

SOMMAIRE

2023 Lunch-and-learn sessions

EURAD is getting ready for 2023 with already 6 Lunch-and-learn planned for the next 6 months.



Designed as short informal sessions, they are open to everyone. Register already for the next ones on the [EURADSchool website](#).

- **January 23rd** - Guidance on Cost Assessment and Financing Schemes of Radioactive Waste Management Programmes – Speaker: Irena Mele
- **January 25th** - EU HARPERS and HARMONIZE Projects Overview – Speakers: Réka Szőke and Egidijus Uronavicius
- **February 22nd** - Missions (almost) completed. The Swiss proposal for a combined repository in clay rocks – Speaker: Tim Vietor
- **April 19th** - Update on UK Programme – *To be defined*
- **May 31st** - EU OFFERR project Overview – Speaker: Charles Toulemonde
- **June 28th** - IAEA Technical Working Group on Nuclear Fuel Cycle Option and Spent Fuel Management – Speaker: Amparo Gonzalez

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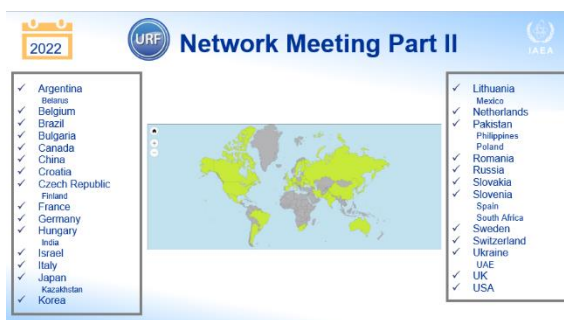
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EURAD's participation at IAEA Underground Research Facilities Network - by Karina Lange (IAEA)

The International Atomic Energy Agency (IAEA) Underground Research Facilities Network (URF Network) celebrated its 20th anniversary in November 2022, in Vienna, Austria. Guest speaker Dr. Piet Zuidema, Chief Scientific Officer of EURAD, delivered a presentation about EURAD and perspectives on future opportunities for collaboration with the IAEA. The occasion to meet Dr. Zuidema was also timely considering his lifelong work at NAGRA in supporting their recent success in selecting a site for Switzerland's deep geological repository, announced earlier this year.

The URF annual meeting was attended by members from 27 countries worldwide and was hybrid in format. The audience greatly appreciated having an in-depth overview of EURAD, especially in terms of sharing available data and resources from underground research laboratories across Europe that have been operating for decades.



Dr. Zuidema highlighted the impressive membership and dedicated participants behind EURAD: 23 countries, 116 organizations and 800 individuals each working on a series of carefully organized themed projects. Not only does EURAD serve to help more than 100 end user



Karina Lange

members, but it is also playing a clear pivotal role in addressing the knowledge management issue currently facing the nuclear industry. The EURAD Roadmap will help end users to navigate amongst a large European library of geological disposal records as they start to progress through their own programme. As Dr. Zuidema noted clearly: “the roadmap helps with what to do and when”, which is critical to countries at the start of their programme in deciding where to best allocate human and financial resources and support future planning. Furthermore, it was positively noted that graduate students are fully integrated into the EURAD framework, an essential factor in the knowledge transfer equation.

EURAD delivers its information in a timely manner and maintains a practical and relevant strategy. For example, EURAD has recently launched a project on Requirements Management in response to current needs in this area. In fact, this is one area that Dr. Zuidema identified as an apparent opportunity for collaboration between IAEA and EURAD.

On collaboration with IAEA, Dr. Zuidema noted many existing synergies between EURAD and IAEA on the subject of geological disposal programmes and encouraged other experts to participate in the IAEA Technical Cooperation programme: “One common example of IAEA’s outside engagement work is in relation to Technical Cooperation missions. Joining these can benefit both recipients and the experts that join and support missions – they tend to be inspiring and source of new insights for both.”

Dr. Zuidema ended his talk by prompting the audience to seriously consider the infrastructure needed to manage more than 50 years of tremendous work in this area. EURAD is playing a major role, but this initiative requires collaboration and careful coordination amongst all actors, including IAEA. To start, we need to as an industry

review how much of the past we need to focus on transferring and what part might be outdated. Advanced programmes will turn increasingly to industrialization and optimisation; and this still requires some amount of science to support updates. Who can coordinate maintenance of needed infrastructure? Structuring knowledge is critical, so it is accessible for ready transfer. In the future, as work and results continue to be generated, it is important for all of us to keep this as a major priority.

The URF Network members and IAEA staff would like to sincerely thank Piet for his enthusiasm and inspirational words at our 20th URF Network meeting. We this is one of many collaborations with Piet and EURAD.

EURAD Third annual event

The registration for EURAD third annual event is now [open](#). You can find below the draft detailed agenda.

Day 1 – Tuesday 14 th March	
Introduction	
08:30-09.00	Welcoming and introduction
Plenary Session	
09.00-10.30	<ul style="list-style-type: none"> • Gérard Bruno (IAEA) – Artemis missions services – 15’ • Saïda Ensgröm (VATTENFALL) – <i>Title to be defined</i> 15’ • Gabriel Pavel (ENEN) – ENEN’s missions, ENEN2plus project - 15’ • Allison Macfarlane (The University of British Columbia) – Fuel cycle and advanced reactors - Emerging issues in radwaste management – 15’ 30’ Q&A
Break – 30 min	
11.00-12.30	Panel Session - The benefits of joint programming <ul style="list-style-type: none"> • Hans Forsström – EURAD joint programming – 15’ • Ole Kastbjerg Nielsen (DEKOM) – Shared solutions, needs and challenges for SIMS – 15’ • Manuel Martin Ramos (JRC) – Taxonomy – 15’ • Valéry Detilleux (Bel V) – EURAD Strategic Research Agenda – 15’ 30’ Q&A
Lunch – 1 hour 30 min	
14.00-17.00	Look into the future – “Students session”
	Social dinner

Day 2 – Wednesday 15 th March	
Parallel breakout sessions – Cross-cutting work in EURAD	
09.00-13.00	Innovation – How can science, technology, knowledge management, civil society, contribute to innovate in radioactive waste management? (Session 1)
	Improving cross-border cooperation - How can more advanced and early-stage programs work together towards a common goal? (Session 2)
	Building competencies – Address generational gap and knowledge management (Session 3)
Lunch - 1 hour 30 minutes	

See next page for the detailed agenda of Day2 afternoon and Day 3

Parallel sessions – Technical results / projects	
14.30 – 16.30	Waste Acceptance Criteria (ROUTES and PREDIS) (Topical session 1)
	Data (MODATS and DONUT) (Topical session 2)
	Migration (CORI and FUTURE) (Topical session 3)
Break – 30 min	
16.30-18.30	Uncertainties (UMAN and DONUT) (Topical session 4)
	Perturbations (GAS, HITEC and SFC) (Topical session 5)
	Chemistry and microbio (ACED, ConCorD and MAGIC) (Topical session 6)

Day 3 - Thursday 16 th March	
Plenary – Technical results / project	
08.30-10.00	Knowledge Management (SoK, Guidance and Training and mobility) (Topical session 7)
Break – 30 min	
Plenary Session- Spotlight on cutting-edge science	
10.30-10.40	Overview of issues related to challenging wastes – Virginie Wasselin / Mélanie Maitre (ANDRA)
10.45-10.55	Mechanistic understanding of gas transport in porous clay materials from molecular scale and mesoscale points of view– Jerry Peprah Owusu (PSI)
11.00-11.10	Title and speaker to be defined - SFC
11.15-11.25	Title and speaker to be defined - ConCorD
11.30-11.40	Title and speaker to be defined - FUTURE
11.45-11.55	Characterization of thermo-hydro-mechanical properties of Wyoming sodium bentonite using methods based on X-ray imaging and triaxial tests' – HITEC WP University of Jyväskylä, GTK, VTT and Posiva.
12.00-12.30	Exchanges with the speakers
Lunch – 1 hour 30 minutes	
14.00-15.00	Concluding session of the breakouts
15.00-15.30	Closing remarks



The fourth annual project meeting of WP-FUTURE took place in person on 24-25 October in Düren, Germany. The meeting was attended by 37 participants physically, while other colleagues could follow the video-streaming of the event. WP task leaders presented the progress in the individual tasks. The PhD students were given an opportunity to present their projects. One of the central aims of the project meeting was the coordination of the reporting plan and discussion on the strategy for the update on the SOTA report in the final project year. All these aims were successfully achieved. The participants have highly appreciated the opportunities for direct exchange and the benefits of the in-person meetings. The event was particularly important for PhD students, as an opportunity to receive critical feedback to their work prior to the anticipated thesis defense. Personal exchange with the peers and scientific discussion with senior researchers from partner institutes are essential elements of establishing research network and finding next job opportunity for the junior researchers at the beginning of their scientific carrier.



To evaluate the progress of WP and the relevance of the research conducted in the project for the implementation of nuclear waste disposal several representatives of the WMO (End-User group) were invited to provide their comment on the success of the meeting. Overall, a very positive feedback was received. In particular, the importance and innovation of PhD projects were appreciated. Each project partner could demonstrate a significant progress and the overall project is approaching competition of the initially planned program contribution to an overall success of EURAD consortium.



A look back – ICOND 2022

On November 17, 2022 Niels Belmans (WP13 Leader) represented EURAD and the School of Radioactive Waste Management during the International Conference on Nuclear Decommissioning (ICOND) 2022 Conference. The ICOND2022 Conference, held in Aachen (Germany), addressed operators of nuclear power plants and companies who are working on the planning, implementation and supervision of decommissioning projects. This includes authorities and technical experts who approve and supervise the decommissioning projects, and research institutes which are responsible for the dismantling of research reactors and the storage and/or disposal of radioactive waste. It was because of the latter that the Conference organiser invited Niels Belmans to represent EURAD, more specifically the School of Radioactive Waste Management. The presentation was part of a larger session on “Competence building & training”, which discussed the importance of training and improving the competences of current experts, but also, and more importantly, of the next generation of experts. This led to some interesting discussions with experts in decommissioning, who were also interested in joining EURAD training courses, such as the upcoming training course on uncertainty management. For those interested, more information is available on the [ICOND website](#), and the book of abstracts can be downloaded [here](#)





A look back – OECD-NEA: Remembering the Past in the Future – Building Awareness of Radioactive Waste Repositories Together

On November 21, 2022 Niels Belmans (WP13 Leader) represented the EURAD Knowledge Management Work Packages (WP11, 12 & 13) during the OECD-NEA event “Remembering the Past in the Future – Building Awareness of Radioactive Waste Repositories Together”, which was organised at Tabloo (Dessel, Belgium).

One of the main aims of this event was to show how important the link with Civil Society and local municipalities is when planning and constructing a disposal site for radioactive waste. The session during which the EURAD Knowledge Management programme was presented focused on communication, stakeholder involvement, and the importance of maintaining knowledge about the waste that is contained at the disposal site. To illustrate this, there were, besides the EURAD presentation, presentations from the Belgian partnerships MONA and STORA, focusing on creating a ‘living memory’ of the low-level disposal site in Dessel (Belgium), and from OECD-NEA’s “Preservation of Records, Knowledge and Memory” (RK&M) initiative. The main results of this session were that there are multiple ways to help retain the necessary knowledge and memory and that no single mechanism or technique can achieve this on its own. And, most importantly, that input from and collaboration with the local municipalities and Civil Society are crucial factors in creating a sustainable knowledge and memory initiative. This further highlights the importance of the EURAD Knowledge Management programme and confirms that besides generating and maintaining knowledge, we should also share it and make it available not only to experts and students, but to society as a whole.



Insight from Alexis Geisler-Robin - Participant

The participants had three days to enlighten the different aspects of the complex relationship to future humans that will be managing or re-discovering the high-level waste repositories. The workshop was the occasion to wrap up most of the work done in this field in different countries and to draw it to a complete spectrum of actions and concepts, from memory and knowledge transfer up to cultural heritage and long-term stewardship. A specific new regard brought by professionals of archives was recognized as highly useful.

Many artistic perspectives were presented by participants, and by the Tabloo center itself. The workshop was also the occasion for 30 persons to visit the HADES underground research laboratory.

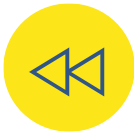


A look back – 7th World Nuclear Industry Congress 2022



At the 7th World Nuclear Industry Congress 2022, 29th November London, EURAD, represented by Tara Beattie, chaired the second day sub-forum and panel session on “Nuclear Decommissioning and Waste Management” (see photo above). The invited speakers provided a diverse and engaging look at latest developments across the world covering AI, digital twins, asset management, procurement, regulators perspectives, latest technical advancements in Japan and Sweden and much more. A key takeaway from the day was the impressive work happening across nuclear on sustainability. From NDA and Sellafield Ltd UK, we heard how both organisations are embedding the [UN Sustainable Development Goals](#) into everyday work. For more, see the 2022 NDA Sustainability Strategy [here](#).





SETPlan Conference

Thanks to a collaboration with SNETP, EURAD was able to have a poster together with SNETP, MEENAS and ENEN at the SETPlan Conference.



The 2022 SETPlan Conference was steered around the following three holistic contents:

- Objectives of the European Green Deal and REPowerEU through stronger synergies between national, industrial and European energy R&I efforts
- Introduction of the revamping process of the SET Plan in the broader context of the new European Innovation Agenda and the new European Research Agenda
- New technologies in R&I in energy important for energy transition

EURAD Training course on safety case development and review

The EURAD School of Radioactive Waste Management established within EURAD Work Package 13 organised the „EURAD training course on safety case development and review“, held face-to-face at SURO premises in Prague from November 28-December 2, 2022.



The topic of this training course was chosen at the request of the EURAD community and corresponds to the result of the survey on training needs carried out by WP13 in the initial stage of EURAD, where the production of safety case was identified as the highest priority.

There were 16 participants attending the training course from Belgium, Czech Republic, Finland, Germany, Hungary, Italy, Switzerland, Slovakia, Slovenia and Switzerland representing Regulatory authority, TSOs, WMOs, REs and students. In order to receive the Attendance certificate, they had to perform the knowledge test. The lectures were provided by 12 experts from Belgium, Czech Republic, Finland, France, Germany and Sweden representing Regulatory Authority, TSOs, WMOs, RE and Civil Society (NTW).

See next page for more detail.

The training module consisted of three main parts:

- safety case development – after the introductory to radioactive waste management, the focus is done on the theoretical bases of safety case development, in particular on safety case for deep geological repository, safety assessment as a key element of the safety case and on specific aspects of safety case. The role and management of uncertainties in safety case and a communication with stakeholders are also integrated,



- safety case review – provides an insight into regulatory expectation for safety case together with evolving safety case expectation moving from conceptualization to the implementation. The safety case review preparation is completed with a practical feedback from French safety case review. The special tool - Pathway Evaluation Process (PEP game) enabling better understanding of RWM matters and supporting a necessary trust building among different stakeholders is integrated,

- safety case implementation - the practical examples from advanced programmes are included, in particular the development of safety case within Swedish programme, the baselines of safety case from German programme and experience from Finish programme on the R&D's role in safety case development and implementations.



This training course was developed in a close cooperation with the international platforms: (i) NEA/RWMC, resp. IGCS, (ii) SITEX.Network and, (iii) IGD-TP in order to share experts' experience and to support the knowledge transfer from advanced programmes to those at early stage of their implementation. Experts who have been involved in RWM for a number of years in their professional carriers and deal with radioactive waste disposal safety issues were lecturing.

The main objective of the training was to progress participants theoretical knowledge and learn more about safety case issues and be aware of why a robust safety case for a radioactive waste disposal facility is crucial. Based on the positive feedback from the participants, it seems that this goal has been achieved. In addition, all lecturers have agreed to possibly participate in the next run, so if there is enough interest this training can be repeated.

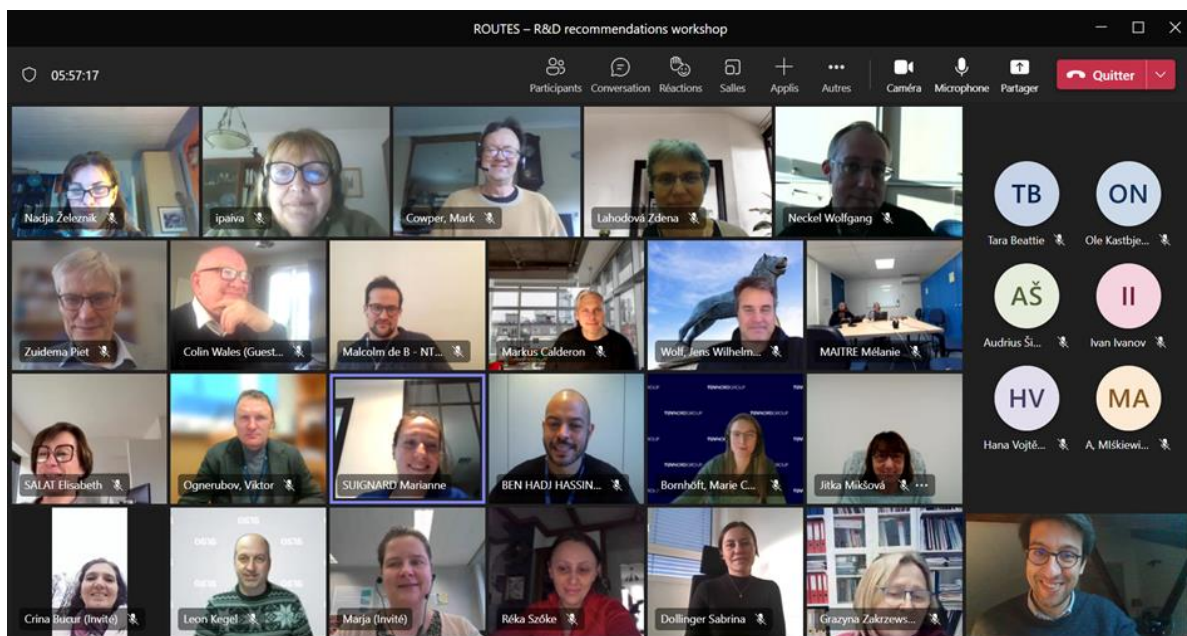


Focus – ROUTES Workshop on R&D recommendations

The ROUTES Work Package (WP) organized on 6th December a virtual workshop in order to disseminate Research & Development (R&D), but also strategic studies and knowledge management draft recommendations.

The objectives of this workshop were to share and to disseminate R&D recommendations so far identified to a broad audience, prioritize ROUTES recommendations and consolidate the wording of recommendations. Three knowledge management, ten strategic studies and nine R&D recommendations, mostly issued from the deliverables and milestones, were discussed. They constituted the basis of ROUTES input to the EURAD Strategic Research Agenda. The recommendations were organised regarding the following topics: **interactions with civil society & safety culture, international cooperation, disposal strategies, concept selection, waste acceptance criteria, characterization and treatment & conditioning.**

Around 35 participants attended the meeting, including ROUTES WP members but also, several members from the EURAD PMO (the chief scientific officer, the SRA coordinator, the StSt representative), the UMAN WP leader, representative from EC (the project officer, DG-ENER member), the HARPERS project and NEA. **A minute of meeting will soon be produced to highlight the workshop outcomes.**





Did you know?

EURAD is organising three trainings in January and February:

- Online session on the Spent Fuel State-of-Knowledge document (18 January – 13.00-16.00 CET)
- Geochemical and reactive transport modelling for geological disposal (06 to 10 February in Bern – Switzerland)
- Uncertainty management (14 to 16 February in Brussels – Belgium)

REGISTER

REGISTER

REGISTER

All trainings are free. The travels and accommodation costs need to be arranged by the participant.

More trainings are planned in 2023, so stay tuned!



Contribute to EURAD lessons learned

A new task to conduct a ‘lessons learned’ exercise for EURAD will start in December 2022, coordinated by the PMO/WP1.

This task will help us improve the final work of EURAD 1, and will also be an important input to how EURAD 2 is established, building on our experiences over the last 3.5 years.

If you have experience about your participation in EURAD that you would like to share or if you have any recommendations on key actors who should be invited to participate in structured interviews to elicit their honest views on key success factors and lessons learned on the Joint Programme, please get in touch with Tara Beattie (tara@tbenviro.com) and Liz Harvey (ejh@galson-sciences.co.uk)

Note that all inputs received will be anonymised, and we will work flexibly to capture your lessons learned in a way that is most efficient for you (email, short online meeting etc.).



Focus – EURAD-2 (Extract from Core Group public communication – December 2022)

EURAD-2 Core Group will organize three public events to inform about the progress. Two will be online (January and February 2023) and one event will be face-to-face (March 2023).

- **Public webinar #1 – Towards EURAD-2**

The first webinar will take place on January 19, 2023 from 9-12 CET. This event is open to all but preliminary [registration](#) is mandatory. The detailed agenda is provided in the Core Group public communication for December 2022.

- **EURAD-2 WP Focus Funnel**

EURAD-2 Core Group will organize the EURAD-2 WP Focus Funnel (FF) that will take place following EURAD third annual event, on 16th afternoon and 17th March 2023 in Golden Bay Beach Hotel, Larnaca, Cyprus.

The aim of this event is to provide an opportunity to get connected, advance the process, share latest progress and mainly to discuss ideas of future work packages to help the Colleges in refining the scope of the work packages to issue a final list of work packages. There will be parallel sessions, structured by the EURAD SRA Themes, identified on the WP ideas templates. Based on the WP idea proposals suggested by the Colleges, the Core Group will invite presenters to pitch the grouped WP scopes. Presenters will be selected based on named persons on the WP idea templates. A moderated panel discussion on the scope of the work will allow for other comments and ideas to be shared by the audience members. The expected outcome from the FF sessions will be a route forward for refinement of the WP descriptions. This will help the Colleges define the final list of WPs to be selected by June 2023. The development of the WP details regarding scope, roles, partners and budgets will still be refined through summer.

To attend this event, participant will be asked to pay a registration fee of 60€ (covering meeting rooms and catering). All costs associated to the FF attendance are not eligible for EURAD or PREDIS project reimbursement.

The Core Group invites you to already register for this March event at the [following link](#).



Now published

FUTURE– Training materials (D5.3) – [Link](#)

This deliverable is a compilation of the materials used for the education and training event on radionuclide transport and retention which took place in November 2021. Several senior experts have covered a broad range of topics, from RN transport and retention to uncertainty analysis in safety assessment calculations .

State-of-Knowledge – QA Procedures for the Generation of SoK Demonstration cases – [Link](#)

This deliverable defines procedures for planning and managing a system on the production of Domain Insights (DI) and State-of-Knowledge (SoK) documents.

Guidance – Updated list of prioritized topics for guidance documents (D12.5) - [Link](#)

This deliverable provides the updated list of guidance documents that work package 12 is developing as a comprehensive suite of specific guidance documents that can be used by EU Members States with RWM programmes that are at an early-stage of development, but can be beneficial also to more advanced programmes

Training and Mobility – Specification document of the content, material and learning outcomes of mobility training (D13.7) - [Link](#)

This deliverable aims to describe the establishment and implementation of the EURAD Mobility Programme. It introduces the content of the Mobility Programme together with main rules and principles of its management and information related to the assessment of the Mobility Programme.

Training and Mobility – Overview of webinars organized in the first three years of EURAD (D13.11) – [Link](#)

This deliverable provides an overview of all webinars organised by WP13 under the umbrella of the School of Radioactive Waste Management (RWM). This includes data on the number of live attendees, the number of watched recordings and data on the feedback and mailing campaign accompanying each webinar.



Upcoming events

JANUARY

- 18: EURAD Training session on the Spent Fuel State-of-Knowledge document.
- 19: EURAD-2 public webinar #1
- 23: L&L – Guidance on Cost Assessment and Financing Schemes of RWM Programmes
- 25: L&L – HARPERS and HARMONIZE EC projects
- 25-27: Non-destructive Evaluation of Concrete in Nuclear Applications

FEBRUARY

- 06-10: EURAD Geochemical & Reactive Transport Modelling for Geological Disposal training
- 22: L&L – Mission (almost) completed. The Swiss proposal for a combined repository in clay rocks
- 26-03/03: WM Symposia 2023

MARCH

- 14-16: EURAD Third annual event
- 17: EURAD-2 Focus Funnel



Students Corner

Jérémy Perrot – Université Saint-Etienne

Can you explain the scope of your thesis and the link with the workpackage you are involved in?

My PhD thesis aims at studying the effects of radiation such as neutrons and gamma on distributed optical fiber sensors in order to understand its effects on optical fiber cables to monitor temperature and strain. The goal is to implement a radiation tolerant distributed optical fiber sensor for the Cigéo radioactive waste repository. I am working for ANDRA and part of Hubert Curien Laboratory in MOPERE group specialized in radiation effects on fiber optic and photonic systems located in Saint Etienne (France). My work is part of the MODATS WP covering monitoring of the environment variables such as temperature and strain of nuclear wastes repository cells. It is also providing the new scope of using promising optical fiber technologies to nuclear waste management and promote its performances.



What do you wish other people knew about your thesis scope?

I wish people from outside of the fiber optic sensor field knew about how important and promising this technology is. It offers many advantages and is being used in many fields of application other than monitoring for nuclear facilities: space, medicine, telecommunication and many more.

According to you, what will be the impact of your thesis in your field of research?

My thesis comes up with both a direct application and an experimental point of view on the optical fiber sensor field. Thanks to the ANDRA application for Cigéo my work aims at implementing a radiation tolerant sensor and understanding the basic mechanism of radiation effects on fiber optic sensors. My thesis will provide solutions to ANDRA and a better understanding of radiation effects on fiber optic cable and sensors.

What was your first impression of EURAD?

At first, EURAD seemed like such a challenge for me since I have never been part of any project this scale. But now I feel pleased to contribute and share what I am working on.

How is EURAD an opportunity for you?

EURAD allows me to spread out my work on an international level and exchange about it in MODATS WP. It is also an opportunity to have a look at what is being done besides optical fibers and discover waste management and nuclear facilities from all its aspects.

What do you find most challenging about your PhD/post-doc/master? And how did you overcome these challenges (if relevant)?

Planning irradiation campaigns has been the most challenging part of my work since I started. Everything has to be prepared, anticipated and sent without any delays and no possible modifications can be done once installed. It is a great pleasure seeing everything run and analysing the first results from such a challenging task.

What future career are you thinking about? If relevant, how was this choice influenced by your work in EURAD?

I am currently thinking about going for a non-academic career after my PhD. thesis, thinking of industry, agencies... I still leave some room for any interesting application, project, technologies and countries.

What do you hope to achieve in your future career?

I hope to be part of a project that I feel motivated about and can give my contribution to it, witness any of its advancement and hope to see its achievement. For now, I have no precise plan except than leave some room for some opportunities and work in a field of application that I like.

Virginie Solans – University of Uppsala

Can you explain the scope of your thesis and the link with the work package you are involved in?

Before disposing of spent nuclear fuels, certain experimental measurements will be done to improve and verify fuel parameter estimations. My thesis scope aims to further improve the prediction of some fuel parameters by combining different experimental techniques with machine learning. My work package is WP8 on spent nuclear fuel characterization, which amongst other things, studies fuel parameter predictions using state of the art codes and non-destructive fuel measurements.



What do you wish other people knew about your thesis scope?

This thesis scope has, in fact, very practical applications. I am focusing on Swedish encapsulation plans, but the methodology could be broadened and used in any country.

According to you, what will be the impact of your thesis in your field of research?

In Sweden, for instance, these experimental measurements are planned to be done on each fuel before its encapsulation. Therefore, my thesis is a first step to develop a methodology to predict these safety parameters, and it will be used daily once the encapsulation facility will be in operation.

What was your first impression of EURAD?

I was very surprised by the diversity of the topics included in EURAD, and it helped me to have a broader understanding of the end-of-fuel cycle, and all the associated challenges.

How is EURAD an opportunity for you?

EURAD is a big consortium, and I am really happy that my PhD is part of it. It is very beneficial to interact with different institutes. It is a really good opportunity and it allows me to discuss regularly with world-leaders in their field.

What do you find most challenging about your PhD? And how did you overcome these challenges (if relevant)?

My PhD combines results of a lot of different measurements campaigns, which have been realized before I started my PhD. It can be therefore challenging to analyse them. Fortunately, different members of EURAD and Uppsala University, have assisted me to better understand the different techniques used and their associated challenges.

What future career are you thinking about? If relevant, how was this choice influenced by your work in EURAD?

I really enjoy research so I am definitely thinking to continue in this field, either in a university or in an R&D program in industry. EURAD allowed me to be able to see different European perspectives, and I hope to follow my career with one of the EURAD partners.

What do you hope to achieve in your future career?

In the future I would like to be in a position where I can make a difference and help with the radioactive waste, which is in my opinion one of the biggest challenges of our time.



We are out there

Wolfgang Neckel • 2e
Team lead for Documentation, Instrumentation and Radiation Protection in the R...

I am thankful to #EURAD and SURO (the organizers) for the opportunity to participate in the training course on safety case development! It was a week of informative lectures in a friendly group.

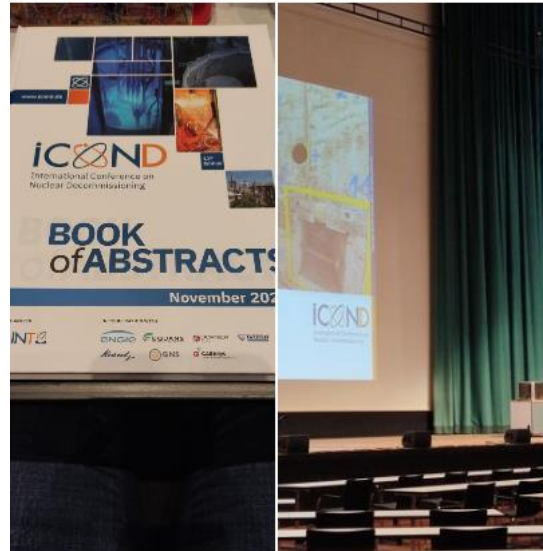
[Voir la traduction](#)



Niels Belmans • 1er
SCK CEN Academy project leader | Biomedical Scientist
3 sem. • Modifié •

Proud to have been invited to present the **European Joint Programme on Radioactive Waste Management** School of Radioactive Waste Management at the International Conference on Nuclear Decommissioning 2022 today! ...voir plus

[Voir la traduction](#)



Fisicoquímica de Actínidos y Productos de Fisi... @FFisi... · 25 oct.

Today @FFision from @CIEMAT_OPI was in charge of the high level scientific presentation regarding "Redox relevance on radionuclide migration" on @EJP_EURAD WP FUTURE Y4 meeting, held in Düren (Germany).

WP5 - FUTURE

Task 3 – Redox : Ciemat approach

25th October 2022 • Ursula Alonso (CIEMAT)

The project leading to this application has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement of 847382.

CIEMAT TEAM IN EJP1-FUTURE

Tiziana Missana
(Head)

Ursula Alon Ana Maria Ferrá Miguel Garcia- Gutiérrez_je Mingarro

Petri Gil-Jesus Morejón
Technica

Francisco Javier León
PhD student

OUTLINE

- Task 3 - Redox: EJP1-FUTURE initial objectives
- Redox in deep geological repositories
EJP1-FUTURE starting point: Fe(II)/Fe(III)
- CIEMAT approach to tackle redox issue in EJP1-FUTURE
• (A) Role of structural Fe in deep-seated Fe silicates