



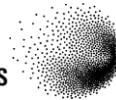
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EMUG

16th Meeting of the European MELCOR and MACCS User Group (EMUG)

7th – 11th April, 2025

Brno University of Technology and TES, Brno, Czech Republic

Meeting Location (7th April): Faculty of Electrical Engineering and Communications,
Technická 12, 616 00 Brno, Czech Republic

Class room SF1.141

Meeting Location (8th-11th April): The rectorate of Brno University of Technology,
Antonínská 548/1, 602 00 Brno, Czech Republic

Conference room (ground floor)

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**The EMUG 2025 conference is held under the auspices
of the Ministry of Industry and Trade of The Czech Republic**



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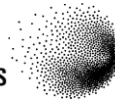
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Day 1: Monday, 7th of April – MELCOR meeting

UPDATE!!

Meeting Location (7th April): Faculty of Electrical Engineering and Communications, Technická 12, 616 00 Brno, Czech Republic

Class room SF1.141

Time	Title	Speaker
9:00 – 9:30	Registrations	
9:30 – 9:35	16 th EMUG - WELCOME	MALICKI Mateusz (PSI)
9:35 – 9:45	Introduction of TES s.r.o.	TES s.r.o.
9:45 – 10:00	Introduction BUT	prof. Jaroslav Koton Vice-Dean (BUT)
10:00 – 10:15	Capabilities of the Czech TSO	Alain Flores y Flores (SURO)
10:15 – 10:30	Introduction of ÚJV Řež	VÁCHA Petr (ÚJV Řež)
10:30 – 11:00	Coffee Break	
Session 1: CSARP program		Chairperson: Peter Mičian (BUT)
11:00 – 11:30	U.S. NRC Research Activities on Severe Accident Progression and Source Term Analysis	CAMPBELL Shawn (U.S. NRC)
Session 2: SNL introduction		Chairperson: Peter Mičian (BUT)
11:30 – 12:30	MELCOR Overview	HUMPHRIES Larry (SNL)
Session 3: SNL updates		Chairperson: Peter Mičian (BUT)
12:30 – 13:00	Sodium Fire Validation Update	BEENY Brad (SNL)
13:00 – 14:00	Lunch	
Session 3: SNL updates		Chairperson: Peter Mičian (BUT)
14:00 – 14:30	CAV/CORQUENCH Update	BEENY Brad (SNL)
14:30 – 15:00	MELCOR/ORIGEN Update	BEENY Brad (SNL)
15:00 – 15:30	Fluid Fuel Point Kinetics Update	BEENY Brad (SNL)
15:30 – 16:00	Coffee Break	
Session 3: SNL updates		Chairperson: Peter Mičian (BUT)
16:00 – 16:30	Fusion I	BEENY Brad (SNL)
16:30 – 17:00	Application/Demonstration – MSBR and gHPR I	DUCHNOWSKI, Ed (SNL) ONLINE
17:00 – 17:30	Application/Demonstration – MSBR and gHPR II	DUCHNOWSKI, Ed (SNL) ONLINE
17:30	Adjourn	



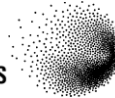
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Day 2: Tuesday, 8th of April – MELCOR meeting

UPDATE !!

Meeting Location (8th-11th April): The rectorate of Brno University of Technology, Antonínská 548/1, 602 00 Brno

Conference room (ground floor)

Time	Title	Speaker
8:30 – 9:00	Registrations	
Session 4: Users - SA codes experience		Chairperson: Frelich Jan (TES)
9:00 – 9:20	Latest Experiences with MELCOR 2.2: An Overview of Applications, Issues and Challenges	GARCIA Monica (Ciemat)
9:20 – 9:45	Brief MELCOR uncertainty and sensitivity analysis	KOTOUC Miroslav ((UJV Řež))
9:45 – 10:05	Stability evaluations application to MAAP benchmarks	BITTAN Jeremy (EDF)
10:05 – 10:30	Stability techniques applied to SA codes	BAKOUTA Nikolai (EDF)
10:30 – 11:00	Coffee Break + group photo	
Session 5: Users – SA codes experience		Chairperson: FORAL Štěpán (TES)
11:00 – 11:35	Implementation of Accident Tolerant Fuels in MELCOR: Stability, Performance, and Limitations	HAMŘÍK Lukáš (BUT)
11:35 – 12:15	Experience from MACCS Applications by the Slovak Regulator	Husarcek Jan (UJD SR)
12:15 – 13:45	Lunch	
Session 6: MACCS		Chairperson: FORAL Štěpán (TES)
13:45 – 15:45	MACCS: Code Overview, US Regulatory Applications, and Status of Advanced Reactor Readiness.	AJ Nosek (U.S.NRC), Kyle Clavier (SNL) ONLINE
16:00	Adjourn	
16:00 – 16:15	Coffee Break	
17:00 – 18:30	Optional Brewery tour (self paid with English guide) Group meeting at 16:20 in front of the conference room. Transportation by public transport (tram no. 6 from the Antoninska station and go to the Mendlovo namesti station). The brewery is located next to the Mendlovo namesti (2 mins walking distance). Further details on: https://www.starobrna.cz/kontakt Address: Pivovar Starobrna, Hlinky 160/12, Brno 603 00	
19:00 – 23:00	Social dinner (paid by organizers and partners) The event takes place at Starobrna pub located at the Mendlovo namesti. Take tram no. 6 from the Antoninska station and go to the Mendlovo namesti station directly. (Or walk directly from the brewery for the one who decide to join us on brewery tour) Further details on: https://www.pivovarska-starobrna.cz/kontakty/ Address: Pivovarská Starobrna, Mendlovo náměstí 158/20, Brno 603 00 Dinner in the form of banquet incl. beer and non-alcoholic beverages The room is reserved maximum until 23:00.	

Day 3: Wednesday, 9th of April – MELCOR meeting



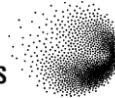
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Time	Title	Speaker
8:30 – 9:00	Registrations	
Session 7: SNL Workshop - Core Degradation, Lower Head/Plenum		Chairperson: David Luxat (SNL)
9:00 – 9:30	Core Degradation, Lower Head/Plenum – I	Larry Humphries (SNL)
9:30 – 10:00	Core Degradation, Lower Head/Plenum – II	Larry Humphries (SNL)
10:00 – 10:30	Core Degradation, Lower Head/Plenum – III	Larry Humphries (SNL)
10:30 – 11:00	Coffee Break	
Session 8: SNL Workshop - Core Degradation, Lower Head/Plenum		Chairperson: David Luxat (SNL)
11:00 – 11:30	Core Degradation, Lower Head/Plenum – IV	Larry Humphries (SNL)
11:30 – 12:00	Core Degradation, Lower Head/Plenum – V	Larry Humphries (SNL)
12:00 – 12:30	Core Degradation, Lower Head/Plenum – VI	Larry Humphries (SNL)
12:30 – 13:45	Lunch	
Session 9: SNL Workshop – SMR Containment		Chairperson: David Luxat (SNL)
13:45– 14:15	SMR Containment Models I – HS	BEENY Brad (SNL)
14:15 – 14:45	SMR Containment Models II – SG, CND, and Rain	BEENY Brad (SNL)
14:45 – 15:15	SMR Containment Models III – Aerosol Dep/Resusp.	BEENY Brad (SNL)
15:15 – 15:45	Coffee Break	
Session 10: SNL Workshop – Non-LWR Demo		Chairperson: David Luxat (SNL)
15:45 – 16:15	SMR Containment Models III – Aerosol Dep/Resusp. (continuation)	BEENY Brad (SNL)
16:15 – 16:45	Third-Party Plug-ins	HASKIN Troy (SNL) ONLINE
Guest lecture		Chairperson: FORAL Štěpán (TES)
16:45 – 17:15	Mr. Duspiva	Czech Nuclear Society
17:30	Adjourn	



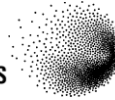
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Day 4: Thursday, 10th of April – MELCOR and MACCS meeting

Time	Title	Speaker
8:30 – 8:45	Registrations	
Session 11: Users – NPP simulations		Chairperson: MALICKI Mateusz (PSI)
8:45 – 9:10	Simultaneous SFP and open reactor calculations for VVER-1200	NEMES András (NUBIKI)
9:10 – 9:35	Experience with MELCOR applications to the VVER-440 reactor equipped with IVR	POKORNÝ Jan (ÚJV Řež a.s.)
9:35 – 10:00	Analyzing Ex-Vessel Steam Explosions During Severe Accidents in Nordic BWRs	ACHARYA Govatsa (KTH) ONLINE
10:00 – 10:30	Coffee Break	
Session 12: Users - SMR		Chairperson: MALICKI Mateusz (PSI)
10:30 – 11:00	Status of SASPAM-SA EU project	MASCARI Fulvio (ENEA) ONLINE
11:00 – 11:15	Analysis of DBA and different BDBA scenarios in a generic iPWR-type SMR.	CILIA Erik (UNIBO)
11:15 – 11:30	In-vessel melt retention simulation in iPWR using MELCOR	GIANNETTI Fabio (Sapienza University of Rome) ONLINE
11:30 – 12:00	LDR Lite district heating reactor benchmark with MELCOR	SEVÓN Tuomo (VTT)
12:00	Adjourn	
12:00 – 13:15	Lunch	

12:00 – 17:00	<p>Technical visit to the water dam Dalešice, reactor control room simulator and information center of the Nuclear Power Plant Dukovany. The departure is at 12:00 with transport provided by organizers.</p> <ul style="list-style-type: none"> The water dam Dalešice is the water source for NPP Dukovany and emergency electricity source in case of black-out. More info here: https://www.cez.cz/en/energy-generation/hydroelectric-power-plants/cez-hydroelectric-power-plants/czech-republic/dalesice During the visit, the visitors will have a chance to see how the reactor control room simulator is used for training the NPP staff. The information center provides the basic information about the NPP Dukovany. More info here (in Czech lang., use translator): https://www.svetenergie.cz/cs/infocentra/dukovany
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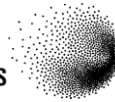
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Day 5: Friday, 11th of April – MELCOR and MACCS meeting

Time	Title	Speaker
8:30 – 9:00	Registrations	
Session 15: Users - fusion		Chairperson: MALICKI Mateusz (PSI)
9:00 – 9:25	Loss of cryostat vacuum in DEMO fusion reactor due to large ingress of He gas	Leskovar Matjaž (JSI)
9:25 – 9:45	Emergency draining strategies for lithium systems at the IFMIF-DONES facility	VALVERDE Jaime (Universidad Politécnica de Madrid)
9:45 – 10:05	Development of an external routine using EDF for fusion modeling needs	GLINGLER Tommaso (Sapienza University of Rome) ONLINE
Session 16: Users – safety systems		Chairperson: FORAL Štěpán (TES)
10:05 – 10:30	Development of the MELCOR input deck of the PANDA facility – TEMPEST 1.1 experiment	KELK Rainer (PSI)
10:30 – 10:50	Coffee Break	
Session 16: Users – safety systems		Chairperson: FORAL Štěpán (TES)
10:50-11:20	NPP Krsko limiting SBO Accident Radiological consequences	GRGIC Davor (University of Zagreb) ONLINE
11:20 – 11:40	Hydrogen Distribution and Mitigation Modelling	BRAUN Matthias (Framatome GmbH)
11:40 – 12:00	I2 scrubbing Simulations with Modified SPARC/MELCOR	RYDL Adolf (INSET)
12:00 – 12:30	Application of the REPAS methodology with MELCOR code to analyse the reliability of a passive emergency heat removal system	GRIPPO Gianmarco (UNIBO)
12:30 – 13:00	Adjourn	

For online participants.

[Link will be provided by email.](#)