NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

George Afful

I am Afful George, a graduate of the Master Nuclear Energy (MNE) program with a specialization in Operations at the University of Paris-Saclay (Ecole CentraleSupélec & INSTN) - France. I am currently searching for a PhD to continue my research work in the Nuclear field.
My final year internship work focussed on the “Studies of the thermal dilatation of structures during an Unprotected Loss Of Flow (ULOF) accident for the ASTRID reactor” using CATHARE2 thermal hydraulic system code and Cast3M which is a mechanical code. The work was done to understand the thermal dilatations of the core, the main vessel and the control rods (“Coeur-Cuve-Barre”) as a result of temperature variations and to study the impact on the behavior of the reactor during this scenario. I am of the conviction that the conference will increase my confidence to improve my skills and prepare me for my future research.
I like to play football a lot and easily get along well with people. I look forward to making new friends and establishing links.

University of Paris-Saclay, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Alexandre Bailly

Starting this October, I will be a PhD student at the Laboratoire de Physique Corpusculaire de Caen.
I will mainly work on studying reactivity measurements using the periodic beam interruptions method on ADS reactors in startup phase. These experiments are be done using the VENUS-F reactor of GUINEVERE facility of SCK.CEN. This installation constitutes a mock-up facility for the future MYRRHA reactor at the SCK.CEN.

In my spare time , i mostly enjoy listening to music , playing video games and reading.

LPC Caen, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Gilles Ban

I did my PhD in atomic and plasma physics for fusion then moved to high intensity Xray diagnostics at synchrotron light source, since then at LPC Caen I am looking for small deviation of the standard model and signs of new physics.
I have been part of some research in ADS and Cancer treatment instrumentation.

As a professor I am teaching physics and nuclear engineering at the Engineering School in Caen, France.

LPC Caen, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Solène Bertolotto

I am a 2nd year PhD student at Commissariat à l'Energie Atomique (CEA) of Marcoule in the south of France. I am working in two different labs, the first one is the Laboratoire d'Etudes de Dissolution (CEA) and the second one is the Laboratoire d'Interfaces de Matériaux en Evolution at the Institut de Chimie Séparative de Marcoule (ICSM). My PhD thesis deals with the multi-scales approach of the dissolution of the uranium dioxide single crystals in nitric acid media. I am studying the impact of the crystallographic orientation on the dissolution at several observation scales like at nanoscale with the Atomic Force Microscope (AFM).

During my free time, I enjoy sharing with my friends, discovering new places and hiking in nature.

Laboratoire d'Etudes de Dissolution et Laboratoire d'Interfaces de Matériaux en Evolution at the Institut de Chimie Séparative, Marcoule, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Pauline Bouhier

I'm going to finish my first year PhD in CEA Marcoule and IPN Orsay (Radiochemistry group). My PhD thesis is about understanding the chemical behavior of Beryllium dust in cementitious matrices for nuclear waste management. To do so, I'm working on innocuous materials like Aluminium and Zinc to simulate the Beryllium behavior (toxic and carcinogenic). Currently I'm working on the corrosion of aluminium and beryllium in cementitious matrices and aqueous solutions.

Before my PhD, I worked 3 years as apprentice in industrial R&D where I managed different projects like studying the retardation of cement and the formulation of a 3D-printable mortar

CEA, Marcoule, France

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Dee Jay Cerico

I'm a PhD student at the Centre de Sciences Nucléaires et de Sciences de la Matière (CSNSM) in Orsay, France. My research topic is about the irradiation behavior of apatite, a possible host matrix for actinides separated from high-level nuclear wastes. To determine the radiation tolerance of apatite to actinide decay, we are utilizing an ion beam analysis technique known as the Rutherford Backscattering Spectrometry in channeling mode (RBS/C). Through RBS/C, the evolution of radiation-induced damage in a material can be deduced. Outside PhD research, I'm particularly interested in meeting friends for beer or coffee, trying out various cuisines, travelling and discovering cultures, and just enjoying life! Occasionally, I also binge-watch in Netflix. Aside from French, I'm deeply interested to learn the Spanish language.

Centre de Sciences Nucléaires et de Sciences de la Matière (CSNSM), Orsay, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Carole Chatel

I'm passionate by nuclear power since I'm 16y and I absolutely wanted to study the management of nuclear waste. Now, I'm about to start my second year of PhD on nuclear data mesurements. Currently, I am working at the CENBG. I will move to Cadarache (CEA) for the second half of my PhD.
The aim of my thesis is to improve the accuracy of the 242Pu fission cross section around 1 MeV incident neutron energy for the fast-neutron reactors where the actinides can be burned. The measurement will be done with respect to the neutron scattering cross section on protons. To accomplish this goal, I also need to develop a gaseous proton-recoil detector for incident neutron energies below 1 MeV.
Apart from work, I like practicing sport and playing tarot (in Tarot championship).

CENBG, Gradignan, France

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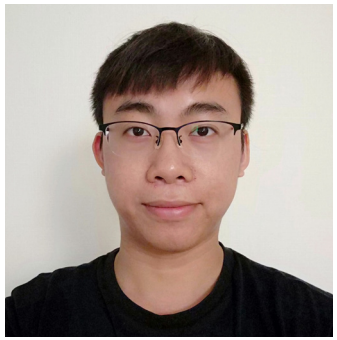

Yifeng Chen

I'm a 1st PhD student in SUBATECH laboratory in Nantes. The topic of my thesis is nuclear physics, my research work focus on the heavy ion collisions at Fermi energy. Recently, I'm investigating the collisions of the Xe + Sn system at the energies from the coulomb barrier to the Fermi energy. By analyzing the production in the collisions: fragments, light particles and nucleons, we can know what happens during the process of collisions, which help us to optimize both EOS of non-homogeneous nuclear matter and transport models.

Beside academic work, I like playing all types sports with racket, badminton for example, I also like watching animation and the match of E-sport.

Subatech, Nantes, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

François Claeys

I will start, in October in Strasbourg, my PhD in the field of nuclear data for nuclear energy production. I will work jointly with the DNR team from the IPHC and the LEPh lab of the CEA/DEN in Cadarache. During my PhD, I will determine the neutron inelastic scattering cross section of the nucleus 233U, prepare an experiment to determine the same cross section with the nucleus 239Pu, and I will make the evaluation of the nucleus 238U.
Besides my work, I like hiking, scouting, traveling, dancing and listening to music.

Institut Pluridisciplinaire Hubert Curien (IPHC), Strasbourg, France

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Théo Cordara

I am a french Post Doctoral researcher working in the Immobilisation Science Laboratory in the Department of Materials Science and Engineering of the University of Sheffield. My research topic is focused on the spent nuclear fuel behavior and reprocessing. My currently work consist in the preparation of chromium doped uranium dioxide samples simulating modern nuclear fuel, to evidence the impact of the Cr on the UO2 pellets microstructure. Then a dissolution study in contact of ground water is performed to highlight the Cr influence on the UO2 dissolution in the case of a direct storage of the SNF in a geological disposal facility. This work is part of the DISCO project (European project). Before my Post Doctoral position I did a PhD at the CEA of Marcoule on the influence of the fission products on the UO2 dissolution in nitric acid media. Besides my studies I'm practicing table tennis, I like to spend time in mountains skiing, hiking or running and visiting new places.

Immobilisation Science Laboratory, University of Sheffield, United Kingdom

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Valentin Drouet

After graduating from the engineering school MINES ParisTech, I started my phD at CEA Saclay. My work focuses on the simulation and optimization of load following transients on pressurized water reactors. My goal is to optimize the efficiency and coast of this type of transients by changing rod management parameters, such as speeds and overlaps. We use massively parallel evolutionnary algorithms for the optimization process, and try to study a variety of situations. Before that, I was an intern at EDF R&D and studied the calculations of the launching tests of the EPR Flamanville.

CEA Gif sur Yvette, France

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Jeanne-Marie Fèvre

I'm coming from Nice. I am a PhD student at « the Institut de Chimie de Nice ». My thesis subject is « Synthesis of amphiphilic molecules as Plutonium decorporation agents ». In case of plutonium release, inhalation is the most frequent way of contamination. There is a need of new Plutonium decorporation agents as the golden standard « DTPA » is pratically useless for mopping up the Plutonium from macrophages. I'm focusing on synthesis of new decorporations agents with high payload and then investigating their complexing capacities.
Besides chemistry, I love playing the piano, hiking, and traveling.

Institut de chimie de Nice, France

Students Committee Speakers

NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Qinjun Fu

I am a PhD student at CEA Saclay in Département de Modélisation des Systèmes et Structures, working on simulation of two-phase flow inside a PWR core under accidental situations (Loss of Coolant Accidents, Steam Line Break, etc.). In particular, I focus on developing turbulence models of different mixing terms at assembly scale based on experimental results and the existing subchannel scale models in code CATHARE, developed in CEA since 1979.

CEA Saclay, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Typhaine Guillemot

I am starting my second post-doctoral contract at Paul Scherrer Institute (CH) about carbon-14 containing species released during long-term corrosion of irradiated steel. I am a geologist and also an organic geochemist. I did my pHD at the University of Besancon about paleoclimatic reconstructions, using molecular biomarkers found in lacustrine sediments. After my first post-doc at Eawag (CH), I decided to do applied sciences and especially use my organic geochemistry background for radioactive waste management. I am new in the nuclear domain and that the reason why I am looking forward to attempt this summer school which will certainly help me to improve my knowledge about nuclear energy.

Paul Sherrer Institute, Switzerland

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Benoît GUILLON

I am assistant professor at Laboratoire de Physique Corpusculaire de Caen. I did my PhD on hadronics Physics, studying the structure of nucleons, via lepton scattering (JLab, USA). Then, my physics interest turned to neutrino physics, starting with the Double-Chooz experiment.

At present, I am strongly involved in the SoLiD experiment, which are searching for neutrino oscillation at very short Baseline. The objectives is to test the sterile neutrino hypothesis.

LPC CAEN, France

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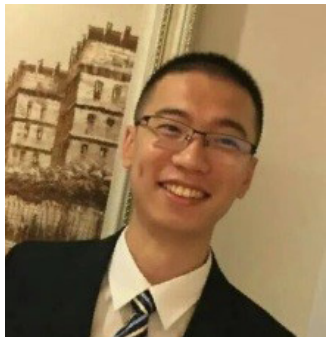

Mingjian He

I am a third-year PhD student at Institut de Physique Nucléaire d'Orsay. I am working in radiochemistry related to the interaction between actinides and organic ligands. I am focusing on determination of thermodynamic parameters and structural information of the complexation in aqueous solution.

In my free time, I like to play mobile game "Arena of Valor" and PC game "Dead by Daylight".

Institut de physique nucléaire d'Orsay, France

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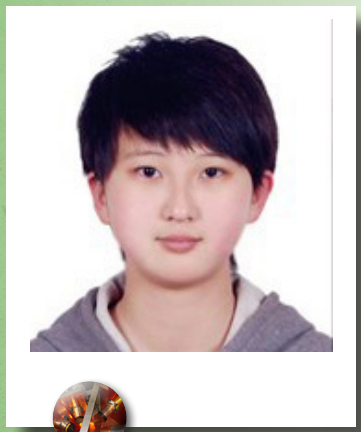

Lu Jin

I'm from IPNO. From 2011 to 2017, I was studying in IFCEN, Sun Yat-sen University for Bachelor and Master Degree of nuclear physic in China. From the spring of 2018, I become a PhD student in nuclear physic and radiochemistry domain under supervisors Claire LE NAOUR and Celine CANNES's guidance. My work is to study actinides electro-deposition mechanisms for the optimization of targets used to determine nuclear data. During my work, electro-analytical, spectroscopic studies and surface characterization will be carried out in order to determine the electro-deposition mechanisms of nucleation on different media.

Institut de physique nucléaire d'Orsay, France

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Valentin Jolivet

I am a 2nd year PhD student at the Laboratoire de Planétologie et de Géodynamique (LPG). I am working on the solubilization of volatile elements in nuclear waste glasses, specificaly 129I and 36Cl, using high pressure. This is part of the CIPress project, aiming to propose a industrial solution to improve the retention ratio of volatils element in nuclear waste glasses melters using pressure, with the assurance that the resulting glass is still sufficiently durable to match long term disposal requirements.

Université de Nantes, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Thibault Kaczmarek

I am starting my second year of my PhD at the CEA de marcoule in the south of France, in the laboratory des interfaces des matériaux en évolution (LIME) at the ICSM. My thesis subject is : impact of PGM in the dissolution mechanisms of UO2. During this study I use various analyticall techniques: ICP-MS, PERALS for example, but also ESEM for the reconstruction of the liquid/solid interface.

Finally, in my free time I like to spend time with my friends and travel around the world to visit as many countries as possible.

Institut de Chimie Séparative, Marcoule, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Quentin Le Moëne

After my master degree in materials science, I joined the IPN radiochemistry group for my PhD. My thesis in focused on the corrosion study of low carbon steel for the Cigéo project (deep geological disposal facility for radioactive waste) lead by Andra (French agency for radioactive waste management).

I like playing saxophone, listening music (all styles) and cinema.

Institut de physique nucléaire d'Orsay, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Jean-Luc Lecouey

I am assistant professor of physics at ENSICAEN/LPC Caen. I teach courses mainly related to Nuclear Engineering and do research in the field of experimental Nuclear Reactor Physics.

LPC Caen, France

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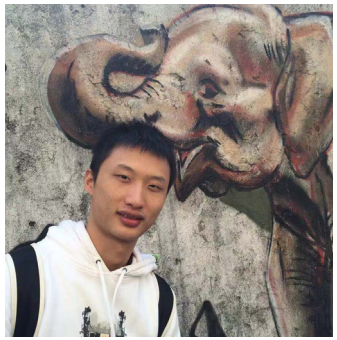

Jiali Liang

I study the robustness of electro-nuclear scenario, and I will soon begin my second year of PhD in Institute of nuclear physics of Orsay in France. Electro-nuclear scenario study is dedicated to investigate possible futures of nuclear power development. Based on simulations of fuel cycle, evolutions of outputs of interest are presented, such as some special material flows and material demands under given assumptions. By analysing these outputs, we could find possible pathways which guide us to achieve a set objective in the future. In consideration of uncertainty of future, robustness study of scenario is needed to provide assessment about changing the objective.

Institut de physique nucléaire d'Orsay, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Philippe Martinet

I am about to start my third year of PhD and I am part of the ACE (Aval du Cycle Electronucléaire) team at IP2I Lyon. I work on the tribocorrosion under irradiation of a 316L stainless steel, that is to say that I try to understand the synergies between mechanical and chemical wear as well as the effects of ion irradiation on the system (prime amongst them the radiolysis of the water in contact with the metal). Given the multidisciplinary state of my research I also work in close collaboration with the CorrIS group (MATEIS, INSA Lyon) on corrosion and electrochemistry.
I am looking forward to this session of ECJ as it is my belief that even with the best sobriety efforts the Energy consumption of Humanity as a whole can only increase. Nuclear energy being one the few technology able to provide a low carbon, high output, baseload supply should thus be promoted. One of the key problem to do so is public acceptance, especially regarding the effects of nuclear energy on the population and the environment. It is a rightful concern that should be addressed.

Institut de physique nucléaire de Lyon, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Sylvia Meyer-Georg

I am starting my last year of PhD at the IPHC in Strasbourg. My subject deals with the migration of uranium and lanthanides under the influence of natural organic matter in surface water.

This year, I will be 43, so I guess I am definitely the oldest student in this assembly. I decided in 2016 to resume my studies because it is never too late to learn.

In my free time, I like reading, cinema, and traveling.

IInstitut Pluridisciplinaire Hubert Curien (IPHC), Strasbourg, France

Students Committee Speakers

NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Nathalie Moncoffre

I am a CNRS researcher at IP2I Lyon, and I study the behaviour of nuclear materials in stress conditions of irradiation and temperature.
Materials play a crucial role all along the nuclear fuel cycle, especially during reactor operation or in the conception of waste disposals. Therefore, we aim at understanding the evolution of materials microstructures and of diffusion processes of representative radionuclides in so-called severe conditions.

Institut de physique des 2 infinis, Lyon, France

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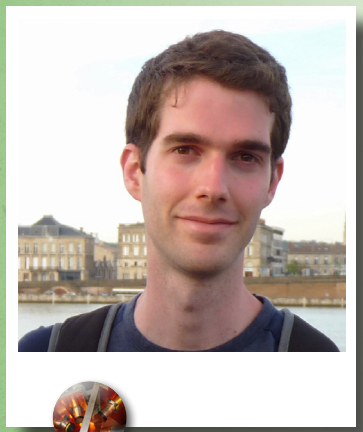

Javier Moreno Soto

I am about to start the third year of my PhD in CEA Paris-Saclay. My work belongs to the n_TOF collaboration at CERN. I am studying the photon strength function and level density for different isotopes of uranium. For the moment I have done the analysis for 235U and 239U with positive results.

Before the PhD I did my final project of the master in Bordeaux and I was working in the CNA of Sevilla using IBA techniques in patrimony.

CEA Paris-Saclay, France

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Oskari Pakari

I am a third 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. I am designing experiments and numerical methods to assess spatial and spectral effects on neutron correlation that differ from lumped parameter models. The aim is to improve the general understanding radiation correlation and improving reactor monitoring techniques for reactor safety. Other than doing physics I like to ski, surf and philosophize.

Laboratory for Reactor Physics and Systems Behaviour (LRS),
École Polytechnique Fédérale de Lausanne, Switzerland

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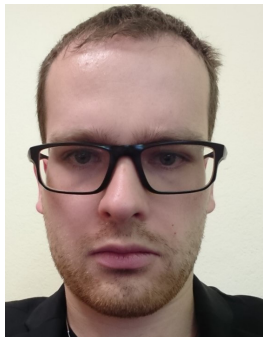

Hugo Sauzet

I have just started my Ph.D thesis at the laboratory IPN in Orsay. In this laboratory, I will focus on nitrocarburizing molten salt. This salt is used during an industrial process and allows nitrogen reaction and its diffusion in steel. This treatment improves some properties of steel, such as hardness and wear, corrosion and fatigue resistances. Electrochemical measurements will be realised in order to follow the different reactions and the different chemical species. These measurements will be executed, first of all, in carbonate molten salt, and then, in nitrocarburizing salt.

Institut de Physique Nucléaire d'Orsay, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Yuxue Shang

I am a M2 student in INSTN majoring in Nuclear Reactor Physics and Engineering. This year I am doing an internship in Institut de Physique Nucléaire d'Orsay working on the importance of the neutron spectrum on calculations of diffusion macroscopic data with Monte-Carlo methods.

Apart from Physics, I like music and travel around the world.

Institut de Physique Nucléaire d'Orsay, France

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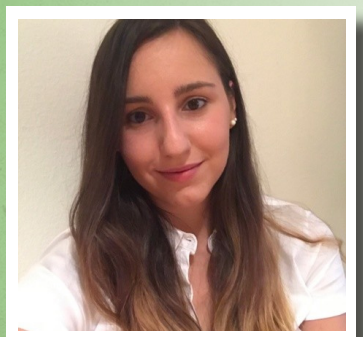

Fanny Vitullo

I am a 2nd year PhD student in the Laboratory for Reactor Physics and Systems Behaviour (LRS) at the École polytechnique fédérale de Lausanne (EPFL), Switzerland. My PhD research focuses on the development of miniature neutron detector that are used to perform localized in-core measurements in the CROCUS reactor, operated at EPFL. At the same time, I am performing some high-fidelity neutronics simulations for the comparison with experimental results.
When I'm not spending time between the reactor and my desk, I like travelling, baking cakes and partying.

Laboratory for Reactor Physics and Systems Behaviour (LRS),
École Polytechnique Fédérale de Lausanne, Switzerland

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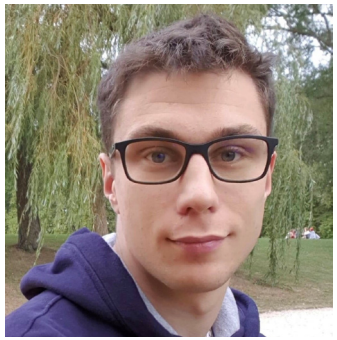

Romain Vuiart

In october 2018, I joined the Institut de Radioprotection et de Sûreté Nucléaire (IRSN) to start my PhD which aims to develop a calculation scheme to estimate the fast neutron fluence (flux of neutrons with energy above 1 MeV integrated over time) at the vessel during the operation of a pressurized water reactor (PWR). In the perspective of possible extension of operation of PWRs, it is an important safety issue to be able to accurately estimate the vessel fluence (and its uncertainty) since this quantity is used to predict the embrittlement of the vessel material.
During the first year of my PhD, I assessed the need to take into account the power history of the reactor core and the induced variation of its operational parameters (boron concentration, control rods insertion…) in order to perform fast neutron fluence calculations. Besides this analysis, I compared different calculation schemes in order to find a combination of codes that could result in the best compromise between precision and calculation time.

Institut de Radioprotection et de Sûreté Nucléaire, Fontenay-aux-Roses, France

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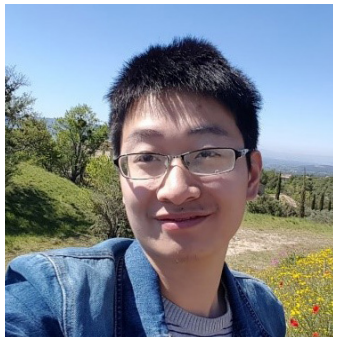

Jing Wang

I am the second year PHD student in CEA ICSM Marcoule, in the laboratory of active interface (L2IA). My current study is focused on the liquid extraction. I synthesis a new extractant for extract Nd3+ and use the non-linear optical method (SHG) to study the distribution and orientation of extractant in the interface. And the same time, to interpreter the result of SHG, I also simulate the signal SHG by molecular dynamic (MD). I want to attend this school to improve my theoretical knowledge in the nuclear domain and meet more friends in the same research.

Laboratory ions at active interface (L2IA), ICSM, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Adam Williamson

I am a postdoctoral researcher at the CNRS investigating the impact of encapsulating microorganisms on the bioremediation of radionuclides. I previously obtained by PhD in Manchester, followed by two postdoctoral projects in Berkeley and Gent Universities covering several topics in geomicrobiology including bioremediation (radionuclides, oil reservoirs, perchlorate) and bioleaching and recovery of metals.

As much as I love science, I enjoy escaping for a little while via cooking (particularly curry) and trying to build my future home.

CENBG, Bordeaux, France

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Chen Xing

Hi, I am Chen, I study on the recuperation of uranium and the other valuable metals in seawater by nano/ultrafiltration process, and I will soon begin my second year of PhD in Institute for Separation Chemistry in Marcoule. The use of membrane processes could allow in implementation of the uranium concentration step. The amount of uranium (U) dissolved in seawaters, even at low concentration (around 3µg/L), have made its recovery of interest as one suitable alternative resource for uranium production from sources other than uranium ores. Nano/ultrafiltration process using inorganic membranes can concentrate multivalent metal ions by rejection attributed to a combination of various mechanism including steric, Donnan, dielectric and transport. By these effects, monovalent, divalent and trivalent metals can be separated. Uranium and other valuable metals such as Mg^{2+}, Ca^{2+} and Cu^{2+} can be recovered.

Ionic Selectivity using self assembled molecular systems (LTSM), Institut de Chimie Séparative de Marcoule (ICSM), Marcoule, France

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Fengqi Xu

I started working in the Radiochimie group of the laboratory Subatech in Nantes, France since October 2018. My project is mainly aimed at finding an efficient and rapid method for the in situ measurement of radium in natural water, which is in the domain of environmental radiochemistry. During my first year, a lot of tests were done in order to select and optimize the appropriate materials for radium captor. In the next two years I will try to develop the entire Ra measurement system which will be applied to the water sources close to radioisotope-enriched areas around France.

I am very happy to join this school. Glad to see you soon!

Subatech, Nantes, France

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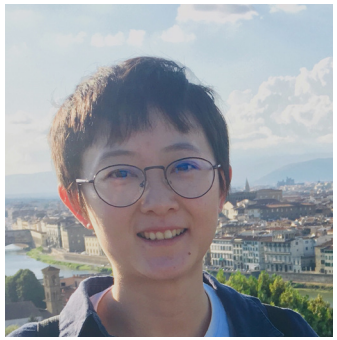

Haohan Zhang

I'm about to start my second year of PhD study in the group of radiochemistry at SUBATECH laboratory, Nantes, France. My work focuses on studying the hydration of nuclear glass in vapor phase, which has not been much investigated compared with the studies of nuclear glass alteration in aqueous phase. Under the context of confine high level radioactive waste in the form of nuclear glass, many studies have been carried out to evaluate the durability of nuclear waste glass during its permanent disposal. My work will also contribute in estimating the safety of nuclear waste glass disposed in the deep geological disposal site.

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Brigitte Cheynis

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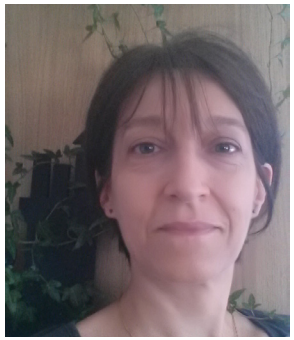

Annick Billebaud

I am working in the Reactor Physics team at LPSC Grenoble, France. I am involved in experimental research programmes devoted to Accelerator Driven Systems (ADS) i.e. sub-critical reactors coupled to particle accelerators, studied for their potential role in nuclear waste incineration strategies. I mainly contributed to the MUSE and more recently GUINEVERE projects, investigating the reactivity monitoring issue, and carried out at MASURCA (CEA) and VENUS-F (SCK-CEN) reactors respectively. I am also in charge of scientific activities in the GDR SciNEE (Nuclear Sciences for Energy and the Environment).

LPSC, GPR team, Grenoble, France

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Brigitte Cheynis

French physicist at the “Institut de Physique des deux Infinis de Lyon”, I joined the CERN heavy ion program in 1993 by first joining the NA38/NA60 collaboration at the SPS and later the ALICE collaboration at the LHC. I had previously worked many years in the field of nuclear physics at much lower energies, investigating fusion-fission processes and reaction mechanisms induced in heavy ion collisions on fixed targets at incident energies ranging from 10 to 100 MeV per nucleon, both in Europe and in United States. The ALICE team I now lead at the IP2I Lyon is strongly involved in the upgrade of the muon spectrometer in view of Run3 of data taking (foreseen to start in 2021) and in analyses of data already collected in Run2. These analyses are focused on two main topics: heavy flavour physics and low-mass di-lepton physics and aim at characterising the properties of the Quark-Gluon Plasma state of matter, through studies of phenomena such as suppression of heavy quark resonances, modification of low-mass resonance properties, and thermal photon radiation.

Institut de Physique des deux Infinis de Lyon, *France*

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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 and I also organize scientific events for physicists.
Since October 2016, I am the administrative head of the Joliot-Curie School.

LPC Caen, France

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Maëlle Kerveno

With my team, at IPHC Strasbourg, we have developed the GRAPhEME device near the EC-JRC-GELINA neutron facility in Geel (Belgium) and we measure neutron inelastic scattering on actinides. The knowledge of these reactions is still not yet at the expected level for accurate nuclear core reactor simulations and improve this knowledge is a real challenge both for experimentalists and theoreticians.
I am strongly interested by the evaluation process and the theoretical modeling of the inelastic process.
And we are involved in the construction of the new neutron facility NFS@SPIRAL2 – GANIL.

IPHC, DRS/DNR team, Strasbourg, France

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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

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Soizic Milhoud-Aussant

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

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Tomo Suzuki-Muresan

My research field concerns the experimental study of nuclear wastes in repository conditions. More specifically, I'm working on the intermediate level long life and high level wastes to determine the surface reactivity of model waste (ZrO2, glass) at the interface solid/solution, and to understand the mechanisms involved in the alteration processes.

Subatech, Nantes, France

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Bernard Boullis

I have been involved in nuclear fuel cycle research for about 40 years : fuel reprocessing operations studies (to design La Hague plants processes), partitioning and transmutation of long-lived radionuclides, scenario studies for fast reactors addition to the current French nuclear fleet…
My research has been performed at CEA, successively in Fontenay-aux-Roses, Marcoule (in charge of Atalante laboratories) , and Saclay (last position: Director for fuel cycle programs). I am currently scientific advisor to the High Commissionneer.
I am still engaged in teaching nuclear chemical engineering (INSTN, Ecole Polytechnique , ENSCP notably).

CEA Paris-Saclay, France

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Rudy Konings

My area of research is nuclear fuels and actinide materials, with particular emphasis on high temperature chemistry, thermodynamics and thermophysics.

Head of Unit Nuclear Fuel Safety, European Commission, Joint Research Centre, Karlsruhe, Germany

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Kastriot Spahiu

I did a Ph.D. in Inorganic Chemistry at the Royal Institute of Technology (RIT), Stockholm investigating lanthanide and actinide carbonate complex formation and the influence of the ionic medium on the stability constants. My research interest concern mainly actinide and lanthanide chemical thermodynamics. I have participated for more than 25 years in the NEA Thermodynamic Database project, working at the same time with elucidating the mechanism of radiolysis promoted spent fuel dissolution in groundwater, with emphasis on the influence of the near field redox conditions.

Adjunct professor at Chalmers University of Technology, Gothenburg, Sweden

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NUCLEAR ENERGY AND THE INTERFACES WITH THE ENVIRONMENT

Nicolas Thiollière

I am assistant professor at IMT Atlantique (campus of Nantes) working as head of the activity nuclear systems for electronuclear scenarios at Subatech laboratory. I handle activities related to scenarios studies performed with the fuel cycle simulator CLASS. In the framework of the international collaboration FIT (Functionality Isolation Test), we are working on improving the level of confidence in outputs produced by fuel cycle simulators. FIT collaboration gathers researchers from 4 US and 4 European laboratories and institutions. Aware that energy related questions cannot be disconnected from other scientific fields (sociology, economy, etc.), we build since 2014 an interdisciplinary consortium focused on energy transition in France and on the evolution of nuclear energy in this framework.

IMT Atlantique, Nantes, France

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Stéphanie Tillement

Initially graduated in industrial engineering from INP Grenoble, while very interested by the human and socio-organizational dimensions of work, I decided to continue with a master and PhD in sociology. During my PhD, I collaborated with the RATP who was engaged in big modernization projects to study the effects of organizational, technical and professional transformations on railway safety. Since 2011, I am working as an Assistant Professor in sociology as IMT Atlantique (Nantes, France). My research interests now focus on collective construction of nuclear safety, high-risk project management, socio-political decision-making and innovation processes related to future nuclear technologies. Since 2014, I collaborate with physicists to understand the role of scenarios in shaping political decisions related to the nuclear of the future.

IMT Atlantique, Nantes, France

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Pascal Yvon

I work in the nuclear energy division of the French atomic energy commission (CEA) as the director of nuclear activities in Saclay. I hold an engineering degree from Ecole Centrale Paris and a PhD in Applied Physics form the California Institute of Technology. After working a s a research assistant at the Center for Material Science of the Los Alamos National Laboratory, I worked at the Institute for Advanced Materials in Petten (The Netherlands) before joining CEA in 1996, where I was in charge of studies on the behavior under irradiation of zirconium alloys. Then I held several management positions in the Department of Materials for Nuclear applications, which I headed from 2009 to 2015. I also worked as the program manager for high temperature reactors and hydrogen production from 2006 to 2009. In addition, I am an adjunct professor at Centrale Supelec, ENSTA and PHELMA Grenoble, where I teach nuclear engineering and materials under irradiation.

CEA Paris-Saclay, France

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