Inserm
La science pour la santé
From science to health

Inserm Workshop 249

Trafic et migration cellulaire : de l'imagerie multidimensionnelle à l'analyse quantitative de la dynamique cellulaire
Multidimensional imaging and quantitative Analysis of cell dynamic's: focus on traffic and cell migration

26-28 novembre 2018 / November 26-28, 2018 ◘ Bordeaux, France

Lundi 26 novembre 2018 ◘ Monday November, 26th 2018

15:30 - 16:00	**Reception of participants**
16:00 - 16:15	**Welcome and presentation by the organizers**
SESSION I	**Dynamics of the cytoskeleton and cellular morphogenesis**
16:15 - 17:00	The biomecanics of toxoplasma parasite uncovered by quantitive microscopy **Isabelle Tardieux (Institute for Advanced Biosciences, Grenoble)**
17:00 - 17:45	Learning dynamic generative models of 3D cell organization and perturbation **Robert Murphy (Carnegie Mellon University, Pittsburgh, USA)**
17:45 - 18:15	**Coffee break and poster session**
18:15 - 19:00	Blind deconvolution, tomography, applications from astrophysics to biology **Ferréol Soulez (Université Lyon 1, France)**
19:00 - 19:45	Lensfree microscopy for the imaging of 3D cell cultures **Xavier Gidrol (CEA, Grenoble, France)**
20:00	**Dinner**

Mardi 27 novembre 2018 ◘ Tuesday November, 27th 2018

06:30 - 09:00	**Breakfast**
SESSION II	**3D imaging of cells and dendritic spine**
09:00 - 09:45	Morphological and functional imaging of human neuronal networks using IPS cells **Jean-Yves Tinevez (Institut Pasteur, Paris, France)**
09:45 - 10:30	3D imaging for the density and dynamics of dendritic spines **Nicolas Heck (Paris Sorbonne University, France)**
10:30 - 11:00	**Coffee break**
11:00 - 11:45	Revealing the dynamic organization of excitatory synapses using super-resolution microscopy **Harold Mac Gillavry (Utrecht University, Netherlands)**
11:45- 12:30	Machine learning to optimize super resolution microscopy on dendritic spine **Flavie Lavoie-Cardinal (Laval University, Québec, Canada)**
12:30 - 14:00	**Lunch**

SESSION III	Intracellular trafficking: dynamics of organelles and molecules at the cell surface
14:00 - 14:45	Monitoring transport to the cell surface in mammalian cells **Franck Perez (Institut Curie, Paris, France)**
14:45 - 15:30	Plasma membrane and lipid droplets probes for advanced fluorescence microscopies **Mayeul Collot (University of Strasbourg, Nonochemistry and Bioimaging Lab, France)**
15:30 - 16:15	Quantitative analysis of molecular coupling with ICY SODA **Thibault Lagache (Columbia University, NewYork, USA)**
16:15 - 16:45	**Coffee Break**
16:45 - 17:30	Vesicular trafficking pathways influencing molecular organisation of synaptic proteins **Lydia Danglot (Institut de Psychiatrie et Neurosciences de Paris, France)**
17:30 - 18:15	Exploiting fluorescence noise to resolve protein oligomerization in intact tissue **Yves de Koninck (Laval University, Québec, Canada)**
19:30 - 20:15	**Cocktail and poster session**
20:15	**Dinner**

Mercredi 28 novembre 2018 ◘ Wednesday November, 28th 2018

06:30 - 09:00	**Breakfast**
SESSION IV	Imaging and cellular monitoring in vivo: the challenge of complex environments with focus on 2 photons imaging
09:00 - 09:45	Imaging immune cells and pathogens : seeing very rapid biological events in vivo **Craig Jenne (Calgary University, Canada)**
09:45 - 10:30	Longitudinal multicolor 2 photons microscopy to study the dynamics of cellular microenvironment in neuropathologies **Franck Debarbieux (Institut de Neurosciences de la Timone, Marseille, France)**
10:30 - 11:00	**Coffee Break and poster session**
11:00 - 11:45	In Vivo Deep Imaging of Brain Structure and Function **Chris Xu (Cornell University, Ithaca, USA)**
11:45 - 12:30	Fast functional imaging in 2D and 3D in non-linear microscopy **Laurent Bourdieu (Ecole Normale Supérieure, Paris, France)**
12:30 - 14:00	**Lunch**
14:00	**Departure**