







#### Michael Bacak

I'm in the middle of my PhD studies focused on measuring neutron induced reaction cross sections at CERN's neutron Time-of-Flight facility n\_TOF. In particular I'm studying the 233U neutron capture reaction. Knowing this cross section with low uncertainty is crucial to improve design and simulations of future Gen IV nuclear reactor systems using the Th/U fuel cycle guaranteeing to operate them safely and efficiently. The challenge of this measurement and its data analysis lies in the corresponding fission reaction which is 10 times more probable than the capture reaction. At the end of the day, nothing's better than enjoying a glass of french wine with swiss cheese in a hammock high up in the alps after a good climb.

CERN, Geneva, Switzerland













#### Jaime Benito Garcia

I have been a PhD student in the Complutense University of Madrid, Spain, since 2015. The main goal of my PhD is to get a better understanding about the nuclear structure of Sn isotopes around doubly magic 132Sn nuclei. For this porpouse a experiment was performed in the ISOLDE facility at CERN were the Sn isotopes were studied through the beta decay of In isotopes using gamma and fast-timing spectroscopy.

Universidad Complutense, Madrid, Spain

Students
Committee
Speakers











#### Said Boudhaim

I am Phd-student at the Laboratory of Condensed matter Physics, Physics Department, Hassan II-Casablanca University, Casablanca, Morocco .

My subjet work is focused on the study of the Matter distribution studies of exotic nuclei in the vicinity of closed shells N=20 and N=50.

University Hassan II, Casablanca, Morocco

Students
Committee
Speakers









#### **Mohamed Lhadi Bouhssa**

I am a Ph.D. student. I do my research at the Laboratory of condensed matter physics, team of work subatomic physics, University Hassan II, Faculty of Sciences Ben M'sik of Casablanca, Morocco. My topic of research is «optic studies for nuclear structure experiments with GEANT4.

University Hassan II, Casablanca, Morocco











#### **Lisa Carpenter**

I am a PhD student at Michigan State University working on the Active Target Time Projection Chamber (AT-TPC) at the National Superconducting Cyclotron Laboratory (NSCL). My overall research goal concerns cluster structure in 14C. My thesis experiment was resonant scattering of 10Be on alpha in order to discern the cluster structure of 14C. I am first looking for low-lying resonances that correspond to a proposed rotational band. My second goal is looking at the three-body decay of higher-lying states of 14C to see if the decay proceeds «sequentially» (14C -> 10Be+alpha -> alpha+alpha+6He) or «democratically» (14C->alpha+alpha+6He).

Michigan State University, East Lansing, USA

Students
Committee
Speakers











#### **Bartolomeo De Canditiis**

I'm a PhD student at the University of Strasbourg working with the AGATA group at IPHC institute. AGATA (Advanced GAmma Tracking Array) is an array of segmented HPGe gamma rays detectors designed and developed in the framework of an European collaboration. My PhD actually focuses on Pulse Shape Analysis techniques for the characterization of AGATA detectors.

My non-work interests include playing and listening music, cinema and photography.

University of Strasbourg - IPHC, Strasbourg, France

Students Committee Speakers









I started my PhD on October 2016 for a French company working on radiation protection and nuclear instrumentation. We aim to develop a new way to calibrate radiation survey meters using an electron accelerator producing braking rays rather than a radioactive source. This method is more accurate because it generates a continuous spectra, which is more representative of the real conditions of use. My PhD objectives are wide and various: simulations of the accelerator beamline for the radiation protection and the metrology, development of a ionisation chamber to monitor the accelerator beamline, development of a human-machine interface to control the accelerator, search other applications for the accelerator, etc.

ATRON Metrology and LPC, Caen, France

Students Committee Speakers











#### **Etienne Dupont**

Trying to understand the shapes of nuclei brings out several mysteries. Among them, I have chosen to study the polonium 212 isotope, the only heavy nucleus in which an alpha structure has been established in several excited levels.

I am particularly interested in the characterization of the transfer reaction leading to the production of 212Po, and especially in determining the optimal conditions to populate its alpha-structure levels.

I will present the on-going analysis of an experiment done with the Germanium array AGATA, and a future experiment which could take place next Spring in Japan.

CSNSM, Orsay, France

Students Committee Speakers











#### **Meriem Fiak**

I'm currently a phd student at Hassan II University in Morocco. My thesis subject aims to estimate the photoneutrons dose around medical linear accelerators in radiation therapy using Monte Carlo method.

The photoneutrons occur especially in the head of the linac (when the energy threshold is greater than 10 MeV) and increase the tolal dose delivred to the patients which may increase the risk of seconds cancers, hence the need to determine the dose due to this component.

University Hassan II, Casablanca, Morocco

Students
Committee
Speakers











#### **Daniela Foligno**

I'm at my first year of Ph.D. at CEA Cadarache on delayed neutron data evaluation with associated uncertainties and covariances. The data I'm working on is essential to "measure" the reactivity in a reactor and the currently large uncertainties lead to a great conservatism in both the design and the operation phase of a reactor. The goal of my Ph.D. is therefore to improve the knowledge on DN data, give a physical meaning to the DN groups, reduce the uncertainties and derive the correlations among the groups.

An experiment is also planned in the next future to verify the exactness of my calculations and to reduce the uncertainties.

Anyway, I'm Italian and I like cooking, eating, doing sport, going out with some friends and watching TV series.

CEA Cadarache, Saint-Paul-lez-Durance, France

Students Committee Speakers









#### Valérian Girard-Alcindor

I'm starting a PhD in Nuclear Astrophysics between IPN Orsay and Ganil.

During my thesis I'll study experimentally resonant elastic scattering, and more particularly the unbound nucleus of Fluorine 15 with Iulian Stefan and François De Oliveira.

Apart from physics, I play guitar and piano and i'm really interested in music in general.

IPN Orsay et GANIL Caen, France

Students
Committee
Speakers









#### **Thomas Goigoux**

I am in my last PhD year. I work on the study of proton-rich nuclei near the proton drip line and their exotic decays: two-proton radioactivity and beta-delayed proton emission. I analysed an experiment performed at RIBF (Tokyo) which allowed to discover a new two-proton emitter, 67Kr. I am also involved in the development of the new time projection chamber (TPC) at CENBG to study the two-proton radioactivity. This detector will allow us to reconstruct the tracks of the protons.

Generally I take part in all activities of the group related to the protonrich exotic decays.

Centre d'études nucléaires de Bordeaux, Gradignan, France

Students
Committee
Speakers









#### Jessica Grund

I am doing my PhD work within the Penning-trap mass spectrometry experiment TRIGA-TRAP located at the research reactor TRIGA Mainz, Germany. It is designed to perform high-precision mass measurements on neutron-rich radionuclides and long-lived transuranium isotopes. The topic of my PhD is the on-line coupling of the experiment to the research reactor, which gives access to short-lived nuclei, produced by neutron-induced fission of U-235 inside of the reactor.

Helmholtz Institute, Mainz, Germany

Students
Committee
Speakers



# école Joliot-Curie

# NEW VIEWS ON RADIOACTIVITY







#### **Maxime Henri**

I am currently finishing my second year of PhD in Nuclear Physics, at the Laboratoire de Physique Corpusculaire in Caen.

I am working within the nuclear dynamic and thermodynamic research team and I belong to the INDRA and FAZIA collaborations. My research

work is mainly focused on transport and equilibrium properties of nuclear matter in the Fermi energy domain (10-100 MeV/A).

I am also involved in the experimental program of the FAZIA collaboration (experiments at the LNS Catania), which aims to develop a new generation of Si-CsI telescopes with some particular treatments, in order to enhance the isotopic identification in nuclear experiments. A small part of my thesis contract is also to participate to scientific outreach for non-scientist people. To do so, we developed with some other PhD students of the lab a small nuclear powerplant model in order to explain how to transform nuclear energy in electricity.

Beside my PHD, I enjoy very much sailing, have good time with friends and also to visit new places.

LPC, Caen, France













#### **Zouhair Housni**

I am a Ph.D. student of University Hassan II Casablanca. The aim of my PHD thesis is to use the quasiparticle-phonon plus rotor model (QPRM) developing in our laboratory to study the nuclear structure of heavy elements in the transition region A  $\sim$  130. we focus our study with our QPRM method to determine the spectroscopic factors at low lying energies and assign the spin-parity of the excited states.

University Hassan II, Casablanca, Morocco

Students
Committee
Speakers









I'm a French PhD student, soon entering my third year. I started my PhD at the LPSC – CNRS, in Grenoble and I'm now in Cadarache – CEA, near Aix-en-Provence.

I work on producing fission yields data from experiments conducted with the Lohengrin mass spectrometer at the Institut Laue Langevin research reactor in Grenoble. I particularly work on 239-Pu and 241-Pu. In my analysis, I give a special care to accurate experimental covariances evaluation since it is a missing knowledge in the evaluated nuclear data libraries (JEFF-3.1.1, ENDF/B-VII.1 ...). This work is part of a CEA-CNRS-ILL collaboration focusing on producing for important actinides precise fission yields data, with the associated experimental covariances matrices.

Apart from my research, I practice boxing and outdoor sports, I like music, board games etc ... quite the usual you can expect from a young scientist!

CEA Cadarache, Saint-Paul-lez-Durance, France















I am at the verge of submission of my Ph.D. thesis at Panjab University, (India) and done my M.Phil in 2012, using GEANT4 simulations of Clover detectors. Now, I am working in experimental nuclear physics group at IUAC (New Delhi) and Panjab University. My research work focuses on the study of fission mechanism of Radon-(Rn) isotopes. The fission dynamics has been studied using neutrons, protons, and alphas as a probe.

Apart from this in my free time I like exploring different places.

Cyclotron laboratory, Panjab University, Chandigarh, India

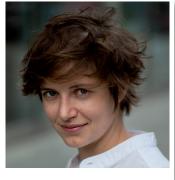
Students
Committee
Speakers

ejc2017.sciencesconf.org











#### Michalina Komorowska

I'm a PhD Student in Heavy Ion Laboratory University of Warsaw and in Département de Physique Nucléaire CEA Saclay. In my research I'm studying octupole deformation in rare earth nuclei

In my research I'm studying octupole deformation in rare earth nuclei around N~88 with Coulomb excitation methods.

In my spare time I enjoy building bicycles and taking pictures with analog cameras.

Heavy Ion Laboratory, University of Warsaw, Poland and Nuclear Physics Department, CEA Saclay, France

Students
Committee
Speakers









#### **Alex Laffoley**

I have been working as a post-doc at GANIL since October 2015 with the Active Target and Time Projection Chamber (ACTAR TPC) project. Much of my work has been focused on the General Electronics for TPCs (GET) and preparing for the upcoming first experiment with the full 16384-channel system. I am also interested in precision symmetry tests of the Standard Model, in particular experimental investigations of superallowed Fermi beta emitters.

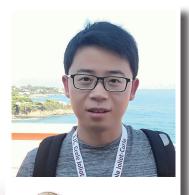
GANIL, Caen, France











### **Bingfeng LV**

I am a second year PhD student at Paris-Sud.

My PhD advisor is Costel Petrache.

My research topic is about the wobbling and Chirality in 135,136Nd.

CSNSM, Orasy, France











#### Loredana Manduci

I've been teaching nuclear physics at EAMEA since September 2005. I'm involved in the analysis of the reaction Xe + Sn @ 8 to 35 A.MeV incident energies measured with the INDRA multidetector at GANIL. Since a January 2014 I'm involved in the SCALP project with the LPC-CAEN for cross section measurements with a gas scintillating ion chamber for alpha production in neutron-induced reactions.

EAMEA Cherbourg and LPC Caen, France

Students
Committee
Speakers









#### **Belen Monteagudo Godoy**

I am a spanish PhD student working currently in France, in the nuclear structure group of the LPC Caen. My thesis work is related to light neutron rich nuclei, studying in particular the Beryllium isotopic chain near the neutron dripline.

Besides nuclear physics I love climbing and all kind of sports in the nature.

LPC Caen, France











#### **lan Murray**

I am a PhD candidate of IPNO/Paris-Sud and have been an IPA (International Program Associate) student of RIKEN, in Tokyo, for the past two years. At the RIKEN Radioactive Isotope Beam Factory (RIBF) we are using the experimental technique of in-beam gamma spectroscopy to understand the structure of the most exotic isotopes. My particular focus is mapping the southeast boundary of the N=20 Island of Inversion. This region is characterized by an abrupt introduction of intruder configurations which dominate the ground state.

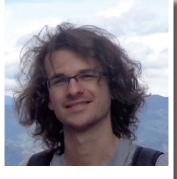
IPN, Orsay, France











#### **Louis Olivier**

I am currently finishing my PhD in nuclear structure at IPN Orsay. My work focuses on 79Cu, which corresponds to one proton above the supposedly doubly-magic 78Ni (Z=28, N=50), in order to extract information on the nature of the low-lying states in this very exotic region. The 79Cu nucleus was studied by means of in-beam gamma spectroscopy and produced through proton knockout in an experiment performed at RIKEN.

IPN, Orsay, France











#### Oskari Pakari

I am a first year PhD student at the Laboratory for Reactor Physics and Systems Behaviour (LRS) at the École Polytechnique Fédérale de Lausanne (EPFL). My work involves the investigation of neutron correlation measurement techniques on the zero power reactor CROCUS. Neutron correlation or noise measurements can be used for non invasive core monitoring and characterization. Most applications hereby rely on reactor models using the so called point approximation. I am designing experiments and numerical methods to assess spatial and spectral effects on neutron noise that differ from the point models. The aim is to improve the general understanding radiation correlation and improving reactor monitoring techniques for safety.

Students
Committee
Speakers

LRS - Ecole polytechnique fédérale de Lausanne, Lausanne, Switzerland















Neutrino physic field has rapidly expanded during the last half century, but a lot of things stay unexplained. One of those shadow areas is the so called 'Reactor Anomaly'. At short baseline, below 100m from the reactor, around 20 experiments observe a deficit in the measured neutrino flux, which is compatible with the existence of a fourth neutrino.

I'm a PhD student working on SoLid experiment. The objective is to perform new measurements of the neutrino flux and its energy spectrum at very short baseline (below 10m), in order to prove or refute this 'sterile neutrino hypothesis'. I work on the calibration of the detector and the data analysis, by performing Monte-Carlo simulation and developing analysis software!

LPC, Caen, France











#### **Claire Portail**

The deep inelastic reactions can be an efficient way to produce even more neutron-rich nuclei but the fragments exoticity remains unknown, in particular getting close to 0 degree, the beam axis. An experiment campaign was performed at GANIL, Caen, to collect data on these reactions. The first experiment was done with the VAMOS spectrometer and 7 EXOGAM clovers for gamma detection. A large angular range of around 30 degrees was observed and my PhD was based on those data analysis. The second experiment was done with the LISE spectrometer, only around 0 degree. The aim is to get a better understanding of this reaction mechanism.

IPN, Orsay, France

Students
Committee
Speakers









I am a second year PhD student at CEA Saclay, currently working at CEA Cadarache for half a year. My work concentrates on analyzing data from EXILL experiment which was conducted at ILL in Grenoble in 2012. This experiment was using an array of 16 HPGe detectors to measure prompt gamma rays coming from the fission process of the 235-U or 241-Pu target irradiated by intense, cold neutron beam. Identification of the fission products is possible due to the fact that each of them emits prompt gamma rays in a form of a specific cascade. Further analysis provide information on the fission yields and intensities of the gamma transition in particular fission products. Mentioned values are essential to verify fission fragments de-excitation simulation code – FIFRELIN, which is under development at CEA Cadarache. It will play an important role in proving safety of the Gen IV reactor design.

CEA Saclay, Gif-sur-Yvette, France

Students Committee Speakers









### **Javier Rodríguez Murias**

I am 25 years old and I study at Universidad Complutense de Madrid. Currently, I am working on my master's thesis based on the analysis of the exotic nuclei 31Mg from beta decay of 31Na and 32Na by fast timming techniques using HPGe and BaF detectors.

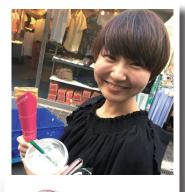
Universidad Complutense, Madrid, Spain

Students
Committee
Speakers









#### **Atsumi Saito**

I'm Atsumi. I'm from Tokyo Institute of Technology, Japan. I'm in my first year of Ph.D course.

I'm interested in unstable nuclear physics, especially the nuclear force in extremely exotic nuclei, like dineutron, tetra neutron and so on.

Tokyo Institute of Technology, Tokyo, Japan











#### Jennifer Sanchez Rojo

I am a master student from Madrid. I am finishing my master thesis in nuclear astrophysics focused on MACS, reaction rates and gamma-ray emission in thermonuclear reactions. That is important to make better models of stelar evolution. Furthermore, it contributes to the better understanding of nuclear structure. I'd like to investigate on these topics so I want to learn more about radiactivity and nuclear reactions, finding this school the perfect place to learn.

In my free time i enjoy reading, listening to music and going outside.

Universidad Complutense, Madrid, Spain

Students
Committee
Speakers









#### **Mateusz Sitarz**

Many radioactive isotopes are commonly used in medicine, both in diagnosis and therapy. However, steady development of nuclear medicine demands the application of new radioisotopes. Their convenient properties usually come with a price of a difficult production technology or a troublesome chemistry. During my PhD studies, I focus mainly on the first part – the research on the production of upcoming medical radioisotopes with the use of cyclotrons. Apart from aspects of nuclear physics, I also study medical imaging, radiobiology, radiation protection and radiochemistry to complement my research.

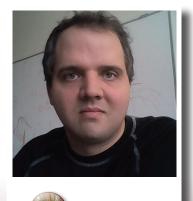
University of Warsaw, Warsaw, Poland

Students
Committee
Speakers









### **Patrick Saint-Onge**

I am completing this fall a PhD as a cotutelle student at GANIL in France and Laval University in Canada. The main goal of my research is to study the influence of neutron enrichment on de-excitation properties of moderately excited nucleus. I am analysing experimental results from the HERACLES experiment at TRIUMF and the INDRA-VAMOS campaign at GANIL.

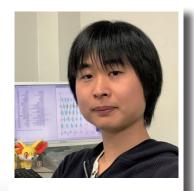
GANIL, Caen, France Laval University, Quebec, Canada

Students
Committee
Speakers









#### **Takato Tomai**

I am a 2nd grade student of master course in Tokyo Institute of Technology, and also SAMURAI collaboration member at RIBF. I am working on the measurement of unbound excited states in neutron-rich deformed halo nuclei 31Ne. In Nov. 2016, the experiment was performed with SAMURAI spectrometer at RIBF using many reaction channels such as C(31Ne,31Ne\*), C(32Ne,31Ne\*), Pb(31Ne,30Ne+n). Currently I am analyzing the acquired data.

Tokyo Institute of Technology, Tokyo, Japan

Students
Committee
Speakers



# école Joliot-Curie

### **NEW VIEWS ON RADIOACTIVITY**







The atomic mass is among the most fundamental properties in atomic physics. At the TRIGA Mainz reserach reactor, a double Penning trap system, TRIGA-TRAP, is installed. It is optimized to measure such masses of exotic nuclei produced in neutron-induced fission of actinide targets as well as of long-lived transuranium isotopes. My current project is the implementation of the phase-imaging ioncyclotron-resonance technique at TRIGA-TRAP. This is a new method to measure the cyclotron frequency of an ion trapped in a Penning trap. Compared with the presently employed time-of-flight ioncyclotron-resonance technique the new method is 25-times faster and provides a 40-fold gain in resolving power. This will allow obtaining data of much higher quality, which will serve as input data, e.g., for modeling of the astrophysical r-process.

Johannes Gutenberg University, Mainz, Germany

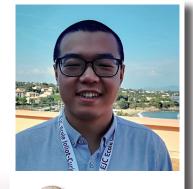
Students Committee Speakers











#### **Gaoyang Ye**

I'm from China and now study at University of Paris-Sud in radiochemistry. My project is focus on how to remove actinide like uranium from human body.

Swimming and badminton are my favorite games. I'm happy to join this school. Nice to meet you all !

IPN Orsay, France

Students
Committee
Speakers









#### Anna Zdeb

I am Ph.D. student at Maria Curie-Skłodowska University in Lublin (Poland). My scientific interests are focused on the theory of nuclear instability. I have been working on theoretical description of various types of decays (alpha and cluster radioactivity, spontaneous fission) since my undergraduate studies. My Ph.D. research is mostly focused on microscopic description of fission fragment mass distribution.

UMCS, Lublin, Poland





























Students

Committee

Speakers

ejc2017.sciencesconf.org







## école Joliot-Curie

## NEW VIEWS ON RADIOACTIVITY







# Students Committee Speakers

Presently working at CENBG, my group is involved in different research topics, such as decay spectroscopy experiments of neutron-deficient nuclei at fragmentation facilities like LISE/GANIL and RIKEN, or high-precision measurements on beta transitions for weak interaction studies. I am also working in mass spectrometry of exotic nuclei, participating to experiments with Penning traps at JYFL or ISOLDE. In the future, ground-state properties of exotic nuclei will be studied at the DESIR facility at GANIL, exploiting the RIB from SPIRAL1 and S3. At CENBG, we are developing beam preparation devices to be installed in the DESIR hall, in order to provide high-quality beams to the users. I am currently working on the development of a Penning trap (PIPERADE) dedicated to high-resolution mass separation as well as mass measurements.

CENBG, Bordeaux, France











Nuclear structure is my main research interest, in particular the evolution of magic numbers far from stability with a special emphasis towards and around neutron-rich 78Ni. For this I have been using different means such as beta decay, laser spectroscopy, transfer or knock-out reactions. These last years I am involved in the construction of a new installation for laser and mass spectroscopy of medium and heavy elements in a supersonic gas jet at S3, Ganil.

IPN, Orsay, France







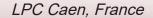






I am the administrative head of the Laboratoire de Physique Corpusculaire de Caen. I am in charge of the budget and human resources of the laboratory and I also organize scientific events for physicists.

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





Students

Committee

Speakers











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













I am the communication assistant of the CNRS office in Normandy. First, I organize events in order to enhance and popularize science for general public and especially among youth. Secondly, I am responsible of the internal communication for the employees: therefore I am the editor of the CNRS Normandy newsletter, the website and different brochures

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

Committee

Speakers

ejc2017.sciencesconf.org









#### **Carlos Munoz 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.



Member of the Scientific Council IPN Orsay, Orsay, France













My research interests are in the area of nuclear methods applied in medical imaging field (real time control of the dose distribution during hadrontherapy) and recently I was also involved in a project concerning volcanoes muography. I participated to the development of a detector using GRPCs for the tomographic survey of volcanoes by means of atmospheric muons. These particles of high energy can cross through mountains and so explore their inner structure on the same principle as X-rays at a smaller scale.

Associate Professor LPC Clermont Ferrand, France











I am professor at the university of Mons (UMONS) in Belgium. I have teaching activities in the fields of tensor calculus, special relativity, Newtonian mechanics and hadronic physics. I am the author of two physics textbooks published by Dunod, and I regularly give lectures on popular science related to physics. I have research activities in the field of effective models of the theory of strong interaction and in the field of techniques for solving quantum systems. I have directed several PhD theses in these fields. I am the head of the department of Nuclear and Subnuclear Physics at UMONS.

Member of the Scientific Council University of Mons, Mons, Belgium





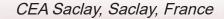






#### **Barbara Sulignano**

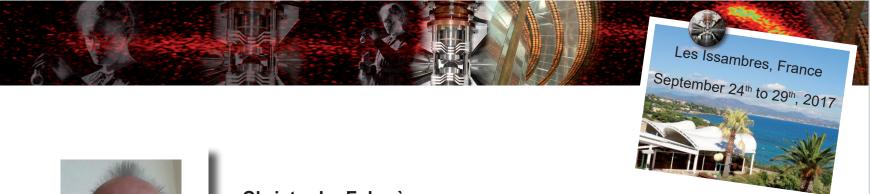
I'm nuclear physicist working at CEA Saclay on Super Heavy Elements. Our goal is to explore the extreme masses beyond lead 208, performing experiments all around the word (Finland, Germany, Russia). In the next future, with the new linear accelerator at GANIL coupled with the new Super Separator Spectrometer S3, we will be able to synthesize for the first time Super Heavy Elements in France.











#### **Christophe Falguères**

I am interested by the oldest human settlements in Eurasia and the pathes that they borrowed when they left Africa 2Ma ago. For that I use dating methods in order to elaborate a chronostratigraphical framework helping to better understand the human evolution. I work on Electron Spin Resonance (ESR) applied on detritic quartz and combined ESR with U-series methods to enamel fossil herbivorous teeth.

CNRS Research Director HNHP, Paris, France

Students
Committee
Speakers







#### Jérôme Giovinazzo

I was born in north-east of France, and ended my studies in Strasbourg. My PhD work (in CRN lab – Centre de Recherches Nucléaires – at that time: it was last century... the lab change dits name since then) was about statistical analysis of decay of delayed proton emitters, studied at ISOLDE (CERN). I have been working at CENBG (where I am currently staff reasearcher) for almost 20 years. My work focuses on nuclear studies from radioactive decay measurements, in 2 main experimental directions: the study of very exotic decay modes (with a highlight on the 2-proton radioactivity studies) on one side, and the high precision decay measurements to test the weak interaction of the standard model. These subjects are to some extend very different: in the first case, it is exploratory studies based on very small event rates (sometimes less than 1 event per day of experiment) largely dominated by statistical uncertainties, while for precision measurements, a large number of counts is required (at least several millions) and in that case the challenge is the control of many small systematic corrections.

Centre d'Etudes Nucléaires de Bordeaux-Gradignan (CNRS-IN2P3 / université de Bordeaux) ejc2017.sciencesconf.org ejc2017@sciencesconf.org



Les Issambres, France

September 24th to 29th, 2017







My current research is focused on the tests of the Standard Model (SM) of particles using the nucleus as laboratory. In particular, with my team we precisely measure correlations between particles emitted during nuclear beta decays, to search for traces of new physics beyond the SM. For instance, some specific correlations are sensitive to exotic currents in weak interaction, beyond the V-A theory, while others enable to test invariance under fundamental symmetry operations if the decaying nuclei are polarized. Researched events are rare, requiring to perform very precise measurements with a careful study of systematic effects. This especially implies to use the cleanest decaying sources, which are often provided by atom or ion traps. I am responsible of the LPCTrap setup installed at GANIL.

Professor at the University of Caen Normandy Researcher at LPC Caen, France









I obtained my PhD in 2006 at CEA-Saclay, on the study of the gluon spin contribution to the nucleon spin with the Compass experiment at CERN. I then joined the JLab group of Saclay to work on the development of a new, cylindrical tracker for the future CLAS12 spectrometer. In 2014 I initiated a muography activity using multiplexed Micromegas detectors, and proposed several experiments like WatTo or M-Cube. In 2016 the team joined the ScanPyramids mission and installed 3 muon telescopes to scan the Great Pyramid of Giza. In total, we have built 6 muon instruments, including the TomoMu portable setup which will be used during the workshop of the school.

CEA, Saclay, France

Students
Committee
Speakers







#### **Christophe Theisen**

I performed my PhD at the end of last century at Strasbourg on superdeformed nuclei. After moving to Saclay, I made an excursion in fission-fragment spectroscopy, but decided to return to something super. Since them I'm desperately trying to observe super-heavy elements. These guys being tremendously scarce and shy, our group simply investigate very-heavy elements around Z=100, and spends most of his time to develop experimental devices. For the GANIL facility, we have developed a highly segmented Si array for the focal plane of the VAMOS spectrometer. We are currently upgrading VAMOS as a gas-filled separator for heavy elements studies. We also contribute to something super again: the S3 Super Separator Spectrometer, and to the AGATA gamma tracking array. Since we like the cold and quiet places, we frequently perform experiments in Finland at the University of Jyväskylä. Mendelevium Z=101 nuclei are our best friends there. This will be my fourth participation to the Joliot-Curie school. I hope this session will be as pleasant and fruitful as the previous ones.

IRFU, Saclay, France

ejc2017.sciencesconf.org ejc2017@sciencesconf.org



Les Issambres, France

September 24th to 29th, 2017

