



THICKET

-2020

Seminar on Transfer of Competence, Knowledge and Experience Gained through CSNI Activities in the Field of Thermal-hydraulics

SNC LAVALIN CANDU, SP1 BUILDING, 2251 SPEAKMAN DR., MISSISSAUGA, ON
CANADA L5K 1B1

Program

Monday, May 25, Day 1

08:00 - 08:30	Registration
Session I:	Introductory Session – Chair N. Aksan
08:30 - 09:00	Welcome addresses by CSNI representative & CNS Executive – L1.1 (TBC - <i>Bill Magwood</i>)
09:00 - 09:30	Short Presentation on WGAMA Activities – L1.2 (<i>L. Herranz</i>)
09:30 - 10:00	Short Presentation on EC Activities – L1.3a (<i>TBD</i>)
10:00 – 10:30	Short Presentation on IAEA Activities – L1.3b (<i>TBD</i>)
10:30 - 11:00	Coffee break
11:00 – 11:15	The Program of the Seminar – <i>T. Nitheanandan</i>
11:15 - 12:15	Historical Perspective on the Role and the Achievements of CSNI in the Field of Thermal-hydraulics L 1.4 – <i>N. Aksan</i>
12:15 – 12:30	Evaluations and comments – Session I
12:30 - 13:30	Lunch break
Session II:	Phenomena in Nuclear Thermal-Hydraulics – Chair H. Glaeser
13:30 – 13:40	Introduction - <i>F. D'Auria</i>
13:40 - 14:35	CSNI Integral Test Facility Matrices for Validation of Best Estimate Thermal-Hydraulic Computer Codes L2.1 – <i>H. Glaeser</i>
14:35 - 15:30	CSNI Separate Effects Test Facility Matrices for Validation of Best Estimate Thermal-Hydraulic Computer Codes (including critical review) L 2.2 - <i>N. Aksan</i>
15:30 -16:00	Coffee break
16:00 – 17:00	A Review of Critical Heat Flux (CHF) Phenomena L 2.3 – <i>M. Corradini</i>
17:00 – 17:30	Open time for questions, evaluations and comments on Session II lectures L 2.1, L 2.2, and L 2.3



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Program (Cont'd)

Tuesday, May 26, Day 2

08:00 – 08:30	Comments and (additional) questions about presentations on Day 1
08:30 – 09:30	A review for the Counter Current Flow Limitation (CCFL) phenomenon L2.4 – <i>H. Glaeser</i>
09:30 – 10:30	L2.5 A review for the Two-Phase Critical Flow (TPCF) phenomenon – <i>D. Bestion</i>
10:30 - 11:00	Coffee break
11:00 – 11:40	The 116 phenomena list L2.6 – <i>F. D'Auria</i>
11:40 – 12:00	The Critical Heat Flux (CHF) L2.7 – <i>C. Herer</i>
12:00 – 12:30	Open time for questions, evaluations and comments on Session II lectures L 2.4, L 2.5, L 2.6 and L 2.7
12:30 - 13:30	Lunch break
Session III:	Procedures in Nuclear Thermal-Hydraulics – Chair F. Reventos
13:30 – 13:40	Introduction - <i>F. D'Auria</i>
13:40 – 14:35	Validation in Nuclear Thermal-Hydraulics L 3.1 – <i>B- Bestion</i>
14:55 – 15:30	Scaling in Nuclear Thermal-Hydraulics L 3.2 – <i>F. D'Auria</i>
15:30 -16:00	Coffee break
16:00 – 17:00	Accuracy Evaluation and the Fast Fourier Transform Based Method (FFTBM) L3.3 – <i>A. Prosek</i>
17:00 – 17:30	Open time for questions, evaluations and comments on Session III lectures L3.1, L3.2 and L3.3



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Program (Cont'd)

Wednesday, May 27, Day 3

Session III (Cont'd):	Procedures in Nuclear Thermal-Hydraulics – Chair F. Reventos
08:00 - 08:30	Comments and (additional) questions about presentations on Day 2
08:30 – 09:30	Uncertainty: Uncertainty Methodology Study (UMS), Best-Estimate Methods Uncertainty and Sensitivity Evaluation (BEMUSE) and Post-BEMUSE REflood Model Input Uncertainty Methods (PREMIUM) L3.4 – <i>H. Glaeser</i>
09:30 – 10:30	Sensitivity Analysis and Kv-Scaled Calculations L3.5 – <i>F. Reventos</i>
10:30 - 11:00	Coffee break
11:00 – 11:30	The user effect and the qualification L3.6 – <i>N. Aksan</i>
11:30 – 12:00	The Best Estimate Plus Uncertainty (BEPU) Approach L3.7 – <i>F. D'Auria</i>
12:00 – 12:30	Open time for questions, evaluations and comments on Session III lectures L3.4, L3.5, L3.6 and L3.7
12:30 - 13:30	Lunch break
Session IV:	Special Topics and Complexity – Chair D. Bestion
13:30 – 13:40	Introduction – <i>F. D'Auria</i>
13:40 – 14:35	Containment Nuclear Thermal-Hydraulics L4.1 – <i>L. Herranz</i>
14:35 – 15:30	Computational Fluid Dynamics (CFD) in Nuclear Thermal-Hydraulics L4.2 – <i>Y. Hassan</i>
15:30 - 16:00	Coffee break
16:00 – 16:40	The Primary Transport System in Nuclear Thermal-Hydraulics with Emphasis on the role of CFD L4.3 – <i>D. Bestion</i>
16:40 – 17:20	The Boiling Water Reactor Stability and Code Coupling L4.4 – <i>F. D'Auria</i>
17:20 – 18:00	CFD Perspectives L4.5 – <i>D. Bestion</i>
6:00 to 10:30	Official Dinner



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Program (Cont'd)

Thursday, May 28, Day 4

Session IV (Cont'd):	Special Topics and Complexity – Chair D. Bestion
08:00 – 08:30	Comments and (additional) questions about presentations on Day 3
08:30 – 09:20	The Boron issue in Pressurized Water Reactors L4.6 – <i>K. Umminger</i>
09:20 – 10:00	Status of 3-D code modelling L4.7 – <i>C. Herer</i>
10:00 – 10:40	Scaling applications L4.8– <i>C-H. Song</i>
10:40 - 11:00	Coffee break
11:00 – 11:30	Open time for questions, evaluations and comments on Session IV lectures L4.1 to L4.8
Session V:	Nuclear Thermal-Hydraulic Issues in CANDU Reactors – Chair T. Nitheanandan
11:30 – 12:15	Nuclear Thermal-Hydraulic Issues in CANDU design L5.1 – <i>D. Novog</i>
12:15 – 13:00	Nuclear Thermal-Hydraulic issues in CANDU safety L5.2 – <i>V. Snell</i>
13:00 - 14:00	Lunch break
14:00 – 17:30	Departure to Darlington Darlington NPP remarks



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Program (Cont'd)

Friday, May 29, Day 5

08:00 - 08:30	Comments and (additional) questions about presentations on Day 4
Session VI:	OECD/NEA Projects in Nuclear Thermal-Hydraulics – Chair K. Umminger
08:30 – 08:40	Introduction - <i>F. D'Auria</i>
08:40 – 09:35	The Primary Coolant Loop Test facility (PKL) Project L6.1- <i>K. Umminger</i>
09:35 – 10:30	The Nuclear Energy Agency Rig-of-Safety Assessment (ROSA) Project L6.2 – <i>H. Nakamura</i>
10:30 - 11:00	Coffee break
11:00 – 11:45	The Advanced Thermal-hydraulic Test Loop for Accident Simulation (ATLAS) project L6.3 – <i>C-H. Song</i>
11:45 – 12:30	The PANDA project L6.4 – <i>N. Aksan</i>
12:30 - 13:30	Lunch break
13:30 – 14:15	The Spent Fuel Pool (SFP) project L6.5 – <i>M. Adorni</i>
14:45 – 15:30	The Core Exit Temperature (CET) issue in Nuclear Thermal-Hydraulics L6.6 – <i>H. Nakamura</i>
15:30 – 16:00	Open time for questions, evaluations and comments on Session VI lectures L6.1, L6.2, L6.3 and L6.4
Session VII:	Open discussion for the entire THICKET-2020 – perspectives – Chair C-H. Song
16:00 – 16:30	Open discussion for the entire THICKET-2020 – perspectives
16:30 – 17:00	Filling the Questionnaire
17:00 – 17:30	Distribution of Certificates End of THICKET-2020