

8:30-8:55	Welcoming Address	
8:55-9:20	Plenary Speaker 1 (joint) R. Duffey, AECL	
9:20-9:45	Plenary Speaker 2 (joint) B. Chen, NPIC	
9:45-10:10	Plenary Speaker 3 (joint) D. Brady, NRCAN	
10:10-10:30	Break	
10:30-10:55	Material Session 1 (Corrosion) (D. Guzonas, AECL, and C. Ge, USTB) Assessment of recent stress corrosion cracking results for SCWR development: Gaps and Needs Wenyue Zheng, Dave Guzonas and Jingli lu	Thermahydraulics General Session (D.C. Groneveld, U. Ottawa, and Q. Bi, XJTU) Progress of Thermal-hydraulic Research on SCWR in NPIC Huang Yanping, Yan Xiao, Li Yongliang, Zeng Xiaokang, Lu Donghua and Xiao Zejun
10:55-11:20	High temperature oxidation behavior of ODS iron-base alloys for nuclear energy application Ming Li, Zhangjian Zhou, Lu Liao, Wanhua Chen and Changchun Ge	A Comparative Study on Hydraulic Features of Supercritical Water Natural and forced Circulation Loops Bo Kuang
11:20-11:45	Preliminary Analysis of Candidate Alloys for Use in The CANDU-SCWR William Cook, Jamie Miles, Jian Li, Selcuk Kuyucak and Wenyue Zheng	Heat Transfer Calculations for SCWRs Wargha Peiman, Kamiel Gabriel and Igor Pioro
11:45-12:10	Corrosion behavior of P92 steel in supercritical water Kaiju Yin	Recent Improvement of ATHAS Code for SCWR Jianqiang SHAN, Xuanxiang CHEN, Juejie PAN and Yuanbin ZHU
12:10-13:10	Lunch	

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2010 April 26

		Alexander A	Alexander B
13:10-13:35		Chemistry Session 1 (Corrosion Product Transport) (W. Cook, UNB, and L. Zhang, SJTU) An Overview of Corrosion Product Solubilities in Subcritical and Supercritical Water Liyan Qiu and Dave Guzonas	Safety Analysis Session (D. Novog, McMaster, and J. Shan, XJTU) Risk Assessments and Regulatory Concerns for Canada's Gen-IV Reactors Ima Ituen and David Novog
13:35-14:00		The Solubility of Magnetite and Nickel Ferrite Under Supercritical Water Reactor Coolant Conditions Francis Brosseau, David Guzonas and Peter Tremaine	LOFA Analysis of CANDU-SCWR Jianqiang SHAN and Yang JIANG
14:00-14:25	Registration	The Design and Application of A New Bassett-Type Diamond Anvil Cell for Spectroscopic Analysis of Supercritical Aqueous Solutions Alan Anderson, Peter Meredith and William Bassett	Research and Development of One Dimensional Two-Phase System Code Used in Pt-SCWR Ye Tian and Baoshan Jia
14:25-14:50	Registration	Pourbaix Diagrams for Iron, Nickel, and Chromium in Sub-Critical and Supercritical Water William Cook and Robert Olive	Modelling and Simulation of Dynamic Characteristics of CANDU-SCWR Peiwei Sun and Jin Jiang
14:50-15:10	Registration		Break
15:10-15:35	Registration	Core Design and Thermo-Cycle (R. Bodner, AECL, and B. Chen, NPIC) Chinese SCWR R&D in NPIC Songtao LIU	Reactor Core Physics (J. Pencer, AECL, and L. Cao, XJTU) Research on Thermal Neutron Scattering Data for Compounds Guanbo WANG, Kan WANG and Ganglin YU
15:35-16:00	Registration	Development of Out-of-Core Concepts for A Supercritical-Water, Pressure-Tube Reactor William Diamond	Treatment of Neutron Cross Section With Interpolation Xiang Zhang, Ganglin Yu, Guangwen Bi and Kan Wang
16:00-16:25	Registration	Cycle Efficiency and Flowrates in A Supercritical Water Reactor: A Thermodynamic Analysis of The Effects of Final Feedwater Temperature and Number of Feedwater Heaters William Cook and Matthew Edwards	Study on Characters of Th-U Cycle in CANDU SCWR Jianfeng SHI and Gong SHI
16:25-16:50		Nuclear Steam-Reheat Options: Russian Experience Eugene Saltanov, Wargha Peiman, Amjad Farah, Krysten King and Igor Pioro	Simulations of CANDU-SCWR Lattice Cell Using 2D Transport Codes WIMS and NEWT Michael McDonald
16:50-18:00			End of Day 1
18:00-18:30	Reception		
18:30-21:00	Reception		

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2010 April 27

Alexander A

Alexander B

Material Session 2 (Radiation and Microstructure Modeling) (W. Zheng, NRCan-MTL, and Z. Zhou, USTB)

Thermalhydraulics Assessment Session (I. Pioro, UOIT, and K. Du, CIAE)

8:30-8:55	Influence of Stress On Primary Defect Damage in α -Fe Kevin Boyle, Ishraq Shabib and Ronald Miller	Comparison of Existing Heat-Transfer Correlations for Supercritical Water in Vertical Bare Tubes Amjad Farah, Krysten King, Sahil Gupta, Sarah Mokry and Igor Pioro
8:55-9:20	Structure Evolution and Nature of Defects in Bcc Iron by Collision Cascade from Molecular Dynamics Simulation Jun Cai	Assessment of Supercritical Heat-Transfer Correlations Against AECL Database for Tubes Shujun Wang, Lan Qin Yuan and Laurence Leung
9:20-9:45	Molecular Dynamics Simulation of displacement cascades in Fe-10%Cr Systems Gang Yu	Comparison of The Heat Transfer Characteristics of Supercritical Pressure Water to That of Subcritical Pressure Water in Vertically-Upward Tubes Jianguo Wang, Huixiong Li, Shuiqing Yu and Tingkuan Chen
9:45-10:10	Electron Microscope and Three-Dimensional Atom Probe Study of Microstructure of Oxide-Dispersion-Strengthened Steel H. Xing and J. Sun	Comparative Study and Advancement of Supercritical Water Heat-Transfer Correlation for Vertical Bare Tubes Sarah Mokry, Amjad Farah, Sahil Gupta, Krysten King and Igor Pioro
10:10-10:30		Break
10:30-10:55	Chemistry Session 2 (Radiolysis and Chemistry Control) (P. Tremaine, Guelph U., and Y. Ma, NCEPU) Strategies for Corrosion Monitoring and Control in A CANDU-SCWR David Guzonas and Matt Edwards	SCW Experiment Session (L. Leung, AECL, and Y. Huang, NPIC) Experimental Investigation on Heat Transfer of Supercritical Pressure Water in Annular Channel Gang Wu, Qincheng Bi, Zhendong Yang and Mingling Li
10:55-11:20	Monte-Carlo Simulation of The Radiolysis of Supercritical Water At 400oC and Liquid-Like Densities Jintana Meesungnoen, Sunuchakan Sanguanmith, David Guzonas, Craig R. Stuart and Jean-Paul Jay-Gerin	Heat Transfer and Turbulence Measurements in Supercritical Pressure Water Jeremy Licht, Mark Anderson and Michael Corradini
11:20-11:45	Chemical Kinetics in H ₂ O and D ₂ O Under Hydrothermal Conditions khashayar Ghandi, Christopher Alcorn, Gwen Legate, Paul Percival, Jean-Claude Brodovitch and Craig Stuart	Progress on the Insulated Fuel Channel Experiments for Supercritical Water-Cooled Reactors Jeremy Licht
11:45-12:10	Flow Reactor Studies of Hydrazine Stability under Hydrothermal Conditions Relevant to an SCWR Igor Svishev, Andriy Plugatyr and David Guzonas	Progress on the Research of thermal-Hydraulics of SCW in CIAE Yuzhou Chen
12:10-13:10		Lunch

CCSC-2010 Preliminary Program**2010 April 27****Alexander A****Alexander B****Material Session 3 (Corrosion 2) (J. Luo, U. Alberta, and R. Tang, NPIC)****Coupled Neutronic/Thermalhydraulic Analysis**

13:10-13:35	Steel Corrosion in Supercritical Water: An Assessment of The Key Parameters David Guzonas, John Wills, Holly Dole, Jennifer Michel, Sooinn Jang, Meghan Haycock and Maris Chutumstid	Core and Sub-channel Analysis of SCWR with Mixed Spectrum Core Xiaojing Liu, Ting Yang and Xu Cheng
13:35:14:00	Corrosion Tests of Candidate Fuel Cladding and Reactor Internal Structural Materials Lefu ZHANG, Fawen ZHU and Rui TANG	A Core Design of CANDU-SCWR by Three-dimensional Neutronics/Thermal-hydraulics Coupling Liangzhi Cao, Ping Yang and Hongchun Wu
14:00-14:25	Corrosion Database for SCWR Development Gordon Ping Gu, Wenyue Zheng and Dave Guzonas	Comparisons of Thermal SCWR Assembly Designs by In- or Inter-assembly Moderation Peng ZHANG and Kan WANG
14:25-14:50	Preliminary study of oxidation mechanisms in high Cr steels in SCW Roger Newman, Dorota Artymowicz, William Cook and Gianluigi Botton	Models for Safety Analysis of the Generation IV Supercritical Water-Cooled Reactor Geneviève Harrisson and Guy Marleau
14:50-15:10		Break
15:10-15:35	Material Session 4 (Mechanical Properties) (S. Kuyucak, NRCan-MTL, and X. Huang, Carleton U.) Challenges in Mechanical Performance of Materials in SCWR Faramarz Zarandi and William Tyson	Hydrogen Production (S. Suppiah, AECL, and Z. Wang, UOIT) Nuclear Hydrogen Production Suited for Canadian Supercritical Water-Cooled Reactors Sellathurai (Sam) Suppiah, Lorne Stolberg, Sandra York and Alexi Shkarupin
15:35-16:00	High-temperature Persistent Resistance of Hastelloy C-276 Yan Ma	Study On Hydrogen Co-Generation With The Copper-Chloride Cycle Using Process Heat From A Supercritical Water Reactor Andrew Lukomski, Igor Piro and Kamiel Gabriel
16:00-16:25	The Recent Development of Fabrication ODS Ferritic Steels for Supercritical Water-Cooled Reactors Core Application Zhangjian Zhou, Ming Li and Yingli Xu	Degradation of Materials Under Conditions of Thermochemical Cycles for Hydrogen Production Stan Klimas, Henry Searle and Lorne Stolberg
16:25-16:50	Testing of Ultra-filtration Membranes for Application in Generation IV- Super Critical Water Reactor Pascal Mertins, Janusz Kozinski, Ian Butler, Dominic Ryan and Sikun Xu	SCWR Heat Exchange With A Nuclear Thermochemical Hydrogen Plant Zhaolin Wang, Greg Naterer and Kamiel Gabriel
16:50-18:00		End of Day 2
18:00-18:30		Pre-Banquet Gathering
18:30-21:00		Workshop Banquet

CCSC-2010 Preliminary Program**2010 April 28****Alexander A****Material Session 5 (Cracking and Coating) (J. Li, NRCan-MTL, and K. Yin, NPIC)**

- 8:30-8:55 Potential Use of Ceramic Materials for Supercritical Water-Cooled Reactors
Blaine Geddes, Xiao Huang and Dave Guzonas
- 8:55-9:20 Development of Ceramic Coatings for Metallic Components in Supercritical Water-Cooled Reactors
Chunwen Sun, Yongsong Xie, Peter Yao, Lefu Zhang, Jamie Miles, William Cook and Rob Hui
- 9:20-9:45 Stress Corrosion Cracking of 316 SS and Alloy 625 in Supercritical Water
Zhuoyuan Chen, Jingli Luo, Weixing Chen, Wenyue Zheng and David Guzonas
- 9:45-10:10 Delayed Hydride Cracking Properties of CANDU-SCWR Pressure Tube Materials - Excel Zr Alloy
Zhengliang Pan
- 10:10-10:30
- Applications (J. Tyo, AECL, and X. Cheng, SJTU)**
- 10:30-10:55 CANDU Super Critical Water Reactor for Use in Steam Generation for Recovery of Bitumen Resources
Jonathan Tyo, Tracy Zhou, Madan Dhawan, Robert Bodner, Cathy Cottrell and Sermet Kuran
- 10:55-11:20 SCWR Nuclear Production of Hydrogen for Oil Sands Applications
Zhaolin Wang, Greg Naterer and Kamiel Gabriel
- 11:20-11:45 Hydrogen from Nuclear via Thermo-Chemical Process for Passenger Train Service
Gabriel Marin, G. Naterer and K. Gabriel
- 11:45-12:10 Thermal Aspects of Mixed Oxide Fuel in Application to SuperCritical Water-cooled Nuclear Reactors
Lisa Grande, Adrianexy Rodriguez-Prado, Sally Mikhael, Bryan Villamere, Leyland Allison and Igor Piro

Alexander B**Surrogate Fluid Heat Transfer Session (S. Tavoularis, U. Ottawa, and B. Kuang, SJTU)**

- Construction of A Flow Loop for Supercritical Heat Transfer Experiments
Loubna Jeddi, Stavros Tavoularis and Dionysius Groeneveld
- Heat Transfer in A Vertical Bare 7-Element Bundle Cooled With Supercritical Freon-12
Graham Richards, Ashley Milner, Caleb Pascoe, Hemal Patel, Wargha Peiman, Eu. Saltanov, R.S. Pomet'ko, A.N. Opanasenko, A.S. Shelegov, P.L. Kirillov and I.L. Piro
- Fluid-to-Fluid Scaling of Heat Transfer in Supercritical Fluids
Xu Cheng
- Look up Table for Transcritical Heat Transfer
Hussam Zahlan, Dé Groeneveld and Stavros Tavoularis

Break**Lunch**

CCSC-2010 Preliminary Program

2010 April 28

Alexander A

Alexander B

Panel Discussion

13:10-13:35

Chair persons report on session highlight

13:35-14:00

Participants Comments

14:00-14:25

Collaboration Discussions

14:25-14:50

Closing (joint)

14:50-15:10

15:10-15:35

15:35-16:00

16:00-16:25

16:25-16:50

16:50-18:00

18:00-18:30

18:30-21:00

CCSC-2010 Technical Tours (Registered Participants Only)
2010 April 29

2010 April 30

Travel from Toronto to Ottawa (Departing at 07:30)

**Travel from Pembroke to Chalk River Laboratories
(Departing at 07:30)**

8:30-8:55

8:55-9:20

9:20-9:45

9:45-10:10

10:10-10:30

10:30-10:55

10:55-11:20

11:20-11:45

11:45-12:10

12:10-13:10

Lunch

CCSC-2010 Technical Tours (Registered Participants Only)
2010 April 29

2010 April 30

Visit NRCan-MTL

13:10-13:35

13:35-14:00

14:00-14:25

14:25-14:50

14:50-15:10

Travel from Chalk River Laboratories to Toronto

15:10-15:35

15:35-16:00

16:00-16:25

16:25-16:50

16:50-18:00

18:00-18:30

Dinner at Ottawa

18:30-21:00

Travel from Ottawa to Pembroke (Departing at 19:30)

Arriving at Toronto hotel (at ~20:00)