

SAFER2028 Day

Date: 2.4.2025

Location: Innopoli 1 & 2, Tekniikantie 12 & 14, Espoo

Morning Session, Innopoli 2, room Edison1&2

08:30 - 09:00 Registration and Coffee

09:00 - 09:20 Welcome and Opening Remarks, *Juho Korteniemi, MEAE*

09:20 - 09:40 What's New for SAFER2028 for Its Second Half, *Tomi Routamo, STUK*

09:40 - 10:20 News from End Users & Outlook on Research Needs:

- 09:40 - 10:00 *Anne Kontula, TVO*
- 10:00 - 10:20 *Eero Vesaoja, Fortum*

10:20 - 10:50 Coffee Break

- 10:50 - 11:10 *Tomi Routamo, STUK*
- 11:10 - 11:30 *Susanna Aro, Posiva*

11:30 - 11:50 Greetings from the Swedish Radiation Safety Authority, *Cheuk Lau, SSM*

11:50 - 12:10 Infrastructure Funding for 2026-2028, *Mikko Lemmetty, TVO*

12:10 - 12:30 Q&A and Discussion

12:30 - 13:30 Lunch

Parallel Afternoon Sessions, Innopoli 1&2

13:30 - 16:30 Session 1: Overall Safety and Society, Edison 2, Innopoli 2

- Chair: *Paula Savioja, STUK*

13:30 - 16:30 Session 2: Reactor Safety and Fuel Lifecycle, Hippokrates, Innopoli 1

- Chair: *Eero Virtanen, STUK*

13:30 - 16:30 Session 3: Nuclear Waste Management, Edison 1, Innopoli 2

- Chair: *Petri Jussila, STUK*

13:30 - 16:30 Session 4: Mechanical and Structural Safety of Nuclear Power Plants, Galileo, Innopoli 1

- Chair: *Tarja Nuoranne, STUK*

~ 15:00 Coffee break

Parallel Afternoon Session Agendas

Note: No online participation option for afternoon sessions - all sessions at Innopoli 1 or 2!

Session A: Overall Safety and Society, room Edison 2, Innopoli 2

Time	First name	Last name	Organisation	Topic
13:30	Merja	Airola	VTT	AIDA - AI enhanced stakeholder engagement and risk communication for future nuclear deployment
13:40	Ludovic	Fulop	VTT	OSPATO - Open seismic platform and data toolbox
13:50	Hanna	Koskinen	VTT	EASILY - Intelligent human system integration throughout the nuclear plant lifecycle
14:00	Ulpu	Leijala	FMI	MAWECLI - Hazardous external events in the warmer and altering climate
14:10	Sami	Naumer	VTT	CHARMAS – Preparation for Finland for SMR deployment
14:20	Antti	Pakonen	VTT	CHAINS - Safety assessment of complex functional chains in nuclear I&C
14:30	Tero	Tyrväinen	VTT	RILTO - Risk-informed decision support for long-time operation using AI
14:50	Coffee break			
15:20	Nikhil	Verma	VTT	FASAANI2 - Fire Safety, Fire PRA, Cable Fires, SMR, Wildfires
15:30	Juhani	Vihavainen	LUT	PASAFE - Passive Systems in Overall Safety
15:40	Kim	Calonius	VTT	TOPAZ - Total plant fragility in external hazards
15:50	Kaupo	Viitanen	VTT	LANOS - Leadership and Safety Culture in New Forms of Organizing for Assuring Nuclear Safety
16:00	Arto	Laikari	VTT	DITOCO-2 - Digital Twin Integration for Radioactive Repositories
16:10	End of session			

Session B: Reactor Safety and Fuel, room Hippokrates, Innopoli 1

Time	First name	Last name	Organisation	Topic
13:30	Asko	Arkoma	VTT	FORMA - Modelling and cladding experimental Assessments
13:40	Asko	Arkoma	VTT	RENOIR - Radionuclide Emission and Source Term Investigation through Modelling and Experimental Research
13:50	Giteshkumar	Patel	LUT	Enhancing the understanding of interfacial heat and mass transfer phenomena of two-phase flows
14:00	Giteshkumar	Patel	LUT	Experimental study of cold liquid mixing in BWR downcomer
14:10	Lauri	Pyö	LUT	C-FLOW continuation project - experimentally investigating two-phase critical flow with CRAFTY facility
14:20	Heikki	Suikkanen	LUT	Flow-induced vibrations in fuel
14:30	Ville	Valtavirta	VTT	SYSI - Core level simulation advances
14:40	Tatu	Hovi	VTT	Understanding Thermal-Hydraulic Phenomena Through Computational Modeling (U-TERM)
14:50	Suvi	Lamminmäki	VTT	MOFI - Metal-Organic Framework Integration for Iodine Filtration and Immobilization
15:00	Coffee break			
15:30	Eero	Karola	VTT	SOPIS - Study on plant behaviour in various scenarios
15:40	Rebekka	Komu	VTT	COCONUTS - Coupled codes for transient analysis
15:50	Ana	Jambrina	VTT	RECODOS - Reactor Computational Dosimetry, RPVI, LTO, Surveillance Programme, Fuel Campaigns, Shielding, and Radiation Protection
16:00	Ana	Jambrina	VTT	DETMORE - Detector Modelling and Signal Reconstruction, Energy Deposition, I&C, Core Protection & Monitoring System
16:10	Ana	Jambrina	VTT	RADTRAN - Radiation Transport, NDE, DPA, Safeguards, Active/Passive Interrogation Techniques, Materials Lifespan Characterization.
16:20	Pauli	Juutilainen	VTT	KRITU - Criticality safety during final disposal
16:30	End of session			

Session C: Nuclear Waste Management, room Edison 1, Innopoli 2

Time	First name	Last name	Organisation	Topic
13:30	Fahim	Al Neshawy	Aalto	PERCO3 - Durability performance of concrete in LILW repositories
13:40	Ahsan	Chonche	VTT	CULFIX - Surface microcracks in Cu-OFP exposed to water with sulphide at elevated temperatures
13:50	Jon	Engström	GTK	Faults, Fractures and Porosity - Defining the sub-surface parameters
14:00	Otto	Fabritius	HU	Radionuclides' transport in cementitious materials
14:10	Yushan	Gu	VTT	MICROWISE - Methods for Immobilizing Challenging Resin-based Operational Wastes for Improved Safety and Efficiency
14:20	Soroush	Majlesi	HU	¹⁴ C Dynamics and Biosphere Assessment in Terrestrial and Aquatic Ecosystems: Uptake, Risks, and Environmental Impacts
14:30	Jukka	Kuva	GTK	HAGEN - Experimental and modelling research of bentonite for safe disposal of spent nuclear fuel
14:40	Kaisa	Nikkilä	ÅA	Fluid Flow and Mineral Alteration: Controlling Porosity and Permeability
14:50	Saara	Söyrinki	VTT	CoW-MatE - Corrosion behaviour of welded steels in the LILW repositories – effect of materials and environment
15:00	Coffee break			
15:30	Sami	Naumer	VTT	BUTLER - Backward U-process Technique for Less Expensive Repositories
15:40	Joni	Tanttu	JyU	Fluid and Mineral Infiltration in Crystalline Bedrock Fractures
15:50	Minna	Vikman	VTT	The influence of microbial processes on the performance of EBS (PROPER)
16:00	Riikka	Kietäväinen	VTT	DODGE ² - Dark oxygen production in the deep subsurface
16:10	Mikko	Vepsäläinen	VTT	HERA - High-efficiency radionuclide removal with porous nanomaterials
16:20	Gianni	Vettese	VTT	ABCRad - 2 - Chemical behaviour and interactions of key, risk-driving radionuclides with alternative buffer materials
16:30	End of session			

Session D: Mechanical and Structural Integrity of NPP's, room Galileo, Innopoli 1

Time	First name	Last name	Organisation	Topic
13:30	Pentti	Arffman	VTT	Constraint, irradiation embrittlement and RPV safety
13:40	Miguel	Ferreira	VTT	FN-CAMP II - Continuation regarding performance of concrete structures for nuclear safety regarding LTO
13:50	Erkka	Frankberg	TUNI	3D printing of SiC fiber reinforced SiC composites
14:00	Noora	Hytönen	VTT	MAFIS - Modelling and characterisation of fracture initiation in RPV welds, understanding failure probability in heterogeneous microstructure
14:10	Noora	Hytönen	VTT	JULES - Jules Horowitz Reactor Participation and Instrumentation Development.
14:20	Tuomas	Riipinen	VTT	SADENA - SAFE use of Directed Energy Deposition components in Nuclear Applications
14:30	Ilkka	Virkkunen	Aalto	DeepNDE - Non-Destructive Evaluation of Welded Pipes' Structural Integrity in Nuclear Plants
14:40	Konsta	Sipilä	VTT	WAMOS - Water chemistry and material degradation study supporting lifetime management in nuclear power plants
14:50	Konsta	Sipilä	VTT	PACMAN - Polymer ageing and condition monitoring at nuclear power plants
15:00	Coffee break			
15:30	Essi	Jäppinen	VTT	EDAM - Environmental Degradation of Additively Manufactured nuclear components
15:40	Zaiqing	Que	VTT	NIEMI - Improving Nuclear Integrity by studying Environmental-assisted degradation and fatigue
15:50	Ahti	Oinonen	VTT	FUDGE - Fatigue usage factor in mechanical degradation evaluation
16:00	Antti	Timperi	VTT	HIFI - Thermal fluctuations and fatigue modelling by high-fidelity simulations
16:10	End of session			