FRANCE-BIOIMAGING

4TH ANNUAL MEETING

Future Challenges in BioImaging

FRIDAY APRIL 14, 2017
INSTITUT CURIE
PARIS, FRANCE

POSTER SESSION PROGRAM

	Poster no.	Poster Title	Keywords	Name & Affiliation
Challenge 1: Quantification of the molecular dynamics and coordination in cells and small organisms, including at the nanometer scale	01-01	Super-resolution multicolor dSTORM microscopy reveals nuclear pore complex plasticity	super-resolution, multicolor dSTORM, nuclear pore	Orestis Faklaris, Institut Jacques Monod - ImagoSeine
	01-02	Contrasting mechanisms of growth in two model rod-shaped bacteria	Bacterial morphogenesis, cell size control, cell wall, MreB, single-particle tracking	Cyrille Billaudeau, Micalis Institute
	01-03	Plant Cell Imaging in FBI	Plant cell, multiphoton microscopy, spectral analysis, serial block face imaging	Geneviève Conéjéro, INRA
	01-04	Joint reconstruction strategy for structured illumination microscopy with unknown illuminations	Super-resolution, fluorescence microscopy, speckle illumination imaging	Marc Allain, Aix Marseille Univ, CNRS, Centrale Marseille, Institut Fresnel
	01-05	The morphology of synapses witrh their dynamic molecular organization revealed by STED microscopy combined with single-molecule imaging	STED microscopy, SMLM, PALM, uPAINT, live-cell imaging, single-particle tracking, dendritic spines, glutamate receptors, GluA1/2, postsynaptic density, PSD-95.	V V G Krishna Inavalli, IINS UMR 5297
	01-06	Cell specific epigenetically defined long-range low-frequency interactions regulate the higher-order genome architecture in Drosophila	DNA architecture, Super-resolution imaging, 3D-SIM, Two-color STORM, Chromosome conformation capture	Diego Cattoni, Centre de Biochimie Structurale
Challenge 2: Imaging architectures and processes of life, from molecular complexes to multi cellular systems	02-01	Time-resolved Anisotropy measurements on fluorescently tagged proteins: effect of EGFP rotation	time-resolved fluorescence, anisotropy, homo-FRET, GFP	François Waharte, CNRS - Institut Curie
	02-02	Multi-scale imaging of epithelial tissues	Spinning-disk, multivue imaging, dorsophila, pattern formation, tissue dynamics	Philippe Girard, Institut Jacques Monod
	02-03	Optimizing Lattice light Sheet Microscope for Imaging Facility (PICT-IBiSA)	Microscopy, Light sheet Microscope	Ludovic Leconte, Institut Curie - UMR 144
	02-04	Implication of submicrometric lipid domains for red blood cell membrane fragility diseases	lipid domains, membrane, electron microscopy, fluorescence microscopy, confocal microscopy	Hélène Pollet, Institut de Duve
	02-05	Understanding the fundamental mechanisms of biofilms development and dispersal: BIAM (Biofilm Intensity and Architecture Measurement)	Confocal, Image processing, Segmentation, Intensity Quantification, Micro-colony	Bertrand Cinquin, ENS Cachan
	02-06	Lipid domain mapping at the erythrocyte plasma membrane outer leaflet	Confocal microscopy, vital microscopy, atomic force microscopy, plasma membrane, lipid domains, erythrocytes	Louise Conrard, Institut de Duve
	02-07	Vitrified Tokuyasu-style immunolabelled sections for correlative cryo light- and cryo-electron microscopy.	Tokuyasu cryosections, CryoCLEM, CryoET	Anastasia Gazi, Ultrapole, Institut Pasteur
	02-08	Visualization of single endogenous polysomes reveals the dynamics of translation in live human cells	RNA Biology, Endogenous Translation imaging, single molecule FISH	Xavier Pichon, IGMM
	02-09	Super-resolution for everybody: An image processing workflow to obtain high-resolution images with a standard confocal microscope	Confocal microscopy, deconvolution, refractive index matching, 3D-SIM-like resolution improvement, meiotic spindle	Susanne Bolte, UPMC

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Challenge 2 (cont.)	02-10	eC-CLEM: flexible multidimensional registration software for correlative microscopies with refined accuracy mapping	Correlative Light Electron Microscopy, 3D image Processing, image registration	Xavier Heiligenstein, Institut Curie
	02-11	A cryo-CLEM approach for the investigation of cellular systems	CLEM, cryo-correlative light/electron microscopy, cryo-electron tomography	Anna Sartori-Rupp, Institut Pasteur
	02-12	Deciphering protein organisation and dynamics at various scales using single-objective Selective Plane Illumination Microscope (soSPIM)	Light-sheet Microscopy, Fluorescence Correlation Spectroscopy, Adaptive Optics, Single Molecule Localization Microscopy	Rémi Galland, Université de Bordeaux - IINS
Challenge 3: New frontiers for imaging, sensing and controlling biomolecules	03-01	DNA based monofunctionalized quantum dots for bioimaging of endocytic pathways	Quantum dots, live cell imaging, bioimaging, endocytosis, monofunctionalization, DNA nanotechnology, single particle tracking	Dhiraj Bhatia, Institut Curie
	03-02	Hotoswitchable nanoassemblies and magnetofluorescent nanoassemblies toward drug release and targeted multimodal bioimaging	Fluorescent nanoparticles, multimodal nanoassemblies, photoswitching, targeted bioimaging	Eléna Ishow, Université de Nantes
	03-03	Kinase FRET biosensors: new tools and new approaches	FRET/FLIM, HCS/FLIM, multiplex FRET, fluorescence anisotropy	Marc Tramier, Université de Rennes 1
	03-04	In vivo FLIM-FRET FLIM-FRET measurements to molecularly characterize the mechanotransductive activation of beta-catenin signalling	FLIM-FRET, in-vivo, Drosophila embryo, Mechanotransduction	Jens-Christian Roeper, Institut Curie
	03-05	Labeling proteins on-demand with fluorogenic probes	Fluorescence imaging, protein tagging, biosensors	Arnaud Gautier, ENS
	03-06	Development of labels for AFM imaging of proteins: concept and the very first results	AFM, protein labeling, DNA-protein conjugates	Sergii Rudiuk, ENS
	03-07	Engineering Cyan fluorescent proteins with ultimate performances for live cell biosensors	Fluorescent Protein, FRET, Biosensors, rational design	Hélène Pasquier, Université Paris-Sud
Challenge 4: Unconventional imaging	04-01	Single Core Multimodal Probes for Imaging (SCoMPIs): classical fluorescence, IR-mappings and quantification, X-fluorescence	IR-imaging, X-fluorescence, classical fluorescence, multimodal probes, metal-CO	Clotilde Policar, ENS
	04-02	Raman microspectroscopy-based spectral signature of Endoplasmic Reticulum stress signaling status in glioblastoma	Vibrational spectroscopy, Raman and IRFT	Alain Fautrel, H2P2 Université Rennes 1
	04-03	Multicolor 3d single particle tracking using spectrally displaced localization	Single particle tracking, multicolor, dual-objective, super-resolution, optics	Corey Butler, Université de Bordeaux IINS
	04-04	Raman compressive detection: towards label-free sensitive probing of model membranes	Model membranes, Raman spectroscopy, compressive sensing	Hilton Barbosa de Aguiar, ENS
	04-05	Focusing through dynamic tissues using fast iterative wavefront shaping	Turbid media, wavefront shaping, microscopy	Baptiste Blochet, ENS

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Challenge 5: Bioimage informatics, image processing and microscopy data management	05-01	Smax: accurate 3d detection of packed nuclei	Nuclei, spot, detection, 3d, high density	Felipe Delestro, IBENS
	05-02	Correlation-based method for membrane diffusion estimation in tirf microscopy	Temporal image correlation spectroscopy, diffusion, estimation, tirf	Anca Caranfil, INRIA Rennes - Bretagne Atlantique
	05-03	Flexible image processing and analysis pipeline in nikon nis-elements software	Image processing, image analysis, pipeline, nis elements	Ondrej Prazsky, Laboratory Imaging s.r.o.
	05-04	Giving access to deep learning for the quantitative analysis of big histological images through the deployment of virtual machines	Big data, deep learning, virtual machine	Steven Nedellec, Micropicell
	05-05	Analysis framework for subcellular mrna localization	Gene expression, mrna localization, image analysis, machine learning	Aubin Samacoits, Institut Pasteur
	05-06	FBI image data public repository and sharing	Big data, open data, image data base	Perrine Paul-Gilloteaux, FBI IPDM
	05-07	Quantifying the heterogeneity of cell responses to cancer drugs	High-content screening, clustering, phenotypes, cancer biology, drug discovery	France Rose, ENS
	05-08	Nuclei segmentation in histopathology images using deep neural networks	Segmentation, Deep Learning, Nuclei, Histopathology, Convolutional Neural Networks	Thomas Walter, Institut Curie
	05-09	Web-based image import within the open microscopy environment	Ome, omero, message-driven web applications, data transfer	Andrea Falconi, Institut de Génétique Humaine
	05-10	Robust classification of particle tracks for characterization of diffusion and dynamics in fluorescence microscopy	Diffusion, brownian motion, classification, trajectory, msd, tracking, statistical tests	Vincent Briane, INRIA Rennes - Bretagne Atlantique
	05-11	Polygon-based colocalization analysis for multicolor single-molecule localization microscopy data	Colocalization analysis, single-molecule localization microscopy, voronoï tesselation	Florian Levet, Université de Bordeaux
	05-12	Collaborative analysis of multi-gigapixel images using cytomine	Web, database, open source, machine learning, collaborative analysis, restful api, multigigapixel images, big imaging data	Raphael Marée, University of Liege
	05-13	An image-based automatic registration method for 2D-CLEM	CLEM, automatic registration	Bertha-Mayela Toledo-Acosta, INRIA Rennes - Bretagne Atlantique
Challenge 6: New biological models and approaches: how will they frame the next challenges in bioimaging?	06-01	A bioorthogonal dual labeling strategy to visualize lignification dynamics in plants	Bioorthogonal chemistry, click chemistry, dual labeling, metabolic labeling, plant cell wall, lignification	Clémence Simon, Université Lille 1
	06-02	NIR-II Multi-Harmonic Imaging of Nanoparticle-labeled Stem Cells in depth tissue: an effective monitoring tool to assess pre-clinically innovative therapeutic strategies	Cell tracking, nanoparticles, shg, thg, intravital microscopy, biphotonic	Laurence Dubreil, PAnTher, INRA, École nationale vétérinaire, agro-alimentaire et de l'alimentation Nantes-Atlantique (Oniris)