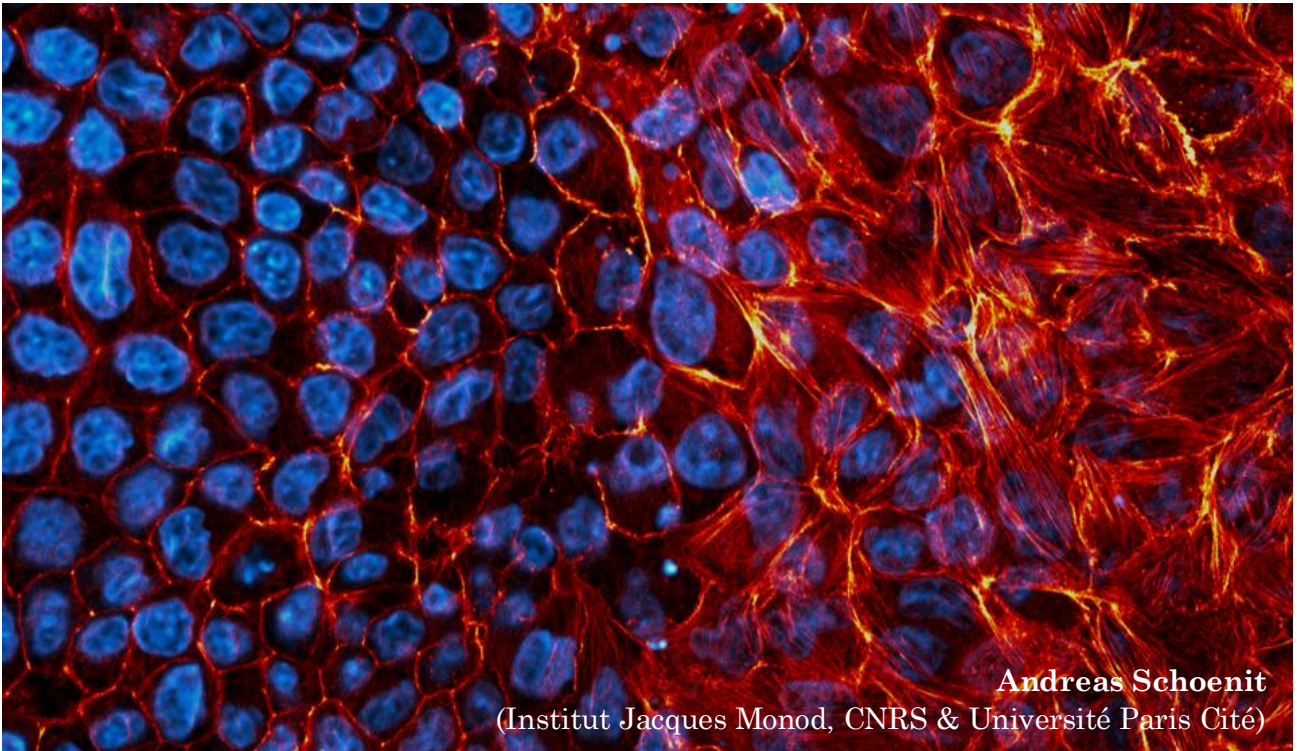


## Session booklet



# EDPIF PhD Scientific Day

Friday, 30 June 2023



# Scientific Programme

- 8:30**     **Registration & Welcome remarks**
- 9:00**     *Invited talk: “La naissance d’une gouttelette lipidique”*  
**Abdou-Rachid Thiam**, *Chair of the Biophysics Research Axis of the Physics Department of ENS Paris*
- 9:45**     “Cell-cell adhesion strength regulates mechanical cell competition in epithelia” - **Andreas Schoenit**, *Institut Jacques Monod, CNRS & Université Paris Cité*
- 10:00**    “Bursting dynamics in a spiking neuron with a memristive voltage-gated channel” - **Jiaming Wu**, *LPS Orsay*
- 10:15**    “Digital harmonic holographic microscope for the study of nanostructures in nonlinear regime” - **Serena Goldmann**, *Institut Langevin, ESPCI*
- 10:30**    “Two-fluid dynamics and micron-thin boundary layers shape cytoplasmic flows in early Drosophila embryos”, **Claudio Hernandez Lopez**, *LPENS*
- 10:45**    **Coffee break & poster session**
- 11:15**    “Complex Dynamics in Mutually Coupled Spin Torque Vortex Oscillators” - **Katia Ho**, *Unité Mixte de Physique CNRS-THALES*
- 11:30**    “Universal exploration dynamics of random walks” - **Léo Régnier**, *LPTMC*
- 11:45**    “Complete determination of thermoelectric and thermal properties of supported few layers 2D materials” - **Mehrdad Rahimi**, *Laboratoire Matériaux et Phénomènes Quantiques, Université Paris Cité*

- 12:00** “Lipid and ionic determinants of mitofusin HR1-mediated fusion” - **Anaïs Vlieghe**, *Institut Psychiatrie et Neurosciences de Paris, IPNP*
- 12:15** “Superconducting quantum interference antenna” - **Sarah Menouni**, *Unité Mixte de Physique CNRS, Thales, Université Paris Saclay*
- 12:30** **Lunch & poster session**
- 14:00** *Invited talk:* “Climate and geology of Titan, icy moon of Saturn”  
**Sebastien Rodriguez**, *IPGP, Université Paris Cité*
- 14:45** “Acoustical Characterization of bubbly media” - **Camille Cohen**, *Saint-Gobain Recherche/Laboratoire Matière et Systèmes Complexes*
- 15 :00** “A dynamic full field optical coherence tomography module for in vitro retinal imaging” - **Salvatore Azzollini**, *Institut de la Vision*
- 15:15** “Carbon dots-based composites: from elaboration to study of their properties” - **Enrique Manso Castillo**, *Laboratoire Matière et Systèmes Complexes*
- 15:30** “Non-reciprocity across scales in active mixtures” - **Alberto Dinelli**, *Université Paris Cité*
- 15:45** “InP quantum well infrared photodetectors operating in the strong coupling regime” - **Jihye BAIK**, *LPENS*
- 16 :00** **Coffee break & poster session**
- 16:30** "Development of an optical lattice clock using bosonic isotopes of mercury" - **Clara Zyskind**, *LNE-SYRTE, Observatoire de Paris, Université PSL, CNRS, Sorbonne Université*
- 16:45** “Control of collective motion through surfaces” - **Benjamin Perez**, *PMMH*

- 17 :00** “Does geometric constraint of individual muscle cells promote differentiation?” - **Lorijn van der Spek**, *Matières et Systèmes Complexes, Université Paris Cité*
- 17:15** “Groove in the vicinity of a meniscus in a thin liquid film” - **Alice ETIENNE SIMONETTI**, *Laboratoire de Physique des Solides*
- 17 :30** **Closing Remarks & Farewell cocktail**

# List of posters

**Mohammad AbdelSater**, Laboratoire de physique des solides, "Hydrogen storage and dynamics in a nano-clay material"

**Myrann Abobaker Salih**, LCPMR, "Orbital Angular Momentum entanglement by Spontaneous Four Wave Mixing"

**Santiago Agudelo**, CEA Saclay, "Interface Control Layer in BaSr1-yTiO3 Based Varactors for 5G technology"

**Killian Babilotte**, CEA, "Massive N-body simulation: an in-situ analysis framework to unveil new physical phenomena"

**Quentin Benichou**, Université Paris-Saclay, "Toward an anyonic Mach-Zehnder interferometer in graphene"

**Martin Chaigne**, Laboratoire Matière et Systèmes Complexes, "Emergence of tip singularities in dissolution patterns"

**Florentin Daniel**, Laboratoire de physique de l'ENS, "Dynamo action sustaining turbulence: a subcritical transition"

**Andrés DURAN HERNANDEZ**, Laboratoire Kastler Brossel - CNRS, "Trapping-Arrays of interacting Circular Rydberg Atoms"

**Chaumeton Etienne**, lkb/syrte/cnrs, "Towards a squeezed clock"

**Hao FU**, Sorbonne Université - LERMA, "Towards a new NDACC site at Paris: preliminary results of the atmospheric component retrieval using SFIT4 algorithm"

**Eugenio Gambari**, INSP, "Scanning tunneling microscope study of the Van der Waals ferromagnet CrCl<sub>3</sub>"

**Federico Ghimenti**, Laboratoire Matière et Systèmes Complexes, Université Paris Cité, "Efficiency of transverse forces in dense liquids"

**Vincent Gourmandie**, MSC - UPC, "Acoustique de l'impact d'une goutte sur un bain liquide : le rôle des tensio-actifs"

**Alexis Lespinas**, Laboratoire Matériaux et Phénomènes Quantiques - Université Paris Cité, "An elasto-Raman study on the iron-based superconductor Co-BaFe<sub>2</sub>As<sub>2</sub>"

**Hugo Lévy**, ONERA / IAP, "Challenging modified gravity theories with numerical simulations"

**Aymen Mahmoudi**, EDPIF-SACLAY-CNRS/C2N, "Direct imaging of band structure for CVD grown rhombohedral-stacked bilayer WSe<sub>2</sub> using nanospot angle-resolved photoemission"

**Ye Mou**, Institut des NanoSciences de Paris - Sorbonne Université, "A chiral inverse Faraday effect mediated by an inversely designed plasmonic antenna"

**Yifan Pan**, Laboratoire de Physique des Solides, "Investigation of the structural evolution of thermal treated imogolite nanotubes"

**Himanshu Patange**, Laboratoire Kastler Brossel, "Towards quantum control of an ultracoherent mechanical resonator with a fluxonium qubit"

**Aravind Raji**, LPS Orsay & Synchrotron SOLEIL, "Charge distribution between capped and uncapped infinite-layer nickelates"

**Paul RAUX**, Université Paris-Cité, LIED, "Thermoelectric networks and beyond"

**Benoît Reynier**, Institut des NanoSciences de Paris, "Excitation of a magnetic dipole transition through a plasmonic nano-antenna"

**Antoine Roll**, Laboratoire Léon Brillouin - Saclay, "Probing magnetic interactions in Fe-based superconductors by neutron scattering: an experimental and numerical approach"

**Vui Yin Seow**, Laboratoire Jean Perrin, Sorbonne Université, "Type IV Pili regulates DNA uptake dynamics in *Neisseria gonorrhoeae*"

**Florian Simon**, Laboratoire de Physique des Solides, Orsay, "Superconductivity and the normal state's band geometry"

**Karen Sobnath**, Laboratoire matériaux et phénomènes quantiques - Université Paris Cité, "Pure spin pumping in 2D van der Waals materials"



**Alexander Wagner**, Collège de France, "Bloch oscillations in Josephson Junctions"

**Xiaoxiao YANG**, Laboratoire MSC - Université Paris Cité , "Unveiling Pathways to Elastic Turbulence in Semi-Dilute Giant Micelles Through Curvature Ratios in TC Flows"

**Stanisław Żukowski**, Laboratoire Matière et Systèmes Complexes, "Breakthrough-Induced Loop Formation in Evolving Transport Networks"

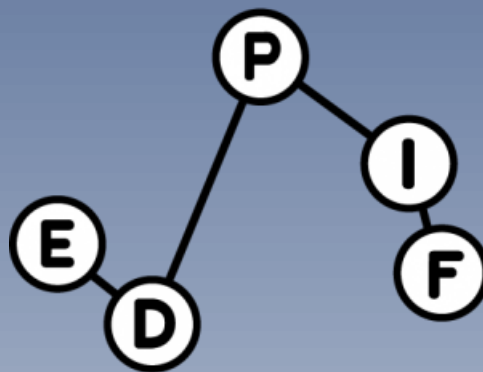
**Ludovica Zullo**, Sorbonne Université, CNRS, Institut des Nanosciences de Paris and University of Trento, "Misfit Layer Compounds: a tale of the perfect misMATCH "

## Some info:

The venue is at the Amphi Farabeuf, Campus des Cordeliers, 15 Rue de l'École de Médecine, 75006 Paris.

Don't hesitate to check the website

<https://www.edpif.org/journee/2023/index.html>  
for further information.



The organization committee:

Usama IQBAL, Ecole Normale Supérieure

Marta MASTRANGELO, Ecole Normale Supérieure

Filip NOVKOSKI, Université Paris Cité

