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 - Chairman, HOTLAB 2019		
9:10 – 9:20	Inaugural Address - Director, IGCAR, Kalpakkam		
9:20 – 9:35	Remarks by Chairman, International Working Group of Hot Laboratories & Presentation on IAEA HOTLAB PIE database	Dr. Ki Sim Seob	IAEA
	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	Karlsruhe, Germany
10:00 - 10.20	UKAEA Materials Research Facility, growing into mature levels	Monica Jong	UKAEA,Abingdon,UK
10:20 - 10:40	New Argentinean project: Laboratory for the study of irradiated materials associated to RA10 Research Reactor	Ruben Gonzales	Comisión Nacional de Energía Atómica, Argentina
10.40 - 11.10	**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, Vancouver, Canada
11.30 - 11.50	Pyro Process Research & Development Facility: A Test bed for engineering technologies for metal fuel reprocessing	S.P. Ruhela	MC&MFCG,IGCAR,India
11.50 - 12.10	Infrastructure for Production of Radioisotopes andProgress 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
13.00 - 14.00	**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	IFE,Institute for Energy Technology, Norway

14:20 – 14:40	Brookhaven National Laboratory (BNL) hot cell renovation	C. S. Cutler	Brookhaven National Laboratory, USA
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 Marcoule, France
15:00 – 15:20	INL visual examination machine periscope upgrade	Philip Winston	Idaho National Laboratory
15:20 – 15:40	Decontamination and dismantling of a modular steel alpha chamber for JRC Karlsruhe hot cells	L. Velnom	Karlsruhe, Germany
15:40 – 16:00	**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	BRIT,India
16:20 – 16:40	A new remote handling facility for radioactive high-powerfission and spallation ISOL targets at TRIUMF	Grant Minor	TRIUMF,Vancouver,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	FRTG, IGCAR
17:00 – 17:20	Development of in-cell crane for use in lead shielded cell	M Sakthivel	PIED,IGCAR,India
17:20 – 17:40	Dissolution and solvent extraction for the purification of Sr-89 from irradiated yttria target in Hot cells	S. Rajeswari	MC&MFCG,IGCAR, 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	PIED,IGCAR,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	MC&MFCG,IGCAR,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	RCL,IGCAR,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	MC & MFCG, IGCAR, India
10:00– 10:20	Investigation of irradiation induced phase formation at Ferroboron and SS 304L clad interface	Bhabani Sankar Dash	PIED,IGCAR,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	CNL,Chalk River, Ontario, 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	BARC,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	Small specimen test of reactor structural materials in CIAE	WeihuaZhong	China Institute of Atomic Energy, China
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	BARC,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	BARC, India
14:20 – 14:40	High resolution neutron imaging of spent fuel cladding sections	Robert Zubler	Paul Scherrer Institut, LNM, Switzerland
14:40 – 15:00	Non Destructive PIE Techniques at Windscale – Locating failed fuel pins	Matthew Barker	National Nuclear Laboratory Limited, Sellafied, UK
15:00 – 15:20	Development of gamma scanning applications in post irradiation examination	Martin Adam	National Nuclear Laboratory Limited, Sellafied, UK
15:20 – 15:40	Radial gamma scanning system for irradiated fuel	V V Jayaraj	PIED,IGCAR,India
15:40 – 16.00	Use of neutron radiography for examination of irradiated fast reactor fuels	V Anandraj	PIED,IGCAR,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, Vancouver, BC, 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, Center For Nuclear Fuel Technology,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 Microhardness Testing capability for post irradiation examination as part of UK wide capability	Susan Morgan	NNL,Sellafield,UK
11:00 – 11:20	Design of a facility for in-situ creep testing under ion irradiation of fast reactor core structural materials	S Ravi	MMG,IGCAR,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	CNL,Chalk River, Ontario, Canada
COMMERCIAL PRESENTATIONS			
11.40 - 12.00	Building a winning formula	Steve Barker	Aquila Europe
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 Microanalyser 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	Nucear Fuel Cycle Engineering Loboratories, JAEA, 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 LevelRadioactive LiquidWaste at WIP Kalpakkam	J. Selvakumar	WIP,BARCF,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 Laboratory, Iwaki, Japan
16:00 – 16:20	Operational Health Physics surveillance in Post Irradiation Examination Lab – An Overview	Akila R	HISD,IGCAR,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 Laboratory), Iwaki, Japan
16.45 - 17.30	**CLOSING SESSION : Awards & Announcement of 57th HOTLAB meeting**		
	POSTER PRESENTATIONS	**(10.9.2019)**	
1	Decontamination work in the Reactor Fuel Examination Facility	Yuma Ida	Japan Atomic Energy Agency, Ibaraki-ken, Japan
2	The R83 Package: A new Type B(U) Fissile Package for Research Reactor Spent Fuels Transportation in the Netherlands	M. Christopher DANE	Robatel Industries, France
3	The surveillance program for the life extension of the reactor LVR-15	P. Svrcula	Research Center Rez, Czech Republic
4	Expenditure of microscope units for replacement of optical lens in Hot cell 107	Fajar Al Afghani	National Nuclear Energy Agency
5	Development of technology for remote fabrication of pressurized capsule in a pressurized chamber using LASER (An effort towards re-irradiation program)	R. Ravikumar	FRTG, IGCAR
6	3D scanning system of Nuclear Fuel Subassembly Detection	Zhang Xiangyang	China Institute of Atomic Energy, Beijing
7	ISIS Second target station beam entry window replacement	Leslie Jones	Rutherford Appleton Laboratory, Harwell Science, UK.
8	Design of a remote steel pipe cutting system for a high place with dual arm manipulators	Hocheol Shin	KAERI, South Korea

9	Remote MAG welding system for maintenance of nuclear facility	Dongseok Ryu	KAERI, South Korea
10	Blistering test of U3Si2/Al fuel element under loss of coolant accident in shielded glove box	Wei Zhang	Nuclear Power Institute of China
11	Remote handling of active samples	Otto Caretta	UKAEA,United Kingdom
12	Radiological safety considerations and 20 years operational health physics experience in hot cell operations at Radio Chemistry Lab	T. Ravi	HISD, IGCAR, India
13	Effect of post irradiation transient heating on ring tensile properties of Zircaloy-4 fuel cladding	R. S. Shriwastaw	BARC,INDIA
14	Radiation Protection aspects of Articulated Master Slave ManipulatorMaintenance at CORAL facility	Dhanasekaran A	HISD,IGCAR, India
15	PADIRAC Project for Fukushima sample extraction	Christophe SELLIEZ	Getinge La Calhène, France
16	Our experience with a mobile shielded remote handling system for Impact testing of radioactive samples	Ashish Kolhatkar	PIED,IGCAR, India
17	BF3 based waste drum assay system	M Padalakshmi	PIED,IGCAR, India
18	Conceptual design of a lead shielded facility for micro-analytical examination and mechanical testing	Vinayak Sharma	PIED,IGCAR, India
19	Post Fukushima safety upgradation of hot cell facility	A Vijayaraghavan	PIED,IGCAR, India
20	Experience in the maintenance of the ventilation systems of the RML hot cell facility	K Sekar	PIED,IGCAR, India
21	Control and Instrumentation systems for the RML hot cell facility	R Devaraj	PIED,IGCAR, India
22	Development of laboratory scale rotary semi continuous dissolver for nuclear spent fuel reprocessing facilities	Geletar	RpG, IGCAR, India
23	Set-up for post-irradiation determination of temperature during nuclear reactor exposure with 3C-SiC	Guy Cornelis	SCK-CEN, Belgium