

CONFERENCE PROGRAM



3rd Conference on Key Topics in Deep Geological Disposal

*Challenges of a
Site Selection Process:
Society – Procedures – Safety*

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Cologne, 04 – 06 July 2022

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Background

There is a broad international consensus that high-level radioactive waste arising from electricity production by nuclear fission has to be safely isolated from the biosphere. Disposal in deep geological formations is considered the best approach to protect human beings and the environment from radiological exposures. However, the design of an appropriate site selection process for a repository still represents a challenge and different strategies are pursued in those countries with advanced geological disposal programs.

A site selection process for a repository for high-level radioactive waste and / or spent nuclear fuel has to consider and to reconcile:

- Safety related scientific technical principles and knowledge bases as well as regulatory constraints/guidelines
- Geoscientific information based both on existing data and on site investigations and its utilization for safety, feasibility and demonstration purposes
- Detailed knowledge about type and amount of waste to be disposed of (data bases)
- Ideas/concepts how to provide safety by means of an appropriate repository design
- Social-science based aspects related to good governance, i.e. a “qualitatively good” procedural design aiming at the development of a fair process
- Land use concepts and regional planning aspects
- Legal and political boundary conditions

The reconciliation of these aspects may differ from country to country but experience shows that “safety first” is the overriding principle.

Considering the time scales of many decades required to implement a repository for high-level radioactive waste from initiating the site selection process to the closure and possibly post-closure monitoring, evidently science and technologies related to nuclear waste disposal have to be developed further during the process. Keeping and improving know-how and expertise during decades requires strong efforts to support and organize research in all related scientific disciplines with a strong focus on interdisciplinary aspects as well as permanently educating and training scientific and technical staff.

The third international conference ***Key Topics on Deep Geological Disposal – Challenges of a Site Selection Process: Society – Procedures – Safety*** will focus on the following topics:

1. **Status of high-level waste / spent nuclear fuel repository siting in Germany: Views of different actors**
2. **Status of high-level waste / spent nuclear fuel disposal programs in various countries: Technical and societal aspects**
3. **High-level waste / spent nuclear fuel disposal: Research and development in natural sciences and engineering**
4. **High-level waste / spent nuclear fuel management strategies and governance: Research in humanities and social sciences**
5. **Competence building and knowledge transfer**

The conference will provide an adequate forum for fruitful scientific exchange and a valuable instrument for further improving multilateral co-operation for mutual benefit. The program will consist of invited and contributed presentations (oral and posters); the conference language will be English.

Conference organizers:

Being “The Research University in the Helmholtz Association”, KIT creates and imparts knowledge for the society and the environment. It is the objective to make significant contributions to the global challenges in the fields of energy, mobility, and information.

The scientific conceptualization and implementation lie in the hands of the German association for repository research (DAEF). DAEF represents leading research organizations active in radioactive waste disposal research. The aim of this association is to contribute to the safe disposal of radioactive waste, to support respective research and education, and to offer respective fact based information.

Timeline

Deadline for Abstract submission:	25 July 2021
Notification of acceptance:	20 December 2021
Deadline for early registration:	31 May 2022
Final Program:	End of May 2022
Welcome Reception at Gürzenich Weinkeller:	04 July 2022
Conference:	05-06 July 2022

Accommodation

Details and information on accommodation:
<https://www.daef2022.org/venue-and-hotel.html>.

Registration fees for payment before 15 May 2022

Full admission:	€ 500
Students (<i>please send proof to conference secretary</i>):	€ 200

Registration fees for payment after 15 May 2022

Full admission:	€ 550
Students (<i>please send proof to conference secretary</i>):	€ 230

Registration fees include:

Welcome reception; Attendance of technical sessions;
Buffet style dinner during the evening poster session; coffee breaks;
conference material

Location:

The conference will take place in the Gürzenich Köln, a wonderful representational building in the heart of Cologne, which was first opened in 1447. It is fronted by a classic late Gothic façade. The interior was developed in the style of the fifties. In 1997, the building underwent a complete renovation with the objective of combining its historical architecture with state-of-the-art event technology in an exclusive event center.

Köln (Cologne) is the city of the dome: The cathedral is the famous landmark of the city and one of the greatest European masterpieces of gothic architecture and was declared a UNESCO world heritage. The city founded by the Romans has a more than 2000-year-old history and is one of the economic and cultural centers of international importance in Germany – and it is famous for its traditional carnival.

Getting to the venue

Cologne has an outstanding traffic infrastructure with an excellent public transport network. Motorways lead to Cologne from every direction and a main station is served by 1,200 trains daily. Two international airports are located nearby – Cologne-Bonn and Düsseldorf – and direct InterCity Express-trains connect to Frankfurt Airport.

MONDAY (04 JULY 2022)

Program

17:00 REGISTRATION

19:00 ICEBREAKER

TUESDAY (05 JULY 2022)

07:30 Registration – Conference office opens

08:15 Welcome

SESSION 1 HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL MANAGEMENT STRATEGIES AND GOVERNANCE: RESEARCH IN HUMANITIES AND SOCIAL SCIENCES (TOPIC 4 – PART 1)

*Chairs: J. Ahlswede (Germany) and M. Schreurs
(Germany)*

08:30 BUILDING CONFIDENCE IN THE FACE OF UNCERTAINTY: THE ROLE OF THE SAFETY CASE **S1-01**

*L. Bailey, P. Künzi (**Keynote**) (UK, Switzerland)*

09:00 TRANSDISCIPLINARY RESEARCH ON NUCLEAR WASTE MANAGEMENT – CAN IT WORK? A CASE STUDY ON REPOSITORY SAFETY **S1-02**

*K.-J. Röhlig, M. Ebeling, A. Eckhardt, P. Hocke,
P. Krüttli (Germany)*

09:20 COGNITIVE BIASES AND GROUP BIASES IN ORGANIZATIONS - DEVELOPMENT OF A QUESTIONNAIRE FOR THE BIAS-RELATED DIAGNOSIS OF PLANNING PROCESSES **S1-03**

F. Englisch, O. Sträter (Germany)

09:40 REVIEW OF COPPER CORROSION BY THE SWEDISH RADIATION SAFETY AUTHORITY (SSM) IN THE CONTEXTS OF THE LOT EXPERIMENTS AT THE ÄSPÖ FACILITY AND THE ONGOING LICENSING PROCESS FOR ESTABLISHING A REPOSITORY FOR SPENT NUCLEAR FUEL IN SWEDEN **S1-04**

B. Strömberg (Sweden)

TUESDAY (05 JULY 2022)

- 10:00 SPATIAL EFFECTS OF SURFACE FACILITIES FOR FINAL DISPOSAL: PERCEPTIONS OF THE SAME AND IMPACT ON PLACE ATTACHMENT – A TRANSDISCIPLINARY EXPERIMENTAL SETTING **S1-05**
M. Mbah, J. Neles, S. Bremer, T. Leusmann, D. Lowke (Germany)

10:20 COFFEE BREAK

SESSION 2 HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL DISPOSAL: RESEARCH AND DEVELOPMENT IN NATURAL SCIENCES AND ENGINEERING (TOPIC 3 – PART 1)

Chairs: L. Bailey (UK) and B. Grambow (France)

- 10:50 MICHIGAN INTERNATIONAL COPPER ANALOGUE (MICA) PROJECT – RECENT ADVANCES **S2-01**
H. Reijonen, I. Aaltonen, C. Lilja, A. Liebscher, S. Norris, P. Keech, N. Diomidis, T. Bornhost (Finland)
- 11:10 EXPERIMENTAL INVESTIGATION OF RADIONUCLIDE RELEASE FROM SPENT NUCLEAR FUELS UNDER CONDITIONS EXPECTED IN A DEEP GEOLOGICAL REPOSITORY LOCATED IN ARGILLACEOUS, CRYSTALLINE OR SALINE ROCKS – STATE OF KNOWLEGDE **S2-02**
M. Herm, E. Bohnert, L. Iglesias-Pérez, T. König, V. Metz, A. Walschburger, H. Geckeis (Germany)

TUESDAY (05 JULY 2022)

11:30	THE OPENGEOSYS SOFTWARE FRAMEWORK FOR REACTIVE TRANSPORT AND CHEMO-MECHANICAL MODELING IN DEEP GEOLOGICAL DISPOSAL <i>V. Montoya, J. Garibay-Rodriguez, R. Lu, H. Shao, D. Naumov, K. Yoshioka, J. Poonoosamy, O. Kolditz (Germany)</i>	S2-03
11:50	INTRODUCTION OF POSTER PRESENTATIONS <i>V. Brendler, F. Charlier (Germany)</i>	S2-04
12:30	LUNCH BREAK	

SESSION 3 STATUS OF HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL REPOSITORY SITING IN GERMANY: VIEWS OF DIFFERENT ACTORS (TOPIC 1)

Chairs: P. Künzi (Switzerland) and K.-J. Röhlig (Germany)

14:00	FINALIZING PHASE ONE – TOWARDS THE IDENTIFICATION OF SITES OF INTEREST FOR A SURFACE EXPLORATION FOR A GERMAN HIGH LEVEL RADIOACTIVE WASTE REPOSITORY <i>L. Seidel, S. Reiche, W. Rühaak (Keynote) (Germany)</i>	S3-01
14:30	ENABLING AND SUPERVISING A UNIQUE & NOVEL PROCEDURE - BASE'S STATUTORY TASKS & VIEW ON THE GERMAN APPROACH TO SITE SELECTION FOR A DEEP GEOLOGICAL DISPOSAL REPOSITORY FOR HIGH-LEVEL WASTE AND ITS CURRENT STATUS <i>C. Weiss, C. Borkel, S. Drees, F. Emanuel (Keynote) (Germany)</i>	S3-02

TUESDAY (05 JULY 2022)

- 15:00 SUPPORTING THE DEVELOPMENT AND PRESERVATION OF TRUST IN THE SEARCH OF A HIGH-LEVEL RADIOACTIVE WASTE DISPOSAL SITE IN GERMANY **S3-03**
*M. Schreurs, A. Grunwald (**Keynote**) (Germany)*
- 15:30 DISCUSSION
- 16:00 COFFEE BREAK

SESSION 4 STATUS OF HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL DISPOSAL PROGRAMMES IN VARIOUS COUNTRIES: TECHNICAL AND SOCIETAL ASPECTS (TOPIC 2 – PART 1)

Chairs: J. Mönig (Germany) and T. Vietor (Switzerland)

- 16:30 THE SUCCES AND FAILURE OF HIGH LEVEL NUCLEAR WASTE MANAGEMENT PROGRAMS. SCIENCE AND TECHNOLOGY VS SOCIAL ACCEPTANCE AND POLITICAL (IN)ACTION **S4-01**
J. Bruno (Spain)
- 16:50 POSIVA SUBMITTED THE OPERATING LICENCE APPLICATION FOR ENCAPSULATION AND FINAL DISPOSAL FACILITY **S4-02**
J. Makkonen, R. Ylöstalo (Finland)
- 17:10 REGULATORY REQUIREMENTS FOR ESTIMATING THE ADDITIONAL MEAN EFFECTIVE ANNUAL DOSE IN THE CONTEXT OF THE GERMAN SITE SELECTION PROCEDURE **S4-03**
C. Borkel, A. Diener, S. Hellebrandt, M. Jendras, M. Krauß, O. Onkun, S. Schöbel, F. Schulzeck, M. Steiner (Germany)
- 17:30 BREAK

TUESDAY (05 JULY 2022)

SESSION 5 POSTER SESSION (19:00 – 22:00)

Incl. Dinner buffet

TOPIC 2: STATUS OF HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL DISPOSAL PROGRAMMES IN VARIOUS COUNTRIES: TECHNICAL AND SOCIETAL ASPECTS

- P1-01** ANALYSIS OF INTERACTIONS BETWEEN OPERATIONAL SAFETY AND POST-CLOSURE SAFETY OF A HLW REPOSITORY
A. Lommerzheim, J. Wolf, N. Bertrams, D. Buhmann, B. Förster, P. Herold, J. Leonhard, U. Noseck (Germany)

TOPIC 3: HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL DISPOSAL: RESEARCH AND DEVELOPMENT IN NATURAL SCIENCES AND ENGINEERING

- P2-01** ICROSS – INTEGRITY OF NUCLEAR WASTE REPOSITORY SYSTEMS – CROSS-SCALE SYSTEM UNDERSTANDING AND ANALYSIS: A MULTIDISCIPLINARY COLLABORATIVE RESEARCH PROJECT IN THE HELMHOLTZ ASSOCIATION
D. Bosbach, H. Geckeis, O. Kolditz, M. Kühn, T. Stumpf, G. Deissmann, iCross Team (Germany)
- P2-02** THE CORI PROJECT ON CEMENT-ORGANIC-RADIONUCLIDE-INTERACTIONS – AN ACTIVITY WITHIN THE EC EURAD PROJECT
M. Altmaier (Germany)
- P2-03** IMPLEMENTATION OF RETRIEVABILITY IN GERMAN REPOSITORY CONCEPTS FOR HIGH-LEVEL RADIOACTIVE WASTE IN CRYSTALLINE FORMATIONS
P. Herold, J. Leonhardt, A. Keller, R. P. Leon Vargas (Germany)

TUESDAY (05 JULY 2022)

- P2-04** RECENT ADVANCES IN THE LABORATORY COMPACTION OF CRUSHED SALT
B. Laurich, K. Svensson, K. Zemke, D. Stührenberg (Germany)
- P2-05** FEP AND SCENARIOS – BASIC TOOLS FOR THE DESIGN AND PERFORMANCE ASSESSMENT OF GEOTECHNICAL BARRIERS
A. Lommerzheim, N. Müller-Hoepe (Germany)
- P2-06** THE USE OF NATURAL ANALOGUES IN THE SITE SELECTION PROCESS
N. Marcos, H. Reijonen (Finland)
- P2-07** FROM FRACTURES TO MODELS: IT'S ALL ABOUT NETWORKING
C. Müller, J. Flügge, A. Hassanzadegan, H. Zhao (Germany)
- P2-08** OVERVIEW OF BGR'S PARTICIPATION IN EXPERIMENTS AT THE MONT TERRI ROCK LABORATORY, SWITZERLAND
D. Rebscher, BGR Mont Terri Project Team (Germany)
- P2-09** CONTRIBUTION OF BENTONITE AND CEMENTITIOUS MATERIAL TO ACTINIDE RETENTION UNDER HYPERALKALINE CONDITIONS AND INCREASED IONIC STRENGTH
K. Schmeide, (Germany)
- P2-10** SHAFT SEALING BY SANDWICH SEAL SYSTEMS: A LARGE-SCALE EXPERIMENT PERFORMED AT THE MONT TERRI ROCK LABORATORY
K. Wieczorek, K. Emmerich, R. Schuhmann, J. Hesser, M. Furche, D. Jaeggi, S. Schefer, J. Aurich, J. Carlos Mayor, S. Norris, K. Birch, M. Sentis, J. L. García-Siñeriz, F. Königer, U. Glaubach, C. Rölke, R. Diedel (Germany)

TUESDAY (05 JULY 2022)

- P2-11** VOLUME CHANGE BEHAVIOR OF UNSATURATED CLAYSTONE/ BENTONITE MIXTURE SAMPLES CHARACTERIZED BY DIFFERENT INITIAL DRY DENSITIES
M. Middelhoff, O. Cuisinier, F. Masrouri, J. Talandier
(France)
- P2-12** ASSESSMENT OF RADIONUCLIDE SOLUBILITY AND RADIONUCLIDE SOURCE TERMS FOR DIFFERENT HOST-ROCK CONDITIONS
D. Fellhauer, X. Gaona, M. Altmaier, H. Geckeis (Germany)
- P2-13** THEREDA – THERMODYNAMIC REFERENCE DATABASE FOR THE NUCLEAR WASTE DISPOSAL IN GERMANY
F. Bok, H. C. Moog, X. Gaona, D. Freyer, L. Wissmeier
(Germany)
- P2-14** A SYSTEMATIC APPROACH FOR SURFACE EXPLORATION OF SITES – A DATABASE TO RESEARCH AND EVALUATE SUITABLE METHODS
R. Dlugosch, T. Bellecke, T. Kneuker, L. Pollok, L. Richter, N. Schubarth-Engelschall, R. Semroch (Germany)
- P2-15** COMPACTION OF CRUSHED SALT FOR THE SAFE CONTAINMENT – OVERVIEW OF PHASE 2 OF THE KOMPASS PROJECT
L. Friedenberg, J. Bartol, J. Bean, O. Czaikowski, U. Düsterloh, N. Müller-Hoeppe, B. Laurich, C. Lerch, S. Lerche, C. Lüdeling, M. Mills, T. Popp, B. Reedlunn, K. Svensson, L. Wenting, K. Zemke, J. Zhao (Germany)
- P2-16** OVERCORING OF NUCLEAR WASTE CANISTERS FOR RETRIEVAL FROM SHORT VERTICAL BOREHOLES
A. Keller, P. Herold (Germany)
- P2-17** ADVANCING TRANSIENT SIMULATION OF HYDRO-MECHANICALLY COUPLED SYSTEMS IN GEOLOGICAL DISPOSAL APPLICATIONS
D. Kern, T. Deng, F. Magri, V. I. Malkovsky, T. Nagel
(Germany)

TUESDAY (05 JULY 2022)

- P2-18** INFLUENCE OF RESIDUAL STRESSES ON BARRIER INTEGRITY DEMONSTRATION FOR ROCK SALT
Nina Müller-Hoeppel (Germany)
- P2-19** SIMULATION OF RADIONUCLIDE DIFFUSION PROFILES IN BENTONITE – PREDICTION FOR THE LONG TERM IN-SITU TEST AT GRIMSEL TEST SITE (GTS), SWITZERLAND
U. Noseck, T. Schäfer, I. Blechschmidt (Germany)
- P2-20** GEOPHYSICAL CHARACTERISATION OF TECTONIC FAULT ZONES IN THE VICINITY OF POTENTIAL REPOSITORY SITES: A CASE EXAMPLE FROM SWITZERLAND
T. Spillmann, H. Madritsch, T. Diehl, A. Hölker (Switzerland)
- P2-21** IMPLEMENTATION OF A TEMPERATURE- AND STRESS-DEPENDENT APPROACH TO DESCRIBE BITUMEN MATERIAL BEHAVIOUR AS SEALING MATERIAL
R. P. León-Vargas, P. Herold, E. Simo (Germany)
- P2-22** RETENTION OF RADIONUCLIDES IN THE SURROUNDINGS OF A REPOSITORY FOR NUCLEAR WASTE: SELECTED SCENARIOS
J. Lützenkirchen, F. Heberling, A. Skerencak-Frech, M. Altmaier, V. Metz, H. Geckeis (Germany)
- P2-23** AN INTERNATIONAL JOINT EXERCISE ON SENSITIVITY ANALYSIS: FIRST RESULTS
E. Plischke, K.-J. Röhlig (Germany)
- P2-24** SPANNEND PROJECT: 3-D STRESS MODELLING IN THE UPPER CRUST OF GERMANY
O. Heidbach, K. Reiter, S. Ahlers, S. Morawietz, L. Röckel, T. Hergert, A. Henk, B. Müller, F. Schilling (Germany)

TUESDAY (05 JULY 2022)

TOPIC 4: SCIENTIFIC ASPECTS OF THE NUCLEAR WASTE DISPOSAL SAFETY CASE

- P3-01** ON HUMAN CLOSENESS AND SAFETY: PARTICIPATION IN THE PRODUCTION OF EXECUTIVE ORDER LAW FOR THE IMPLEMENTATION OF THE GERMAN SITE SELECTION ACT

U. Smeddinck (Germany)

TOPIC 5: COMPETENCE BUILDING AND KNOWLEDGE TRANSFER

- P4-01** RECERTIFICATION OF THE WASTE ISOLATION PILOT PLANT: PERFORMANCE ASSESSMENT CALCULATIONS TO DEMONSTRATE REGULATORY COMPLIANCE

T. R. Zeitler, S. Brunell, D. Kicker, J. Long (USA)

WEDNESDAY (06 JULY 2022)

08:00 Registration – Conference office opens

SESSION 6 COMPETENCE BUILDING AND KNOWLEDGE TRANSFER (TOPIC 5)

Chairs: K.-J. Röhlig (Germany) and O. Sträter (Germany)

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|-------|---|--------------|
| 09:00 | LONG-TERM STRATEGIES FOR COMPETENCE BUILDING AND KNOWLEDGE TRANSFER FOR A SAFE DISPOSAL OF NUCLEAR WASTE
<u>J. Ahlswede</u> (Keynote) (Germany) | S6-01 |
| 09:30 | IMPLEMENTATION OF KNOWLEDGE MANAGEMENT (KM) IN THE GERMAN WMO
P. L. Wellmann, <u>G. Hoefler</u> (Germany) | S6-02 |

SESSION 7 STATUS OF HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL DISPOSAL PROGRAMMES IN VARIOUS COUNTRIES: TECHNICAL AND SOCIETAL ASPECTS (TOPIC 2 – PART 2)

Chairs: K.-J. Röhlig (Germany) and O. Sträter (Germany)

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| 09:50 | THE LAST 15 YEARS OF SEISMIC EXPLORATION IN NORTHERN SWITZERLAND: CONTRIBUTIONS TO DEFINITION, CHARACTERIZATION AND SELECTION OF SITES FOR DEEP GEOLOGICAL DISPOSAL
<u>H. Madritsch</u> , P. Birkhäuser, M. Hertrich, M. Schnellmann, T. Spillmann, T. Vietor (Switzerland) | S7-01 |
| 10:10 | THE ROLE OF SAFETY ASSESSMENTS IN DEVELOPING CONSISTENT AND PLAUSIBLE SITE SELECTION AND POST-CLOSURE SAFETY ARGUMENTS
<u>T. U. Kaempfer</u> , X. Li, P. Marschall (Switzerland) | S7-02 |

WEDNESDAY (06 JULY 2022)

10:30 COFFEE BREAK

SESSION 8 HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL DISPOSAL: RESEARCH AND DEVELOPMENT IN NATURAL SCIENCES AND ENGINEERING (TOPIC 3 – PART 2)

Chairs: P. Herold (Germany) and A. Liebscher (Germany)

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|-------|--|--------------|
| 11:00 | EURAD: A STEP CHANGE IN EUROPEAN JOINT COLLABORATION TOWARDS SAFE RADIOACTIVE WASTE MANAGEMENT
<i>B. Grambow, T. Beattie, P. Carbol, E. Salat, L. Theodon, R. Winsley, P. Zuidema (Keynote) (France)</i> | S8-01 |
| 11:30 | RESEARCH AND DEVELOPMENT FOR HIGH-LEVEL NUCLEAR WASTE REPOSITORY IN GERMANY
<i>A. Göbel, A. Liebscher, A. Strusińska-Correia, T. Knuuti (Germany)</i> | S8-02 |
| 11:50 | SAFETY FACING UNCERTAINTY – STEPS TOWARDS A HOLISTIC AND MORE COMPREHENSIVE ASSESSMENT OF UNCERTAINTIES IN THE SAFETY CASE
<i>A. Eckhardt, K.-J. Röhlig (Switzerland)</i> | S8-03 |
| 12:10 | A SYSTEMATIC APPROACH TO DEVELOP RECOMMENDATIONS FOR SURFACE EXPLORATION IN GERMANY – BGR PROJECTS „GEOMEPS AND ZUBEMERK“
<i>L. Richter, T. Beilecke, R. Dlugosch, T. Kneucker, L. Pollok, N. Schubarth-Engelschall, R. Semroch (Germany)</i> | S8-04 |

WEDNESDAY (06 JULY 2022)

- 12:30 DEEP BOREHOLE DISPOSAL OF LONG-LIVED INTERMEDIATE LEVEL WASTE – GENERIC SITE SCREENING TOOLS ACCOUNTING FOR GEOLOGICAL FAULTS **S8-05**
U. Kelka, T. Poulet, P. Schaub, H. Sheldon, L. Esteban, D. Mallants (Australia)
- 12:50 LUNCH BREAK

SESSION 9 HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL DISPOSAL: RESEARCH AND DEVELOPMENT IN NATURAL SCIENCES AND ENGINEERING (TOPIC 3 – PART 3)

Chairs: A. Göbel (Germany) and U. Noseck (Germany)

- 14:00 KOMBILYSE: COMBINED APPROACH TO SAFETY-RELEVANT ASPECTS FROM THE PERSPECTIVE OF EXTENDED STORAGE AND DISPOSAL OF HIGH-LEVEL RADIOACTIVE WASTE **S9-01**
O. Bartos, J. Krüger, K. Hummelsheim, J. Nicol, F. Rowold, F.-N. Sentuc, M. Tzivaki (Germany)
- 14:20 SYSTEMATIC TOP-DOWN APPROACH TO DEVELOP WASTE CONTAINERS FOR HEAT-GENERATING RADIOACTIVE WASTE AND SPENT FUEL IN DIFFERENT HOST ROCKS – RESULTS OF THE R&D PROJECT KOBRA **S9-02**
W. Bollingerfehr, A. Wunderlich, S. Prignitz, H. Völzke, C. Herold, D. Wolff (Germany)
- 14:40 DEVELOPMENT OF MAGNESIA SHOTCRETE WITH HARD STONE AND SALT SURCHARGE **S9-03**
J. Arendt, D. Freyer, M. Gruner, W. Kudla (Germany)

WEDNESDAY (06 JULY 2022)

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|-------|--|--------------|
| 15:00 | SUPPORT OF UNDERGROUND OPENINGS IN A HLW/SF REPOSITORY IN CLAY STONE
<i>J. te Kook, A. Studeny, B. Pflüger, C. Scior, A. Hücke (Germany)</i> | S9-04 |
| 15:20 | LONG-TERM PERFORMANCE OF CONCRETE-BASED SUPPORT STRUCTURES FOR A HIGH-LEVEL RADIOACTIVE WASTE REPOSITORY IN CLAYSTONE
<i>P. Herold, E. Simo, H.-J. Engelhardt, H. Räuschel, M. Manica, T. Meyer (Germany)</i> | S9-05 |
| 15:40 | SAFETY AND SCIENCE: THE FRAGILE CONNECTION
<i>B. Grambow, R. C. Ewing (France)</i> | S9-06 |
| 16:00 | COFFEE BREAK | |

SESSION 10 HIGH-LEVEL WASTE / SPENT NUCLEAR FUEL MANAGEMENT STRATEGIES AND GOVERNANCE: RESEARCH IN HUMANITIES AND SOCIAL SCIENCES (TOPIC 4 – PART 2)

Chairs: K. Fischer-Appelt (Germany) and M. Mbah (Germany)

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|-------|--|---------------|
| 16:30 | LEGAL, CULTURAL AND POLITICAL CHALLENGES FOR TRANSBOUNDARY PUBLIC PARTICIPATION IN THE CONTEXT OF THE SITING PROCEDURE FOR HIGH-LEVEL RADIOACTIVE WASTE
<i>F. Sperfeld, M. Mbah, S. Schütte (Germany)</i> | S10-01 |
| 16:50 | FUTURE PICTURES FOR FINAL DISPOSAL
<i>S. Enderle, P. Hocke (Germany)</i> | S10-02 |

WEDNESDAY (06 JULY 2022)

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|-------|---|---------------|
| 17:10 | NUCLEAR WASTE AS “MATTER OF CARE”:
OPPORTUNITIES FOR A PARADIGM SHIFT IN
THE LONG-TERM GOVERNANCE OF HLW AND
SPENT FUEL IN BELGIUM
<u>A. Bergmans, C. Parotte (Belgium)</u> | S10-03 |
| 17:30 | CLOSING | |
| 17:40 | END | |

OVERVIEW

Monday, 04 July 2022

17:00 **Registration**

19:00 **Icebreaker**

Tuesday, 05 July 2022

08:30 - 10:20 **Session 1**

Topic 4: High-level waste / spent nuclear fuel management strategies and governance: Research in humanities and social sciences – Part 1

10:50 - 12:30 **Session 2**

Topic 3: High-level waste / spent nuclear fuel disposal: Research and development in natural sciences and engineering – Part 1

14:00 – 16:00 **Session 3**

Topic 1: Status of high-level waste / spent nuclear fuel repository siting in Germany: Views of different actors

16:30 - 17:30 **Session 4**

Topic 2: Status of high-level waste / spent nuclear fuel disposal programs in various countries: Technical and societal aspects – Part 1

19:00 - 22:00 **Session 5**

Poster Session

Wednesday, 06 July 2022

09:00 - 09:50 **Session 6**

Topic 5: Competence building and knowledge transfer

09:50 - 10:30 **Session 7**

Topic 2: Status of high-level waste / spent nuclear fuel disposal programs in various countries: Technical and societal aspects – Part 2

11:00 - 12:50 **Session 8**

Topic 3: High-level waste / spent nuclear fuel disposal: Research and development in natural sciences and engineering – Part 2

14:00 - 16:00 **Session 9**

Topic 3: High-level waste / spent nuclear fuel disposal: Research and development in natural sciences and engineering – Part 3

16:30 - 17:40 **Session 10**

Topic 4: High-level waste / spent nuclear fuel management strategies and governance: Research in humanities and social sciences – Part 2