



**BUILDING EUROPEAN  
NUCLEAR COMPETENCE**  
THROUGH CONTINUOUS ADVANCED  
AND STRUCTURED EDUCATION  
AND TRAINING ACTIONS



ISSUE 03/2023

# ENEN# Bulletin

## AUTUMN

Quarterly  
Newsletter

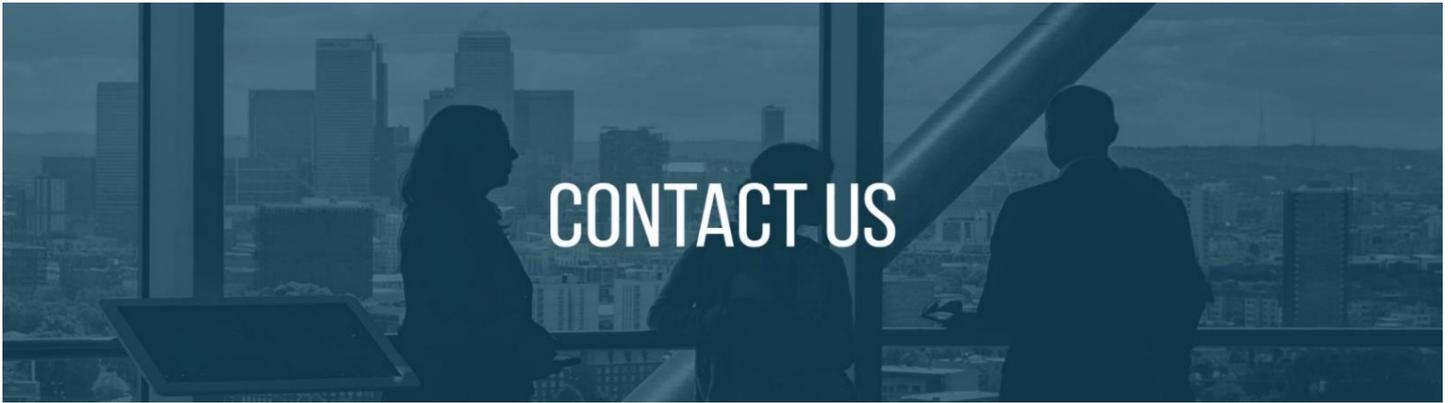
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# CONTACT US



**Walter AMBROSINI** is Full Professor in Nuclear Plants at the University of Pisa, Italy.



**Roberta CIRILLO** is working as Project Manager and Communication Officer at ENEN.



**Csilla PESZNYÁK** is Medical Physics and Radiation Protection Expert in Budapest University of Technology and Economics and at National Institute of Oncology, Hungary. President of the ENEN aisbl.



**Štefan ČERBA** graduated from the Slovak University of Technology in Bratislava (STU) in the degree course nuclear engineering.



**Enikő KOSZTA** is a young Medical Physicist in Hungary. She is the technical editor of the ENEN2Plus Bulletin.



Contact Us:  
[www.enen.eu](http://www.enen.eu)



Email:  
[csilla.pesznyak@gmail.com](mailto:csilla.pesznyak@gmail.com)

## Focus - European Congress of Medical Physics

The next edition of the ENEN PhD Event and Prize will take place in as a side event of the ECMP2024, organised by the European Federation of Medical Physics (EFOMP) and hosted by the Medical Physicist Societies of Austria, Germany and Switzerland. Munich (Germany), from 11 to 14 September 2024.



This year we are opening up for a few novelties. It will be the first time the event will be held during a Medical Physics type of event, because we wish to open to PhD Candidates of all nuclear applications and fields! We hope this choice will also encourage applicants from various fields to apply and take part. Furthermore, we also increased the number of participants that we can welcome. This year we are selecting up to 18 finalists to come to Munich. The basic structure of the event stays the same though, since this looks like being a winning choice: each finalist will present their PhD thesis work and after each presentation, there will be time for questions, both from the jury and from other finalists.



### ENEN PhD Event & Prize 2024



#### Scope

The ENEN PhD Event & Prize is an action of the European Nuclear Education Network (ENEN) to support the Research and Science in the Nuclear fields promoting the works of the young scientists and researchers.

It is co-sponsored by ENEN, the European Commission Joint Research Centre (JRC), and the organizer of the international conference.

- Nuclear engineering and safety
- Nuclear materials sciences
- Radiochemistry
- Waste & disposal and decommissioning
- Medical applications
- Radiation protection
- and other nuclear applications



#### YOU

⊗ Are a **PhD student** working on a topic in one of the domains listed or **you obtained your PhD in 2023**.

⊗ Are eager to **share your research** results with peers and professionals in a **multidisciplinary** environment.

⊗ Want to have a **unique opportunity to network** and meet fellow students and nuclear professionals

⊗ Want to take a chance to win **1000 euro** to attend a conference of your choice?

**Application form and more information:**



**Finalists will receive financial support to attend ECMP 2024 (to cover travel, accommodation & registration fee)**

#### Important steps

- Application with abstract and motivation letter
- Preselection in each nuclear domain
- Selection of finalists by jury of experts
- Presentation of selected work at



#### Important dates

- |                   |  |
|-------------------|--|
| 26 March 2024     | Deadline for application                                     |
| 22 April 2024     | Notification finalists                                       |
| 11 September 2024 | ENEN PhD Event & Prize Award ceremony @ECMP, Munich, Germany |

The PhD event will be on September 11th (whole day) and the award ceremony for the winners, the best three, will take place in the evening, during the congress welcome reception. All finalists are more than encouraged however to take part to the whole event (as usual financial support will be made available to support travel, accommodation and congress fee expenses) and even to submit their abstracts to be published in a European Journal of Medical Physics special issue.

**On a final note, we draw your attention to the workshop that will be held during the ECMP2024 as well. Dedicated to PhD students. This is an ENEN2plus initiative organized by EFOMP. All ENEN PhD finalists are more than welcome to join!**



**Roberta CIRILLO** is working as Project Manager and Communication Officer at ENEN. She is responsible of all ENEN communication channels, manages several EU-funded projects leading the Dissemination and Communication working package and acts coordinator for the TOURR project. Physicist and Nuclear Engineer by training, she complemented her education with Energy Management and Innovation & Business Creation courses.

## Event Schedule 2023

### ENEN2PLUS PROJECT EVENTS AT UWB IN PILSEN

*The University of West Bohemia in Pilsen is one of the leading nuclear educational institutions in the Czech Republic, with a long tradition in nuclear-related study programs at the Faculty of Mechanical and Electrical Engineering. During the autumn of 2023, our university prepared two nuclear events supported by the ENEN2Plus project.*

The traditional "Nuclear Days" consists of extensive exposition, educational-popular lectures for high school and grammar school students, and a two-day international conference, "Nuclear Energy - the way out of Europe's energy crisis," on September 14th and 15th, 2023. This opening conference also includes a competitive poster session for university students. This year, we have registered nearly 200 conference participants. Thanks to the support from the ENEN2plus project, we have invited international students involved in the poster competition to participate in our conference. Selected students attended the conference in person and presented and discussed the results of their work with their colleagues and other participants. Support was offered to six international students (from Ghana, Ukraine, Italy, and Peru), and finally, four international students received the reward for their posters:

- **1st place** in the MSc. category for the poster "**3D Transient CFD Simulation of an In-Vessel Loss-of-Coolant Accident in the EU DEMO WCLL Breeding Blanket**" by **Mauro Sprò**, Politecnico di Torino, Italy
- **2nd place** in the PhD category for the poster "**Methods for Safety and Stability Analysis of Nuclear Systems**" by **Nicolò Abrate**, Politecnico di Torino, Italy
- **3rd place** in the PhD category for the poster "**Design and Thermal-hydraulic Transient Analysis of Primary Cooling Systems for Tokamak Fusion Reactors**" by **Cristiano Ciurluini**, Sapienza University of Rome, Italy

**UWB Rector's special award** in the BSc. category for the poster "**Quality Control for 4D Extracranial Stereotaxic Radiotherapy Treatment Guided by Cone Beam CT**" by **Mercedes del Pilar**, National University of San Marcos, Peru



From the 23rd to the 27th of October, 2023, the Faculty of Electrical Engineering organized an international workshop – PILSMR2023. This event was designed for students and young researchers who share a keen interest in small modular reactors. Eleven participants supported by the ENEN2Plus

project from various countries, such as Italy, Slovenia, Germany, Spain, France, Hungary, Serbia, and Ghana, gathered in Pilsen for the workshop. Alongside them, representatives from major Czech companies in nuclear and non-nuclear industries and doctoral and master's students from the University of West Bohemia participated. Throughout the workshop, leading experts from universities, research centers, and industries across European countries delivered interesting lectures and seminars. On Wednesday, participants enjoyed a visit to Doosan Škoda Power, featuring an exciting tour of the steam turbine production facilities. The workshop also involved interactive sessions, where participants, working in small groups, endeavoured to design suitable reactors for selected countries in Europe and beyond. Towards the workshop's conclusion, each group successfully presented their concepts to fellow participants.



**David MAŠATA** is a PhD student and researcher at the Faculty of Electrical Engineering, University of West Bohemia, where he also obtained the BSc. and MSc. degree in Electrical Power Engineering. He is currently involved in nuclear-related educational activities at the Faculty, and is also a member of the nuclear research group. His work's main field is utilizing nuclear sources for heat production.

## Scientific Dating - an encounter across disciplines

On October 5-6, SCK CEN brought an engaging two-day workshop: 'Scientific Dating - an encounter across disciplines' at the Belgian Comics Art Museum in Brussels. In a world where research is increasingly collaborative and inclusive, this workshop was a unique opportunity for junior scientists from diverse fields to come together. They shared valuable insights and approaches related to research on nuclear topics. Our main aim? To foster connections, integrate various perspectives, stimulate critical thinking, and explore innovative ways to embark on collaborative projects. We were thrilled to have 11 talented people from 7 different European countries with backgrounds in either natural or social sciences, forming a group of MSc students, PhD students and junior professionals.



On the first day, these great minds not only presented their own research but also delved into the realm of transdisciplinarity. Together, they discussed both the challenges and opportunities that lie ahead. Three subgroups were made that each focused on a specific nuclear theme which were management of nuclear emergencies and post-accident recovery, small modular reactors and the medical application mammography screening. Each group formulated a research question and developed a transdisciplinary project with special attention to all social actors and level of involvement needed from various actors in the research process.

On the second day, the participants took their collaboration to the next level. The different research projects were presented to each other. During these presentations, each group member was provided with a specific stakeholder role relevant for the presenting group. In a final stage, the groups reflected on the provided feedback and incorporated this in their final project proposal. The wonderful team spirit and the high quality of discussions with respect and interest for everyone's background made this event a success.



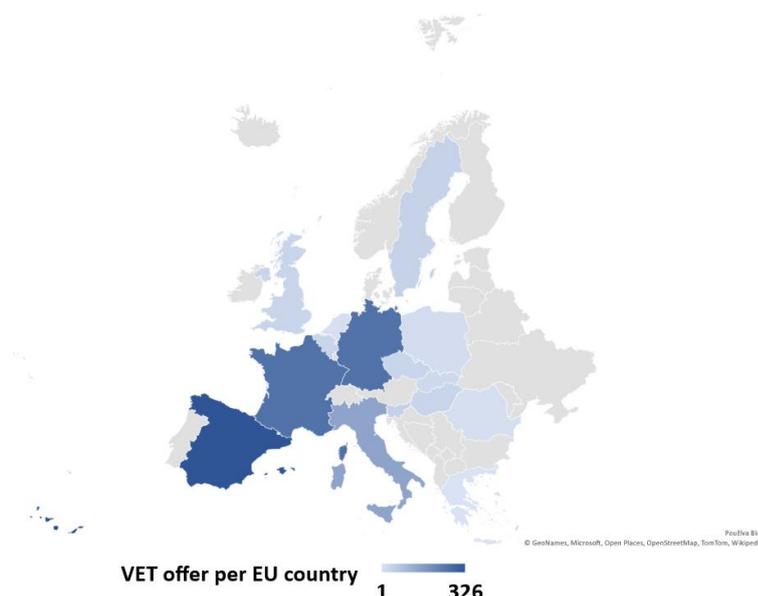
**Jakob LUYTEN** has a teaching degree and a MSc in Chemistry from the Catholic University of Leuven. He worked at the Avans University of Applied Science as a lecturer and within the L&D group of Sanofi Geel as site training specialist. He is currently working at the SCK CEN Academy focusing on education and training, policy support and outreach activities.

## Collection and analysis of VET opportunities in the EU

Securing NPP operations, advancing research and development (R&D), and managing retirements depend on a skilled workforce. Promoting nuclear education and training (E&T) and vocational education and training (VET) across Europe is vital to sustain and improve expertise in power and non-power sectors. WP4 of the ENEN2plus project aims to create a VET program and network. The VET sector is crucial and demands continuous attention to prevent a shortage of specialists. Project actions include analysing existing VET options, building VET communities, and considering a dedicated VET platform. In Task 4.1 of WP4 in the ENEN2plus project, the current VET offer was collected and analysed. An MS Excel-based data collection template was developed, called the "VET database," to store, categorize, and evaluate the data. The available data from public sources were collected, resulting in more than 1300 VET offers across 16 EU countries and the United Kingdom.

The collected VET offers were categorized in the VET database. These categories describe various aspects of the VET offer, including the VET provider, type, language, target audience, frequency, delivery, and learning outcomes, etc... The data evaluation aimed to identify domains without VET, analyse offer fragmentation, pinpoint key job roles and barriers, and assess the adequacy of current offerings in addressing required competencies. This evaluation began with a VET quality analysis, where a grading system was established. It involved evaluating the available information and the user-friendliness of the offer using 12 criteria, resulting in scores from 0 to 50. Based on these scores, grades

ranging from A (representing uniqueness) to E (indicating the need for significant improvement) were assigned. The results are generally satisfactory, with nearly 50% of cases achieving a grade A or B, indicating they are "qualified." However, a significant challenge arises from the insufficient user-orientation of many VET courses, with approximately 700 courses receiving grades of C or lower. The lack of user-orientation primarily results from missing information regarding certification, frequency, qualifications, and specified learning objectives. Additionally, limited availability of VET courses in English, accounting for only 20% of the courses, hampers international accessibility.



In the next phase of the VET analysis, key nuclear jobs in the EU were identified and evaluated based on the projected increase in human resources by 2035. Since neither precise data on VET provider capacities nor the share of VET in covering new job competencies were available, several assumptions had to be made. The coverage of new jobs by VET was estimated through the time required to reach the projected number of trained staffs. Based on this indicator the coverage of specific nuclear domains was evaluated as “Sufficient”, “To be improved” and “Critical”. The final distribution of nuclear domains is the following:

- **Sufficient** – Nuclear Materials, Nuclear Energy, Radiation Protection, Medical Applications.
- **To be improved** – Nuclear Safety, Nuclear Waste Management, Decommissioning.
- **Critical** – Management in Nuclear, Nuclear Fusion, Nuclear Safeguards and Forensics, Nuclear Security.

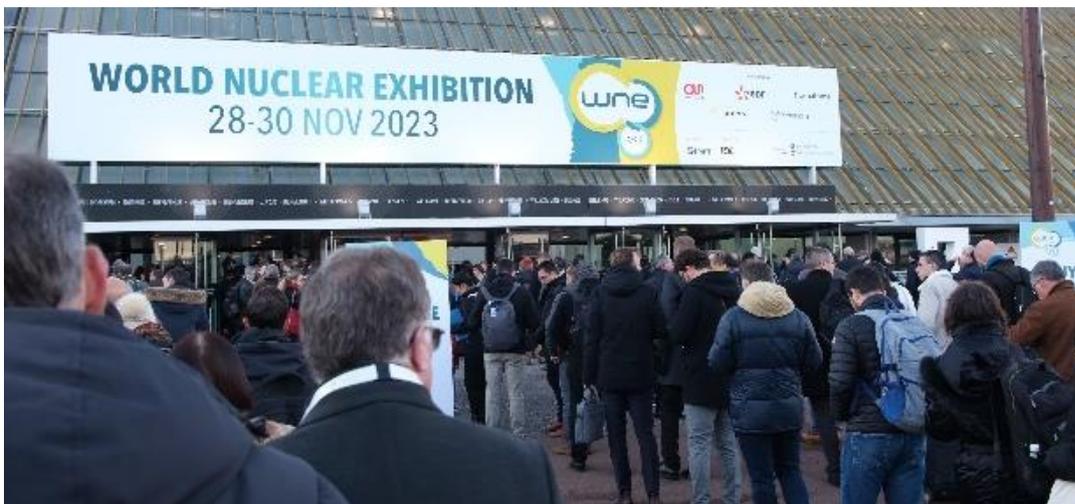
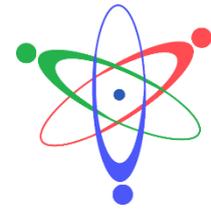
In the concluding phase of the VET analysis, the assessment was aligned with the specific needs of nuclear employers and individuals. The findings revealed a demand for more hands-on education in curricula, with the nuclear industry prioritizing examinations through assignments. Notably, there's heightened interest in VET among young professionals, surpassing the current offerings. Individuals expressed a desire for VET relevant to the nuclear sector, extending beyond specific job roles. An important insight was the challenge in accessing VET information, indicating a need for improvement. As a response, the upcoming T4.1 workforce will concentrate on developing new VET cases to address these gaps. The ongoing development of the ENEN HUB is seen as a promising solution to connect VET users with available offerings.



**Štefan ČERBA** graduated from the Slovak University of Technology in Bratislava (STU) in the degree course nuclear engineering. He worked at the Korea Atomic Energy Research Institute (KAERI) and as an expert advisor for the Slovak Nuclear Regulatory Authority. Currently he works as a senior researcher at STU where he is involved in research activities related to reactor physics, radiation protection, numerical simulations, and nuclear data. He is also involved in the education process through subject such as reactor physics, NPP decommissioning, materials for NPPs and computer network. He is involved and responsible for the implementation of several national and international projects, he is a task leader in ENEN2plus and communication manager in ENEEP. He is also a chairman of the NURECO – Nuclear Research Community civil association and the chairman of the Supervisory Board of the B&J NUCLEAR research spin-off company.

## First Meeting of the NUCLEATION community

In work package 4 of the ENEN2plus project, one task deals with the creation and operation of a Nuclear VET (Vocational Education and Training) Learning Community. This task shall contribute to resolving the current fragmentation of the relevant nuclear vocational training opportunities in the EU, thereby guaranteeing a coherent and sustainable EURATOM vocational training program. For several months, the partners in this task carefully prepared the creation of this community. Now called NUCLEATION, it plays an essential role in the ENEN2plus project. Main objective of NUCLEATION is to have VET related competences, experiences, and challenges quickly and effectively collected and disseminated within the community.



**Therefore, NUCLEATION shall be a community of people, not of organizations, while addressing the following groups:**

- ☑ Managers in education and training institutions, either public or private, that develop and offer vocational training directed towards occupations, job positions, or other professional activities on the labor market in nuclear domains like nuclear medicine, radiation protection, nuclear energy, or nuclear waste.
- ☑ Persons in organizations that are active in nuclear domains, and which are responsible for capacity building, competences, qualifications, and development of the human resources in these organizations.
- ☑ Persons interested in participating in vocational training that is related to activities and jobs or positions in nuclear domains.

Members should pursue the NUCLEATION objective through joint activities, discussions, problem-solving opportunities, information sharing and relationship building.

It was decided to invite people from the NUCLEATION target groups to a first live meeting, to breathe life into the community,

best at a central location during an important event: during the WNE 2023<sup>1</sup> in Paris, the first meeting took place on November 29th. On this

<sup>1</sup> see, e.g., <https://www.world-nuclear-exhibition.com/en-gb/the-show.html>

day nearly 20 persons convened in the meeting area of WNE 2023, coming from Belgium, France, Germany, Italy, Poland, and Sweden. Welcomed by Christian Schönfelder, the participants first presented themselves (country, organization, industry sector, position) and especially their expectations on NUCLEATION. Then Christian Schönfelder talked about how the partners in the ENEN2plus project had designed NUCLEATION, considering objective, target group, domain of interest, activities. He particularly emphasized the opportunities that will be given through the activities of the community: it may bridge different nuclear domains, bridge national frontiers, enable a continuous dialogue between demand of human resources in nuclear and the provided by VET institutions,

thereby boosting the development of nuclear competences in Europe. Thereafter, a very lively and extensive discussion between the participants started, in which they debated on many issues related to vocational training, illustrated by several practical examples, while talking about their expectations, comments, and suggestions on NUCLEATION. Finally, complemented by a discussion on a specific learning-oriented topic, participants confirmed that this first meeting fulfilled their expectations on a community of this type, especially the personal exchange on topics relevant for vocational training. Everybody agreed that this was a good start for the new community. Further meetings will soon follow, best as online virtual meetings.



### Want to join the community?

Apply for membership in NUCLEATION via the [form](#).

(Terms of Reference may be downloaded there as well) or directly contact Christian Schönfelder ([christian@schoenfelder.training](mailto:christian@schoenfelder.training)) resp. ENEN ([secretariat@enen.eu](mailto:secretariat@enen.eu)) and stay informed through the dedicated [LinkedIn group of NUCLEATION](#)

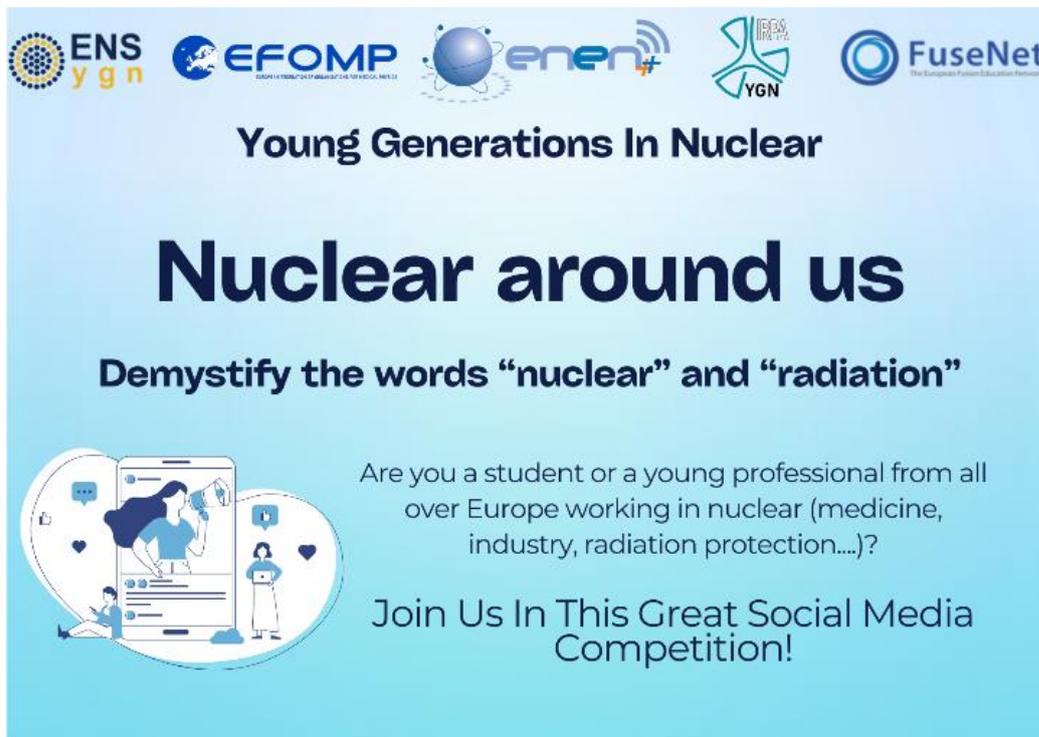


Formerly active as manager of the German AREVA Training Center, **Christian SCHÖNFELDER** was responsible for designing and implementing the comprehensible training program for the operation and maintenance staff of OL3, the EPR that recently started its commercial operation in Finland. For several years now, he has been active in education and training projects funded by the EU. In ENEN2plus, he is managing work package 4: *Development of Sustainable Vocational Training Program and Network*. He is not only a member of the German (KTG) as well as of the Spanish Nuclear Society (SNE), but also a member of ENEN as well as of FuseNet, the European Fusion Education Network.

## Cross-YGN Activities – The Launch of the Social Media Competition

### **Nuclear around us - Demystify the words “nuclear” and “radiation”.**

Last year, as part of the ENEN2plus work package WP3, Task 3.4, a new cross-sectional cooperation was established under the leadership of the European Nuclear Society (ENS) between various young sections of different nuclear and radiation-related organisations. After several months of virtual brainstorming, the collaboration, consisting of the young sections of EFOMP (European Federation of Organisations for Medical Purposes), IRPA (International Radiation Protection Association), FuseNet (The European Fusion Education Network) and ENS (European Nuclear Society), met in person for the first time in July, parallel to the [ENEN2Plus Summer School](#) at the Budapest University of Technology and Economics.



*Preliminary cover of the social media competition*

During the summer school in Budapest, the young representatives of the EFOMP, IRPA, FuseNet and ENS sections gave a short presentation about their experiences and careers in their fields and talked about their everyday work, different backgrounds and motivations for their careers. In particular, common preconceptions about ‘nuclear’ were addressed and the students were encouraged to consider a career in STEM, especially in nuclear sciences and engineering. In addition to talking to the students, the representatives were also able to exchange ideas with the teachers who had travelled with them and encourage them to take part in other extracurricular activities. The cooperation then came together to brainstorm intensively about possible projects such as meetings, sponsorships, working groups, etc. In addition to the goal of organising workshops at conferences, the first project to be realised is a social media competition. This competition “Nuclear around us” calls for the terms ‘nuclear’ and ‘radiation’ to be demystified by asking people up to the age of 35 to write an (unpublished) social media post and send the submission to the working group by email. A jury made up of members of the individual young sections will then select the ten best contributions to go

through to the next round. There, the selected ideas will be published by all members of the collaboration in their social networks and released for public voting. The winner will have their entry published on all the young sections' social media platforms and receive a travel and participation grant to the European Research Reactor Conference (RRFM) in Warsaw, Poland, from 21 to 24 April 2024. If eligible (Master or PhD student), the winner gets fast-track participation in the RRFM 2024 Student Competition (if eligible) and continue the debate on his/her work during the Poster Session. The collaboration will also organise a workshop during the RRFM and is planning another workshop in September at the EFOMP medical physics congress, taking place in Munich, but both are still in the planning stage.

**The Competition will be launched on 15<sup>th</sup> December, and submissions will be closed on 31 January 2024.**

The different organisations partaking the collaborations are:

- **EFOMP:** The European Federation of Organisations for Medical Physics (EFOMP) was founded in 1980 with the aim of being an umbrella for all European National Member Organisations (NMOs). The current membership (December 2023) covers 36 National Member Organisations, representing more than 10000 medical physicists and clinical engineers working in the field of medical physics, Individual Associate and Company Members. EFOMP aims to harmonize and advance medical physics both in its professional clinical and scientific expression throughout Europe and to strengthen and make more effective the activities of the NMOs by bringing about and maintaining systematic exchange of professional and scientific information, by the formulation of common policies, and by promoting education and training programmes.
- **FuseNet:** The FuseNet Association facilitates networking and education in the field of nuclear fusion. As such it supports educational endeavours in all stages of education (primary to post-gradual). The most important group it supports however are university (especially master) students. Over its 13 years of existence, it developed into a solid network of over 60 research institutions and universities from 26 European countries. A new and most welcome addition to the network in the past few years are the fusion startup companies. Apart from networking, The FuseNet Association organizes, to name a few, the Teacher's day and the MSc and PhD events.
- **IRPA:** The IRPA Young Generation Network is an international network of "Young Professionals" across the field of Radiation Protection. Its primary function is to promote communication, collaboration and professional development of Students and Young Professionals in the area of Radiation Protection and its allied fields. Attracting and retain new talents, supporting the development of students and young professionals studying / working in the field, and promote the understanding of Radiation Protection and its allied fields across the world are among the IRPA-YGN objectives.
- **ENS YGN:** Founded in 1996, the ENS YGN (European Nuclear Society Young Generation Network, section of the European Nuclear Society) represents around 4000 members in 21 countries as well as six observers (as of November 2023). The organisation promotes and contributes by all appropriate means to the advancement of science and technology in the peaceful use of nuclear technology. The organisation hosts several different events, including the European Nuclear Young Generation Forum (ENYGF), the European final of I4N,

workshops, and more. The ENYGF is a biennial conference for students and young professionals to exchange research results, network and broaden participants' horizons with regard to nuclear energy in Europe. In addition to organising, the network also participates in dialogues concerning the young generation in the nuclear field, thus giving students and young professionals a voice at conferences, meetings, etc.



**Leticia IRAZOLA** is a Medical Physics from Spain. She made her studies in Physics in Zaragoza (Spain) and then dedicated to the Medical Physics field with her MSc in Medical Physics in Rennes (France), PhD thesis in Sevilla (Spain) and short PostDoc in Santiago de Chile (Chile). She moved into the clinical field and made her Medical Physics residency at the Clinica Universidad de Navarra (Spain). She is currently secretary of the Communications and Publications Committee and chair of the Early Career SIG of the EFOMP. Based in La Rioja, she works as a medical physicist and combines this with university teaching and research.



**Andrea KOZLOWSKI** is a PhD Student from Scotland. She graduated with a BSc in Production and Energy Management (HTWK Leipzig) and a European Master in Nuclear Applications at FH Aachen (both Germany). After that she started working on her PhD at Strathclyde University in Glasgow (Scotland) with an estimated graduation in 2024. She started working with the ENS YGN in 2019, became Vice Chair in 2021 and Chair in 2023. She was also Vice Chair of the German Nuclear Society Young Generation.

## ENEN2plus BSc and MSc Nuclear Competition and Summer School 2024

Every year the ENEN MSc and BSc Competition is organized to promote and support the work of young researchers in Europe.

The **ENEN MSc and BSc Competition** is an action of the European Nuclear Education Network to support the Research and Science in the Nuclear fields promoting the works of the BSc and MSc students. The **ENEN MSc and BSc Competition** will consist of about 20 MSc and 20 BSc presentations nominated by ENEN Members or other universities and selected by the ENEN2plus Jury. The event will be divided into several sessions according to the subjects. The participants will make a presentation of their research work for 10 minutes followed by 5 minutes of questions and discussion in a competitive but friendly environment.

All presentations will be judged by the Jury members considering the quality of the submitted paper as well as the quality of the presentation itself. Moreover, the participation in the discussion and the clarity in answering the questions received will also be considered in selecting the winners. The best presentations will be awarded the ENEN awards. Please see the “Criteria and Procedure for the ENEN Awards” in Annex I. All nuclear topics and fields are welcome: Nuclear Engineering and Safety, Medical Applications, Radiation Protection, Waste Management and Disposal, Radiochemistry, Nuclear Materials, or any other nuclear-related topic.

**Qualification for application** - applicants should be either:

- BSc and MSc students studying at one Institute listed among ENEN Members and any other universities and prepare their BSc and MSc thesis work in any nuclear field
- The criteria for the selection of the participants are:
  - Quality of their research work,
  - Motivation letter,
  - Recommendation letter,
  - No balance among the participating countries is considered.

All abstracts and presentations provided for the Event will be shared among the ENEN Members after the Event. Participants agree with this rule by submitting their material. All participants are requested to attend the event and the award ceremony of the ENEN BSc and MSc Competition in person.

**Registration - from the 1<sup>st</sup> of February 2024:** <http://nuclearcompetition2024.enen.bme.hu/>

### Thematic of the competition and workshop

- Nuclear Energy and Technology
- Radiation Protection
- Nuclear Waste Management
- Medical Applications

### Program

- Day 1: Welcome and Introduction
- Day 2: Nuclear Competition
- Day 3: Summer School – theoretical part
- Day 4: Summer School – practical part
- Day 5: Evaluation and closing ceremony



### Financial Support

- For the ENEN2plus BSc and MSc award ENEN Association will grant a 750€ the winners
- Selected applicants will receive financial support for their travel expenses, and they can participate on the summer school organized by the ENEN2plus.

**Deadline for submitting your application: 2<sup>nd</sup> May 2024**



**Štefan ČERBA**

## ENEN2Plus 14C Workshop (15-19 July 2024)

The ENEN2plus master students' workshop on radioactive carbon isotope  $^{14}\text{C}$  will be organized by Nuclear Physics Institute (NPI) in 15-19 July 2024. The isotope  $^{14}\text{C}$  is produced naturally, artificial production is associated with atmospheric nuclear bomb testing and nuclear fuel cycle. Measurements of tiny amounts of  $^{14}\text{C}$  serve for radiocarbon dating, wildlife crime control, forensic analysis of works of art, differentiation between fossil and bio-fuels, monitoring of nuclear power plant releases, to list just a few examples. The most sensitive method for  $^{14}\text{C}$  today is accelerator mass spectrometry (AMS). In addition to theoretical lectures, the workshop will focus on extensive hands-on training for sample preparation, AMS measurements, and data evaluation. Students will get the opportunity to study their own materials. Due to the capacity of AMS laboratory, the workshop is limited to eight participants. Interested candidates will submit proposals that will describe research goals, materials for analysis and how the samples will be obtained. Authors of the selected proposals will be invited for the workshop that will be hosted by NPI at Prague and Řež near Prague.

**The workshop and cross-border mobility of workshop participants is supported by ENEN2plus project funded by the European Union.**



*AMS system at Nuclear Physics Institute, Czech Republic*

Interested candidates, please visit event [WEBPAGE](#)



**Jan KAMENÍK** is a researcher at Nuclear Physics Institute of the Czech Academy of Sciences. He is focused on accelerator mass spectrometry for measurement of minute amounts of certain long-lived radionuclides. Jan is particularly interested in  $^{10}\text{Be}$  and  $^{26}\text{Al}$  that can provide valuable information about processes on our planet. Jan has been active in neutron activation analysis, a robust method for measurement of elemental composition of various solid and liquid samples.

## Reminder

### Winter School on “Nuclear Waste Safety and Management” (Bologna, Italy - 4-8 MARCH, 2024)

The school intends to provide a complete perspective of fundamental aspects of nuclear waste management and disposal solutions and issues ranging from radioprotection to management issues and final disposal. The lectures will also encompass the norms and safety standards in the nuclear field, and the impact of nuclear activities on the environment and the population, including environmental radiation monitoring and risk and safety assessments for both the population and the ecosystem. The objective is to give to the students a right background allowing them to be fully engaged in the training session focused on post-closure safety assessment of nuclear waste disposal facilities.



Starting from the concept of a ‘safety case’ relating to radioactive waste disposal and its constituent parts the training session will cover all aspects of planning and managing nuclear waste and a disposal system. The objective is to provide a walk-through best international practice for post-closure safety assessment, signposting guidance and providing examples. This will include exercises in identifying scenarios and developing associated conceptual models and hands-on sessions with the AMBER compartment modelling tool. Students will be guided through running calculations, to exploring a model for near-surface disposal including wastes, the engineered facility, geosphere and biosphere, exploring results and making changes to explore scenario, model and parameter uncertainties.



**Barbara FERRUCCI** is born in 1975. She is currently employed at the FSN - SICNUC - TNMT Laboratory within the ENEA Research Centre in Bologna, Italy. She obtained her Master's degree in Nuclear Engineering in 2005 and a PhD in Nuclear Engineering from Bologna University in 2009. Throughout her doctoral studies, her research centered around the utilization of geographic information system (GIS) software for analysing environmental impacts, as well as simulating radioactive releases and conducting dose assessments. At present, Barbara is actively participating in different projects including a partnership with ENEA and ASI (Italian Space Agency) for the feasibility study of a nuclear fission reactor for the power generation on the Moon surface, the ENEN2Plus project, a EURATOM funded project which seeks to enhance nuclear expertise in Europe by offering continuous education and structured training programs.

## ENEN# Webinars

The first edition was offered in the frame of the ENEN+ project, as a spontaneous initiative that resulted immediately successful for both the willingness of Past-student and Experts to deliver typically one-hour talks on their recent research and relevant findings during Friday afternoons. The combination of Past-student and Experts, often difficult to distinguish among each other because of the high-level discussions proposed by all interventions, was conceived for having a twofold attractiveness for young students and researchers: past-student show examples of the work being done in the early stages of their careers in the nuclear fields, while experts bring to the audience the live voice of senior researchers and professors from qualified institutions in the nuclear fields.



### Continuing ENEN# Webinars on Nuclear Energy managed by the University of Pisa

In the frame of the activities for WP3 of the ENEN# project, the [MSc in Nuclear Engineering of the University of Pisa](#) as member of CIRTEEN has organised a new series of webinars for the Academic Year [2023-2024](#).

As for the previous academic year series, also the new one features **Past-Student and Expert Webinars in Nuclear Energy**, replacing an earlier more specific focus on “Nuclear Engineering”. Actually, also in previous editions general subjects were covered not strictly pertaining to nuclear engineering, but in the latest edition there was a specific need to focus also on “*organising webinars about the novelties (e.g., nuclear safety, medical application, environment, decommissioning, space, etc.) involving the companies and research centres*”. Webinars are held on Friday afternoons and are open to all the interested persons, covering a variety of scientific and policy subjects of great interest at the moment for nuclear energy. Knowledgeable persons from nuclear research and development fields and eminent representatives of the main

institutions and platforms are delivering the webinars, together with past students, with an interesting and varied mix of subjects. The webinars are generally recorded and are made available on the website of the Master of Science in Nuclear Engineering of the University of Pisa at the [link](#). The announcements are sent via e-mail to more than 800 addresses and are posted also on LinkedIn and Facebook pages of ENEN and of the organisers. Whoever wishes to receive a weekly reminder about the webinars with the related links for connection can subscribe at this [Link](#) . Likewise, lecturers proposing to deliver a nearly one-hour webinar about any relevant subjects are encouraged to send a message to Prof. Walter Ambrosini at the e-mail address [walter.ambrosini@unipi.it](mailto:walter.ambrosini@unipi.it) .

It is remarked that this initiative, started in 2021, is now configured as a good tradition for dissemination of useful research and policy information from different European projects related to nuclear energy, in addition to the ENEN# one. Recently, the [EU TANDEM project](#) made use of the series to include specific webinars on nuclear hybrid energy systems (HES) involving Small Modular Reactors. This is an excellent example of cooperation between European projects that we wish definitely to encourage.

**So, please, have a look at our [schedule](#) and feel welcome to attend our interesting webinars held each Friday afternoon at 15:00 CET.**



**Walter AMBROSINI** is Full Professor in Nuclear Plants at the University of Pisa, Italy. His Research interests involve the field of Nuclear Reactor Thermal-hydraulics. He has been President of the Research Doctorate in Nuclear Engineering in Pisa (2008-2016), President of the MSc in Nuclear Engineering in Pisa (2011-2018), President of the European Nuclear Education Network (2013-2016), Member of the ASN Commission for Energetics and Nuclear Engineering (2018-2021), Present Member of the CDs of CIRTEN and of the Associazione Italiana Nucleare (AIN). His relevant Memberships: AIN, ENS, ANS, ASME.



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- ❖ Exploitation of results
- ❖ International Mobility travel fund



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Rue d'Egmont 11, Bruxelles 1000 – Belgium



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