



DigiDECOM 2024

Scientific Program



DAY 1 – Tuesday (November 12th)

Registration (Please bring your ID)

- November 12 from 8:00 AM to 8:50 AM at IFE Os alle 5, 1777 Halden

9:00 AM Welcome & Practicalities

9:10 AM **Opening Address** by the **Mayor of Halden** and the **Vice President of IFE**

Session 1 starts at 9:30 AM

Keynote speeches will cover

- Global demands and trends
- High-impact innovations
- Cross-industry synergies
- Significant international initiatives
- EURATOM research indirect actions

Chairs: **Javier ALONSO** and **Mark SHARPE**

9:30 AM IAEA (Helena MRAZOVA) Plenary presentation

9:55 AM EPRI (Martin BRANDAUER) Plenary presentation

10:20 AM OECD NEA (Alexia MERCIER) Plenary presentation

10:45 AM – 11:10 AM Coffee Break

11:10 AM Cyclife Sweden AB (Arne LARSSON) Sustainability in Nuclear decommissioning and RWM

11:35 AM EC DG RTD Euratom Unit (Seif Ben Hadj HASSINE) Overview of the Euratom research indirect actions on Decommissioning and RWM

11:55 AM IFE & NNRC (Andreas BYE & István SZŐKE) AI, data and Robotics for sustainable nuclear lifecycle (HADRON)

12:15 PM – 1:30 PM Lunch Break





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DigiDECOM Sponsors Roadshow

Join us at 1:30 PM to meet our esteemed Sponsors

Opening address by Bjørn Axel GRAN, Vice President of IFE

Engage with industry pioneers, explore their innovative solutions, discover how they are driving advancements in the nuclear industry. This is your chance to be inspired and to network with key players shaping the future of our field.

Session 2 Risks, safety and security management

Chairs: Meritxell MARTELL and Duriem Calderin MORALES

2:30 PM Introduction by Session Chairs

2:35 PM Rivne Nuclear Power Plant *Nuclear safety and cyber security aspect – Rivne NPP case study*

2:55 PM NNEGC Energoatom *Equipment Support for Nuclear Safety*

3:15 PM – 3:45 PM Coffee Break

3:45 PM SHARE platform *The role of social sciences and humanities in decommissioning research & innovation*

4:05 PM Anthony BANFORD (National Nuclear Laboratory) *SNETP and EURATOM Training Program*

4:25 PM Javier ALONSO (INGECID) *Different approaches in the design of Independent Spent Fuel Storage Installations (ISFSIs)*

4:45 PM Antti RÄTY (VTT) *FIR1 TRIGA research reactor dismantling project*

5:05 PM James M. HYLKO (Hylko Nuclear) *Decommissioning a portable nuclear reactor that sat on the top of the world (Logistics applied to decommissioning)*

5:25 PM Fionán O'CARROLL (SWECO) *Digital Decommissioning. Case study: Salaspils nuclear reactor, Latvia*

5:45 PM - Day Adjourned





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DAY 2 – Wednesday (November 13th)

Session 3 Starts at 8:40 AM

New initiatives and emerging technologies & Advanced training tools and methods

Chairs: Anthony BANFORD and Maugan MICHEL

8:40 AM Introduction by Session Chairs

8:45 AM Bradley GORDON (CREATEC) *Createc's Expertise in Sensing and Imaging Deployment in Extreme Hazardous Environments: Case Studies and Lessons Learned*

9:05 AM Michele ORNAGO (SOGIN) *3D modelling of Caorso's Reactor Building: creation of an interactive tool for the decommissioning of Caorso NPP*

9:25 AM Marco DEL GATTO (NUCLECO) *ANDROMEDA project: An integrated System for the creation of a full digital copy of the plant*

9:45 AM André JOLY (COO - SPIX industry) *An embedded Smart Voice Assistant for the field operators to increase their safety and operations feedback*

10:05 AM Morten GUSTAVSEN (IFE) *Update on ColaRIS project*

10:25 AM – 10:50 AM Coffee Break

Session 4 Euratom Research and Training Programme and other Frameworks

Chairs: Seif Ben Hadj HASSINE and Réka SZŐKE

10:50 AM Introduction by Session Chairs

10:55 AM Seif Ben Hadj HASSINE (EC DG RTD Euratom Unit) *Euratom Research and Training Programme*

11:10 AM Maugan MICHEL (CEA) *Conclusion of the CLEANDEM Project*

11:30 AM Maugan MICHEL (CEA) *Presenting the XS-ABILITY Project*

11:50 AM Antti RÄTY (VTT) *Digital Twins and ontology for robot assisted decommissioning operations*

12:10 PM Réka SZŐKE (IFE) *Presenting the EJP EURAD-2 project and the DITOCO2030 work package*

12:30 PM – 1:30 PM Lunch Break





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Session 5 Role of AI, data and robotics in safety compliance

Chairs: André JOLY and Nicklas TJERNLUND

1:30 PM Introduction by Session Chairs

1:35 PM Duriem Calderin MORALES (IAEA) *Safety Standards, the role of AI in safety during decommissioning*

1:55 PM Nicklas TJERNLUND (Vattenfall AB) *The use of robot to carry out the removal of neutron activated concrete in Ågesta Nuclear Power Plant*

2:15 PM Darren ROURKE (Amentum) *Demystifying the use of Large Language Models (LLMs) in the Nuclear Industry projects*

2:35 PM Federica ROBERTO (SCK CEN) *Reinforcement learning for workers radiation Safety: A case study in the ANUBIS project*

2:55 PM Victor Casas MOLINA (SCK CEN) *Bayesian optimization of a HPGE detector for 3D activity reconstruction in radioactive waste drums*

3:15 PM Jan PORSMYR (IFE) *Practical examples from HADRON*

3:35 PM – 3:55 PM Coffee Break

15:55 Special Session Breakout room on EURATOM DORADO and HARPERS Projects

Introduction by Session Chairs & Practicalities (main room)

4:00 PM Group Discussions (meeting rooms at the venue)

5:30 PM - 6:00 PM Summary in Plenary Session (main room)

6:00 PM Day adjourned



19:30 Welcome drinks

20:00 Banquet





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DAY 3 – Thursday (November 14th)

Session 6 starts at 09:30 AM

Sustainability and circular economy

Chairs: [Helena MRAZOVA](#) and [Arne LARSSON](#)

9:30 AM Introduction by Session Chairs

9:35 AM [Helena MRAZOVA](#) (IAEA) *Advancing Nuclear Decommissioning: Leveraging sustainability approaches*

9:55 AM [Ingeborg MORK-KNUTSEN](#) (DSA) *Navigating sustainability in nuclear decommissioning: Regulatory instruments, Challenges and Opportunities*

10:15 AM [Meritxell MARTELL](#) (Merience) *Local communities remain vital partners in decommissioning and potential repurposing*

10:35 AM [Kelvin BROWNING](#) (NRG) *Optimising radioactive waste management at NRG using the VINISH and HIRARCHI systems*

10:55 AM [Jeffrey FORTIN](#) (CNL) *Robotics to support Digital Visualization for Decommissioning*

11:15 AM [Marja VUORIO](#) (ERDO Association) – *title to be confirmed*

11:35 AM [Niels K. MARK](#) (IFE) *Use of CHNPP Planner in the CHERNOBYL NPP decommissioning*

12:00 PM – 1:30 PM Lunch Break

Panel discussion

Moderator [Ingeborg MORK-KNUTSEN](#)

1:30 PM – 3:00 PM

Emphasis will be placed on utilizing AI, data analytics, and robotics advancements to improve efficiency, safety, and environmental stewardship throughout the nuclear lifecycle. Additionally, the discussion aims to underscore the crucial role of training and stakeholder engagement in nuclear decommissioning and waste management.

3:00 PM – 3:30 PM Coffee Break





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3:30 PM Special Session

Breakout Room(s) Risk, Safety and Sustainability & Role of digitalisation

Introduction by session chairs & Practicalities (main room)

3:30 PM Group Discussions (meeting rooms at the venue)

5:00 PM - 5:30 PM Summary in Plenary Session (main room)

5:30 PM Concluding Remarks

See you in 2025!

DAY 4 – Friday (November 15th)

Technical visit **Please bring your ID**

starts at **9:00 AM** at IFE Os alle 5, 1777 Halden

- **HADRON Lab** offers facilities for applied research and development in robotic solutions.
- **Halden Virtual Reality Centre** specializes in identifying and testing innovative applications of emerging VR & AR technologies, focusing on design, training, and the optimization of safety-critical tasks in industrial settings.
- **Cybersecurity Centre** leverages IFE's decades-long R&D expertise in the operational safety and security of critical infrastructures.
- **HAMMLAB** is IFE's simulator-based research facility dedicated to studying operator crew behavior and performance in control room environments.

12:30 Lunch

