

IMAGING LIFE: THE FUTURE

17 - 19 OCTOBER 2023

LE CORUM • MONTPELLIER • FRANCE



KEYNOTE SPEAKERS

Christophe Godin, France
Olivier Berné, France

INVITED SPEAKERS

Célia Baroux, Switzerland
Laurent Bourdieu, France
Alain Chédotal, France
Antoine Coulon, France
Siân Culley, UK
Noel de Miranda, Netherlands
Estibaliz Gómez de Mariscal, Portugal
Léo Guignard, France
Kalina T. Haas, France
Maria Harkiolaki, UK

Anna Labernadie, Spain
Jennifer Li & Drew Robson, Germany
Alice Malivert, UK
Yanlan Mao, UK
Pontus Nordenfelt, Sweden
Lothar Schermelleh, UK
Willy Supatto, France
Salvatore Valitutti, France
Nadine Vastenhouw, Switzerland
Virgile Viasnoff, Singapore
Allon Weiner, France

THEMATIC SESSIONS

Plant biology
3D genome organisation & Transcription
Infection / Immunity
Cell & Developmental biology
Image analysis
Cancer biology
Neurosciences

LOCAL SCIENTIFIC COMMITTEE

Daphné Autran, Edouard Bertrand, Matteo Bonazzi,
François Fagotto, Emmanuel Faure,
Virginie Lafont, Karine Loulier

SCIENTIFIC PROGRAMME



TUESDAY OCTOBER 17TH

- 14:00 **Welcome of the participants**
- 14:30 - 15:00 **Opening words**
- 15:00 - 16:00 **PLENARY LECTURE**
**Genetics of Shapes:
A grand challenge for biology, physics
and computational sciences**
Christophe Godin, *INRIA - France*
- 16:00 - 18:45 **SESSION 1 - IMAGE ANALYSIS**
Chair: Emmanuel Faure, LIRMM, Montpellier - France
- 16:00 - 16:30 **The good, the bad and the ugly
in fluorescence microscopy**
Siân Culley, King's College London - UK
- 16:30 - 16:45 To be announced
Fadwa Fatmaoui, IGBMC - Illkirch-Graffenstaden, France
- 16:45 - 17:15 **AI-enhanced microscopy imaging**
Estibaliz Gómez de Mariscal, IGC - Lisbon, Portugal
- 17:15 - 17:45 **Coffee break with partners**
- 17:45 - 18:00 FAST RIM, Super-resolution microscopy
for live biological imaging
Simon Labouesse, CBI - Toulouse, France
- 18:00 - 18:30 **Visualising mouse embryogenesis
from blastocyst to early organogenesis**
Léo Guignard, Centuri - Marseille, France
- 18:30 - 18:45 Virtual Microscopy: from microscope to virtual reality
Tao Laurent, CNRS, LIRMM - Montpellier, France
- 19:00 - 21:00 **Official reception & Cocktail with partners**



WEDNESDAY OCTOBER 18TH

- 08:45 **Welcome of the participants**
- 09:15 - 12:00 **SESSION 2**
3D GENOME ARCHITECTURE & TRANSCRIPTION
Chair: Edouard Bertrand, IGH, Montpellier - France
- 09:15 - 09:45 **Understanding interphase chromosomes as physical objects**
Antoine Coulon, Curie Institute, Paris - France
- 09:45 - 10:00 TAD structure revealed by super-resolution microscopy
Frédéric Bantignies, IGH, CNRS UM - Montpellier, France
- 10:00 - 10:30 **The power of super-resolution SIM to unlock secrets of chromatin organization**
Lothar Schermelleh, Oxford University - UK
- 10:30 - 11:00 **Coffee break with partners**
- 11:00 - 11:15 How to modulate transcriptional noise: the impact of cis-regulatory modules and feedback loops
Antonio Trullo, IGMM, CNRS UM - Montpellier, France
- 11:15 - 11:45 **The organisation of transcriptional activity in nuclear space**
Nadine Vastenhouw, UNIL Lausanne - Switzerland
- 11:45 - 12:00 Multiplexed imaging approach reveals changes in cell type-specific chromatin organization in mouse tissues
Olivier Messina, CBS - Montpellier, France
- 12:00 - 14:00 **Lunch with partners & Poster Session**



WEDNESDAY OCTOBER 18TH

- 14:00 - 16:15 **SESSION 3 - NEUROSCIENCES**
Chair: Karine Loulier, INM, Montpellier - France
- 14:00 - 14:30 **Custom-address serial holography for the measurement of spike correlations between neurons in mouse visual cortex**
Laurent Bourdieu, IBENS - Paris, France
- 14:30 - 14:45 Chromatically corrected color multiphoton microscopy of brain slices
Pierre Mahou, Ecole Polytechnique - Palaiseau, France
- 14:45 - 15:15 **3D Analysis of human embryos**
Alain Chédotal, Institut de la Vision - Paris, France
- 15:15 - 15:30 Metabotropic glutamate receptors: from in vitro, toward live cell dynamic structural biology
Emmanuel Margeat, CBS - Montpellier, France
- 15:30 - 16:00 **How the brain maps the world: Uncovering spatial cognition in the zebrafish brain with tracking microscopy**
*Jennifer Li & Drew Robson,
Max Planck Institute for Biological Cybernetics - Tübingen, Germany*
- 16:00 - 16:15 Deciphering ATP signaling in epilepsy with biosensors
Paola Nobili, IGF, UM, CNRS, INSERM - Montpellier, France
- 16:15 - 16:45 **Coffee break with partners**



WEDNESDAY OCTOBER 18TH

- 16:45 - 19:30 **SESSION 4 - INFECTION & IMMUNITY**
Chair: Matteo Bonazzi, IRIM, Montpellier - France
- 16:45 - 17:15 **The invasive lifestyle of the fungal pathogen *Candida albicans* studied via live cell imaging, damage sensitive reporters and volume electron microscopy**
Allon Weiner, CIMI, la Pitié salpêtrière, Paris - France
- 17:15 - 17:45 To be announced
Maria Harkiolaki, Diamond Light source, UK
- 17:45 - 18:00 Quantitative imaging of HIV-1 assembly: respective roles of viral and host cell molecules
Cyril Favard, CNRS - Montpellier, France
- 18:00 - 18:30 **Data-driven microscopy as an approach to capture events and phenotypes of interest**
Pontus Nordenfelt, Lund University, Sweden
- 18:30 - 19:30 **ROUND TABLE**
In 10/20 years' time, what current technological limitation would you most like to be able to overcome, and why?
- 20:00 **Congress dinner**



THURSDAY OCTOBER 19TH

- 08:15 **Welcome of the participants**
- 08:45 - 12:30 **SESSION 5 - CANCER BIOLOGY**
Chair: Virginie Lafont, IRCM, Montpellier - France
- 08:45 - 09:15 **Unraveling immune responses in cancers through spatial omics**
Noel de Miranda, Leiden University, Netherlands
- 09:15 - 09:30 Time-lapse fluorescence microscopy to study and model the temporal response of cancerous cells to single-dose radiation therapy
Marianne Billoir, IJCLab - Paris, France
- 09:30 - 10:00 **Imaging the fight between cytotoxic T lymphocytes and cancer cells at the immunological synapse**
Salvatore Valitutti, CRCT, Toulouse - France
- 10:00 - 10:30 **Coffee break with partners**
- 10:30 - 10:45 The ATR inhibitor and FOLFIRINOX combination inhibits pancreatic cancer growth by remodeling immune cells in the tumor stroma
Marine Bruciamacchie, IRCM - Montpellier, France
- 10:45 - 11:15 **Tumor-Stroma Mechanobiology: Role in cancer spreading and immunotherapy outcomes**
Anna Labernadie, PFCI, Barcelona - Spain
- 11:15 - 11:30 Deciphering early dissemination in colorectal cancer
Zeinab Homayed, IGF, CNRS, INSERM - Montpellier, France
- 11:30 - 12:30 **PLENARY TALK**
Imaging the past with the James Webb Space Telescope
Olivier Berné, IRAP, Toulouse - France
- 12:30 - 13:45 **Lunch with partners**
- 13:45 - 14:00 **Sponsors corner**



THURSDAY OCTOBER 19TH

- 14:00 - 16:15 **SESSION 6 - PLANT BIOLOGY**
Chair: Alexandre Martinière, INRAe, Montpellier - France
- 14:00 - 14:30 **Visualizing cellular mechano-response: how do plants sense mechanical stress?**
Alice Malivert, Imperial College London - UK
- 14:30 - 14:45 Control of the spiral phyllotaxis from a single stem cell in the moss *Physcomitrium patens*
Laure Mancini, RDP, ENS - Lyon, France
- 14:45 - 15:15 **Chromatin dynamics in plant cell reprogramming: Complementary views gained from high resolution and high-throughput**
Célia Baroux, University of Zürich - Switzerland
- 15:15 - 15:30 Role of ROS nanodomains at the plasma membrane in response to osmotic stress
Arthur Poitout, IPSIM - Montpellier, France
- 15:30 - 16:00 **Delving into cell wall structure and assembly during plant cell expansion**
Kalina T. Haas, IJPB, INRAe, Versailles - France
- 16:00 - 16:15 Live imaging of phytochrome B photobodies
Kasper Van Gelderen, COS - Heidelberg, Germany
- 16:15 - 16:45 **Coffee break with partners**



THURSDAY OCTOBER 19TH

- 16:45 - 19:00 **SESSION 7 - CELL & DEVELOPMENTAL BIOLOGY**
Chair : François Fagotto, CRBM, Montpellier - France
- 16:45 - 17:15 **To be announced**
Willy Supatto, LOB, Ecole Polytechnique - France
- 17:15 - 17:30 RiboFAST, an amazing biosensor
Héloïse Chassé, IGH - Montpellier, France
- 17:30 - 18:00 **To be announced**
Virgile Viasnoff, CNRS/NUS - Singapore
- 18:00 - 18:15 Structure and assembly of nuclear pore complexes by correlative AFM-dSTORM
Christine Doucet, CBS - Montpellier, France
- 18:15 - 18:45 **Coping with mechanical stress: Imaging tissue dynamics during homeostasis and repair**
Yanlan Mao, UCL - London, UK
- 18:45 - 19:00 Notch-Yap crosstalk represents a conserved mechanism regulating symmetry breaking of embryonic glandular epithelial cells
Robin Journot, Institut Curie - Paris, France
- 19:00 **Concluding remarks**



INFORMATION & REGISTRATION

Online registration
www.atoutcom.com/futureimaging/

	REGISTRATION RATES
Senior researcher (staff scientist/faculty)	300 €
Senior researcher (staff scientist/faculty) member of a supporting learned society/institution	250 €
Junior researcher (PhD student/post-doc)	250 €
Junior researcher (PhD student/post-doc) member of a supporting learned society	200 €
Engineer/Technician	200 €
Engineer/Technician member of a supporting learned society	150 €
Master student	Free (subject to space availability)
Industrial registration	450 €

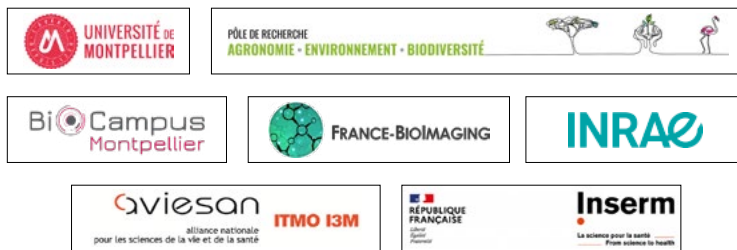
CONGRESS VENUE

LE CORUM
 Esplanade Charles De Gaulle
 34000 Montpellier - France



PARTNERS & SPONSORS

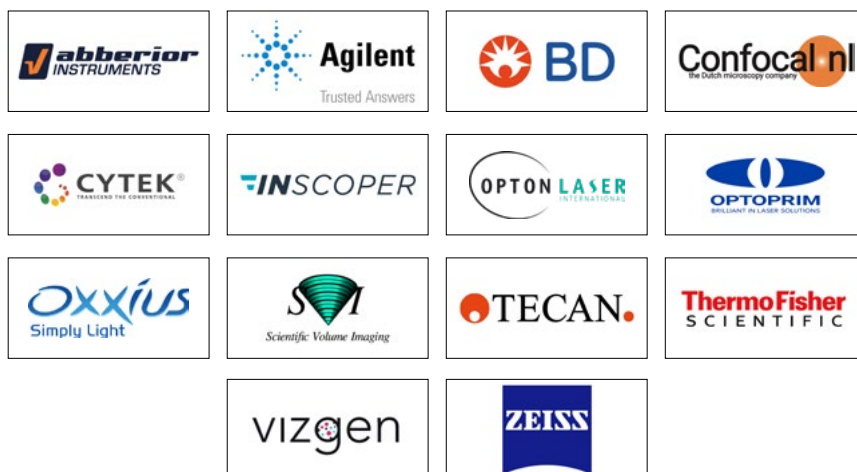
INSTITUTIONAL PARTNERS




LEARNED SOCIETIES



INDUSTRIAL PARTNERS



List established on October 2, 2023

The background of the entire page is a microscopic image of various cells, some of which are stained in bright colors like blue, green, red, and yellow. The image is framed by two thick, dark grey curved lines that sweep across the page, creating a central white space for the text.

IMAGING LIFE: THE FUTURE 2023

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GENERAL ORGANISATION
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