



15th International Conference on CANDU Fuel



Advanced Fuel Manufacturing and SMR Initiatives for a Cleaner Energy Future

2022

CANADIAN NUCLEAR SOCIETY SOCIÉTÉ NUCLÉAIRE CANADIENNE

Hosted by Cameco

In Cooperation with the International Atomic Energy Agency and support from
Royal Military College of Canada and Ontario Tech University



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OntarioTech
UNIVERSITY



IAEA
International Atomic Energy Agency

August 21-24, 2022

Ajax Convention Centre, Hilton Garden Inn & Homewood
Suites by Hilton, Ajax, Ontario, Canada



SPONSORS

We would like to acknowledge and thank the organizations listed below which have made outstanding contributions to the success of the CNS 15th International Conference on CANDU Fuel and to the enjoyment of the attendees and their guests through their generous sponsorship.



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TABLE OF CONTENTS

Page	Topic
2	Sponsors Acknowledgment and thanks to the organizations which have made outstanding and generous contributions to the success of this conference
4	Program Sessions A list of Conference Program Plenary and Technical Sessions
6	Conference Officials Find the meeting officials for the Organizing Committee and the Technical Program Committee.
7	Conference Information Find additional information regarding accommodations and hotel information, local attractions and activities, conference registration and conference proceedings.
10	Conference Schedule – At a Glance Find a summary of the conference schedule.
13	Schedule of Plenary & Technical Sessions Find comprehensive listing of conference times and paper titles of each day’s plenary and technical sessions.
30	Proceedings (Abstracts & Presentations) To be made available through CNS website.
31	Facility Map Ajax Convention Centre Facility Map – Main Floor & Mezzanine Level



PROGRAM SESSIONS

The 15th International Conference on CANDU Fuel brings together international experts of the nuclear fuel industry involved in design, R&D, fabrication, operation, fuel modelling, safety analysis and regulation from both CANDU and Small Modular Reactors (SMR) fuels.

Conference Program Sessions will cover a wide range of topics including:

- A. Advanced Fuel Manufacturing:** Fuel manufacturer experience, advances in manufacturing & inspection technologies, additive manufacturing, blending RU and DU, fuel manufacturing challenges and improvements.
- B. SMR Fuel:** Design, development, modelling, fabrication/synthesis and supply-chain.
- C. Fuel Performance:** Fuel behaviour (normal operating conditions and extended burnup), station experience and Hot Cell work & capabilities. Common causes of fuel failure from other reactor designs are also welcome.
- D. Fuel Safety:** Performance improvements, Licensing issues, accident studies, fission gas release, fuel behaviour, LOCA initiatives and experimental simulation, fuel acceptance criteria, fuel deformation and dryout.
- E. Fuel Design & Development:** Modifications to fuel designs and quality assurance in fuel design and development, MOX, inert matrices, DUPIC, slightly enriched uranium (SEU), recovered uranium (RU), Thoria fuel cycle, Gen IV Fuel Types, economical and societal implications of fuel cycles.



PROGRAM SESSIONS

F. Fuel Code Development: Predictive capability on thermal, mechanical, irradiation and fission-gas release behaviour under normal operating and accident conditions and predicting aerosol behaviour. Advanced code/model development, which may include radiation protection/ shielding.

G. Fuel Management: Fuel management schemes, load following, fuel physics analysis and specific operational challenges.

H. Fuel Bundle Thermal Hydraulics: Critical Heat Flux assessment, Computational Fluid Dynamics modelling, reactor aging, pressure tube performance and fuel simulation and testing.

I. Used Fuel Management: Fuel handling technology, spent fuel storage, and in-storage fuel behaviour.

J. Advanced Fuel Modelling and Code Development: Models that are being developed to further support fuel performance and safety assessment. Multi-physics/multi-scale simulation.



CONFERENCE OFFICIALS

Conference Chair

Doug Jensen (Cameco)

IAEA Representative

Ki-Seob Sim (IAEA)

Organizing Committee

Doug Jensen (Cameco)

Paul Chan (RMC)

Mukesh Tayal (CNS)

Raheel Hameed (Cameco)

Sara Forsey (Cameco)

Michelle Webb (Cameco)

Markus Piro (Ontario Tech University)

Technical Program Committee

Markus Piro (Ontario Tech University)

Raheel Hameed (Cameco)

Paul Chan (RMC)

Mingjun Chen (NPP)

Mukesh Tayal (CNS)

Wei Shen (COG)

Ki Seob Sim (IAEA)

Awards Committee

Paul Chan (RMC)

Brent Lewis (Emeritus Professor RMC)

Doug Jensen (Cameco)

Raheel Hameed (Cameco)

Markus Piro (Ontario Tech University)

Registrations

Elmir Lekovic (CNS)

Michelle Webb (Cameco)

Deborah Northwood-Tink (Cameco)

Facilities and Tour Coordinator

Michelle Webb (Cameco)

Deborah Northwood-Tink (Cameco)

Sara Forsey (Cameco)

Communication/Invitations, Reception & Administration

Elmir Lekovic (CNS)

Sara Forsey (Cameco)

Michelle Webb (Cameco)

Adam McFarland (Cameco)

Deborah Northwood (Cameco)

Maria Modica (Cameco)

Sponsorships

Sara Forsey (Cameco)

Lane Bannerman (Cameco)

Paul Chan (RMC)

Venue & Hotel Coordinators

Sara Forsey (Cameco)

Raheel Hameed (Cameco)

Registrations/Technical/IT Services

Elmir Lekovic (CNS)

Tyler Martyn (Cameco)

Dave Westcott (Cameco)

Wael Farag (Cameco)

Adam McFarland (Cameco)

Chris Knox (Cameco)

Treasurers

Mohamed Younis (CNS)

Mohinder Grover (CNS)



CONFERENCE INFORMATION

Special Events:

Sunday, August 21, 2022

Registration: From: 18:00 to 21:00 **Location:** Lobby

Opening Reception: From: 18:00 to 21:00 **Location:** Westney Ballroom

Monday, August 22, 2022

Registration and Breakfast: From: 07:00 to 08:00

Opening Remarks: 08:00 - 08:15

Remarks by Dignitaries: 08:15 - 08:30

Locations: Lobby / Westney Ballroom

Luncheon: From: 12:30 to 14:00 **Location:** Westney Ballroom

Technical Tour: (Meet Buses in Parking Lot) From: 16:30 to 19:00

Tour Locations: Cameco Port Hope Conversion / Cameco Fuel Manufacturing
Port Hope / Cameco Fuel Manufacturing Cobourg

Tuesday, August 23, 2022

Breakfast: From: 07:00 to 08:00 **Location:** Westney Ballroom

Group Picture: From: 12:30 to 12:45 **Location:** Lobby

Luncheon: From: 12:45 to 14:00 **Location:** Westney Ballroom

Conference Banquet and Entertainment: From: 18:00 to 21:00

Location: ACC, Westney Ballroom

WiN Student Awards, Fuel Technology Awards, Dinner and Entertainment

Wednesday, August 24, 2022

Breakfast: From: 07:00 to 08:00 **Location:** Westney Ballroom

Hotel Check-out: From: 12:00 to 12:30

Luncheon and Closing Remarks: From: 12:30 to 13:30

Location: Westney Ballroom



CONFERENCE INFORMATION

Conference Registration & Proceedings:

Registration is required for all attendees and presenters. Badges are required for admission to all events. The Full Conference Registration fee includes one (1) copy of the Conference Proceedings, conference program, conference souvenir, conference breakfasts, lunches and coffee breaks and one (1) ticket each to the conference banquet and the conference technical tour. The Conference Proceedings will be available after the Conference.

NOTES:

- Registration desk will be located at the Ajax Convention Centre Lobby:
- From: Sunday August 21; 18:00 To: Wednesday August 24; 14:00
- **Additional tickets:** Additional Banquet Tickets can be purchased (@ \$50.00 each) at the conference. For additional tickets, the conference organizing committee must be notified one week in advance before the event.
- **Hot breakfast:** Served each day for all registrants from 07:00 to 08:00 at Westney Ballroom.
- Breakfast speaker tables with session chairs will be arranged.
- **Technical Tour:** Requests for the preferred tour location site will be accommodated on first come first serve basis. Attendees will be requested to provide their preferred choice of location in advance. Proof of COVID-19 vaccination is required to attend the tours; attendee will be provided a mechanism to provide this proof by Cameco in advance.

SESSION FORMAT:

- Plenary and Technical Sessions: 20-minute presentation and 10-minutes for questions.
- Please bring the final Paper (PDF or MS Word), Power Point presentations and a brief personal bio on a flash drive to the conference. All presentations must be loaded during breakfast or lunch periods on the day of presentation.



CONFERENCE INFORMATION

Conference Contacts:

For any conference related enquiries including additional Banquet Tickets, Tour Registrations, please contact:

Doug Jensen: Doug_Jensen@cameco.com
Paul Chan: Paul.Chan@RMC.ca
Raheel Hameed: Raheel_Hameed@cameco.com
Michelle Webb: Michelle_Webb@cameco.com
Sara Forsey: Sara_Forsey@cameco.com
Markus Piro: Markus.Piro@ontariotechu.ca



CONFERENCE SCHEDULE

AT A GLANCE

Sunday, August 21, 2022

Event	Location	Time
Registration and Reception, Conference Open	Westney Ballroom	18:00 - 21:00

Monday, August 22, 2022

Event	Location	Time
Registration and Breakfast	Westney Ballroom	07:00 - 08:00
Opening Ceremony & Welcome Addresses - <i>D. Jensen (Cameco)</i>	Westney Ballroom	08:00 - 08:15
Remarks by Dignitaries	Westney Ballroom	08:15 - 08:30
Plenary Session P1 <i>International Experience and Program on CANDU Reactors</i>	Westney Ballroom	08:30 - 10:30
Coffee Break	Westney Ballroom	10:30 - 10:45
Plenary Session P2 <i>International Experience and Program on CANDU Reactors (continued)</i>	Westney Ballroom	10:45 - 12:30
Lunch & Luncheon Speaker <i>Advancing Fuel Manufacturing and SMR Initiatives for a Cleaner Energy Future - F. Dermarkar, AECL</i>	Westney Ballroom	12:30 - 14:00
Parallel Technical Session T1 <i>Manufacturing</i>	Bayly	14:00 - 16:00
Parallel Technical Session T2 <i>Fuel Design</i>	Salem A/B	14:00 - 16:00
Parallel Technical Session T3 <i>Thermal Hydraulics</i>	Harwood	14:00 - 16:00
Technical Tour <i>Cameco Port Hope Conversion Facility Cameco Fuel Manufacturing - Port Hope Cameco Fuel Manufacturing - Cobourg</i>	Meet Buses in Parking Lot	Buses Depart 16:30 Buses Return 20:30



CONFERENCE SCHEDULE

AT A GLANCE

Tuesday, August 23, 2022		
Event	Location	Time
Registration and Breakfast	Westney Ballroom	07:00 - 08:00
Safety, Daily Program & General Announcements - <i>D. Jensen (Cameco)</i>	Westney Ballroom	08:00 - 08:15
Plenary Session P3 <i>International Experience and Program on SMR Reactors</i>	Westney Ballroom	08:15 - 10:15
Coffee Break	Westney Ballroom	10:15 - 10:30
Plenary Session P4 <i>International Experience and Program on CANDU Reactors (continued)</i>	Westney Ballroom	10:30 - 12:30
Group Photo	Lobby	12:30 - 12:45
Lunch & Luncheon Speaker <i>SMR Development and Deployment in Canada - P.D. Thompson, NBP</i>	Westney Ballroom	12:45 - 14:00
Parallel Technical Session T4 <i>SMR, TRISO</i>	Bayly	14:00 - 15:30
Parallel Technical Session T5 <i>SMR, MSR</i>	Salem A/B	14:00 - 15:30
Parallel Technical Session T6 <i>SMR/Canadian</i>	Harwood	14:00 - 15:30
Coffee Break	Westney Ballroom	15:30 - 15:45
Parallel Technical Session T4 <i>SMR, LWR</i>	Bayly	15:45 - 17:45
Parallel Technical Session T5 <i>Fuel Performance 1</i>	Salem A/B	15:45 - 17:45
Parallel Technical Session T6 <i>SMR Modelling 1</i>	Harwood	15:45 - 17:45
Conference Banquet, Entertainment WiN Student and Fuel Technology Awards	Westney Ballroom	18:30 - 21:00



CONFERENCE SCHEDULE

AT A GLANCE

Wednesday, August 24, 2022		
Event	Location	Time
Registration and Breakfast	Westney Ballroom	07:00 - 08:00
Daily Program & General Announcements - <i>D. Jensen (Cameco)</i>	Westney Ballroom	08:00 - 08:15
Parallel Technical Session T7 <i>SLOWPOKE 1</i>	Bayly	08:15 - 10:15
Parallel Technical Session T8 <i>Fuel Safety and Fuel Performance 1</i>	Salem A/B	08:15 - 10:15
Parallel Technical Session T9 <i>Fuel Modelling 2</i>	Harwood	08:15 - 10:15
Coffee Break	Westney Ballroom	10:15 - 10:30
Parallel Technical Session T7 <i>SLOWPOKE 2</i>	Bayly	10:30 - 12:00
Parallel Technical Session T8 <i>Fuel Safety & Fuel Performance 2</i>	Salem A/B	10:30 - 12:30
Hotel Check-Out	Hotel Lobby	12:00 - 12:30
Lunch and Closing Remarks	Westney Ballroom	12:30 - 13:30



Schedule of Plenary & Technical Sessions

Daily Program - Day 1 - Monday, August 22, 2022

Room: Westney Ballroom

Plenary Session P1 - 08:30 - 10:30

International Experience and Program on CANDU reactors

Session Chairs: F. Dermarkar (AECL), P. Thompson (NBP)

Time	Session ID	Time
08:30 - 09:00	P1-A	Licensing and Reactor Fuel in Canada <i>R. Rulko, CNSC</i>
09:00 - 09:30	P1-B	Recent CANDU industry R&D on the CANDU Fuel <i>W. Shen, COG</i>
09:30 - 10:00	P1-C	Clean Core's Thorium and HALEU Fuel for PHWR/CANDU <i>M. Shah, CCTE</i>
10:00 - 10:30	P1-D	Application Of Modified 37 Element Fuel Bundle in Wolsong NPP <i>D.H. Park, KHNP</i>

Plenary Session P2 - 10:45 - 12:30

International Experience and Program on CANDU reactors (cont.)

Session Chairs: F. Dermarkar (AECL), P. Thompson (NBP)

Time	Session ID	Time
10:45 - 11:15	P2-A	Manufacturing and Performance of CANDU-6 Nuclear Fuel Bundles Produced in Romania <i>A.B. Musetoiu, SNN</i>
11:15 - 11:45	P2-B	Nuclear Fuel Activities in Argentina - Period 2019-2021 <i>A.R. Minetti, CNEA</i>
11:45 - 12:05	P2-C	IAEA Activities to Support PHWR Fuel Technology <i>K.S. Sim, IAEA</i>
12:05 - 12:30	P2-D	CANDU Fuel Development in China <i>M.J. Chen, CNNP</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 1 - Monday, August 22, 2022

Room: Bayly

Parallel Technical Session T1 - 14:00 - 16:00

Manufacturing

Session Chairs: *W. Babbe (ARC Energy), S. Abrol (BWXT NEC)*

Time	Session ID	Time
14:00 - 14:30	T1-1	Resistance Welding as an Alternative to Replace the Use of Beryllium for Appendages Attachment on CANDU Fuel Element in Argentina <i>A.R. Minetti, CNEA</i>
14:30 - 15:00	T1-2	Port Hope Conversion Facility Performance <i>S. Reid, Cameco</i>
15:00 - 15:30	T1-3	Bonderite L-GP 154N (Dag) Contamination – Response and Proposed Specification Revisions <i>J. Studzinski, Cameco</i>
15:30 - 16:00	T1-4	Initiation of the Pitting Corrosion of Copper in Chloride and Sulfide for Used Fuel Containers <i>M. Billah, D. Williams, J. Howe, U of T</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 1 - Monday, August 22, 2022

Room: Salem A/B

Parallel Technical Session T2 - 14:00 - 16:00

Fuel Design

Session Chairs: *M. Piro (Ontario Tech University), M. Couture (CNSC-Ret)*

Time	Session ID	Time
14:00 - 14:30	T2-1	Stainless Steel as a Replacement for Beryllium as Braze Material <i>I. Dimayuga, CNL</i>
14:30 - 15:00	T2-2	The Process to Manufacture a CANDU Fuel Bundle - From Design Review to Product Realization <i>J. Hughes, Cameco</i>
15:00 - 15:30	T2-3	On Advanced Fuel Design Features with ATF And AFC For Operating CANDU Reactors <i>C. Suk, CNSC</i>
15:30 - 16:00	T2-4	Studying the Effects of End Plate Phenomena on the Deformation Of 37-Element CANDU Fuel Bundles Using Finite Element Analysis <i>W. Payton-Stewart, RMC</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 1 - Monday, August 22, 2022

Room: Harwood

Parallel Technical Session T3 - 14:00 - 16:00

Thermal Hydraulics

Session Chairs: J. Spencer (CNL), W. Grant (CNSC)

Time	Session ID	Time
14:00 - 14:30	T3-1	Computational Fluid Dynamic Investigations of the Impact of CANDU Pressure Tube Deformation on Coolant Flow Bypass <i>Z. Lu, Ontario Tech</i>
14:30 - 15:00	T3-2	CFD Modelling Slowpoke-2 and Neutron Flux Analysis <i>M. Di Giovanni, RMC</i>
15:00 - 15:30	T3-3	Pressure Drop Model for CANDU Fuel Bundles in Crept Flow Channels <i>R. Fortman, Stern</i>
15:30 - 16:00	T3-4	Applying CFD to Investigate the Impact of Former 28-Element CANDU Fuel Bundle Design with Mid-Plane Downward Deflection on the Flow Field Parameters <i>F. Abbasian, Stern</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 2 - Tuesday, August 23, 2022

Room: Westney Ballroom

Plenary Session P3 - 08:15 - 10:15

International Experience and Program on SMRs

Session Chairs: *B. Fehrenbach (OCNI), C. Lorencez (COG)*

Time	Session ID	Time
08:15 - 08:45	P3-A	SMR Fuel S&T at Canadian Nuclear Laboratories <i>R. Ham-Su, CNL</i>
08:45 - 09:15	P3-B	Westinghouse Initiatives for a Clean Energy Future <i>Z. Karoutas, Westinghouse</i>
09:15 - 09:45	P3-C	Overview Of USNC's FCM Fuel Manufacturing for Micro Modular Reactor <i>M. Meyer, USNC</i>
09:45 - 10:15	P3-D	The GEH BWRX-300 Small Modular Reactor Core and Fuel Description <i>R.M. Fawcett, GEH</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 2 - Tuesday, August 23, 2022

Room: Westney Ballroom

Plenary Session P4 - 10:30 - 12:30

International Experience and Program on CANDU Reactors (cont)

Session Chairs: B. Fehrenbach (OCNI), C. Lorencez (COG)

Time	Session ID	Time
10:30 - 12:30	P4	Plenary Session #4 International Experience and Program on CANDU Reactors (continued) <i>Session Chairs: B. Fehrenbach (OCNI) C. Lorencez (COG)</i>
10:30 - 11:00	P4-A	Recycled CANDU Fuel as Fuel for the SSR-W <i>P. Reid, Moltex Energy</i>
11:00 - 11:30	P4-B	IMSR Fuel Salt Qualification <i>W.F. Smith, Terrestrial Energy</i>
11:30 - 12:00	P4-C	Introduction of U-10ZR Metal Fuel to Canada for the ARC-100 Sodium Cooled Fast Reactor <i>B. Labbe, Arc-Energy</i>
12:00 - 12:30	P4-D	Update on TRISO-X Fuel Development and Production <i>P. Pappano, X-Energy</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 2 - Tuesday, August 23, 2022

Room: Bayly

Parallel Technical Session T4 - 14:00 - 15:30

SMR TRISO

Session Chairs: S. Middleburgh (Bangor University), S. Corbett (CNL)

Time	Session ID	Time
14:00 - 14:30	T4-1	Separate Effects Testing of TRISO Fuel Particles Using the Minifuel Irradiation Vehicle <i>T. Gerczak, ORNL</i>
14:30 - 15:00	T4-2	Evaluating AGR Program TRISO Fuel Particle Performance Variation and Assessing Particle Failure Causes <i>T. Gerczak, ORNL</i>
15:00 - 15:30	T4-3	Diffusion Framework for TRISO Fuel Using Bison Nuclear Fuel Code Coupled to Thermochemica <i>B. Fitzpatrick, Ontario Tech</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 2 - Tuesday, August 23, 2022

Room: Bayly

Parallel Technical Session T4 - 15:45 - 17:45

SMR, LWR

Session Chairs: S. Middleburgh (Bangor University), S. Corbett (CNL)

Time	Session ID	Time
15:45 - 16:15	T4-4	The Thermal Hydraulics Of The BWRX-300 Small Modular Reactor <i>C. Heck, GEH</i>
16:15 - 16:45	T4-5	GNF Fuel Reliability and Experience: 2022 Update and BWRX-300 Expectations <i>R. Schneider, GEH</i>
16:45 - 17:15	T4-6	Westinghouse Accident Tolerant Fuel and Additive Manufacturing Solutions for the SMR Market <i>Z. Karoutas, Westinghouse</i>
17:15 - 17:45	T4-7	Recent Developments in the Evaluation And Characterization of Nuclear Fuel for Advanced Reactors <i>G. Burton, CNL</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 2 - Tuesday, August 23, 2022

Room: Salem A/B

Parallel Technical Session T5 - 14:00 - 15:30

SMR, MSR

Session Chairs: *P. Gillespie (KINECTRICS), H. Fan (CEI)*

Time	Session ID	Time
14:00 - 14:30	T5-1	Purification of Actinoid Fluorides for Preparation of Simulated Irradiated Fuel Salt <i>B. Fitzpatrick, Ontario Tech</i>
14:30 - 15:00	T5-2	Radiation Decelerated Corrosion in Simulated Molten Fluoride Salt Fuel <i>M. Short, MIT</i>
15:00 - 15:30	T5-3	Yellowjacket Gibbs Energy Minimiser: Computing Thermochemical Equilibrium for Multiphysics Simulations of Molten Salt Reactors <i>P. Bajpai, Ontario Tech</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 2 - Tuesday, August 23, 2022

Room: Salem A/B

Parallel Technical Session T5 - 15:45 - 17:45

Fuel Performance

Session Chairs: P. Gillespie (KINETRICS), H. Fan (CEI)

Time	Session ID	Time
15:45 - 16:15	T5-4	Microstructural Characterization of Copper Coatings to Used Fuel Containers <i>L. Zheng, J. Tam, A. Zhang, J.D. Giallonardo, J.Y. Howe, U. Erb, U of T, NWMO</i>
16:15 - 16:45	T5-5	37-Element CANDU Fuel Reliability <i>P. Chan, RMC</i>
16:45 - 17:15	T5-6	A Review And Case Study of the Susceptibility of Zircaloy-4 Sheathing as a Function of Their Metallurgical History in Fabrication <i>K. Farahani, RMC</i>
17:15 - 17:45	T5-7	Key Parameter Ranking for CANDU Fuel Performance Assessment Using GRS Uncertainty Method <i>H. Fan, CEI</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 2 - Tuesday, August 23, 2022

Room: Harwood

Parallel Technical Session T6 - 14:00 - 15:30

SMR, Canadian

Session Chairs: A. Prudil (CNL), E. Geiger (Ontario Tech)

Time	Session ID	Time
14:00 - 14:30	T6-1	Used CANDU Fuel: Energy Independence and \$3 Billion Carbon-Free Electricity Per Tonne <i>P. Ottensmeyer, Retired</i>
14:30 - 15:00	T6-2	Differences Between Electronic Properties of UN, THN and THC <i>B. Szpunar, AECL Retiree, Adjunct. Prof. USASK</i>
15:00 - 15:30	T6-3	Understanding Hydration Process of Bentonite Clay for Long-Term Nuclear Waste Disposal in a Deep Geological Repository <i>M. Brillantes, M. Gabriel, D. Perovic, J. Howe, U of T</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 2 - Tuesday, August 23, 2022

Room: Harwood

Parallel Technical Session T6 - 15:45 - 17:45

Fuel Modelling 1

Session Chairs: A. Prudil (CNL), E. Geiger (Ontario Tech)

Time	Session ID	Time
15:45 - 16:15	T6-4	Bison Analyses of Fuel Forms Used in Small Modular Reactors <i>K. Gamble, INL</i>
16:15 - 16:45	T6-5	Modelling of Defective Fuel Phenomena <i>B.J. Lewis, Retired</i>
16:45 - 17:15	T6-6	Using Thermochemical Modelling Capabilities to Aid in Simulating BWR Severe Accidents in Melcor <i>B. Breeden, Ontario Tech</i>
17:15 - 17:45	T6-7	Melcor Accident Analysis Code For Non-LWR Applications <i>D. Luxat, SNL</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 3 - Wednesday, August 24, 2022

Room: Bayly

Parallel Technical Session T7 - 08:15 - 10:15

Slowpoke 1

Session Chairs: L. Posada (CNSC), B. Fitzpatrick (Ontario Tech)

Time	Session ID	Time
08:15 - 08:45	T7-1	RMC Slowpoke Reactor Refueling Project Overview <i>J. Spencer, CNL</i>
08:45 - 09:15	T7-2	Fuel Core Fabrication for the Royal Military College of Canada Slowpoke-2 Reactor <i>C. Thiriet, CNL</i>
09:15 - 09:45	T7-3	Rmc Slowpoke-2 Reactor - Core Reload and Commissioning Tests <i>J. Atfield, CNL</i>
09:45 - 10:15	T7-4	Analysis of Decommissioned Rmc Slowpoke-2 Nuclear Reactor Core and Comparison to MNCP Simulations <i>B. Casper, RMC</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 3 - Wednesday, August 24, 2022

Room: Bayly

Parallel Technical Session T7 - 10:30 - 12:00

Slowpoke 2

Session Chairs: L. Posada (CNSC), B. Fitzpatrick (Ontario Tech)

Time	Session ID	Time
10:30 - 11:00	T7-5	Hazard Identification Study to Support Royal Military College Slowpoke-2 Reactor Refuel <i>M. Karam, CNL</i>
11:00 - 11:30	T7-6	Forecast of Waste Management Requirements of SMR Cores Using a MCNP 6.2 Modelized Slowpoke-2 LEU Core at Decommissioning <i>S. Parent, RMC</i>
11:30 - 12:00	T7-7	Lessons for Very Small Modular Reactors (VSMRS) From Slowpoke 2 Fleet Deployment, Operations, Maintenance, Refueling, and Decommissioning <i>J. Spencer, CNL</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 3 - Wednesday, August 24, 2022

Room: Salem A/B

Parallel Technical Session T8 - 8:15 - 10:15

Fuel Safety & Performance 1

Session Chairs: A. Rodriguez Minetti (CNEA), R. Lewis (Bruce Power)

Time	Session ID	Time
08:15 - 08:45	T8-1	Review and Update of Fuel Defect Secondary Hydrating Thresholds <i>P. Gillespie, Kinectrics</i>
08:45 - 09:15	T8-2	Fuel Deposit Characterization During In-Bay Fuel Inspection <i>F. Abbasian, Stern</i>
09:15 - 09:45	T8-3	Experimental and Thermodynamic Investigation of Molten UO₂-Corium Chemical Behaviour <i>E. Geiger, Ontario Tech</i>
09:45 - 10:15	T8-4	A Comparison of Thermo-Oxidation Kinetic Measurements Of Zircaloy-4 in Light and Heavy Water Steam <i>G. Francolini, Ontario Tech</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 3 - Wednesday, August 24, 2022

Room: Salem A/B

Parallel Technical Session T8 - 10:30 - 12:00

Fuel Safety & Performance 2

Session Chairs: *A. Rodriguez Minetti (CNEA), R. Lewis (Bruce Power)*

Time	Session ID	Time
10:30 - 11:00	T8-5	CNSC Draft RegDoc 2.4.5 Nuclear Fuel Safety <i>W. Grant, CNSC</i>
11:00 - 11:30	T8-6	Welding Shut Spent Fuel Container Lid, Next to Fuel Pellets Safely <i>P. Cheng, FuseRing</i>
11:30 - 12:00	T8-7	Fuel Performance Simulation of Accident Tolerant Fuel Coupled with High-Fidelity Neutronics and Sub-Channel Thermal-Hydraulics <i>W. Shen, X. Xu, Xi'an Jiaotong U.</i>



Schedule of Plenary & Technical Sessions

Daily Program - Day 3 - Wednesday, August 24, 2022

Room: Harwood

Parallel Technical Session T9 - 08:15 - 10:15

Fuel Modelling 2

Session Chairs: *K. Gamble (INL), M. Poschmann (Ontario Tech)*

Time	Session ID	Time
08:15 - 08:45	T9-1	Thermochemical Applications for Nuclear Fuels <i>M. Poschmann, Ontario Tech</i>
08:45 - 09:15	T9-2	Thermal Properties Of U_3O_8 And U_2O_8 MO: An Experimental and First-Principles Investigation <i>J. Ranasinghe, U. Sask</i>
09:15 - 09:45	T9-3	Source IST 2.0 Model Uncertainty <i>A. Popescu, Kinectrics</i>
09:45 - 10:15	T9-4	Evolution of Intergranular Fission Gas Bubbles by Planar IPM <i>A. Prudil, CNL</i>



PROCEEDINGS

(Abstracts & Presentations)

Available through CNS website

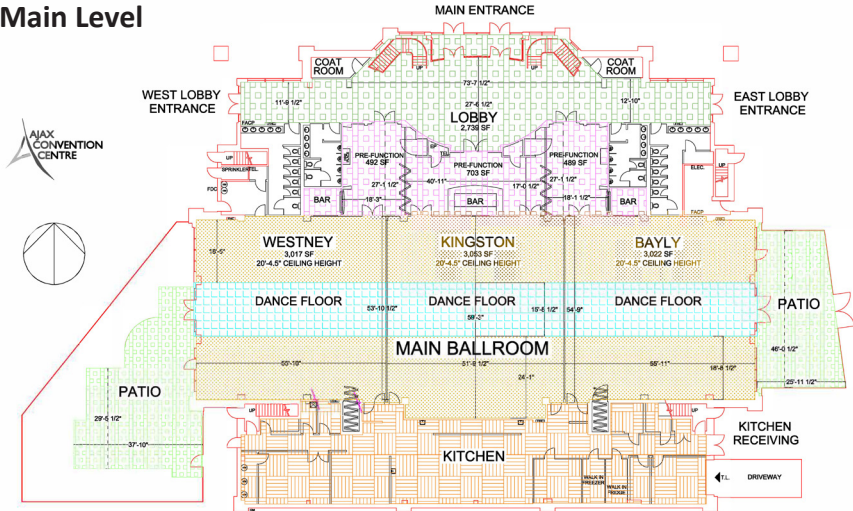
www.cns-snc.ca/event/2022-fuel-conference/





Facility Map

Main Level



Mezzanine

