

ECC-SMART Project Newsletter

September 2024

Dear Partners, Colleagues and Friends,

We are happy to welcome you at the latest issue of the ECC-SMART Project External Newsletter.

This edition will be special as it focuses completely on the last workshop we organized in Prague, Czech Republic. Post-Irradiation Examination (PIE) plays a crucial role in the safe operation of nuclear power plants and is essential for developing the next generation of nuclear reactors and technologies. The workshop featured a combination of theoretical courses and practical demonstrations of PIE techniques.

We hope you enjoy this edition and share it with your colleagues and friends. We're thrilled to announce the success of our recent event and look forward to hosting more like it in the future!

ECC-SMART Project Team



Workshop on Post Irradiation – Examination (PIE) 26-30 August 2024

[FIND OUT MORE!](#)

Research Center Rez



The Post-Irradiation Examination (PIE) Workshop brought together experts in nuclear research to explore the latest advancements in PIE techniques. The workshop attracted a dynamic group of 20 early-career researchers and students, aged between 18 and 30, from across the globe, all eager to enhancing their research skills and academic expertise.

Participants gained insights on:

- Irradiation experiments
- Dosimetry
- Fuel inspection
- Safety regulations
- Advanced material testing
- Applications of PIE in future nuclear technologies

The workshop offered a comprehensive platform for sharing critical knowledge on the long-term operation and safety of nuclear reactors, along with hands-on experience through tours of research reactors and facilities.

CORDIS
EU research results



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LVR15

The participants of the workshop had the opportunity to visit the **LVR-15 research reactor** facility. They got to see the reactor, explore the control room and interact with the operators learning about transport and safety operations.

The tour provided valuable insights into reactor functions, material testing, and nuclear safety protocols.



VRABEC

Participants got to visit the **VRABEC** University reactor at ČVUT.

The **training reactor VR-1** of the Faculty of Nuclear Sciences and Physical Engineering Czech Technical University in Prague is a light water, zero power research reactor with enriched uranium.

The pool type arrangement assures quick and easy access to the reactor core, easy insertion and extraction of various experimental samples and detectors, simple and safe manipulation with fuel elements.



JOINT EUROPEAN CANADIAN CHINESE DEVELOPMENT OF SMALL MODULAR REACTOR TECHNOLOGY



This project has received funding from the Euratom Research and training programme 2019-2020 under Grant Agreement No 945234.



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HOT CELLS

The participants got to visit the **hot cell system** built at the Research Centre Rez within the **SUSEN** project. They got an exclusive insight to the new design based on the concept of heavy shielding with an airtight steel box.

They got the opportunity to manipulate the robotic arms and participate in a hands-on safety training simulation.



TANDETRON

TANDETRON 4130MC electrostatic accelerator at ÚJF ASCR v.v.i. – Universal source of MeV ions for irradiation and analysis.

Participants visited the TANDETRON facility, gaining insights into cutting-edge ion beam technology and its applications in nuclear research. The excursion provided hands-on exposure to advanced equipment, fostering deeper engagement with irradiation techniques.



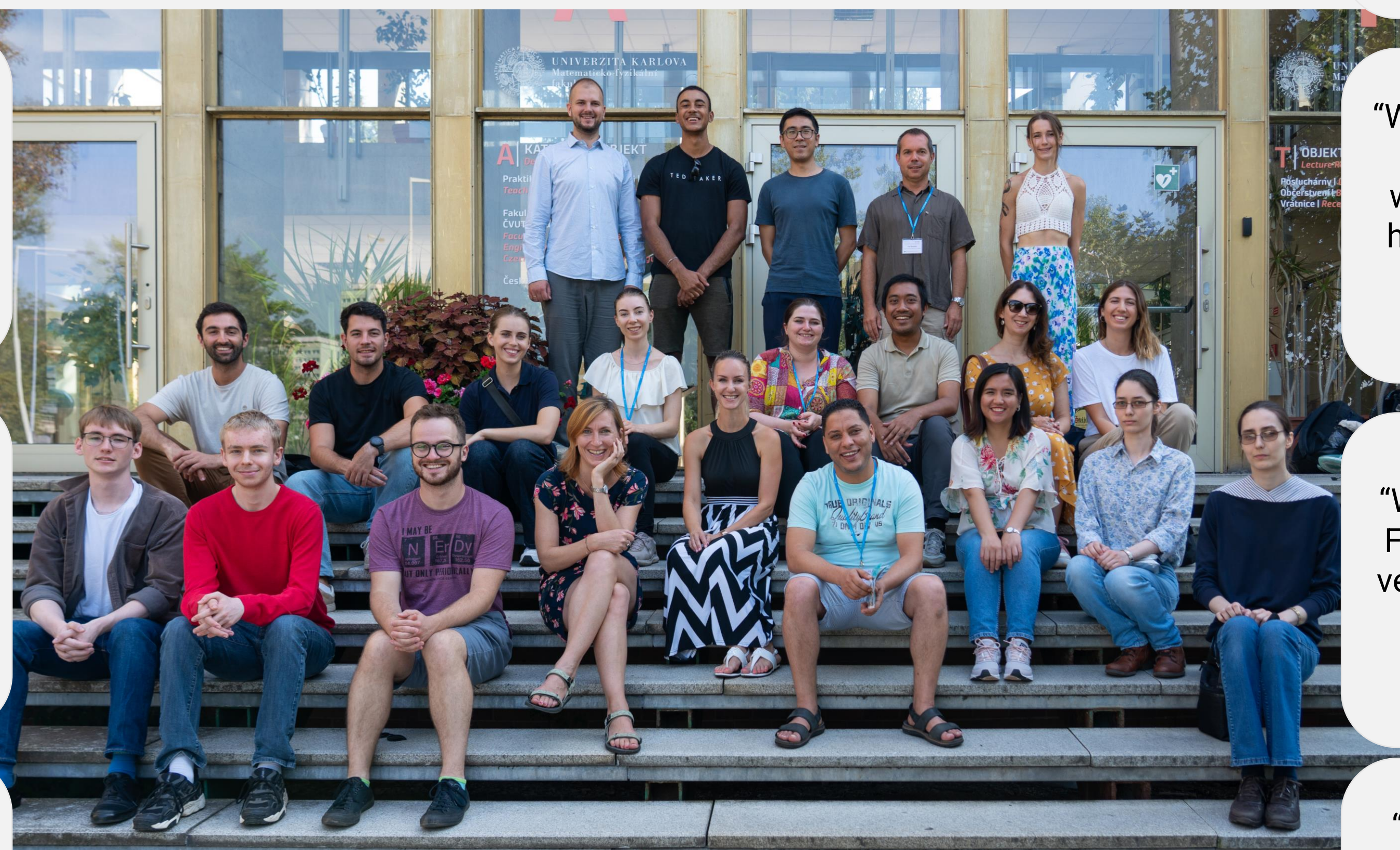
"The program was really interesting. I know it will be useful for my research. The workshop gave me a lot of insight on how to deal with irradiated material. Also, I would like to mention that thanks to ENEN funding I was able to attend."
- Merell Lystra Recta

TESTIMONIALS

What are the participants saying?

"My favorite lecture was the one on Nuclear Power Plant operation and the future. It was very unique, with a realistic overview of the nuclear fission landscape. Focusing on financials of construction, operation and decommissioning."
- Ryan Oatley

"The workshop gave me a deeper technical background on the effect of irradiation on materials which is aligned to the work we are doing in my company. What I like the most was that not only we had technical courses but also explored how it's applicable to the industry."
- Lucas Autones



"What I liked the most was having the opportunity to visit different facilities and be able to try working with the manipulators in the hot cells. I had never done this before. It gave a whole new level of hands-on experience."
- Selina Richter

"It was my first time seeing a reactor. I also got the opportunity to speak with the people that work there with the equipment and ask them questions."
- Oleksii Ishchenko

"We had the opportunity to visit a lot of facilities. From hot cells to irradiation reactors. Which is a very rich thing. We got to see how the knowledge is gathered and the facilities operated."
- Lucas Autones

"We got to visit the hot cells and research reactors. It was an amazing experience, something I hadn't got the opportunity to do yet in my university."
- Ryan Oatley

"The most interesting part of the workshop was seeing how material science comes together to bring a safer nuclear industry. We also got an in-depth approach of how this materials get tested to keep nuclear reactors safe."
- Luiza Vlasenko Mischenko

PROJECT CONSORTIUM

20 partners: 15 from Europe, 3 from China, 1 from Canada and 1 from Ukraine



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