FRANCE-BIOIMAGING

INSTITUT FRESNEL
MARSEILLE

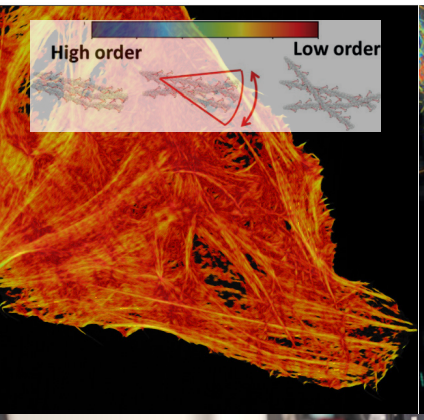
FLUORESCENCE POLARISATION MICROSCOPY WORKSHOP

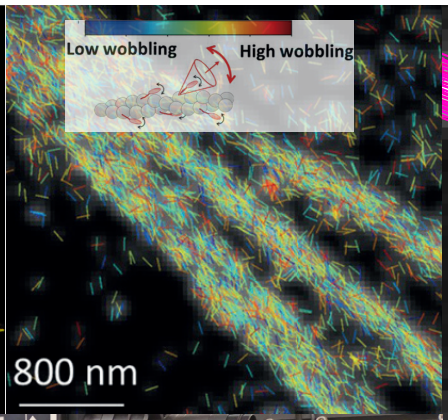
Measurements of protein organization in cells, tissues and organisms

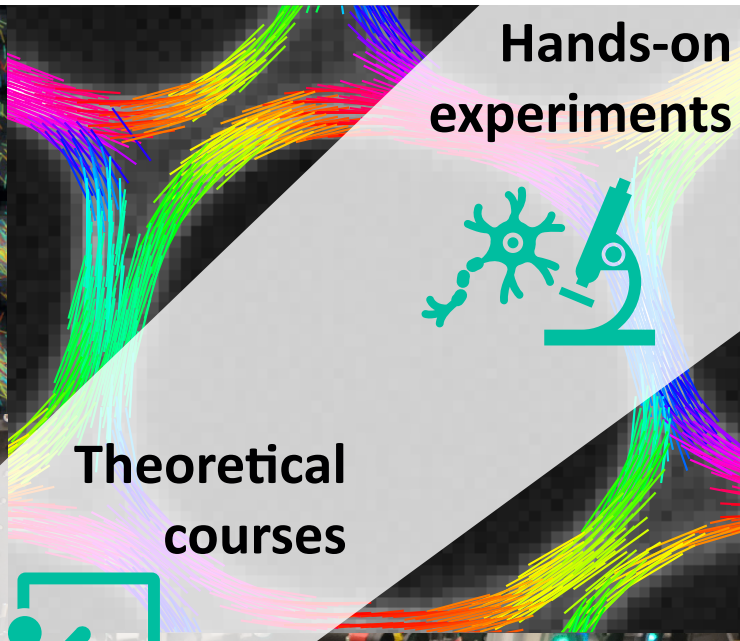
November 12-14th 2024

INSTITUT FRESNEL
Marseille

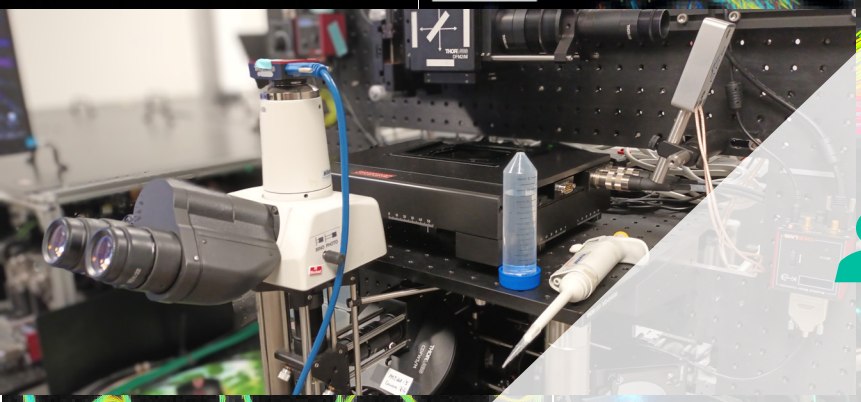
Registration deadline:
October 1st 2024



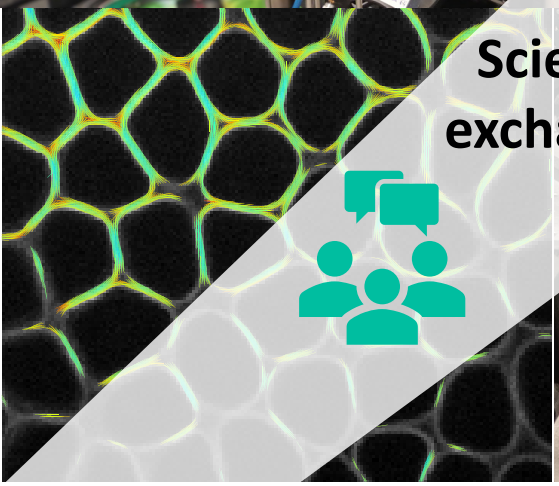




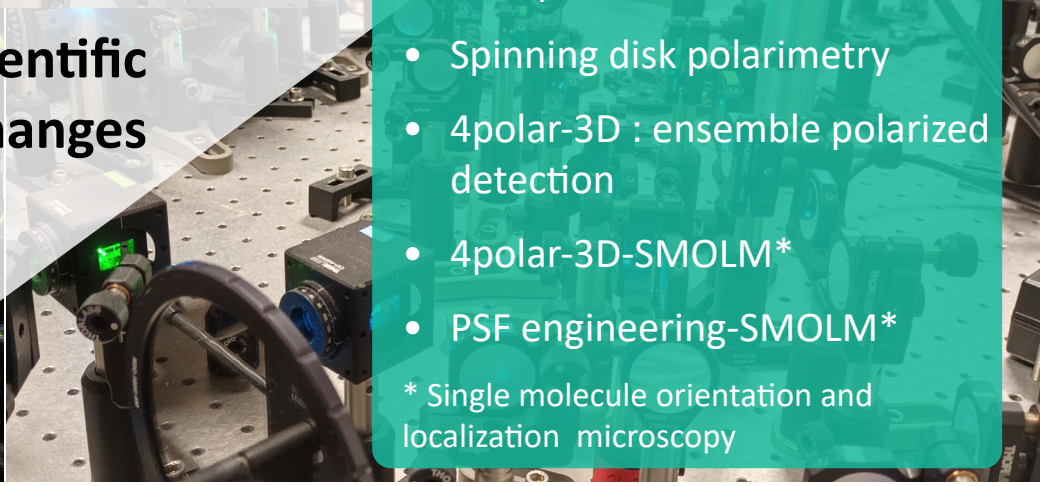
Hands-on experiments



Theoretical courses



Scientific exchanges



Main topics

- Spinning disk polarimetry
- 4polar-3D : ensemble polarized detection
- 4polar-3D-SMOLM*
- PSF engineering-SMOLM*

* Single molecule orientation and localization microscopy

amU Aix Marseille Université

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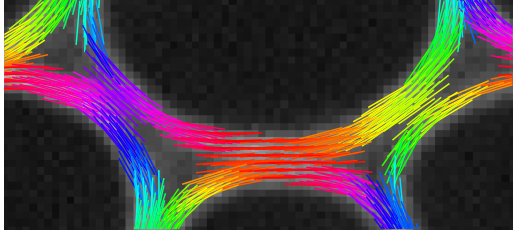
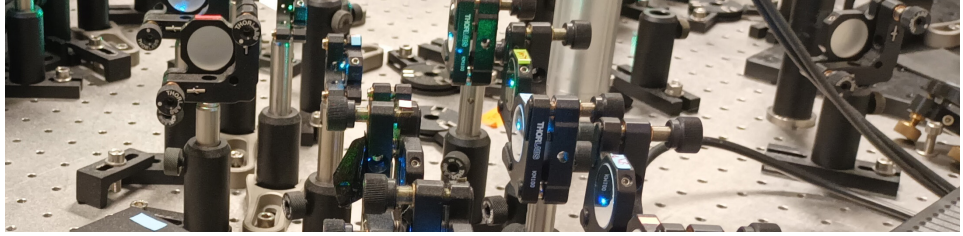
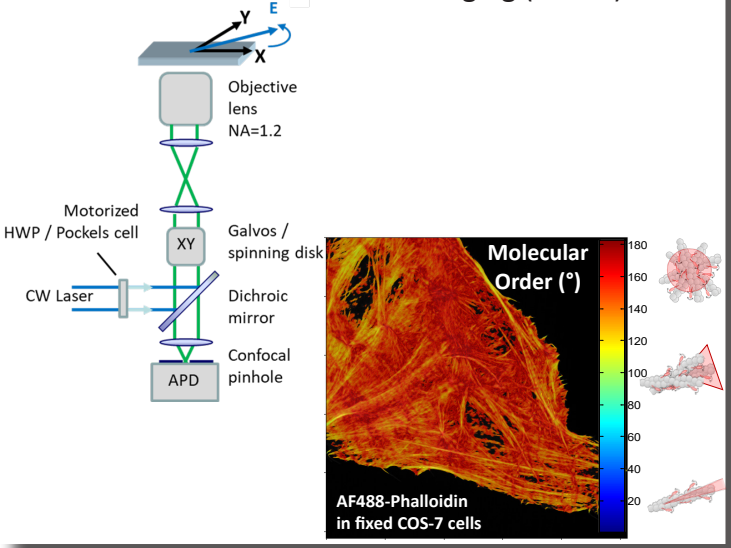




4 topics covered in theoretical and practical sessions with hands-on experiments - Possibility to bring your own samples or test our probes!

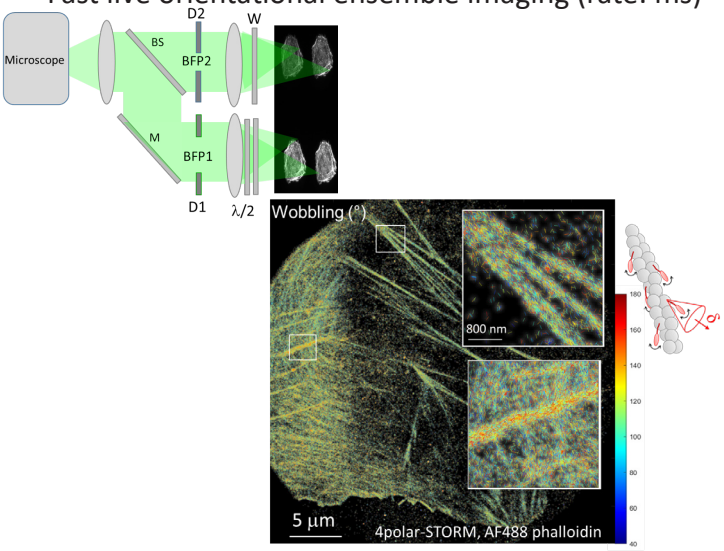
Spinning disk polarimetry

- Excitation polarization rotation
- Sectioned imaging + 2D projected orientation
- Live orientational ensemble imaging (rate: s)



4polar3D : ensemble polarized detection

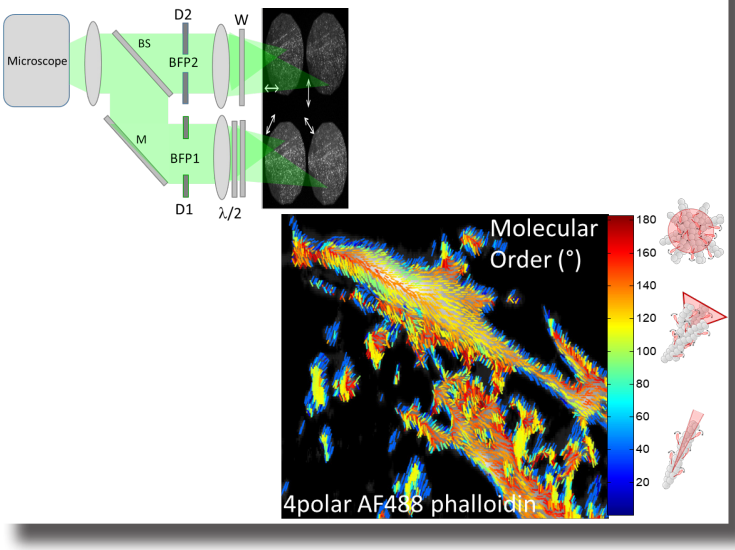
- Emission polarization ratiometry
- Widefield / TIRF imaging + 3D orientation
- Fast live orientational ensemble imaging (rate: ms)



4polar3D - SMOLM*

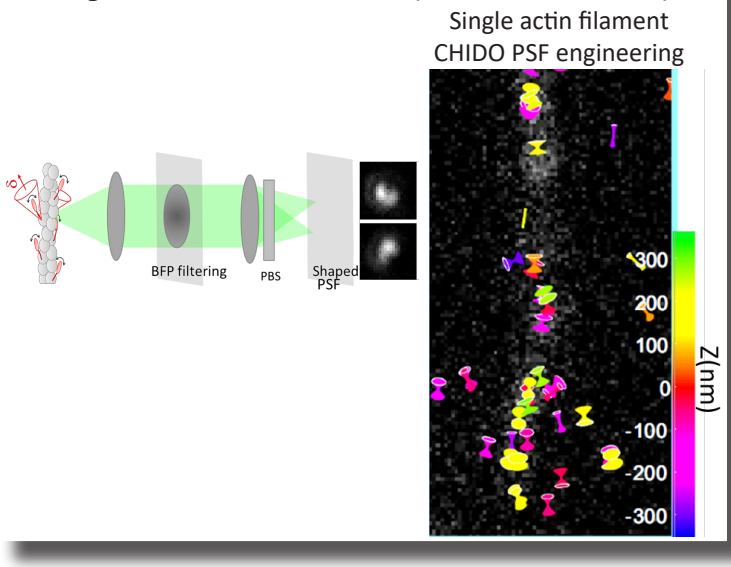
***single molecule orientation and localization microscopy**

- Single molecule intensity polarized ratiometry
- Retrieval of 2D position + 3D orientation
- Single molecule localization (STORM/PALM/etc.)



PSF engineering - SMOLM

- Single molecule PSF engineering
- Retrieval of 3D position + 3D orientation
- Single molecule localization (STORM/PALM/etc.)



FACILITY FRESNEL PHOTONICS

PLATEFORME TECHNOLOGIQUE AIX-MARSEILLE

FRANCE 2030 Equipex+ IDEC

Imagerie et Détection Computationnelle

Preliminary program

Nov. 12th

! Beginning at 1 PM !

Welcoming participants

Introducing the speakers and participants - training schedule

Presentation of France BioImaging

Interest of the techniques - Biological applications

Practical workshops in small groups or Theoretical session and discussion

Dinner

Nov. 13th

Practical workshops in small groups

Theoretical session and discussion

Free evening

Nov. 14th

Questions & answers about probes

Feedback of theoretical & practical courses per small group - debriefing

Practical workshop on Sample trials – How to calibrate a system – PSF engineering demo

! End at 3 PM !

Organization committee Sophie BRASSELET, Sébastien MAILFERT, Manos MAVRAKIS, Julien SAVATIER

? General information ? sebastien.mailfert@fresnel.fr

? Samples and experiments ? manos.mavrakis@fresnel.fr

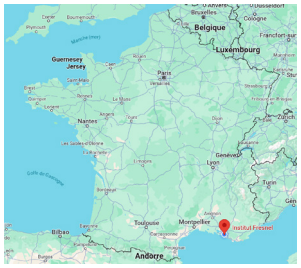
Registration form

- Registration (here) before October 1st, 2024
- Places limited to 16 participants
- Free registration covering accommodation, transport and meals (except for the evening of November 13th)
- Priority will be given to the France BioImaging (FBI) infrastructure members

Target audience

- Open to all, regardless of discipline, status or employer
- Designed for people from a variety of disciplines interested in polarisation resolved fluorescence imaging (beginners or experienced)

Location and Access



Theoretical & practical courses

Institut Fresnel - PHOTONICS

Faculté des Sciences Saint Jérôme

Avenue Escadrille Normandie-Niémen

13397 Marseille

Access from the city center / Train station

Take metro line 1 to Malpassé station (La Rose direction), then take bus B3A to Faculté des Sciences de St Jérôme