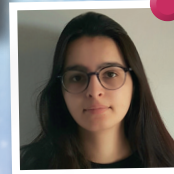
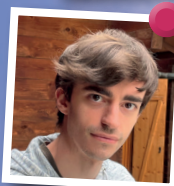
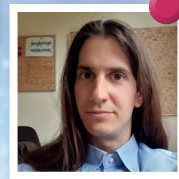
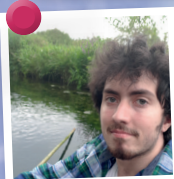
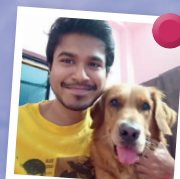
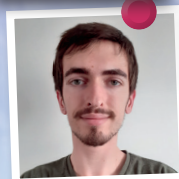
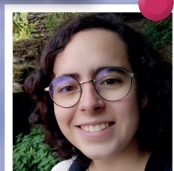
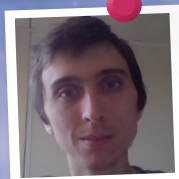
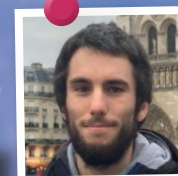
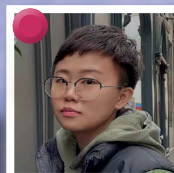




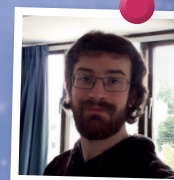
NUCLEAR MATTER UNDER PRESSURE

Saint Pierre d'Oléron, France
September 4 to 9, 2022

Nelson
Adriazola



Students
Committee
Speakers



Geoffrey
Zietek

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Nelson Adriaola

I am a 3rd year PhD student at the University of Chile. My thesis research aims to obtain a nuclear equation of state at high densities based on the bare NN potential, in addition to its implications on the equilibrium of neutron stars.

My main motivation to attend this School fully overlaps with my research work, giving me the opportunity to know the state-of-the-art in this fascinating subject. Also give me the possibility to meet and exchange ideas with active researchers and future colleagues in the field.

University of Chile, Santiago, Chile



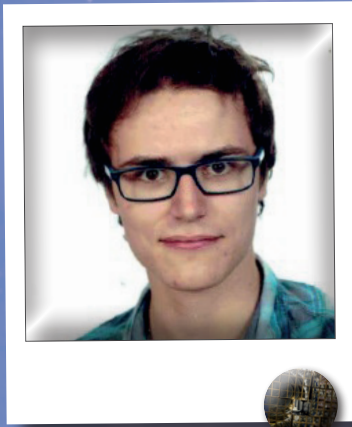
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Valentin Allard

I'm in my 3rd year of my PhD at Université Libre de Bruxelles within the Institute of Astronomy and Astrophysics. My PhD work consists of trying to bridge the gap between the microscopical dynamical aspects of superfluidity, which are studied under the energy density-functional theory, and the (large-scale) astrophysical phenomena encountered in the context of neutron stars (such as cooling or pulsar glitches).

In my spare time, I love travelling, discovering new cultures (Eastern cultures, in particular), reading books about Economy and Psychology and cooking.

Institute of Astronomy and Astrophysics, Université Libre de Bruxelles, Belgium



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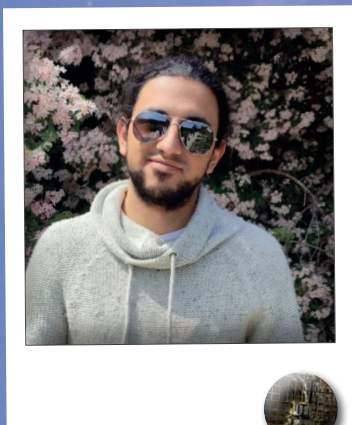




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Sebastian Alvarado



Currently, I just finished my Master 2 in Theoretical Physics at the ENS-Paris and I am working as an intern in the Jefferson Lab group at IJCLab, Orsay, France, prior to join the team as PhD student this October. The thesis relies on the experimental data provided by the CLAS12 detector at Jefferson lab, in which an electron beam is directed towards a hydrogen (and deuterium) target, aiming to study the proton and neutron structure. In particular, it will be extracted and analyzed the Deeply Virtual Compton Scattering process, whose observables will be used to study the proton and neutron Generalized Parton Distributions.

During my free time I like to cook, go out with my friends, play some videogames and watch a movie.

IJCLab, Orsay, France

Students

Committee

Speakers

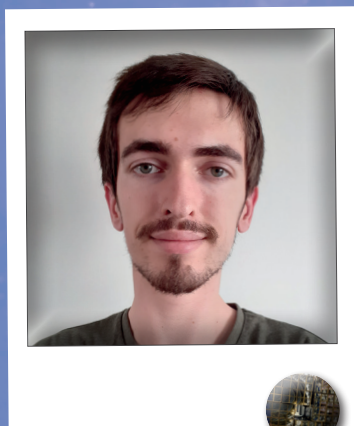
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Antoine Barrière

I'm finishing my first year of PhD in nuclear structure at the GANIL, in Caen. I have been working until recently on old data from GSI (Germany) and will analyze the data taken this year during the experiment performed in the same facility, using new NeuLAND and CALIFA detectors (R3B collaboration setup). My research topic concerns shell evolution and neutron correlations near the neutron drip line, focusing in particular on the study of the structure of light nuclei.

Beside work, I spend my time booking, playing music and video games.

GANIL, Caen, France



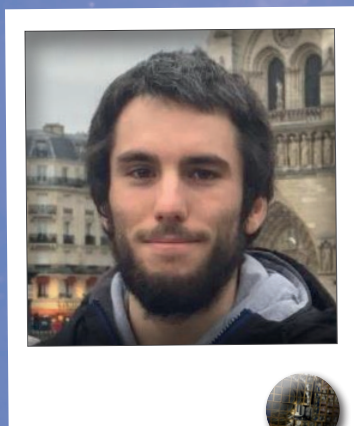
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Yann Beaujeault-Taudière

I am a postdoc working at IJCLab and LLR, on theoretical methods for quantum computing and quantum machine learning. We have in mind applications to the description of strongly coupled quantum many-body systems, as well as particle identification and shower reconstruction in experiments.

Prior to this, I did a PhD on the theoretical description of collective modes (in particular, giant resonances) in atomic nuclei at zero and finite temperature, where I used effective interactions related to QCD.

IJCLab, Orsay, France

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Speakers

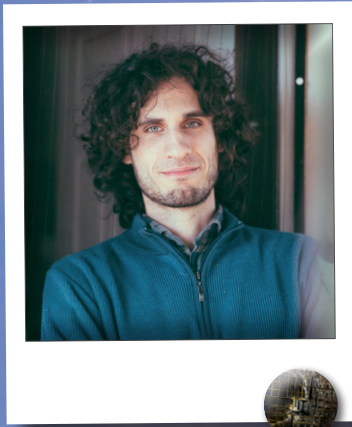
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Alessandro Camilletti

I'm a second year PhD student at the University of Trento. I'm working in binary neutron star merger with the use of current state-of-the-art numerical simulations. Numerical Relativity is a major tool to investigate astrophysical phenomena that we are now observing with gravitational wave detectors and electromagnetic observatories. The focus of one of my PhD projects is to study the effects that the hadron to quark-gluon plasma phase transition could imprint on the observables, e.g. on the gravitational wave signal and on the kilonova lightcurves. This could help us to shed some light on the high density part of the nuclear phase diagram.

Apart from my research, I love mountains, climbing, trekking and sports in general.

University of Trento, Italy

Students
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Speakers

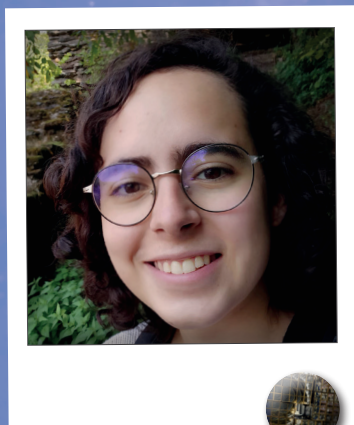
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Raïssa Costa Barroso

I recently finished my master's in nuclear/astroparticle physics/cosmology. During my master's I got interested in a few different research topics ranging from theoretical condensed matter to high energy astrophysics. I eventually chose to focus on gravitational wave physics in my final semester. I will start a PhD thesis this year at the Laboratoire de Physique Corpusculaire de Caen where I will work on the development of data analysis techniques in preparation for the LISA experiment, the first space based gravitational wave observatory.

Besides physics and science in general I am also quite passionate about languages and martial arts. I have been practising karate for a fairly long time and now I just started kendo. I also enjoy going out in bike rides.

LPC, Caen, France

Students

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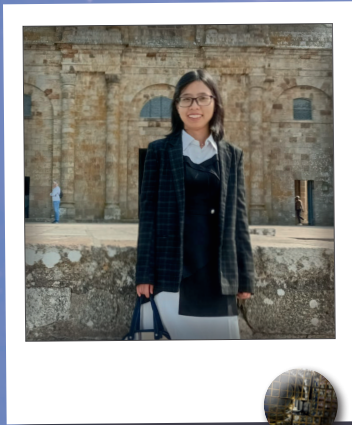
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Hoa Dinh Thi

I am going to be a third-year PhD student from Université de Caen Normandie, and I am working with the Theory group at LPC Caen (Laboratoire de physique corpusculaire de Caen), France. My PhD thesis focuses on the inner crust of neutron stars. Specifically, I am studying the properties of a particular region in the inner crust, called the “pasta phases”. As the name suggests, this pasta layer consists of nuclei of various shapes, resembling the shapes of Italian pasta, such as spaghetti, lasagna, bucatini, etc. Currently, I am extending my work to temperatures of a few MeV, in which the coexistence of different nuclear species is treated in a statistical approach.

Besides physics, I love immersing myself in nature, travelling, and cooking.

LPC, Caen, France

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Speakers

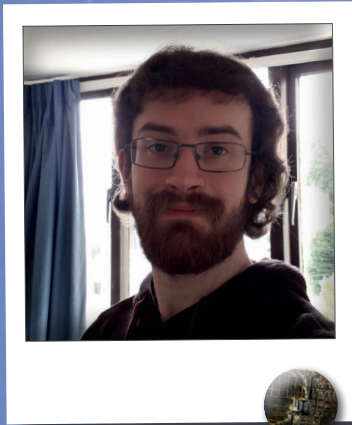
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Neill Duncan

I'm a third year PhD student at the University of Bath. My work is centred on resonant shattering flares (RSFs), short flares of gamma-rays produced due to tidal resonance between the neutron star crust-core interface asteroseismic mode and the star's binary partner during binary inspiral. The coincident timing of a RSF and a gravitational wave signal would allow us to measure the interface mode's frequency, and in my project we have found that this frequency is strongly dependant on the properties of nuclear matter that determine the structure of the neutron star crust. We are currently investigating the constraints that could be placed on the nuclear symmetry energy using a RSF detection. As most neutron star observables only depend on the inner core, the fact that RSFs depend on the properties of the crust makes them particularly interesting.

In my free time I like to read, play video games, and learn about history.

University of Bath, United Kingdom

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Speakers

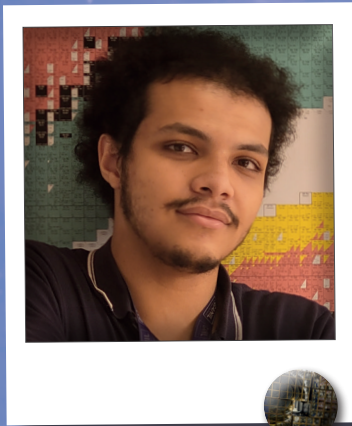
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Tom Génard

I am a PhD candidate at GANIL, currently at the end of my 2nd year. I am working on the study of the equation of state of nuclear matter, and in particular its behavior when nuclear matter is subjected to exotic densities. The probes I am using are light clusters, produced in a low-density area of exchange between the projectile and the target during the collision, called the midvelocity region. The data I am using for this study comes from various INDRA experiments conducted at GSI and at GANIL, from 32 to 150 AMeV.

Other than physics, I enjoy playing video games, and modding them. I also like history, geography, and space.

GANIL, Caen, France

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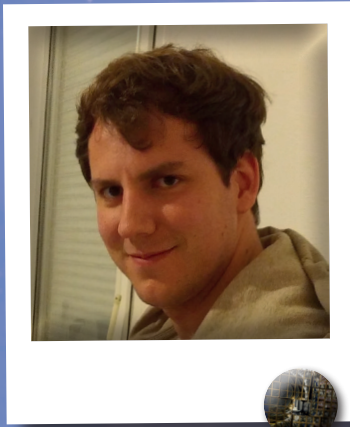
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Julien Lemarié

In 2019, an experiment has been done in GANIL by the INDRA-FAZIA collaboration involving two nickel isotopes, ^{58}Ni and ^{64}Ni , in order to study the isospin diffusion during heavy ions collisions.

Near the end of my PhD, I have been working for 3 years on the resulting data of this experiment at GANIL. From calibration of detectors to extraction of observables, with simulation analysis and the renew of the electronics of the INDRA multi-detector, I have seen every parts of experimental physics.

Beside my thesis, I travel with my bike and my euphonium on the back to play music wherever I can.

GANIL, Caen, France

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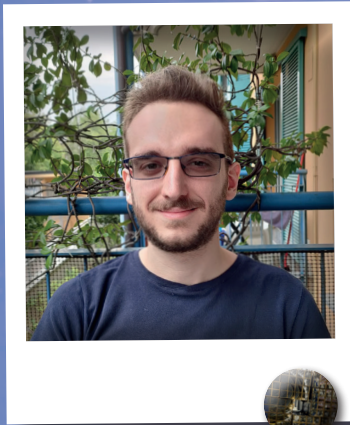
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Fabio Magistrelli

I'm about to finish my master's degree in Theoretical Physics at the University of Milan. I focused my master's studies on compact objects, balancing my curriculum between programming and more theoretical courses on fundamental physics and astrophysics. I'm finalizing my thesis about the hydrodynamic behaviour of superfluids in a non-homogeneous background potential. The aim is to relate the mesoscopic vortex dynamics with the small-scale Gross-Pitaevskii description. I'm also simulating the Gross-Pitaevskii equation to investigate the vortex unpinning processes. This is relevant to the internal dynamics of the inner crust of neutron stars and has implications for the observed timing irregularities of pulsars.

In my spare time, I like hiking, playing table tennis and board games and playing trumpet in an amateur wind orchestra.

Università degli Studi di Milano, Italy

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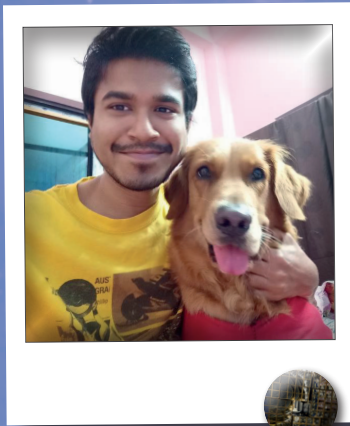
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September 4 to 9, 2022



Chiranjib Mondal

I am a post-doctoral fellow in the Theory group in Laboratoire de Physique Corpusculaire, Caen, France. Our group has affiliated to the LIGO-Virgo collaboration very recently along with the theory group of LUTH, Meudon, France. Our primary focus lies on looking at the dense matter equation of state from the Nuclear Physics perspective.

I like the silence of mountains and the noise of football stadiums.

LPC, Caen, France

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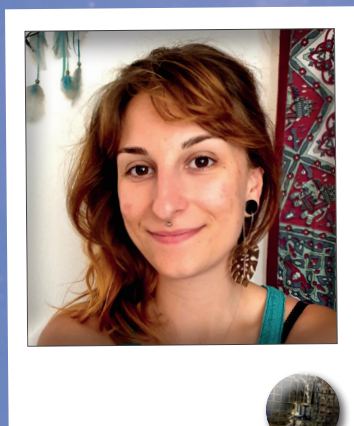
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Emeline Oliveira

I just finished my Master 2 in Subatomic Physics and Astroparticles at the University of Strasbourg, where I did an internship in the team Du Noyau Aux Etoiles (DNAE) of the Institut Pluridisciplinaire Hubert Curien (IPHC) which study the $^{12}\text{C} + ^{12}\text{C}$ fusion reaction at energies of astrophysical interest.

I will start a PhD in October at the Laboratoire de Physique Corpusculaire (LPC) in Caen. This thesis will focus on the study of exotic nuclei structure, in particular neutron-rich isotopes of beryllium and boron.

In my free time I like to cook, go out with my friends and garden.

LPC, Caen, France

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Committee
Speakers

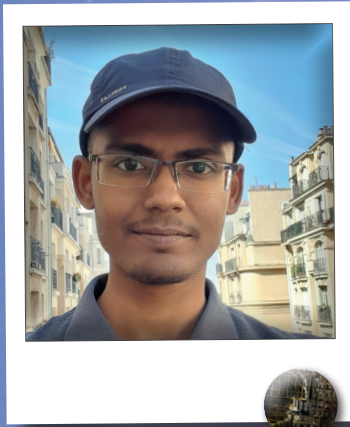
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Saint Pierre d'Oléron, France
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Viswanathan Palaniappan

I am currently working at the IJCLab, Orsay. I am actually a PhD student at the Indian Institute of Technology - Madras, India. As part of collaboration work, I have come to France. My focus is on pairing in neutron matter at densities relevant to the inner crust of neutron stars.

Besides work, I watch movies and shows, sometimes read, and spend time with my friends.

IJCLab, Orsay, France



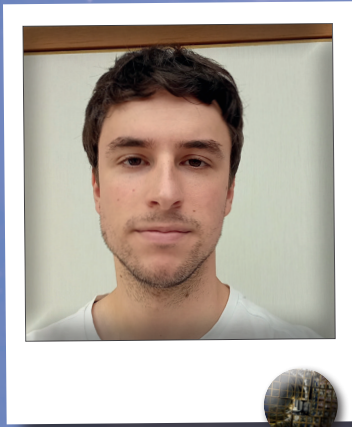
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Loïc Perot

I'm a third year PhD student at Université Libre de Bruxelles within the Institute of Astronomy and Astrophysics, under the supervision of Prof. Nicolas Chamel. I'm working on tidal effects in compact binary systems, as neutron stars or white dwarfs. My research aims to calculate the tidal deformability parameters of such systems using realistic equations of state of dense matter. Since these parameters are measurable through gravitational wave observations, studying them allows us to put some constraints on the dense matter properties in conditions that are non-accessible in laboratories.

Beside my research, I'm keen on sport: I'm swimming and playing basketball.

Institute of Astronomy and Astrophysics, Université Libre de Bruxelles, Belgium



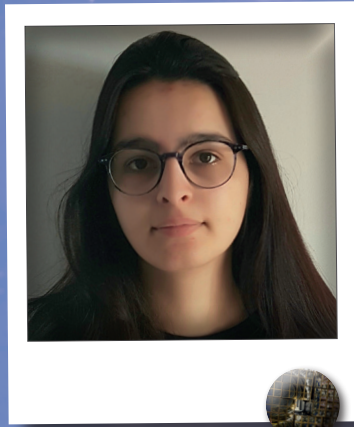
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Noémie Pilleux

I am finishing my first year of PhD at IJCLab, Orsay, France. I am working in hadronic physics, both with data analysis and hardware. I am working with Jefferson Lab on an experiment which just started running, with the aim of studying the neutron structure. We are scattering polarized electrons off a polarized neutron target, in order to extract observables that will be used to study Generalized Parton Distributions. I am also working to build a prototype for the electromagnetic calorimeter of the EIC. We are developing a detector that uses scintillating crystals and their readout with SiPMs.

I spend a lot of time in an engraving and printmaking workshop. I love to learn new things : I paint, play music, cook... I am part of two student associations and enjoy organising social events.

IJCLab, Orsay, France



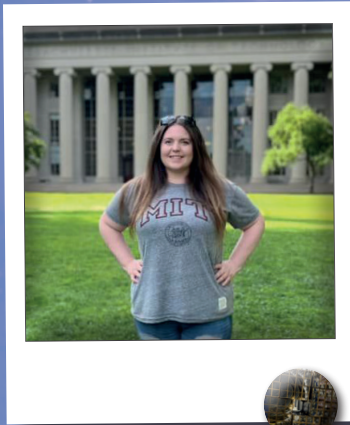
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Rebecca Preston

I am a 2nd year master's student at Texas A&M University - Commerce and my research is in theoretical computational nuclear astrophysics. I work with Dr. William Newton on constraining values of symmetry energy and crust properties of neutron stars using neutron skin data from the PREX and CREX experiments along with astrophysical data. I love traveling, art and history museums, and trying new things.

Texas A&M University - Commerce, USA



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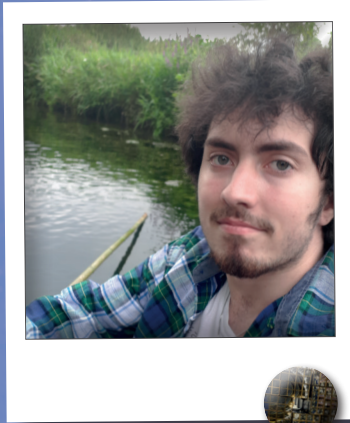




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Saint Pierre d'Oléron, France
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Alex Rebillard-Soulié



I am starting my 2nd year of PhD in nuclear physics at the LPC (laboratoire de physique corpusculaire) in Caen, France. My work focuses on understanding the properties of clusters in low density nuclear matter. Indeed, the abundance of light clusters in nuclear matter can have effects in some astrophysical objects such as neutron stars and core-collapse supernovae. On the experimental side, we have conducted this year a heavy ion experiment in GANIL. The idea is to measure the concentrations of light clusters formed in an excited nuclear matter system. The clusters are detected and identified by the INDRA-FAZIA multi-detector.

Beside my work, I enjoy visiting new places, playing video games, making music and hanging out with friends.

LPC, Caen, France

Students
Committee
Speakers

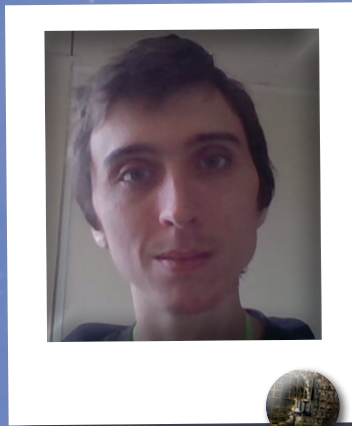
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Antoine Roux

I am starting my second year as a PhD student in theoretical/numerical nuclear physics at CEA/DAM.

I am studying beyond mean field resolutions of the N -body nuclear problem. My project consist to combine one of these technique (PGCM) with the eigenvector continuation method in order to do very large scale PGCM emulations and sensitivity analysis of spectroscopic data.

Beside the PhD, I enjoy hiking and climbing.

CEA, Bruyère le châtel, France



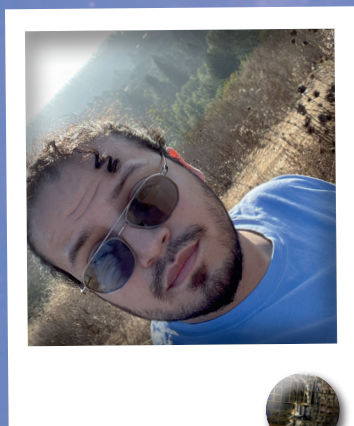
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Benjamin Santoyo

I am entering the second year of my Master's program at Texas A&M University - Commerce. During my undergrad I did research in both Physics and Chemistry, and obtained a degree in both fields. I am currently working with Dr. Carlos Bertulani on applying machine learning methods to different physical problems.

Outside of University work I am a pharmacy technician and hobbyist programmer.

Texas A&M University - Commerce, USA

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Speakers

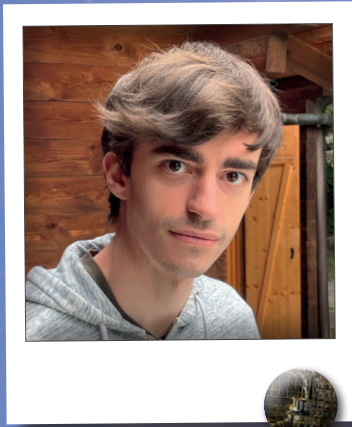
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Alberto Scalesi

I am a 2nd year PhD student in theoretical nuclear physics at CEA (Paris-Saclay). The goal of my PhD project consists in developing a theory of deformed Gorkov Self-Consistent Green's functions and in implementing it in a numerical code to compute bulk properties of doubly open-shell nuclei. The code will be based on the expansion of the Hamiltonian on a natural basis, which allows a fast convergence of the observables respect to the size of the Hilbert space considered for the calculation.

In the spare time I like to play tennis and chess.

CEA, Saclay, France

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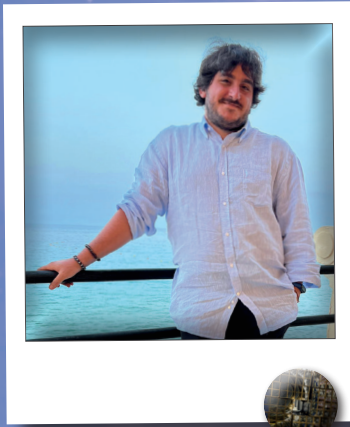
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Luigi Scurto

I am a first (almost second) year PhD student at the University of Coimbra in Portugal, but I will spend almost half of the PhD at the LPC of Caen. My research focuses on the Equation of State of Neutron Stars and in particular on how the presence of an intense magnetic field affects the interior composition of this kind of objects. At the moment we are studying how the field affects the properties of the inner crust in the presence of heavy clusters (pasta phases).

During my master degree I also worked in the field of Corpuscular Theories of Gravity.

University of Coimbra, Portugal



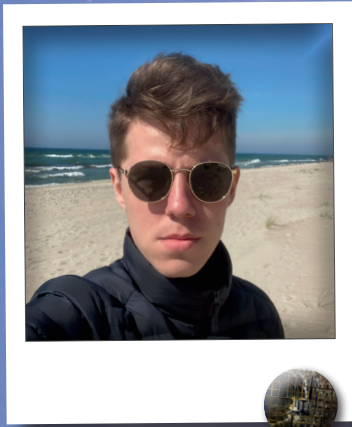
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Nikolai Shchechilin

I am a first-year PhD student at the Institute of Astronomy and Astrophysics of the Université Libre de Bruxelles. There I am cooking nuclear pasta in the extreme conditions of the neutron stars environment. Naturally, I am really interested in the various aspects of nuclear astrophysics and its intriguing application.

Beside science, I am keen on sports and love to spend time on movies and books.

Institute of Astronomy and Astrophysics, Université Libre de Bruxelles, Belgium



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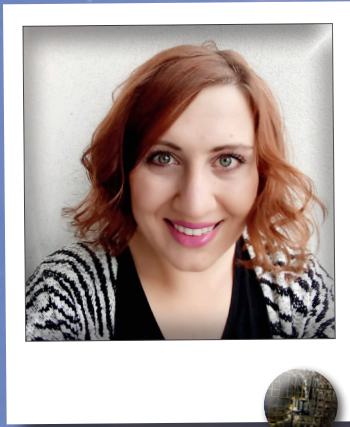




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Magdalena Sieniawska



I am a postdoctoral researcher at the Université Catholique de Louvain (Belgium), in the group led by prof. Giacomo Bruno. Since my PhD studies I am a part of the LIGO-Virgo-KAGRA Collaboration, working on the different aspects of the gravitational wave emission from compact objects. I finished my PhD studies, supervised by Dr Michał Bejger, at the Nicolaus Copernicus Astronomical Centre, Polish Academy of Sciences (Warsaw, Poland). During that period, I have been exploring the mysteries of the neutron stars. I have experience in modelling parametric equation of state of the dense matter (neutron stars described as a sequence of piecewise connected polytropes and hybrid stars with the phase transition between hadronic and quark matter); constraining equation of state from electromagnetic and gravitational-wave observations; data analysis of the continuous gravitational waves from isolated, rotating, non-axisymmetric neutron stars.

In my free time, I enjoy reading, drawing and cooking.

Université Catholique de Louvain, Belgium

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September 4 to 9, 2022

Gianluca Stellan



I am a postdoctoral researcher at the Irfu/DPhN/LENA laboratory of the CEA Paris-Saclay in theoretical nuclear physics. My project focuses on the extension of the *ab-initio* self-consistent Gorkov-Green's function approach (SCGGF) for even-even semi-magic nuclei to the polarization propagator. From the Lehmann's representation of the latter, in fact, the energy of the excited states of the A -body system can be extracted, together with transition matrix elements between the ground and excited states of the Hamiltonian. With the same position I have been affiliated at Helmholtz Institut für Strahlen- und Kernphysik (HISKP) of the University of Bonn, where I concentrated on the electromagnetic properties of α -conjugate nuclei. In the same German institution I have carried out my doctoral studies, in which P -wave fermion-fermion scattering with QED and structure properties of α -conjugate nuclei have been investigated in a lattice framework. This last class of nuclei has been subject of my M.Sc. thesis at the University of Padova, where I completed also my undergraduate studies.

Outside the laboratory, my spare-time activities encompass hiking, visiting places of interest, reading, drawing and, with less frequency, doing sport activity.

CEA Paris-Saclay, France

Students

Committee

Speakers

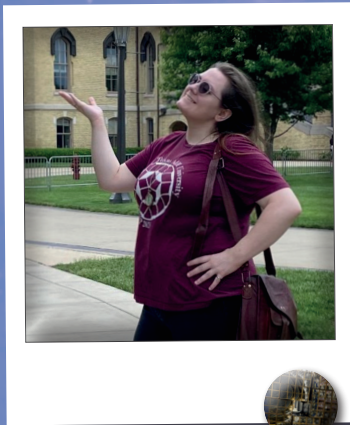
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NUCLEAR MATTER UNDER PRESSURE

Saint Pierre d'Oléron, France
September 4 to 9, 2022



Amber Stinson

I am entering my second year as a Master's student at Texas A&M University in Commerce. After obtaining my Bachelor's in Physics with an emphasis in Astrophysics from the same institution, I decided to continue my research here into using quantum simulations to model nuclear pasta within a neutron star and calculating the shear modulus of the exotic material. Currently, for my master's thesis, my advisor, Dr. William Newton, and I are looking into using a bayesian analysis of multiple generated EoSs from CHANDRA data that have been thermally evolved to generate a cooling curve in order to narrow in on the true EoS of a neutron star.

When I'm not waist deep in my research, I love reading, sewing, playing games and having a good laugh!

Texas A&M University - Commerce, USA

Students
Committee
Speakers

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Pu-Kai Wang

I am third year PhD at IJCLab (Irène Joliot-Curie Lab), Orsay. I am working on the hardware tests and simulation of the future EIC (Electron-Ion Collider). I like the hardware and coding things. More specifically, my work is dedicated to the sub-detectors, end-cap electromagnetic calorimeter and roman pots. It includes the scintillator qualification measurements, silicon sensor performance test and also the simulation of performance.

In my spare time, I like to walk and cook.

IJCLab, Orsay, France



Students
Committee
Speakers

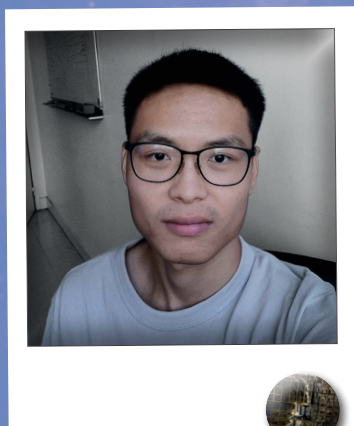
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September 4 to 9, 2022



Jing Zhang

I am a PhD student of the theory pole at IJCLab, Orsay. My second year here starts soon in October. My topic is about quantum computation and its potential application in the domain of nuclear physics. Right now I focus on treating nuclear pairing interaction with this novel technique.

In my spare time, I cook a lot, sometimes read and also like to do sports while enjoying the view of nature.

IJCLab, Orsay, France



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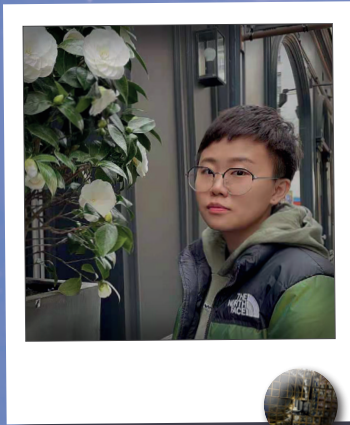




NUCLEAR MATTER UNDER PRESSURE

Saint Pierre d'Oléron, France
September 4 to 9, 2022

Yuwei Zhu



I am a Post Doctoral researcher working in the PHE - Jlab/EIC Group at the Laboratoire de Physique des 2 Infinis Irène Joliot-Curie (IJCLab), Orsay. My research topic is focused on the experimental developments and simulation of the Electron-Endcap Electromagnetic Calorimeter (EEEMCal) in the future Electron-Ion Collider (EIC) at Brookhaven National Laboratory (BNL, U.S.A.). The EEEMCal is a high-resolution ECal designed for precision measurements of the energy of scattered electrons and final-state photons in the electron-going region. My current work consists of the EEEMCal performance simulation and scintillator performance test. Before my Post Doctoral position, I did my Ph.D. in the group of XENON at SUBATECH laboratory, Nantes, France. My thesis work focuses on the Studies and Optimization of Scintillation Light Measurements for the 3-Gamma imaging XEMIS2 Liquid Xenon Compton Camera.

Apart from Physics, I like music and traveling around the world. I also like playing badminton and cooking.

IJCLab, Orsay, France

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NUCLEAR MATTER UNDER PRESSURE

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Geoffrey Zietek

I am a second year PhD student in theoretical nuclear physics at CEA/DAM. My work focuses on the nuclear interaction, which is responsible for the binding of protons and neutrons into the atomic nucleus. More precisely, I work on a generalization of the Gogny interaction, a phenomenological and effective two-body interaction, established by Daniel Gogny (former CEA/DAM researcher) in the late 60s. This generalization consists in extending its analytical form to finite-range terms (a fundamental characteristic of the nuclear interaction) and in including a tensor term, absent in the previous formulations

The physics brought by the addition of a tensor force and the fully finite-range nature of this new interaction should improve the theoretical predictions of many quantities and observables (binding energies, single-particle energies, pairing gaps, transition probabilities, magnetic moments, giant resonances, heights of the second fission barriers in standard actinides, excitation energies of the 2^+ states of some even-even nuclei, etc.), while avoiding divergences in self-consistent beyond mean-field calculations.

In my free time (which is rather short during a PhD), I like running in the nature, watching old movies and partying.

CEA/DAM, Bruyères-le-Châtel, France



Students

Committee

Speakers

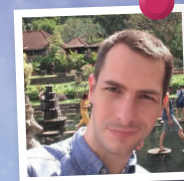
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NUCLEAR MATTER UNDER PRESSURE

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Nicolas Chamel

I am a senior research associate and professor at Université Libre de Bruxelles in Belgium. My research activities aim at exploring the properties of matter under the extreme conditions prevailing in the interior of compact stars, with the main focus on neutron stars. I have been leading research on the equation of the state of dense matter, nuclear superfluidity and pulsar-frequency glitches, nuclear and electroweak processes in dense stellar environments and the thermal emission from accreting neutron stars and, more recently, tidal deformations in inspiraling neutron stars and gravitational-wave emission.

Institute of Astronomy and Astrophysics, Université Libre de Bruxelles,
Belgium

Students

Committee

Speakers

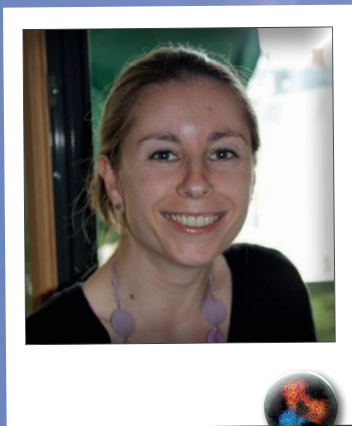
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NUCLEAR MATTER UNDER PRESSURE

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September 4 to 9, 2022



Aurélie Gontier

I am the administrative head of the Laboratoire de Physique Corpusculaire de Caen. I am in charge of the budget and human resources of the laboratory.

Since October 2016, I am the administrative head of the Joliot-Curie School.

LPC Caen, France

Students

Committee

Speakers

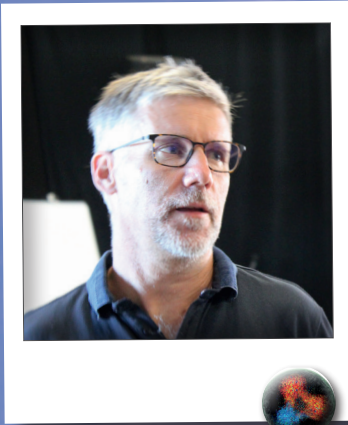
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NUCLEAR MATTER UNDER PRESSURE

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September 4 to 9, 2022



Stéphane Grévy

I'm working in the field of nuclear structure and I have a particular interest for the evolution of the shell structure and the associated magic numbers in exotic nuclei. As an experimentalist, I proposed and performed several experiments at GANIL, ISOLDE and Jyvaskula to study the $N=20$, $N=28$ and $N=50$ shell closures and in order to improve our understanding of the underlying phenomena, my approach has been to combine several experimental techniques (beta decay, in gamma spectroscopy, coulomb excitation, mass measurements...). I'm also involved in experimental developments, in particular in the framework of the DESIR/SPIRAL2 project and I have strongly participated to the development of the PIPERADE setup that consist in a double Penning trap system.

LP2i-Bordeaux, France

Students

Committee

Speakers

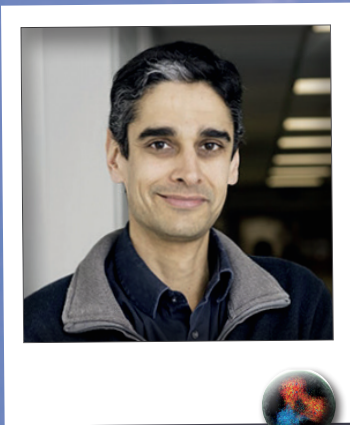
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NUCLEAR MATTER UNDER PRESSURE

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September 4 to 9, 2022



Elias Khan

Theoretical and experimental approaches in nuclear structure : excitations in exotic nuclei, astrophysical applications, cluster states, etc...

IPN, Orsay, France



Students

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Speakers

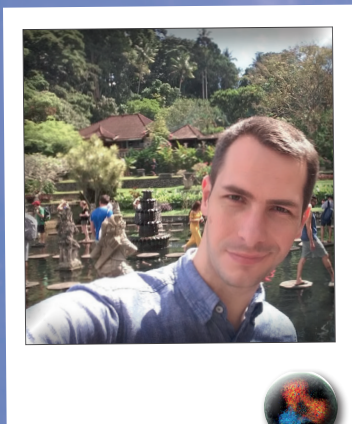
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NUCLEAR MATTER UNDER PRESSURE

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Cédric Lorcé

I work in the field of hadronic physics, and more precisely on the internal structure of nucleons in terms of quarks and gluons. As a theorist, I pay attention not to mess up with the actual machines where particle scatterings occur, but I try to identify the physical information one can extract from experimental data. Recently, I focused on the energy-momentum tensor which is the key object allowing us to address the questions of the origin of the nucleon mass, spin and pressure. (Higgs mechanism is nice but accounts only for a small fraction of the nucleon mass...)

Ecole Polytechnique, Palaiseau, France

Students

Committee

Speakers

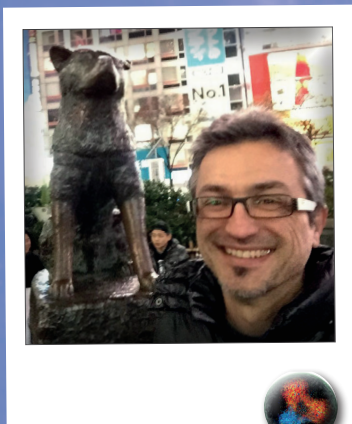
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NUCLEAR MATTER UNDER PRESSURE

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Miguel Marques

My group explores the limits of neutron binding in nuclei and the potential new phenomena that may arise. We started this research at GANIL, with experiments probing the neutron dripline and beyond up to Beryllium, and a few years ago we moved to RIKEN in order to extend our search: to the highest masses available in the world, from Boron to Fluorine; and to the most exotic systems, like neutron clusters and multineutron emitters.

Staff researcher
Head of Joliot-Curie School
LPC Caen, France

Students

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Speakers

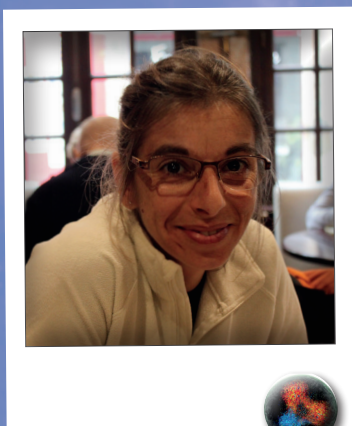
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September 4 to 9, 2022



Soizic Milhoud

I am the communication assistant of the CNRS office in Normandy. I organize events to enhance and popularize science for general public and especially among youth and I am responsible of the internal communication for the employees.

I also help the laboratories of Normandy to communicate on their scientific projects, that is why I joined the organization's committee to help for the Joliot-Curie school.

CNRS Normandy, Caen, France

Students

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Speakers

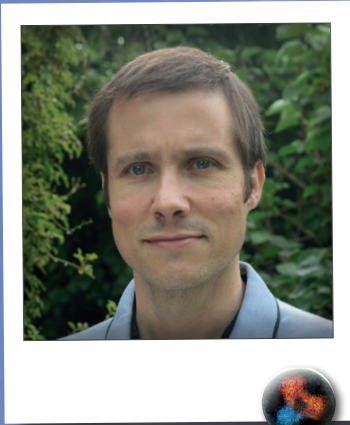
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Carlos Muñoz Camacho

My research interest is non-perturbative QCD and the study of nucleon structure in particular. I carry out lepton scattering experiments using the high energy electron beam of Jefferson Lab (USA) in order to study the position and momentum correlations of quarks and gluons inside nucleons.

IPN Orsay, Orsay, France



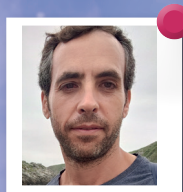
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Nicole d'Hose

I am an experimental physicist, working on the study of nucleon structure. I used mainly lepton beams to probe the nucleon. I have been working successively at different accelerators with the Saclay Linac, with the Mainz Microtron, with the Continuous Electron Beam Accelerator Facility at JLab at Newport News and since these last 15 years with the muon beam at CERN in the COMPASS Collaboration. My goal is to better understand the proton, the most abundant particle in the visible universe, but still really complex and very fascinating.

CEA, Saclay, France



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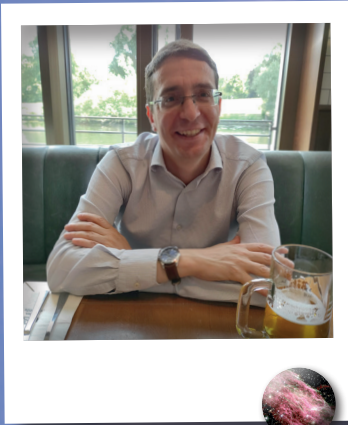




NUCLEAR MATTER UNDER PRESSURE

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Bruno Giacomazzo



I am an associate professor of the Physics Department of the University of Milano-Bicocca (Milan, Italy). I got my PhD in 2006 in SISSA (Trieste, Italy) and I spent 7 years abroad as a postdoc (3 years in Germany and 4 years in the USA) before coming back to Italy in 2013. I work on numerical relativity simulations of compact object binaries (neutron stars in particular). I am the main developer of the codes WhiskyMHD and Spritz and I use them to study the gravitational wave and electromagnetic emission that is produced by binary mergers. I am a member of the LIGO-Virgo-KAGRA collaboration, of the LISA consortium, and of the Einstein Telescope collaboration.

Besides work, I enjoy scifi/horror movies (big fan of Stranger Things), open-world games, and going out for drinks with friends and colleagues (the Spritz code is named after a very popular Italian drink).

Physics Department of the University of Milano-Bicocca, Milan, Italy

Students
Committee
Speakers

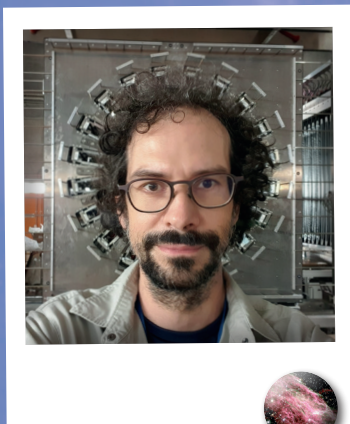
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NUCLEAR MATTER UNDER PRESSURE

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Julien Gibelin

Assistant professor at the University of Caen, Normandie (France) I am an experimental physicist, working on the study of nuclear structure. If now my studies focus more on the structure of light nuclei using direct reactions with secondary beams, I worked during my PhD between France and Japan, and at the beginning of my career, on the measurement of giant resonances in exotic nuclei. In particular the properties of the so-called compression modes (GMR, ISSDR) give an in-sight of the behaviour of nuclear matter under pressure.

LPC Caen, France

Students
Committee
Speakers

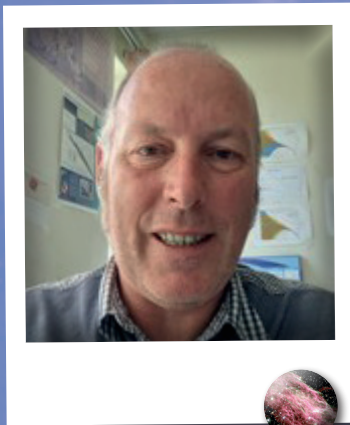
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Olivier Lopez

I am a french experimental nuclear physicist, working on heavy-ions induced reactions around the Fermi energy domain. I have performed number of experiments at GANIL, Caen, France and at GSI, Darmstadt, Germany, LNS Catania and LNL Legnaro, Italy. I have passed my PHD in 1993 and I got a permanent CNRS position the same year at LPC Caen. At that time, I joined the INDRA collaboration. My main subject of research was the characterization of multifragmentation. During the last decade, I joined the international FAZIA collaboration, and contributed to the third generation of multi-detectors with digital electronics. My main activities are nowadays the study of the nuclear Equation of State (EoS) and its link with dense macroscopic objects such as neutrons stars. I have been spoke person of the INDRA collaboration (2014-2020), head of the team « Nuclear Dynamics and Thermodynamics ». I am now deputy director of LPC Caen since September 2022.

LPC Caen, France

Students
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Speakers

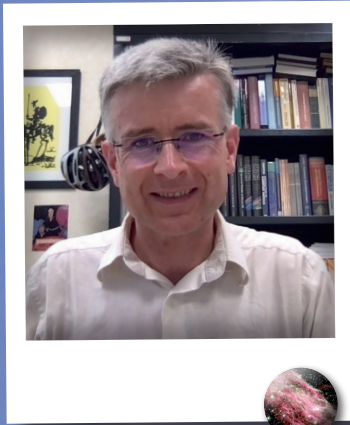
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NUCLEAR MATTER UNDER PRESSURE

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Hervé Moutarde

I am a theoretical nuclear physicist at CEA Saclay with a specific interest on the three-dimensional structure of the nucleon in terms of quarks and gluons. The guideline of my activities over the years has been the theoretical interpretation of experimental data in various fields. This has driven me towards teams developing computing software, solving inverse problems, doing statistical data analysis and investigating the nonperturbative regime of the strong interaction. I also keep a close contact with my experimental colleagues, try to make the best from the data they collect, or help them assessing the potential of future facilities.

I have been continuously teaching since the beginning of my PhD. In recent years I have been developing an interest in the data analysis of gravitational waves. I am pleased to participate to Ecole Joliot Curie for the second time.

Nucleon Structure Laboratory, Gif-sur-Yvette, France



Students
Committee
Speakers

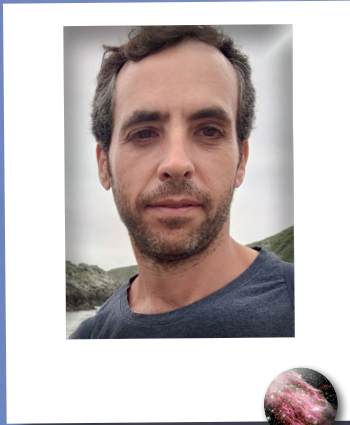
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September 4 to 9, 2022



Xavier Roca Maza

I am an Associate Professor at the University of Milan. I got my PhD at the University of Barcelona in 2010. My thesis was devoted to the study of isospin asymmetry in exotic nuclei.

After two PostDoc experiences (2010-2013) I was appointed as Assistant Professor at the University of Milan. My research is mainly focused on the nuclear many-body problem based on Density Functional Theory. The study of symmetries in the nuclear context and applications to neutron stars. Tight collaborations with experimentalists have been also part of my common research in Nuclear Physics. I teach fundamental of physics, electromagnetism and a data modelling lab.

Università degli Studi di Milano, Italy

Students
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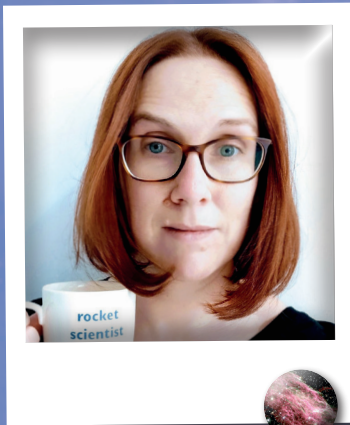
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Anna Watts

I am a Professor of Astrophysics at the University of Amsterdam. My group studies neutron stars, in particular the dense nuclear matter in their cores and the violent dynamical events such as starquakes and magnetic or thermonuclear explosions that they undergo on a regular basis.

Space telescopes are a vital part of our research: I am part of the NICER (Neutron Star Interior Composition ExploreR) team and involved in the development of the next generation of X-ray telescopes.

University of Amsterdam, Netherlands



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