topics per week; from:

17 January 2023 : Basics of transmitted light and fluorescence microscopy
24 January 2023 : Confocal microscopy
31 January 2023 : Modes of image formation, acquisition, signal sampling
7 February 2023 : Dynamic recording of cellular functions by fluorescence imaging. Intracellular ion imaging and cellular signaling. Issues related to imaging of living cells
14 February 2023 : Other optical applications (proposed topics): Fluorescence recovery after photobleaching (FRAP), photoactivation - optogenetics, multiphoton microscopy, fluorescence resonance energy transfer (FRET), optical contrasting methods (phase contrast, DIC), super-resolution microscopy
17 February 2023 (*FRIDAY*) : Q&A session in-person / hybrid (Petit Auditoire DNF, rue du Bugnon 9, 1005 Lausanne)

Registration: ***register before January 13, 2023 via the link https://tinyurl.com/FluorescenceImaging***

→ ***Admission to the course is free and open to anyone interested***

Course materials:

- *available on https://moodle2.unil.ch*
- *log in with your institutional address (UNIL, CHUV, EPFL)*
- *click on "Faculté de Biologie et de Médecine" > "Ecole doctorale / doctoral school" > "Lemanic Neuroscience Doctoral School"*
- *course materials will be stored under "Introduction to Fluorescence Imaging for the Analysis of Living Cells"*
- *the login password will be sent to registered participants the day before course start. Please contact Ulrike.toepel@unil.ch in case of problems.*