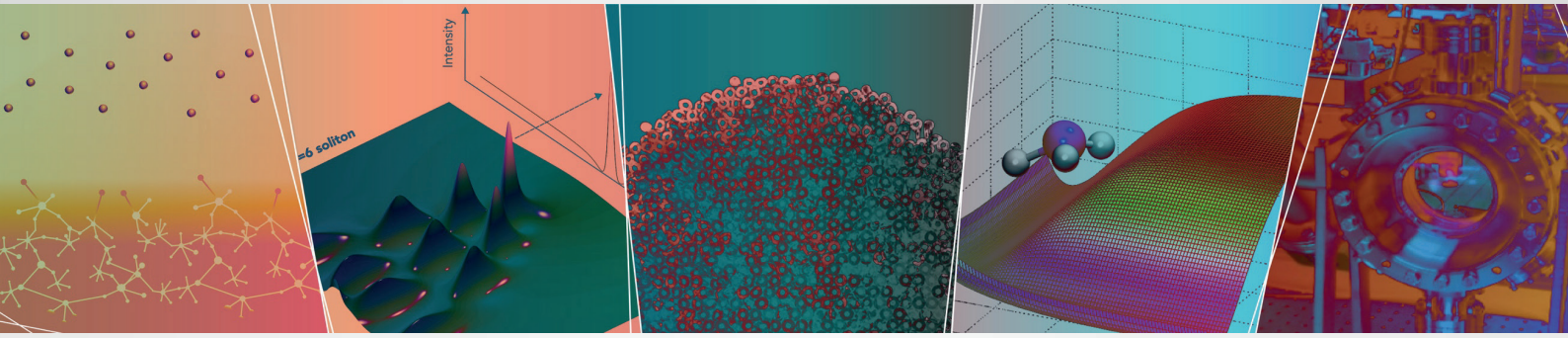
Les journées des doctorants du PhLAM 2022
LE PROGRAMME

Le **25 mars** à l'amphithéâtre Pierre Glorieux du **CERLA**
et le **6 mai** à l'amphithéâtre de l'**IRCICA**

PhLAM
Physique des Lasers
Atomes et Molécules



Université de Lille

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PhLAM Physique des Lasers Atomes et Molécules

Les journées des doctorants du PhLAM 2022

Programme

PHLAM DOCTORAL DAYS / JOURNÉES DES DOCTORANTS DU PHLAM 25 MARS & 6 MAI 2022	
CERLA - Ampithéâtre Pierre Glorieux 25 mars	
9:00	***Introduction by the PhLAM director***
9:10	**HURBAIN Julien :** Modelling investigation of metabolic adaptation to oxidative stress.
9:30	**VANDENBERGHE Alan :** Deciphering circadian clock coupling with cell metabolism by fluorescence and bioluminescence.
9:50	**SEPTIER Dylan :** Double clad hollow core fibers for nonlinear microendoscopy.
10:10	**VANDERHAEGEN Guillaume :** Multiple Fermi Pasta Ulam Tsingou recurrences in uniform and dispersion oscillating fibers.
10:30	***Coffee Break & Posters by the 3rd year PhDs @ Cerla Hall***
11:00	**TOMBOZA Wendy :** Development of high temperature fiber optic pressure sensor for aircraft engines instrumentation. *Zoom*
11:20	**LECHEVALIER Corentin :** Measurement of the band dispersions of a Floquet-Bloch lattice realised with coupled fiber rings.
11:40	**YUAN Xiang :** Molecular properties in the linear response regime and beyond with relativistic equation of motion coupled cluster.
12:00	**HAIDER Kawssar Mujtaba :** Role of the organic waste products reactivity on secondary organic aerosol formation.
12:20	***Lunch break & posters by the 3rd year PhDs @ Cerla Hall***
14:25	**SAWAGODO Alfred :** MT 180s.
14:30	**CLAUS Jordan :** Characterization, microsolvation and reativity of aerosol precursors by microwave and infrared spectroscopy, supported by quantum calculations.
14:50	**BARRELLON—VERNAY Rafaël :** Unveiling Nucleation mechanism in aiRcraft Engine exhAust and its link with fuel composition (UNREAL).
15:10	**DELPIERRE Pauline :** Mathematical modeling of the synchronization of the liver circadian clock with metabolism – Application to the design of chronotherapeutic protocols targeting metabolic deseases.
15:30	***Coffee Break & Posters by the 3rd year PhDs @ Cerla Hall***
15:50	**BAYDI Brahim :** Peigne de fréquence et nouvelle dynamique paramétrique non linéaire en cavité optique.
16:10	**INFUSO Maxime :** Unravelling the atmospheric iodine chemistry using molecular simulations.
16:30	***Closing remarks***

Posters

25 mars au CERLA

AYYAD Marouane :
Caractérisation et contrôle des états chimères dans des réseaux optiques.

BSAIBES Maroun :
Towards a better understanding of light scattering and mode coupling mechanisms in few mode optical fibers.

CHEDID Alex :
Multimodal photonics - Dynamic characterization of the transmission channel of a few mode optical fiber.

EL MOUSSAWI Fatima :
Specialty optical fibers for ultraminiaturized biomedical endoscopes.

OPOKU Richard Asamoah :
Theoretical core spectroscopy of molecules interacting with ice surfaces.

SAWADOGO Bewindin Alfred :
Manipulation de faisceaux RF MIMO à des fréquences THz pour des applications point à point très haut débit.

VUATELET Vincent :
Many-body dynamical localization of a Tonks gas.

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PHLAM DOCTORAL DAYS / JOURNÉES DES DOCTORANTS DU PHLAM 25 MARS & 6 MAI 2022	
IRCICA - Ampithéâtre IRCICA 6 mai	
9:00	**SRIVASTAVA Shivang :** Characterization and manipulation of quantum states of the light with highdimensional encoding.
9:20	**ALDAIR MISAEL Wilken :** Simulating Resonant Inelastic X-ray Scattering Across the Whole Periodic Table.
9:40	**ZAFAR Sadain :** CO2 hydrates as an alternative solution to water desalination and greenhouse gas mitigation.
10:00	**MADHUR Vikas :** Development of a new instrument coupling mass spectroscopy and optical diagnostics for the analysis of environmental samples at atmospheric pressure.
10:20	***Coffee Break & posters by the 1st year PhDs @ IRCICA***
10:50	**AL ASEEL Joelle :** Experimental and Theoretical studies on a new laser method to determine the adsorption energy on carbonaceous surfaces.
11:10	**GYAWALI Prakash :** Studies of the physico-chemical properties of water complexes in the terahertz domain.
11:30	**OUARKOUB Cecilia :** Ultrafast measurement of topological excitations in a polariton gas.
11:50	**DUFOUR Martin :** Encodage, Décodage, multiplexage non-linéaires et applications aux télécommunications optiques.
12:10	***Lunch break & posters by the 1st year PhDs @ IRCICA***
14:05	**BADIN Sylvain :** Theoretical study of iodine plasma for spacecraft propulsion. *Zoom*
14:10	**LERNER Alexandre :** High temperature Fiber Bragg Gratings embedding in metallic structures produced by additive manufacturing. *Zoom*
14:30	**CLAUS Jordan :** Characterization, microsolvation and reativity of aerosol precursors by microwave and infrared spectroscopy, supported by quantum calculations.
14:50	**LAFARGUE Léa :** High energy, ultrashort fiber laser system at 1053 nm for ultrahigh intensity laser frontend improvement. *Zoom*
15:10	***Coffee Break & posters by the 1st year PhDs @ IRCICA***
15:30	**BANCEL Eve-Line :** Frequency combs in multi-core optical fibers for precision spectroscopy.
15:45	**NEGRINI Stefano :** Gain Though Loss in passive fiber cavities.
16:05	**HANOUN Christelle :** Ultrafast measurements in synchrotron radiation sources and free electron lasers.
16:25	***Closing remarks***

Posters

6 mai à l'IRCICA

ABOUHAIDAR Rawan :
Molecular dynamics investigation of the influence of surfactants on halogens propensity at the airwater interface.

BON Mathilde :
Molecular characterization of G. Prisca microfossils by mass spectrometry at the cellular scale.

BUNEL Thomas :
Generation of multiple frequency combs in few mode passive fiber resonators.

DEL FRÉ Samuel :
Theoretical studies of photodesorption of molecular interstellar ices.

DENIS Maxime :
Disordered quantum systems simulation with Potassium Bose-Einstein condensate.

DIOUM Bakhao :
Manipulation of quantum pulses.

HASEEB Eden :
Rewiring programmed cell death and inflammation via modulation of ERK signaling dynamics.

MADANI Farid :
Experimental study of disordered quantum systems in the presence of interactions with a Bose-Einstein condensate.

MUCCI Alexandre :
Gaz de solitons optiques.

MURR Georges :
Optimisation de l'horizon de prédictibilité des évènements extrêmes par « deep learning ».

ZGHARI ISMAIL :
Silice dopée et fibre optique pour la dosimétrie en radiothérapie pulsée.