



G4SR-4 International Conference Technical Program

G4SR-4 International Conference Technical Program (1/4)

Technical Session A		Wednesday October 5 13:30-15:15						
Room:	A1 Toronto		A2 Montreal		A3 Ottawa		A4 Windsor	
Track:	1	Safety Assessment, Regulation and Standards Initiatives	2	Molten Salt Reactor Research & Development	3	Advanced Reactor and SMR Deployment I	5	SMR Manufacturing and Supply Chain
Co-Chair 1	Robert Ion		Aleksandar Delja		Jaleh Soltanlou		Youssef A. Ballout	
Co-Chair 2	Saad Khan		Changhai (Kevin) Ji		Andrew Morreale		Sara Dara	
	#	Title	#	Title	#	Title	#	Title
13:30-13:55	47	An Integrated Safety Assessment Methodology for Advanced Small Modular Reactors / Wilson Lam; Nithy Nitheanandan	2	Results of a Phenomena Identification and Ranking Table (PIRT) Exercise for a Severe Accident in Molten Salt Small Modular Reactors / David Hummel; Yu-Shan (Sammy) Chin	81	Technical and non-technical issues and challenges to realize nuclear power and SMR safety-in-design to levelized the perception as part of lower carbon national energy portfolio / Akira Tokuhiro; Filippo Genco; Mario Gomez Fernandez	69	Canada needs to vertically integrate its fuel supply chain to progress as a Tier 1 nuclear supplier nation / Mario Pieries; Sienna Gagner; Monika Eby; Medhavi Patel
13:55-14:20	54	The CNSC's Approach to Regulatory Collaboration for Small Modular Reactors / Sarah Eaton	30	Progress in Coupling Computational Thermodynamics and Computational Fluid Dynamics to Support Molten Salt Reactor Applications / Nikolas Scuro; Max Poschmann; Ondrej Benes; Markus Piro	14	How to implement Nuclear Power in Saskatchewan, despite the past? / Francisco Sahagun	70	What we can learn from adjacent industries for innovation in advanced manufacturing for serial production of Small Modular Nuclear Reactors / Mario Pieries; Samantha De Vera; Christos Zagotsis
14:20-14:45	63	Regulatory Considerations and Implications in Deployment of SMRs at Industrial Sites / Brian Gihm; Ben Alex	78	Selection and Qualification of Graphite Grades for IMSR400 Operations / Maria Ivanova	36	Deployment of Small Modular Reactors in Saskatchewan / Hani Al Anid; Darcy Holderness; Val Aleyaseen	82	Accelerating the adoption of advanced manufacturing technologies for Gen IV nuclear reactors through international collaboration. / Isabella van Rooyen; Lucian Ivan; Mark Messner; Lyndon Edwards; Eric Abonneau; Yu Kamiji; Shehan Lowe; Karl-Fredrik Nilsson Karl-Fredrik Nilsson; Satoshi Okajima; Manuel Pouchon; Andrew Storer; Kodai Toyota; zhang lefu; Jeong-Yong Park; Suk Hoon Kang; Sang-Gyu Park; Davide Costa; Takuya Funahashi; Christie Morley; Sebastien Teyseyre
14:45-15:10	33	CSA Group Standards Initiatives for Small Modular Reactors / Larisa Logan; Vanessa Mitchell	50	Studies of natural convection in molten salt around vertical tubes / Per Nilsson; Timothy Ruscoe	84	SMR Development and Deployment activities in New Brunswick / Paul Thompson; andy hayward; Brett Plummer	#N/A	

G4SR-4 International Conference Technical Program (2/4)

Technical Session B		Wednesday October 5 15:45-17:30						
Room:	B1 Toronto		B2 Montreal		B3 Ottawa		B4 Windsor	
Track:	1	The Application of Safety, Security and Safeguards in SMRs	2	High-Temperature Gas-Cooled Reactor Research & Development	3	Advanced Reactor and SMR Deployment II	6	SMR Economics, Financing, and Business Models
Co-Chair 1		Robert Ion		Hazem Mazhar		Mohamed Yazid Mokeddem		Dawn M. Scates
Co-Chair 2		Julian Atfield		David Hummel				Jane Akpan
	#	Title	#	Title	#	Title	#	Title
15:45-16:10	41	XDOSE: A Tool for Radiological Consequences For Accidental Releases from the Xe-100 / Peter Maka	77	Flownex Validation for Steady-State Temperature Calculation of the HTR-10 Benchmark Problem / Taesung Ha; Herman van Antwerpen	67	Use of Bounding Site Information to Inform Development of Transportable Nuclear Power Plants (TNPP) / Marcel de Vos	42	Economic Considerations for Factory Fabrication of SMRs / Megan Moore
16:10:16:35	75	Implementation of the IMSR400 Holistic & Integrated Approach to Nuclear Security and Safeguards / John Llambias; Robert Ion	27	RELAP5-3D Simulation of Oregon State University High Temperature Test Facility Lower Plenum Mixing Test / TARIQ JAFRI; Xianmin Huang; Geoff Waddington	57	Transportation Security Considerations of Small Modular and Mobile Reactors / Ross Peel; George Burnett	62	Updated Hatch SMR deployment evaluation framework / Brian Gihm; Medhavi Patel
16:35:17:00	49	A Prediction and Verification Methodology for Small Modular Reactor Safeguards / Xiaolin Wang; Thai Sinh Nguyen	39	Gas-Tungsten Arc Weldability of Incoloy 800H With Inconel 625 Filler Material in the Application of HTGRs / Lin Xiao; Wenjing Li	80	Considerations and Optimization of Hydrogen Production using Small Modular Reactors and Renewable energy sources / Akira Tokuhiko; Filippo Genco; Mustafa Ciftcioglu	65	Viability of vSMRs for Canada's Remote Communities and Industries / Turner Ward; Brian Gihm; Megan Goodland
17:00-17:25	10	A Risk-Informed Framework for Small Modular Reactor Fuel Qualification and Safety Margin Evaluation / Nhu Thuy Tran	61	Overview of HTTF modelling and benchmark efforts for code V&V for gas-cooled reactor applications / Aaron Epiney; Gerhard Strydom; Robert Kile; Mauricio Tano Retamales; SuJong Yoon; Cole Mueller; Izabela Gutowska; Ling Zou; Thanh Hua; Jun Fang; Krishna Podila; Xianmin Huang; Qi Chen; TARIQ JAFRI; Geoff Waddington; Peter Pfeiffer; Chenguang Li	79	Considering commitments to replace electricity generation with nuclear energy: estimates of climate change impact costs using a modified VENSIM DICE model / Elaheh Shobeiri; Filippo Genco; Akira Tokuhiko	13	Modularity-at-scale for cost competitive deployment of nuclear energy / Efe Kurt; David Shropshire

G4SR-4 International Conference Technical Program (3/4)

Technical Session C		Thursday October 6 08:00-09:45						
Room:	C1 Toronto		C2 Montreal		C3 Ottawa		C4 Windsor	
Track:	2	Research & Development Initiatives on SMR Fuel Qualification, Source Term Prediction, and Flux Detectors	9	Nuclear Hybrid Energy Systems and Co-generation I	7	Public Policy, Engagement and Education	11	Standards, Innovation, and Knowledge Management
Co-Chair 1	Kittima (Naid) Khumsa-Ang		Megan Moore		Jeremy Rayner		Xuejun Wei	
Co-Chair 2	Andrew Morreale		Hiroyuki Sato					
	#	Title	#	Title	#	Title	#	Title
08:00-08:25	55	Advancement in Post-Irradiation Examination Techniques and Gap Assessment for Advanced Fuel and Small Modular Reactors / Peng Xu; Arunkumar Seshadri; Stavros Corbett; Susan Morgan; Ki Seob Sim	3	Study of an HTGR-renewable Hybrid System for Grid Resilience / Hiroyuki Sato; Xing Yan	9	Accelerating the deployment of SMRs in Canada: the importance of intermediaries / Jeremy Rayner; Mariia Iakovleva	40	CSA N293S1:21, Supplement No.1 to CSA N293-12: Fire protection for nuclear power plants (application to small modular reactors) / Cherie Zou; Anca McGee
08:25-08:50	83	Manufacture of a High Temperature Neutron Flux Detector for Generation IV Reactors / Chris Laidler	26	Feasibility and benefits of nuclear reactor hybrid energy systems: a remote community case study / Pronnapa Sanongboon; Travis Pettigrew	22	Indigenous Engagement: The shift from mitigating risk to recognizing value / Eric McGoey; Dazawray Landrie-Parker; Francesca Iacobelli	12	Mapping the Innovation Ecosystems for the Deployment of Small Modular Reactors in Canada and Mexico. An Innovation Policy approach through Strategic Niche Management and Social Network Analysis. / Connie Garcia Zepeda; Jeremy Rayner
08:50-09:15	1	Your New SMR Must Not Be Thermal / Peter Ottensmeyer	15	Assessment of Nuclear Renewable Hybrid Energy System (NR-HES): Technical-Economic Approach / Ayman Mahmoud Mahmoud; Megan Moore	51	Public Perception of SMRs in the Yukon: Engagement Approaches and Results / Kieran Potter; Cole Atlin	31	MOOK: The Knowledge Management method applied to a GENIV project. The continuation of a successful story / Gilles Rodriguez; Philippe AMPHOUX; Edwige RICHEBOIS; Frédéric VARAINE
09:15-09:40	59	Recent Advances in Thermodynamic Calculations to Support Source Term Analyses in Multiple Reactor Designs / Markus Piro; Bernard Fitzpatrick; Max Poschmann	19	Business Model for a Nuclear Hybrid Energy System / Ayman Mahmoud Mahmoud; Pronnapa Sanongboon; Larkin Moss crop	20	Broadening Nuclear Education and Outreach for the New Nuclear Era / Jeremy Hopwood	60	Task Allocation Optimization for Human – Machine Control for Minimally Staffed Control Rooms / carlos sanchez

G4SR-4 International Conference Technical Program (4/4)

Technical Session D		Thursday October 6 10:15-12:00						
Room:	D1 Toronto		D2 Montreal		D3 Ottawa		D4 Windsor	
Track:	2	Water-Cooled SMR Research & Development	9	Nuclear Hybrid Energy Systems and Co-generation II	7	Modelling, System Analysis, Critical Parameters Simulation for AR and SMR	3	Innovative SMR designs, SMR/AR Spent Fuel Evaluation and Management
Co-Chair 1	Paul Chan		Pronnapa (Lek) Sanongboon		Ayman Mahmoud		Hazem Mazhar	
Co-Chair 2			Megan Moore		Sankar Laxman			
	#	Title	#	Title	#	Title	#	Title
10:15-10:40	7	Code Development of Severe Accident Sequence Analysis for Korean Small Integral Reactor and Its Application / Rae-Joon Park	23	Value-At-Risk for Stochastic Optimization of Integrated Energy Systems in HERON / Paul Talbot; Daniel Garrett; Dylan McDowell; Konor Frick; Aaron Epiney; Shannon Bragg-Sitton	56	Control systems modelling of Small Modular Reactors within Nuclear-Renewable Hybrid Energy Systems / Otavio Lopes Alves Esteves; Hossam Gaber	76	Cuboid CANDU Reactor: Technical & Economic Advantages / Ibrahim Attieh; Roger Webb; John Hilborn
10:40-11:05	16	Severe Accident Analysis of a Generic Integral Pressurized Water Reactor with MELCOR / Andrew Morreale	24	Multimarket Control and Operation of an Advanced Nuclear Reactor within an Integrated Energy Park / Konor Frick; Daniel Mikkelsen; Paul Talbot; Aaron Epiney	11	A System-Level Study of MMR integration to ICE-Harvest Systems: Safety and Performance / Kelton Friedrich; James Cotton; Elhameh Narimani; Marin Vratonjic	37	PRELIMINARY SPENT FUEL WASTE EVALUATION AND MANAGEMENT FOR SMALL MODULAR REACTORS / George Xu; Laura Merlo-Sosa; Blair Bromley; KARISHMA PILER
11:05-11:30	46	A Neutronic Investigation of a High Performance Two-Batch Natural Circulation Soluble Boron Free Small Modular Reactor / Steven Wijaya; Xuanha Nguyen; Yonghee KIM	43	USNC Micro Modular Reactor for hybrid hydrogen production applications / Jan Van Ravenswaay; Ken Darlington; Robyn Valin/Christian Rabiti	38	McMaster Transient Critical Heat Flux Facility's Nodalization and CHF Simulation Using ASYST / Yang Liu; Anuj Trivedi; David Novog	48	Neutronic Study of Molten Salt and Metal Reactor for Long-life Operation / eunhyug Lee; Taesuk Oh; Yonghee KIM
11:30-11:55	73	Variable Frequency Drives in Nuclear Power Plants / Marcus Schmitt	52	Small Modular Reactor Deployment for Hybrid Energy Systems and Hydrogen Production at Remote Mines / Megan Goodland; Ilhem Ait Amer Meziane; Nathan Tedford; Michel Carreau; Brian Gihm	44	Flow Regimes and Transition Criteria for Vertical Downward Two-Phase Flow in a Narrow Rectangular Channel / Ji Hwan Jeong; Vikrant Chalgeri	#N/A	