

59TH Annual Meeting: Hot Laboratories and Remote Handling Working Group

Knoxville, TN, USA, October 8th to 12th, 2023

Hotlab 2023 organising committee



Sunday October 8th

16:00 to 19:00	Exhibitor set-up
17:00 to 20:00	Participant Check-in and Welcome Reception

Monday October 9th

8:00	Breakfast and Welcome – Hotlab Organizing Committee Welcome to the 59TH Annual Meeting: Hot Laboratories and Remote Handling Working Group		
8:30	Welcome to ORNL – David Pointer, Oak Ridge National Laboratory, Nuclear Energy and Fuel Cycle Division Director		
8:50	Steven Schrick Oak Ridge National Laboratory	New Facility Design Chair: Jason Harp	PIE capabilities for the Second Target Station
9:10	Brandon Miller Idaho National Laboratory		Current Status of the Sample Preparation Laboratory at Idaho National Laboratory (2023)
9:30	Henk Nolles UK Atomic Energy Authority		Extension of Hot Cell line at UKAEA Material Research Facility
9:50	Brent Beatty Oak Ridge National Laboratory		The Radioisotope Processing Facility Modular Hot Cell Design Concept
10:10	Break		
10:30	Henry Korellis Miroslav Mihalj Kairos Power		Kairos Power Remote Maintenance Component Feature Development
10:50	Chirag K. Vyas Michigan State University		From Blueprint to Reality: Hot Cell Construction for Isotope Harvesting Project
11:10	Matthew Barker National Nuclear Laboratory	National Facilities and Knowledge Management Chair: Susan Morgan	Three Challenge Themes at the NNL Windscale Laboratory
11:30	Vercouter Thomas CEA		Overview of the experimental capacity of the LECI hotlab facility and recent advances
11:50	Marco Streit PSI		HotLab 25+ The Lifetime-Extension Project Of The SWISS Hot-Laboratory
12:00	Working Lunch		Kailash Agarwal, IAEA, “IAEA’s activities in Nuclear Fuel engineering and post irradiation examination”
13:00	Rose Montgomery Oak Ridge National Laboratory	Post Irradiation Examination	Studying the respirable airborne contamination from spent nuclear fuel fractures

13:20	Loïck CHAUVIN CEA	Chair: Paul Cantonwine	60Co source renewal for spent fuel studies under interim storage conditions in ATALANTE facility
13:40	V. V. Jayaraj Indira Gandhi Centre for Atomic Research, India		Performance assessment of FBTR driver fuel after 105 GWd/t burn-up operated at a uniform high LHR of 400 W/cm
14:00	William F. Cureton Oak Ridge National Laboratory		Post-Irradiation Examination of TRISO Fuel
14:20	Francois Gobin CEA		Virtual reality benefits for the design of new hot cells
14:40	Carwyn Jones European Spallation Source		The Active Cells Facility in ESS: An update
15:00	Break		
15:30	Jonas Martinsson Studsvik Nuclear AB	Challenges for existing hot cell facilities: Chari: Guy Cornelis	Hot cell logistics – transferring, storing and maintenance of contaminated in-cell equipment. How to maximize the Hot Cell capacity
15:50	Ryan Schultz Oak Ridge National Laboratory		Challenges Encountered While Replacing the SNS Ring Injection Dump Beam Stop and Window
16:10	Petr Švrčula Research Center Rez, Ltd.		Enhancing Conveyor Hot Cell Reliability: Replacement of Damaged Drive Wire Rope
16:30	Robert Cox Pacific Northwest National Laboratory		Hot Cell Material Transfers Managing Vertical Loading and Offloading Horizontally
16:50	Jordan Argyle Idaho National Laboratory		Modification of large hot cell for complex nuclear fuel experiment assembly and disassembly
17:10	Niklas Snis Studsvik Nuclear AB		Automatic inert gas fire suppression system in fuel PIE hot cells: upgrades and full-scale tests
17:40	END of Technical Session		
18:10	Conference Dinner – David Keim “ORNL from the Manhattan Project to Today”		

Tuesday October 10th

7:30 to 8:00			Breakfast and Morning announcements
8:00	Aaron Chiu Nuclear Waste Management Organization	Legacy Fuels & Waste Chair: Jouan Gauthier	FUEL TRANSFER IN THE USED FUEL PACKAGING PLANT FOR CANADA'S CANDU REACTOR USED FUEL
8:20	Yoshinori OHTAKE Japan Atomic Energy Agency		Basic study on the separation of radioactive cesium from the incinerator ash by using Electrokinetic (EK) method
8:40	Charlotte Vernon National Nuclear Laboratory		Inventory Reduction Strategy
9:00	Wade Karlsen VTT Centre for Nuclear Safety		Development of a waste description for final disposal of the operational waste of a structural materials R&D hot cell facility
9:20	Sou Watanabe Japan Atomic Energy Agency		Microwave plasma-assisted combustion of waste organic solvents
9:40	Sheewa X. Feng Navarro-ATL		Chemical and Radiation Effects from Hanford Tank Waste on Tank-Deployable Reference Electrodes
10:00	Break		
10:30	Philip Petersen Idaho National Laboratory	PIE - Mechanical Testing Chair: Hendrik Nolles	Optimized Ring Tension Test (RTT) Grip In-cell Qualification
11:10	Ki-Soo Heo Korea Atomic Energy Research Institute		Development of Machining Technique for Reactor Internals in Hot Cell
11:30	Maxim Gushev Oak Ridge National Laboratory		Optimized Mechanical Testing Specimens from Nuclear Cladding Tubes for Hot Cell Testing
11:50	Radim KOPRIVA ÚJV Řež, a. s.		Challenges for hot cells in the utilization of highly irradiated structural materials from the decommissioned Jaslovske Bohunice NPP reactor internals
12:10	Paul Cantonwine Oak Ridge National Laboratory		Calibration of the Cyclic Integrated Reversible-Bending Fatigue Test at Oak Ridge National Laboratory
12:30	Working Lunch		Jason Harp, Oak Ridge National Laboratory, "Recent Highlights from ORNL ATF PIE activities"

13:30	Jay Horin Robatel Technologies, LLC	Remote Handling Developments Chair: Hubert Hafen	Hot Cell to Type B Transportation Cask Transfer Systems
13:50	Varun Kumar Sampath Kumar UK Atomic Energy Authority		Performance Assessment of Commercially Available Collaborative Robots in High Electromagnetic Field Environment for STEP Fusion Reactor
14:10	O. Srba Research Center Rez, Ltd.		Unusual problems during PIE
14:30	Klaus F. Salein Isotope Technologies Dresden GmbH	Commercial Chair: Michael Wade	Hot cell arrangement for the full life cycle of Ir-192 projectors
14:50	Jared Bower Robatel Technologies, LLC		Hot Cell Design and Fabrication Corporate Experience
15:10	Christopher Dane JACOMEX		Nuclear gloveboxes since 1945 – GLOVEBOXES GROUP
15:30	Break		
16:00	April Lancashire Cyclife Aquila Nuclear	Commercial Chair: Justin Dexter	Modifying analytical equipment without original equipment manufacturer support for hot cell use
16:20	Adrien GUYOT Getinge		“AD System” a Safe, fast and ergonomic Glove changing system
16:40	Hubert Hafen Wälischmiller Engineering GmbH		Lirob - Advancing Automation in Hot Cells with LIROB
17:00			Technical Session Ends
17:30 to 19:00			Poster Session

Wednesday October 11th

7:30 to 8:30	Breakfast and Morning announcements – Tour Groups			
8:30 to 10:00	Panel Discussion - Final Disposal of Hot Cell Waste Wade Karlsen, Moderator	Ballroom	Panel Discussion - Challenges of Hot-cell Work – Technician’s Perspective Susan Morgan, Moderator	Sequoyah 3
10:00	Break			
10:30 to 11:00	Panel Summary	Ballroom	Summary of the 2 panels and discussion of future panel sessions	
11:00	Yadu Sasikumar Oak Ridge National Laboratory	Post Irradiation Examination Chair: Tamara Griffiths	Evaluating air & steam communication through high burnup spent nuclear fuel rods	
11:20	Young Gwan Jin Korea Atomic Energy Research Institute		Hot Cell Testing of Baffle Former Bolts Removed from Pressurized Water Reactor	
11:40	Refa Artika Research Center for Nuclear Fuel Cycle and Radioactive Waste Technology		Image Enhancement on Short PIN PWR Fuel Contains Natural UO2 Pellets Post Digital X-Ray Radiography Test Using ImageJ Program	
12:00	Working Lunch		Adam Robinson, Idaho National Laboratory, “Recent PIE Highlights from US-HPRR Testing”	
13:00	Jason Klein-Horsman Canadian Nuclear Laboratories	Post Irradiation Examination Chair: Brandon Miller	Advanced Nuclear Materials Research Centre Facility Overview	
13:20	Yong Yan Oak Ridge National Laboratory		Transient Fission Gas Release System for Irradiated Fuel under Loss-of-Coolant Accident Conditions	
13:40	Christopher Dane JACOMEX		Molten Salt Purified Glovebox Furnace Integration	
14:00	Robert Zubler PSI		Handling of Nuclear Fuel Cladding for Hydrides Analysis with Neutron Imaging and Synchrotron Methods	

14:20	J. Yarrington Idaho National Laboratory		Optical Microscopy Advanced Post-Irradiation Examination Visual Upgrades in the Hot Fuels Examination Facility Argon and Metallograph Loading Cells
14:40	Peter Doyle Oak Ridge National Laboratory		Development of Tools for the Examination of Post-Burst Rods Exposed to LOCA-type Events in the SATS system
15:00	Break		
15:30	Sponsored Awards and Announcements		Ann Leenaers, Hotlab Chair Jason Harp, Hotlab2023 Chair Sponsors: Eckert & Ziegler Medical Walischmiller Engineering GmbH
17:00	Conference Close		

Thursday October 12th

Tour of ORNL Facilities

7:00 AM	Load Buses for ORNL at Hilton Knoxville
8:00-10:00	Tour Block 1 Group A and B – SNS Group C and D – HFIR and REDC Group E and F – Building 3525, 3025E and Graphite Reactor
10:00-10:30	Transport to next Tour Location
10:30-12:30	Tour Block 2 Group A and B – HFIR and REDC Group C and D – Building 3525, 3025E and Graphite Reactor Group E and F – SNS
12:30 - 13:30	Transport and Working Lunch – Jason Harp, ORNL “Review of ORNL Facilities with Participants”
13:30 – 15:30	Tour Block 3 Group A and B – Building 3525, 3025E and Graphite Reactor Group C and D – SNS Group E and F – HFIR and REDC
15:30 – 17:00	Return to Hilton Knoxville