ISSCWR-9 Program
2019 March 10

ISSCWR-9 Program
2019 March 11

		Room A	Room B
7:00-8:15		**Continental Breakfast**	
		Opening (L. Walters, CNL and T. Schulenberg, KIT)	
8:15-8:30		Welcoming Address (K. Huynh, AECL)	
8:30-9:00		Plenary Speaker 1 (joint)	
		Canadian SCWR Program (L. Walters, CNL)	
9:00-9:30		Plenary Speaker 2 (joint)	
		Chinese SCWR Program (Y.P. Huang, NPIC)	
9:30-10:00		Plenary Speaker 3 (joint)	
		European SCWR Program (M. Kryková, CVR)	
10:00-10:30		**Break**	
10:30-11:00		Plenary Speaker 4 (joint)	
		Roadmap for Advanced Nuclear Reactor Development in Canada (D. Brady, NRCan)	
11:00-11:30		Plenary Speaker 5 (joint)	
		IAEA activities on Super-Critical Water-cooled Reactors (T. Jevremovic, IAEA)	
11:30-12:00		Plenary Speaker 6 (joint)	
		Licensing Framework for Advanced Nuclear Reactor in Canada (R. Rulko, CNSC)	
12:00-13:00		**Lunch**	
		Material &Chemistry Session 1 (Lefu Zhang, SJTU and Matthew Edwards, CNL)	**Rod Bundle Heat Transfer (Yanping Huang, NPIC and Laurence L**
13:00-13:30		Results of GIF SCWR 2nd Interlaboratory Exercise on Corrosion of Alloy 800H and 310S in Supercritical Water Radek Novotny	Experimental Study on Heat Transfer to Water in a Three-Rod Bundle with Spacer Grids Shuo Chen, Yao Xiao and Hanyang Gu
13:30-14:00		In-Situ Electrochemical Impedance Measurements on Corrosion of Pure Ni and AISI Type 316L in Sub-Critical and Super-Critical Water Radek Novotny	Analysis of Heat Transfer Characteristics of Canadian SCWR Fuel Assembly Concept Armando Nava Dominguez, Yanfei Rao and Thomas Beuthe
14:00-14:25	Registration		
14:00-14:30		Study of The Corrosion Behavior of An Austenitic Stainless Steel 316 L in Supercritical Water in Comparison with Liquid Water and Steam Sergio García-Rojo, Dolores Gómez-Briceño and Alberto Sáez-Maderuelo	Further details of a numerical analysis on the thermal hydraulic effect of wrapped wire spacers in fuel bundle Attila Kiss and Bence Mervay
14:25-14:50	Registration		
14:30-15:00		Effects of Pressure on Corrosion in Supercritical Water David Guzonas	Assessment of Hydraulics Resistance Model in the ASSERT Subchannel Code for Bundles with Water Flow at Supercritical Pressures Armando Nava Dominguez
14:50-15:10	Registration		
15:00-15:30		**Break**	
15:10-15:35	Registration		
		Material &Chemistry Session 2 (Radek Novotny, JRC and David Guzonas, CNL Retiree)	**2x2 Rod Bundle Heat Transfer (Jinbiao Xiong, SJTU and Armando Nava-Dominguez, CNL)**
15:30-16:00		Characterizing the effects of in-situ sensitization on stress corrosion cracking of austenitic steels in supercritical water Kai Chen, Jiamei Wang, Donghai Du and Xianglong Guo	A numerical study of turbulent upward flow of super critical water in a 2x2 rod bundle with non-uniform heating Bo Liu, Shuisheng He, Charles Moulinec and Juan Uribe
15:35-16:00	Registration		
16:00-16:30		Effect of Temperature on Cracking of SCWR Candidate Materials Lefu Zhang, Kai Chen, Zhao Shen, Bin Gong and Rui Tang	Benchmarking the Subchannel ASSERT-PV Code using the University of Wisconsin-Madison Supercritical Fluid Experiments Armando Nava and Laurence Leung
16:00-18:00	Registration		
16:30-17:00		Evolution of Microstructure and Mechanical Properties of an Oxide Dispersion Strengthened Austenitic Steel During Aging at 973K Shengying Sun, Shuai Xu, Man Wang, Yujuan Wu and Zhangjian Zhou	CFD modeling of Supercritical Pressure Water Heat Transfer in a 2x2 Rod Bundle Jinbiao Xiong
17:00		**End of Day 1**	
18:00-21:00	Reception		

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2019 March 12

	Room A	Room B
7:00-8:00	**Continental Breakfast**	
	Core and Fuel Designs 1 (Akifumi Yamaji, Waseda U. and German Cota-Sanchez, CNL)	**Fundamental Heat Transfer (Guanghui Su, XJTU and Chukwudi Azih, CNL)**
8:00-8:30	Fast neutron irradiation optimization of Th-fuelled SCWR RPV Petra Pónya, Gyula Csom and Sándor Fehér	Computational Fluid Dynamics Analysis of Inlet Plenum, Outlet Header, And Fuel Channels of The Canadian SCWR Mohammed Movassat, Joanne Bailey and Metin Yetisir
8:30-9:00	Overview of Heterogeneous Core Design Studies of Super Fast Reactor at Waseda University Akifumi Yamaji, Shogo Noda and Takanari Fukuda	Experimental Study on Supercritical Freon Heat Transfer Characteristics in A Smooth Circular Tube with Upward and Downward Flows Guojun Yu, Liu Wang, Zhenhui Ma, G.H. Su, Wenxi Tian and S.Z. Qiu
9:00-9:30	Study on Calculation Difference of the SCWR Core Steady State Analysis Code Lianjie Wang, Lei Yao and Di Lu	Flow Characteristic of Supercritical Carbon Dioxide in Mini Tube Shenghui Liu, Yanping Huang and Junfeng Wang
9:30-10:00	Serpent Verification of Canadian SCWR Core Physics Parameters David Watts	Experimental Measurements of Emissivity of Candidate Fuel and Fuel Channel Materials Chukwudi Azih, Michael Paine, Hazem Mazhar and Randy Fong
10:00-10:30	**Break**	
	Core and Fuel Designs 2 (Lianjie Wang, NPIC and Megan Moore, CNL)	**Safety Analysis 2 (Lin Chen, Chinese Academy of Sciences and Thomas Beuthe, CNL)**
10:30-11:00	Research on Improved Simplified SCWR Assembly and Core Design Lei Yao, Bangyang Xia, Di Lu, Lianjie Wang, Xiang Li and Qing Li	Transient Behavior Analysis of Supercritical Fluid Based Circulation Loop Systems Lin Chen
11:00-11:30	Microstructural characterization of GTAW welded Inconel 625 alloy fuel cladding for the Canadian supercritical water reactor design Lin Xiao, German Cota-Sanchez and Laurence Leung	Studies on Heat Transfer of Water During Depressurizing Transient from Supercritical to Subcritical Pressure Zhenxiao Hu, Shuo Chen and Hanyang Gu
11:30-12:00	An Economic Analysis of the Canadian SCWSMR Concept using G4ECONS Toban Verdun, Megan A Moore and Laurence Leung	Heat transfer analysis and assessment of trans-critical pressure transient Meiqi Song, Xiaojing Liu and Xu Cheng
12:00-13:00	**Lunch**	
	Material &Chemistry Session 3 (Alberto Sáez-Maderuelo, CIEMAT and Khash Ghandi, U. Guelph)	**Safety Analysis 1 (Jianqiang Shan, XJTU and Xianmin Huang, CNL)**
13:00-13:30	Radiation chemistry in the coolant of Super-Critical Water-cooled Reactor Khashayar Ghandi	Numerical simulation of a steam injector for passive residual heat removal Thomas Schulenberg and David Heinze
13:30-14:00	Formation of local, transient "acid spikes" in the fast neutron radiolysis of supercritical water (SCW) at 400 oC: A potential source of corrosion in SCW-cooled reactors? Md. Mohsin Patwary, Sunuchakan Sanguanmith, Jintana Meesungnoen and Jean-Paul Jay-Gerin	Study on Thermal Hydraulic Characteristics in Startup of CSR1000 Yuan Yuan, Jianqiang Shan and Pan Wu
14:00-14:30	Corrosion and Hydrogen Evolution in Supercritical Water Reactors Igor Svishchev, Dimitrios Kallikragas and Kashif Choudhry	Accident Analysis of Supercritical Water Reactor in Startup Yuan Yuan, Jianqiang Shan and Pan Wu
14:30-15:00	Lessons Learned, Ground Covered and the Path Ahead With Supercritical Water Reactor Chemistry and Corrosion Matthew Edwards, Kittima Khumsa-Ang and Stephane Rousseau	Integration of Modelling Capabilities in CATHENA for Supercritical Water Reactors Thomas Beuthe
15:00-15:30	**Break**	
	Material &Chemistry Session 4 (Sami Penttila, VTT and Markéta Kryková, CVR)	**Critical Flow Modelling (Kaiwen Du, CIAE and Alberto Teyssedou, Ecole Polytechnique)**
15:30-16:00	Corrosion Behaviour of 17341, Hr3c and Super 304h Austenitic Stainless Steels in Supercritical Water Markéta Kryková, Zuzana Vávrovcová, Jan Macák and Petr Sajdl	Experimental Study of Supercritical Water Choking Flows using a Convergent-Divergent Test Section Alberto Teyssedou, Altan Muftuoglu and Akila Hidouche
16:00-16:30	Oxidation Behavior of AFA Steels in Superheated Steam at 700˚C Bingjue Xiao, Xiao Huang, Zhangjian Zhou and Sami Penttila	A critical flow model for supercritical pressures Yufeng Lv, Minfu Zhao and Kaiwen Du
16:30-17:00	General Corrosion of Zirconium- and Titanium-Based Alloys in Supercritical Water at 500 °C and 25 Mpa Kittima Khumsa-Ang, Matthew Edwards and Stephane Rousseau	Implementation of Modified Homogeneous Equilibrium Break Discharge Model in CATHENA and Application to the Canadian SCWR LOCA Transient Analysis Xianmin Huang, Armando Nava Dominguez and Geoffrey Waddington
17:00	**End of Day 2**	
18:00-18:30	**Pre-Banquet Gathering**	
18:30-21:00	**Symposium Banquet**	

ISSCWR-9 Program
2019 March 13

	Room A	Room B
7:00-8:00	**Continental Breakfast**	
	Instability Analysis 1 (Jinguang Zang, NPIC and Vijay Chatoorgoon, U. Manitoba)	**Numerical Thermalhydraulics Analysis 2 (Walter Ambrosini, U. Pisa and Huixiong Li, XJTU)**
8:00-8:30	A Correlation for Predicting the Onset of Instability for Supercritical Water Natural Circulation Ma Dongliang, Zhou Tao, Feng Xiang and Huang Yanping	Numerical investigation of the vortex generator's effect on the onset of heat transfer deterioration in a vertical pipe flows of water at supercritical pressure. Chika Eze and Jiyun Zhao
8:30-9:00	The Analysis of Natural Circulation Instability Phenomena of Supercritical Water in A Closed Rectangular Loop Jinguang Zang, Fa Lv and Yanping Huang	Analysis of heat transfer to supercritical pressure CO2 by an advanced RANS model Andrea Pucciarelli, Fulvio Buzzi and Walter Ambrosini
9:00-9:30	Investigation on The Flow Instability in Supercritical CO2 Natural Circulation Loop Guangxu Liu and Yanping Huang	Numerical Investigaion on Heat Transfer of Supercritical Water with a Variable Turbulent Prandtl Number Model Xiangfei Kong, Juanjuan Hu, Xianliang Lei, Qian Zhang, Kaikai Guo and Huixiong Li
9:30-10:00	Experimental investigation of flow instability in two vertical parallel channels using super critical CO2 Anantvir Singh Saini, Vijay Chatoorgoon and Dhanashree S Ghadge	Numerical Simulation of Mixed Convection of Supercritical Water Flowing in Vertical Tubes Minfu Zhao, Yuzhou Chen and Yufeng Lv
10:00-10:30	**Break**	
	Coupled Neutronic/Thermalhydraulic Analysis 1 (Attila Kiss, BME and Chukwudi Azih, CNL)	**Heat Transfer Correlation (Xiaojing Liu, SJTU and Metin Yaras, Carleton U.)**
10:30-11:00	About the thermal hydraulic analysis part of a coupled study on a Thorium fueled SCWR concept Attila Kiss, Béla Hegyesi, András Ványi and Gyula Csom	A Critical Review of Deteriorated Heat Transfer Phenomena and Semi-Empirical Convection Heat Transfer Models Accounting for Buoyancy and Bulk Flow Acceleration Influences Andrew W. Copping and Metin I. Yaras
11:00-11:30	Coupled thermohydraulics-neutronics study of a thorium fueled SCWR concept András Szabolcs Ványi, Sándor Fehér, Attila Kiss and Gyula Csom	A State-of-the-Art Review of Supercritical Heat Transfer Correlations Aleksandar Vasic and Thomas Beuthe
11:30-12:00		A New Approach to Generalization of Experimental Data on Heat Transfer to Fluids in Supercritical Region Victor I. Deev, Vladimir S. Kharitonov, Akhmed M. Baisov and Andrey N. Churkin
12:00-12:15	**Closing ()**	

ISSCWR-9 Technical Tour (Registered Participants Only)
2019 March 14

8:30-8:30	Meeting at the hotel lobby
8:30-9:00	Travel to Canada's Particle Accelerator Centre (TRIUMF)
9:00-11:00	Visit of Canada's Particle Accelerator Centre (TRIUMF)
11:00-11:30	Travel to hotel
11:30	**End of Visit**