Program

Wednesday, May 28th

08:45 - 09:00	Registration		
09:00 - 09:10	Welcome and organizational details		
	Aleš Benda		
09:10 - 09:40	What kinds of molecular dynamics can we expect in cells?		
	Aleš Benda		
09:40 - 10:40	Introduction to principles of single molecule fluorescence detection		
	and correlation analysis		
	Dalibor Pánek		
10:40 - 10:55	Coffee Break		
10:55 - 11:55	Methods of fluorescence correlation analysis on confocal		
	microscopes		
	Aleš Benda		
11:55 - 12:45	Introduction of the participants (3 min about yourself and your		
	research)		
12:45 - 13:30	Lunch		
13:30 - 14:10	Principles of Lattice Light Sheet Microscopy		
	Petra Prokšová		
14:10 - 14:30	Segmentation-Based Object Tracking		
	Zuzana Čočková		
14:30 - 15:10	Principles of Fluorescence Recovery After Photobleaching.		
	Michaela Blažíková		
15:10 - 15:25	Coffee break – Hands-on group assignment		
15:25 - 16:10	Introduction to TIRF microscopy and kymography and single		
	particle tracking.		
	Alica Dodoková		
16:10 - 17:00	Other approaches to quantify molecular dynamics in living cells		
	Piotr Jurkiewicz		
17:00 - 17:30	Which method to choose? Comparison of different approaches		
	Aleš Benda		
17:30 - 20:00	Get together (snacks and beverages)		

Thursday, May 29th - Friday, May 30th

Groups 1 – 2

09:00 – 13:00Morning hands-on session Around 11:00 Coffee break 15 min 13:00 – 14:00Lunch 14:00 – 18:00Afternoon hands-on session

Around 15:15 Coffee break 15 min

	Group 1	Group 2
Morning Thurs, May 29	LLS	FCS
Afternoon Thurs, May 29	FCS	LLS
Morning Fri, May 30	SPT	FRAP
Afternoon Fri, May 30	FRAP	SPT

FCS (Fluorescence Correlation Spectroscopy)

Aleš Benda, Piotr Jurkiewicz

Optimizing point FCS measurements in cells; PIE-FCCS analysis of interacting proteins

FRAP (Fluorescence Recovery After Photobleaching)

Michaela Blažíková, Dalibor Pánek

FRAP combined with a spinning disk and with TIRF to reveal the dynamics of protein pools

SPT (Single Particle Tracking)

Adéla Karhanová, Denisa Ondrúšková 2D tracking of molecular motors on microtubules

LLS (Lattice Light Sheet)

Petra Prokšová, Zuzana Čočková Fast volumetric acquisition to follow vesicular motion in cells