

HOTLAB 2019 TECHNICAL PROGRAMME

SUNDAY 8.9.2019

18.00 - 19.00	Registration
19.00 - 20.30	Welcome Dinner

MONDAY 9.9.2019

OPENING

9:00 – 9:10	Welcome remarks	Dr. G. Amarendra	Chairman, HOTLAB 2019
9:10 – 9:20	Inaugural Address	Dr. A.K. Bhaduri	Director, IGCAR, Kalpakkam
9:20 – 9:35	Opening Remarks and Presentation on IAEA HOTLAB PIE database	Dr. Ki Seob Sim	Chairman, International Working Group of Hot Laboratories & Remote Handling

TECHNICAL SESSION – I : Development of new shielded facilities

09:40 – 10:00	General configuration, recent developments and perspectives of the Hot Cells capabilities at JRC Karlsruhe	V.V. Rondinella	JRC Karlsruhe, Germany
10:00 - 10:20	UKAEA Materials Research Facility, growing into mature levels	Monica Jong	United Kingdom Atomic Energy Authority, United Kingdom
10:20 - 10:40	New Argentinean project: Laboratory for the study of irradiated materials associated to RA10 Research Reactor	Marcela Mirandou	Comisión Nacional de Energía Atómica, Argentina

TEA/COFFEE BREAK

11.10 - 11.30	Radioactive waste processing and medical isotope harvesting requirements for a new hot cell at TRIUMF	S. Varah	TRIUMF, Canada
11.30 - 11.50	Pyro Process Research & Development Facility: A Test bed for engineering technologies for metal fuel reprocessing	S.P. Ruhela	Indira Gandhi Centre for Atomic Research, India
11.50 - 12.10	Infrastructure for Production of Radioisotopes and Progress in Mo-99 Production from LEU Targets	M. Mincu	Institute for Nuclear Research, Romania
12.10 - 12.30	The constructing status and preliminary evaluation for the criticality safety design of Okuma Analysis and Research Center	Akinori Sato	Japan Atomic Energy Agency, Japan
12:30 - 12:50	The European Spallation Source ERIC – Active Cells Facility Construction and Design Update	Magnus Göhran	European Spallation Source ERIC, Sweden

LUNCH

TECHNICAL SESSION – II : Ageing Management And Refurbishment Of Hot Laboratories

14:00 – 14:20	Ageing management and refurbishment of existing hot-cells in Norway to meet future needs	Barbara Oberlander	Institute for Energy Technology, Norway
14:20 – 14:40	Brookhaven National Laboratory (BNL) hot cell renovation	John Boes	Merrick, United States of America
14:40 – 15:00	Refurbishment of a nuclear facility in operation : Focus on the check and thorough maintenance of hot cell's handling equipment	Gruber Philippe	CEA, France
15:00 – 15:20	INL visual examination machine periscope upgrade	Philip Winston	Idaho National Laboratory, United States of America
15:20 – 15:40	Decontamination and dismantling of a modular steel alpha chamber for JRC Karlsruhe hot cells	L. Velnom	JRC Karlsruhe, Germany

TEA/COFFEE BREAK

Technical Session III : Development of Remote Handling Facilities/Equipments

16:00 – 16:20	Mobile hot cell for disused source recovery	Kuldeep Sharma	Board of Radiation and Isotope Technology, India
16:20 – 16:40	A new remote handling facility for radioactive high-power fission and spallation ISOL targets at TRIUMF	Grant Minor	TRIUMF, Canada
16:40 – 17:00	Force estimation and feed back control of the Servo Manipulator for the remote handling use in Hot Cells	Joseph Winston	Indira Gandhi Centre for Atomic Research, India
17:00 – 17:20	Development of in-cell crane for use in lead shielded cell	M Sakthivel	Indira Gandhi Centre for Atomic Research, India
17:20 – 17:40	Dissolution and solvent extraction for the purification of Sr-89 from irradiated yttria target in Hot cells	S. Rajeswari	Indira Gandhi Centre for Atomic Research, India

17:40 – 18:00	Design of vacuum distillation system to remove Sodium from irradiated Sodium bonded metallic fuel pins in concrete hot cell	Sudhanshu Mishra	Indira Gandhi Centre for Atomic Research,India
19:00 – 21:00	Cultural Programme & Dinner		
TUESDAY 10.9.2019			
TECHNICAL SESSION – IV Analytical Characterisation			
9:00 – 9:20	Spatial profile studies of nuclear material burn-up by Laser Ablation- Ionization	P.Manoravi	Indira Gandhi Centre for Atomic Research,India
9:20 – 9:40	Development of ICP-AES and LIBS techniques adapted to Lead Minicell and Glove box facilities respectively for the analysis of radioactive samples.	G.G.S.Subramanian	Indira Gandhi Centre for Atomic Research,India
9:40 – 10:00	Laser Induced Break down Spectroscopy (LIBS): A tool for identification of fuel pin failure by monitoring He gas	U.K. Maity	Indira Gandhi Centre for Atomic Research,India
10:00– 10:20	Investigation of irradiation induced phase formation at Ferroboron and SS 304L clad interface	Bhabani Sankar Dash	Indira Gandhi Centre for Atomic Research,India
10:20 – 10:40	TEA/COFFEE BREAK		
TECHNICAL SESSION – V: Mechanical property and Microstructural evaluation of irradiated materials			
10:40 – 11:00	Advanced Multi-Scale Post-Irradiation Experiments link the mechanical properties and deformation mechanisms of in-core Inconel X-750 spacers	Cameron Howard	Canadian Nuclear Laboratories, Canada
11:00 – 11:20	Evaluation of mechanical properties of Zr cladding tubes for nuclear power plants	O. Srba	Research Center Rez, Czech Republic
11:20 – 11:40	Recent studies on first generation indigenous Zr-2.5Nb pressure tube after 15.3 HOY	Priti Kotak Shah	Bhabha Atomic Research Centre,India
11:40 – 12:00	Destructive examination of experimental CANDU type nuclear fuel tested in TRIGA reactor	Madalin Savu	Institute for Nuclear Research, Romania
12:00 – 12:20	Effect of post irradiation transient heating on ring tensile properties of Zircaloy-4 fuel cladding	R. S. Shrivastaw	Bhabha Atomic Research Centre,India
12:20 – 12:40	Effects of second phases on Charpy Impact Energy and crack propagation behavior of Hastelloy N Sheet Using for Molten Salt Reactor	Jianjun Mao	Nuclear Power Institute of China, China
12:40 – 13:00	PIE of MOX fuel : An Advanced PHWR Fuel	Prerna Mishra	Bhabha Atomic Research Centre,India
13:00 – 14:00	LUNCH		
TECHNICAL SESSION – VI : Non Destructive PIE Techniques			
14:00 – 14:20	Recent advances in NDE techniques during PIE of irradiated nuclear materials	J L Singh	Bhabha Atomic Research Centre, India
14:20 – 14:40	High resolution neutron imaging of spent fuel cladding sections	Robert Zubler	Paul Scherrer Institut, Switzerland
14:40 – 15:00	Non Destructive PIE Techniques at Windscale – Locating failed fuel pins	Matthew Barker	National Nuclear Laboratory Limited, United Kingdom
15:00 – 15:20	Development of gamma scanning applications in post irradiation examination	Susan Morgan	National Nuclear Laboratory Limited, United Kingdom
15:20 – 15:40	Radial gamma scanning system for irradiated fuel	V V Jayaraj	Indira Gandhi Centre for Atomic Research,India
15:40 – 16:00	Use of neutron radiography for examination of irradiated fast reactor fuels	V Anandraj	Indira Gandhi Centre for Atomic Research,India
16:00 – 16:20	TEA/COFFEE BREAK		
POSTER SESSION			
16:20 – 17:20	Poster pitch presentations, 2 minutes each		
17:20 – 18:10	Visit to posters		
WEDNESDAY 11.9.2019			
TECHNICAL SESSION – VII : Transport of Radioactive Material			
9:00 – 9:20	Commissioning a secured bottle to transfer highly radioactive solutions between two hot cells	Elodie Cheutet	CEA, France
9:20 – 9:40	Remote Handling Refurbishment Infrastructure for the ISAC High-Power Target Facility at TRIUMF	Isaac Earle	TRIUMF, Canada

9:20 – 10:00	Transfer radioactive waste material in Hotcell 101 radiometalurgi via transfer channel towards interim storage for spent fuel	Dadang	National Nuclear Energy Agency, Indonesia
10:00– 10:20	The Cask Assembly at ESS	Carwyn R Jones	European Spallation Source ERIC, Sweden
10:20 – 10:40	TEA/COFFEE BREAK		
TECHNICAL SESSION – VIII: Development of Characterisation Equipments			
10:40 – 11:00	Development of Laser- Raman Microscopy and Micro hardness Testing capability for post irradiation examination as part of UK wide capability	Susan Morgan	National Nuclear Laboratory Limited, United Kingdom
11:00 – 11:20	Design of a facility for in-situ creep testing under ion irradiation of fast reactor core structural materials	S Ravi	Indira Gandhi Centre for Atomic Research, India
11:20 – 11:40	Implementation of A Shielded Dual Beam (SEM/FIB) in the fuels and materials hot cells facility at Canadian Nuclear Laboratories	Cameron Howard	Canadian Nuclear Laboratories, Canada
COMMERCIAL PRESENTATIONS			
11.40 - 12.00	Building a winning formula	Steve Barker	Aquila Nuclear Engineering Limited, United Kingdom
12:00 – 12:20	The R80 Package: A new Type B(U) Type A& industrial package for multiple radioactive waste streams	M. Christopher Dane	ROBATEL Industries, France
12.20 – 12.40	Used target management from Advanced Rare Isotope Laboratory (ARIEL)	Clement Filere	ROBATEL Industries, France
12:40 – 13:00	Electron Probe Micro Analyser for nuclear science	Mona Moret	CAMECA, France
13:00 – 14:00	LUNCH		
TECHNICAL SESSION – IX: Inventory and waste management			
14:00 – 14:20	Treatment of spent solvent in STRAD project	Sou Watanabe	Japan Atomic Energy Agency, Japan
14:20 – 14:40	Contribution of R&D hotcells laboratories to the recovery and repackaging of waste resulting from dismantling of French nuclear facilities	S. Mougnaud	CEA, France
14:40 – 15:00	Actinide behavior in biphasic alpha contaminated waste package	J. Delrieu	CEA, France
15:00 – 15:20	Design and Performance of Glove-Box Adapted Inductively Coupled Plasma-Optical Emission Spectrometer for the Estimation of Elemental Composition of High Level Radioactive Liquid Waste at WIP Kalpakkam	J. Selvakumar	Bhabha Atomic Research Centre, India
15:20 – 15:40	TEA/COFFEE BREAK		
TECHNICAL SESSION – X : Safety & Radiological Hygiene			
15:40 – 16:00	Status of the OECD-NEA TCOFF project in support of Fukushima Daiichi decommissioning	D. Bottomley	JAEA-CLADS, Japan
16:00 – 16:20	Operational Health Physics surveillance in Post Irradiation Examination Lab – An Overview	Akila R	Indira Gandhi Centre for Atomic Research, India
16:20 – 16:40	Collection of information on international hot analysis capabilities for the OECD/NEA, Preparatory study on analysis of fuel debris (PreADES) project	Akira Nakayoshi	JAEA-CLADS, Japan
16.45 - 17.30	CLOSING SESSION : Awards & Announcement of 57th HOTLAB meeting		
THURSDAY 12.9.2019			
TECHNICAL VISIT TO IGCAR NUCLEAR FACILITIES			
7:30-13:00	Lunch at Radisson Blu		