

**2004 Oct. 12**

**Reception/Réception**

21:00, La Terrasse

**2004 Oct. 13**

**Welcome Remarks/Mot de bienvenue**

08:45, Auditorium

*Conference Chair/Président de la conférence: H.M. Huynh*

**SESSION 1**

**Plenary/Plénière**

09:00–12:00, Auditorium

*Co-Chairs/Présidents: J. Luxat (McMaster University),*

*D. Rozon (École Polytechnique de Montréal)*

**CNS Luncheon/Déjeuner SNC**

12:00, Les Courants

*Presentation of/Présentation de M. Beaudet, Chef Sécurité nucléaire, Gentilly 2, Hydro-Québec*

*«Energy Supply & Demand in the Québec Scene»*

**SESSION 2A**

**Code & Modelling I/Logiciels et modélisation I**

14:00–17:00, Auditorium

*Co-Chairs/Présidents: V.S. Krishnan (AECL), TBA/à venir*

**SESSION 2B**

**Reactor Physics/Physique du réacteur**

14:00–17:00, St-Laurent

*Co-Chairs/Présidents: A. Hébert (École Polytechnique de Montréal), O. Nainer (Bruce Power)*

**2004 Oct. 14**

**SESSION 3A**

**Safety Analysis I/Analyse de sûreté I**

09:00–12:00, Auditorium

*Co-Chairs/Présidents: G. Hotte (Hydro-Québec),*

*R. Chun (Bruce Power)*

**SESSION 3B**

**Thermalhydraulics I/Thermohydraulique I**

09:00–12:00, St-Laurent

*Co-Chairs/Présidents: F. D'Auria (University of Pisa),*

*P. Chan (Bruce Power)*

**SESSION 3C**

**Fuel Channels I/Canaux de combustible I**

09:00–12:00, St-Charles

*Co-Chairs/Présidents: R. Aboud (AECL),*

*M. Bayoumi (Nuclear Safety Solutions Ltd.)*

**Delegates' Free Time/Temps libre**

12:00–14:00

**SESSION 4A**

**Neutronics Methods/Méthodes de neutronique**

14:00–17:00, Auditorium

*Co-Chairs/Présidents: M. Gold (Candesco), TBA/à venir*

**SESSION 4B**

**Thermalhydraulics Methods/  
Méthodes de thermohydraulique**

14:00–16:35, St-Laurent

*Co-Chairs/Présidents: L.K.H. Leung (AECL), TBA/à venir*

**SESSION 4C**

**Fuel Channels II/Canaux de combustible II**

14:00–17:00, St-Charles

*Co-Chairs/Présidents: M.A. Petrilli (MAPSAN),*

*M. Puls (AECL)*

**Pre-banquet Cocktail/Cocktail pré-banquet**

17:00, Régence A

**Banquet/Banquet**

18:00, Régence A

*Banquet Speaker/Conférencier:*

*D. Meneley, Director/Directeur, COG-CANTEACH,*

*«Now that we've arrived, where shall we go?».*

*Entertainment/Divertissements:*

*Music and concert – Concert de musique et de chant*

**2004 Oct.15**

**SESSION 5A**

**Safety Analysis II/Analyse de sûreté II**

09:00–11:35, Auditorium

*Co-Chairs/Présidents: B. Willemsen (New Brunswick Power),*

*Y. Parlatan (OPG)*

**SESSION 5B**

**Code & Modelling II/Logiciels et modélisation II**

09:00–12:00, Auditorium

*Co-Chairs/Présidents: D. Jenkins (AECL),*

*G. Marleau (École Polytechnique de Montréal)*



**SESSION 5C**

**Simulator/Simulateur**

09:00–12:05, St-Charles

*Co-Chairs/Présidents: G. Bereznai (UOIT),*

*D. Austman (OPG)*

**CNS Luncheon/Déjeuner de la SNC**

12:00, Les Courants

*Presentation of CNS President/*

*Présentation du président de la SNC:*

*W.G. Schneider,*

*«The CNS–25 Years of success–On with the future»*

**SESSION 6A**

**Thermalhydraulics II/Thermohydraulique II**

14:00–17:00, Auditorium

*Co-Chairs/Présidents: A. Teyssedou (École Polytechnique de Montréal),*

*D.C. Groeneveld (University of Ottawa)*

**SESSION 6B**

**Containment/Confinement**

14:00–17:00, St-Laurent

*Co-Chairs/Présidents: A. Muzumdar (OPG),*

*R. Moffett (AECL)*

**SESSION 6C**

**Operation Support/  
Soutien à l'exploitation**

14:00–16:35, St-Charles

*Co-Chairs/Présidents: J. Ballyk (AECL),*

*J. Donnelly (Nuclear Safety Solutions Ltd.)*

**Montréal, Québec, Canada, 2004 Oct. 12–15**



# Session 1: Plenary – Plénière

*Co-chairs/Présidents: J. Luxat (McMaster University) & D. Rozon (École Polytechnique de Montréal)*

**Refurbishment of Point Lepreau Generating Station**, *P.D. Thompson (New-Brunswick Power), R. Jaitly, N. Ichiyen (Atomic Energy of Canada Limited), M.A. Petrilli (MAPSAN)*

**Constitutive model for reinforced concrete applied in the analysis of the Gentilly-2 reactor building**, *V. Gocevski (Hydro-Québec)*

**LWR reactivity accident analysis and its significance in the U.S. regulatory process**, *D.J. Diamond, A.L. Aronson, B.P. Bromley (Brookhaven National Laboratory, U.S.A.)*

**Approach and methods to evaluate the uncertainty in system thermalhydraulic calculations**, *F. D'Auria (Università di Pisa, Italy)*

**Implementation of low void reactivity fuel in Bruce B**  
*R.M. Chun, F.C. Iglesias (Bruce Power), G.H. Archinoff (Candesco Research Corp.)*

**Generation IV power for the future: Status of the SCWR**  
*R.B. Duffey (Atomic Energy of Canada Limited)*





# Session 2A: Code & Modelling I – Logiciels et modélisation I

*Co-chairs/Présidents: V.S. Krishnan (Atomic Energy of Canada Limited) & TBA/à venir*

## **25-years three-fluid modeling-experience: Successes and limits**

*N.I. Kolev (Framatome ANP, Germany)*

## **RELAP5/Mod3.2 re-analysis and accuracy quantification of loft experiment L2-5**

*A. Petruzzi, W. Giannotti, F. D'Auria (Università di Pisa, Pisa, Italy)*

## **A restructuring of CF/EDF packages for MIDAS computer code**

*S.H. Park, K.R. Kim, D.H. Kim (Korea Atomic Energy Research Institute, Korea)*

## **Development of a transient thermal-hydraulic analysis code for CARR**

*W. Tian, J. Wang, Y. Guo, S. Qiu, D. Jia (Xian Jiaotong University, China)*

## **Validation of CATHENA Mod-3.5c/Rev 0 for channel coolant voiding**

*T.V. Sanderson, D.F. Wang (Atomic Energy of Canada Limited)*

## **CATHENA new post-dryout heat transfer methodology**

*R. Girard (Hydro-Québec), B.N. Hanna, L.K.H. Leung (Atomic Energy of Canada Limited)*





# Session 2B: Reactor Physics – Physique du réacteur

*Co-chairs/Présidents: Alain Hébert (École Polytechnique de Montréal) & Ovidiu Nainer (Bruce Power)*

**Bruce A restart phase B commissioning physics tests - A comparison between measurements and calculations**, *C. Ngo-Trong (Atomic Energy of Canada Limited), M. Gold (Bruce Power; currently with CANDESCO Research Corporation), D.A. Jenkins, W. Shen, A. Mao, P. Schwanke (Atomic Energy of Canada Limited)*

**Neutronic simulations of the NRU Mk7 fast-neutron rods for material testing**  
*T.C. Leung (Atomic Energy of Canada Limited)*

**Space-dependent kinetics of CANDU-PHWR based on nodal methods**  
*I.S. Hong, C.H. Kim (Seoul National University, Korea)*

**SORO post-simulations of Bruce A Unit 4 in-core flux detector verification tests**  
*E. Braverman, O. Nainer (Bruce Power)*

**RFSP power rundown simulation of Bruce Power Unit 7 Shutdown System One (SDS1) trip test**, *H. Albasha, O. Nainer (Bruce Power)*

**Application of nonlinear iteration semi-analytic nodal method in CANDU reactor fuel management**, *X.D. Huo, Z.H. Xie (Xian Jiaotong University, China)*





# Session 3A: Safety Analysis I – Analyse de sûreté I

*Co-chairs/Présidents: Guy Hotte (Hydro-Québec) & Robert Chun (Bruce Power)*

## **An experimental simulation study of debris quenching in a radially stratified porous bed**

*B.R. Sehgal, A.K. Nayak, A. Stepanyan (Royal Institute of Technology, Sweden)*

## **Safety analysis of RBMK-1500 using best estimate approach**

*E. Uspuras, A. Kaliatka (Lithuanian Energy Institute, Lithuania)*

## **Development of NSSS transient analyzer based on best-estimate codes for pressurized water reactor**

*H.-S. Lim, H.-G. Kim, Y.-K. Bae, S.-W. Lee, S.-J. Oh, S.-J. Cho (Korea Hydro & Nuclear Power Co. Ltd, Korea)*

## **Safety assessment of a dry storage container drop into irradiated fuel bays**

*Y. Parlatan, D. Oh, D. Arguner (Ontario Power Generation), Q.M. Lei, T. Kulpa, M.H. Bayoumi (Nuclear Safety Solutions Ltd.)*

## **Simulation of transient heat transfer in MACSTOR/KN-400 module storing irradiated CANDU fuel**

*G. Sabourin (Atomic Energy of Canada Limited), K.-H. Lee, J.-H. Yoon, B.-I. Choi, H.-Y. Lee, M.-J. Song (KHNP, Nuclear Environment Technology Institute, Korea)*

## **Evaluation of safety margins during dry storage of CANDU fuel in MACSTOR/KN-400 module**

*R. Beaudoin, R. Shill (Atomic Energy of Canada Limited), K.-H. Lee, J.-H. Yoon, B.-I. Choi, H.-Y. Lee, M.-J. Song (KHNP, Nuclear Environment Technology Institute, Korea)*





# Session 3B: Thermalhydraulics I – Thermohydraulique I

*Co-chairs/Présidents: Prof. F. D'Auria (Università di Pisa, Italy) & Paul Chan (Bruce Power)*

## **Simulation of the formation of slugs in a vertical-to-horizontal obstructed flow**

*N. Onder, A. Teyssedou (École Polytechnique de Montréal), D. Roubtsov (McGill University)*

## **Single-phase pressure-drop model for aligned and misaligned CANDU bundles**

*L.K.H. Leung (Atomic Energy of Canada Limited)*

## **Experimental investigation of inverted annular film boiling for vertical up-flow**

*M.A. El Nakla, J. Yang (University of Ottawa), D.C. Groeneveld (University of Ottawa & Atomic Energy of Canada Limited), S.C. Cheng (University of Ottawa)*

## **Effect of bearing pad height on single-phase pressure drop in aligned and misaligned 7-element bundle strings, M.K.Y. Ip, S.V. Irving, L.K.H. Leung (Atomic Energy of Canada Limited)**

## **Pressure drop tests for CANFLEX bundles with higher bearing-pads in uncrept and 5% uniformly crept channels, S.K. Yang, L.K.H. Leung, Y. Guo (Atomic Energy of Canada Limited)**

## **Numerical simulation of turbulent flow and heat transfer in parallel channel with an obstacle and verification of the field synergy principle**

*W. Tian, M. Aye, S. Qiu, D. Jia (Xian Jiaotong University, China)*





# Session 3C: Fuel Channels I – Canaux de combustible I

*Co-chairs/Présidents: Ron Aboud (Atomic Energy of Canada Limited) & M. Bayoumi (Nuclear Safety Solutions Ltd.)*

## **BOW: Comparisons of creep calculations with analytical solutions**

*G.S. Xu (Atomic Energy of Canada Limited), S.D. Yu (Ryerson University, Toronto),*

*M. Tayal, Z. Xu (Atomic Energy of Canada Limited)*

## **Analysis of delayed creep rupture test conditions to qualify new calandria tubes for CANDU-6 reactors, T. Nitheanandan, P.D. Neal (Atomic Energy of Canada Limited)**

## **Computer simulation of texture and microstructure transformation of Zr alloys during the annealing process, H. Li (McGill University, and RseMat Corp.), J. Lin, J. Szpunar (McGill**

*University)*

## **Computer simulation of hydrogen ingress and oxidation kinetics on Zr-Nb pressure tubes**

*H. Li (McGill University, and ResMat Corp.), J. Lin, J. Szpunar (McGill University)*

## **Computer simulation of oxide formation in Zr-Nb pressure tubes**

*H. Li (McGill University, and ResMat Corp), J. Lin, J. Szpunar (McGill University)*

## **The crystal structure of pure and doped urania**

*B. Szpunar (Atomic Energy of Canada Limited), J. Szpunar (McGill University)*





# Session 4A: Neutronics Methods – Méthodes de neutronique

*Co-chairs/Présidents: Marv Gold (CANDESCO) & TBA/à venir*

## **Application of the generalized multigroup method for a continuous gamma spectrum**

*source, I.K. Attieh, R.E. Pevey (University of Tennessee Knoxville, USA)*

## **3D Large-scale calculations using the method of characteristics**

*M. Dahmani, R. Roy, J. Koclas (École Polytechnique de Montréal)*

## **Application of a combined eulerian-lagrangian mesh updating method to the rod cusping problem,**

*D. Gilbert, W. J. Garland, W.F.S. Poehlman (McMaster University)*

## **A first attempt at a CANDU-6 core tracking using coupled DRAGON/DONJON calculations,**

*E. Varin, G. Marleau (École Polytechnique de Montréal)*

## **Algebraic collapsing acceleration of the characteristics method with anisotropic**

*scattering, R. Le Tellier, A. Hébert, R. Roy (École Polytechnique de Montréal)*

## **A novel channel selection method for CANDU refueling based on BPANN and GA technique,**

*X.D. Huo, Z.H. Xie (Xian Jiaotong University, China)*





# Session 4B: Thermalhydraulics Methods – Méthodes de thermohydraulique

*Co-chairs/Présidents: L. Leung (Atomic Energy of Canada Limited) & TBA/à venir*

**MNRSIM: An interactive visual model which links thermal hydraulics, neutron production, fuel management and other phenomena**

*D. Gilbert, W.J. Garland, T. Ha (McMaster University)*

**Adaptation of a generic model to solve flows and pressures hydraulic networks for the solution of electrical networks**

*E.J. Roldán-Villasana, Y. Mendoza-Alegría (Instituto de Investigaciones Eléctricas, Mexico)*

**Assessment of standard formats for data exchange between scientific codes**

*R. Moffett (Atomic Energy of Canada Limited), D. Shalaby (Waterloo University)*

**Optimization of subchannel simulations by using genetic algorithms**

*A. Nava-Dominguez, A. Teyssedou (École Polytechnique de Montréal)*

**Optimization of heat exchanger networks using genetic algorithms**

*A. Teyssedou, J. Dipama (École Polytechnique de Montréal), M. Sorin (CANMET Energy Technology Centre)*





# Session 4C: Fuel Channels II – Canaux de combustible II

*Co-chairs/Présidents: M.-A. Petrilli (MAPSAN) & M. Puls (Atomic Energy of Canada Limited)*

**Sub-channel analysis by RELAP5 system code of boil-off experiment (Test 5002) with Neptun facility**, *A. Petruzzi, (The Pennsylvania State University, USA), A. Bousbia Salah, F. D'Auria (Università di Pisa, Italy)*

**Modelling of pressure tube quench using PDETWO**

*Y. Parlatan (Ontario Power Generation), Q.M. Lei (Nuclear Safety Solutions Ltd.), M. Kwee (Bruce Power)*

**Use of CATHENA to model calandria-tube/moderator heat transfer after pressure-tube/calandria-tube ballooning contact**, *H.Z. Fan, Z. Bilanovic, T. Nitheanandan (Atomic Energy of Canada Limited)*

**Moderator analysis of the Wolsong Units 2/3/4 for the case of 35% RIH breaks with loss of ECC injection using CFX-4.4**, *C. Yoon, B.-W. Rhee, B.-J. Min (Korea Atomic Energy Research Institute, Korea)*

**Assessment of ACR moderator circulation design using CFD**

*R. Bunama, L.N. Carlucci, G.M. Waddington (Atomic Energy of Canada Limited)*





# Session 5A: Safety Analysis II – Analyse de sûreté II

*Co-chairs/Présidents: Bruce Willemsen (NB Power) & Yuksel Parlatan (Ontario Power Corporation)*

**Development, qualification and use of a code with the capability of internal assessment of uncertainty,** *A. Petruzzi (The Pennsylvania State University, USA, and Università di Pisa, Italy),*

*W. Giannotti, F. D'Auria (The Pennsylvania State University, USA), K. Ivanov (Università di Pisa, Italy)*

**Analyses and sensitivity studies on VVER1000 using the best-estimate model RELAP5/PARCS,** *J. Vedovi, K. Ivanov (The Pennsylvania State University, USA), F. D'Auria (Università di Pisa, Italy)*

**Best estimate and uncertainty analysis of a critical large break loss of coolant accident at Darlington NGS,** *N. Hunt (Nuclear Safety Solutions Ltd.), A. Muzumdar (Ontario Power Generation),*

*H. Xie, P. de Buda, Y. Liu, E. Holliday (Nuclear Safety Solutions Ltd.),*

*H. Sills (Auromont Reasearch, for Nuclear Safety Solutions Ltd.),*

*R. Huget (R.G. Huget Research Inc., for Nuclear Safety Solutions Ltd.)*

**Methodology for calculating doses to equipments in reactor building following LOCA/LOECI accidents,** *H.M. Huynh (Hydro-Québec), R. Moffett (Atomic Energy of Canada Limited)*

**Development of a discharge model for the Bopp & Reuther degasser/condenser relief valves for heat sink assessment,** *C. Hasnaoui (Energie, Calculs & Solutions Inc.), H.M. Huynh (Hydro-Québec)*





# Session 5B: Code & Modelling II – Logiciels et modélisation II

*Co-chairs/Présidents: D. Jenkins (Atomic Energy of Canada Limited) & Guy Marleau (École Polytechnique de Montréal)*

## **Application of a CADIS-like variance reduction technique to electron transport**

*B. Dionne, A. Haghghat (University of Florida, USA)*

## **Simulation of power pulses during large break LOCAs in natural and slightly enriched cores in the Embalse NPP, A. Parrondo, P. Serrano, M. Higa (Nucleoeléctrica Argentina S.A., Argentina)**

## **Development of a micro-depletion model to use WIMS properties in history-based local-parameter calculations in RFSP, W. Shen (Atomic Energy of Canada Limited)**

## **A heterogeneous coarse mesh transport solution for a 2-D CANDU-6 benchmark problem**

*B. Forget, G. Ilas, F. Rahnema (Georgia Institute of Technology, USA)*

## **Adjuster rods reactivity evaluation using a detailed geometry model in DRAGON**

*M. Beaudoin, J. Koclas, G. Marleau (École Polytechnique de Montréal)*

## **VISWAM a computer code package for thermal reactor physics computations**

*V. Jagannathan, T.K. Thiyagarajan, S. Ganesan, R.P. Jain, U. Pal (Bhabha Atomic Research Centre, India),*

*R. Karthikeyan (École Polytechnique de Montréal)*





# Session 5C: Simulator – Simulateur

*Co-chairs/Présidents: George Bereznai (UOIT) & Dan Austman (Ontario Power Generation)*

## **Simulating reactor dynamics at the nuclear department DCEME**

*A.C. Thompson (Nuclear Dept. DCEME, HMS SULTAN, UK)*

## **ANSTO replacement research reactor training simulator development with FARSim**

*A. Etchepareborda, C.A. Flury, F. Lema, F. Maciel, D. Alegrechi, G. Ibarra, M. Muguero, M. D'Amico (Bariloche Atomic Centre, Argentine National Atomic Energy Commission, Argentina)*

## **Development of severe accident guidance module for the SATS simulator**

*K.R. Kim, S.H. Park, D.H. Kim, Y.M. Song (Korea Atomic Energy Research Institute, Korea)*

## **A framework for evaluating distributed control systems in nuclear power plants**

*C. O'Donell, J. Jiang (University of Western Ontario)*

## **Development of support platform for research on digitized instrument and control system in nuclear power plant**

*R. Hu, Y. Yang, M. Lin, R. Zhang (Shanghai Jiao Tong University, China), X. Xu (Technology Centre, Guangdong Nuclear Power Group, China)*

## **The D2G2 project: A new software tool for nuclear engineering design in Canada**

*P. Rhéaume, J.F. Lefebvre, R. Roy, J. Koclas (École Polytechnique de Montréal)*





# Session 6A: Thermalhydraulics II – Thermohydraulique II

*Co-chairs/Présidents: Alberto Teysseidou (École Polytechnique de Montréal) & D.C. Groeneveld (University of Ottawa)*

## **Assessment of Critical-Heat-Flux look-up tables, experimental data and selected correlations**

*A. Durmayaz (University of Ottawa, and Istanbul Technical University, Turkey), D.C. Groeneveld (University of Ottawa, and Atomic Energy of Canada Limited), S.C. Cheng (University of Ottawa)*

## **An improved look-up table for critical heat flux in tubes**

*D.C. Groeneveld (Atomic Energy of Canada Limited, and University of Ottawa), A.Z. Vasic (Atomic Energy of Canada Limited), A. Durmayaz (Istanbul Technical University, Turkey), J.Q. Shan (Xi'an Jiaotong University, China), L.K.H. Leung (Atomic Energy of Canada Limited), S.W. Peng (Huazhong University of Science & Technology, China), J. Yang, S.C. Cheng (University of Ottawa)*

## **An investigation of the effect of axial heat-flux distribution on the critical heat flux in tubes**

*J. Yang (University of Ottawa), D.C. Groeneveld (University of Ottawa, and Atomic Energy of Canada Limited), S.C. Cheng (University of Ottawa), L.K.H. Leung (Atomic Energy of Canada Limited), M.A. El Nakla (University of Ottawa)*

## **An assessment of critical channel power variations in full-core implementation of CANFLEX Mk-IV bundles with natural uranium fuel**, *Y. Guo, L.K.H. Leung (Atomic Energy of Canada Limited)*

## **Effects of coherent structures on flow and heat transfer characteristics in a rod-wall gap region**

*D. Chang, S. Tavoularis (University of Ottawa)*





# Session 6B: Containment – Confinement

*Co-chairs/Présidents: A. Mujumdar (Ontario Power Generation) & R. Moffett (Nuclear Safety Solutions Ltd.)*

## **Investigations on steam explosion phenomena with FARO and TROI experiments**

*A.K. Nayak, H.S. Park (Royal Institute of Technology, Sweden), A. Annunziato (Joint Research Centre, Ispra, Italy),*

*B.R. Sehgal (Royal Institute of Technology, Sweden)*

## **Hydrogen distribution and mitigation in CANDU-6 containment for LOCA/LOECC accidents,**

*P. Hernu, R. Moffett (Atomic Energy of Canada Limited), H.M. Huynh (Hydro-Québec), T. Chapman (NB Power)*

## **Fission product distribution simulation during large LOCA accidents for PHWR**

*Y.M. Song, S.Y. Park, K.R. Kim, S.H. Park (Korea Atomic Energy Research Institute, Korea)*

## **The European source-term evaluation code ASTEC: Status and applications, including CANDU plant applications,**

*J.P. Van Dorsselaere, P. Giordano, M.P. Kissane, T. Montanelli (Institut de Radioprotection et de Sûreté Nucléaire, France), B. Schwinges (Gesellschaft für Anlagen und Reaktorsicherheit, Germany), S. Ganju (Bhabha Atomic Research Centre, India), L. Dickson (Atomic Energy of Canada Limited)*

## **SOPHAEROS-IST 2.0 validation: An update on the current status**

*L.W. Dickson, R.S. Dickson, R.J. Lemire, S. Sunder (Atomic Energy of Canada Limited)*

## **Neutron beam and shielding design of MNR high-speed neutron radiography facility**

*A.M. Khaial, G.D. Harvel, N. Harrison, J-S. Chang (McMaster University)*





# Session 6C: Operation Support – Soutien à l'exploitation

*Co-chairs/Présidents: John Ballyk (Atomic Energy of Canada Limited) & Jim Donnelly (Nuclear Safety Solutions Ltd.)*

**TRANSITORION – Program for the simulation of zone liquid level evolution in power and reactivity transients**, *E. Coutsiers, M. Pomerantz, C. Moreno (Central Nuclear Embalse Nucleoeléctrica Argentina S.A., Argentina)*

**The residual stress evaluation for expansion process of steam generator tubes**  
*C.-S. Kong, S.-C. Lee, D.-N. Shim (Doosan Heavy Industries & Construction, Korea)*

**Steam generator maintenance virtual simulation**  
*R. Lampron (Opti-conseil Inc., Bécancour, QC, Canada)*

**Simulation of CANDU 6 LLOCA power transients terminated by SDS1 with a full 2-energy-group coupled RFSP-IST/CATHENA approach**  
*R.D. McArthur, W.E. Ross (Atomic Energy of Canada Limited), S. Kaveh (Hydro-Québec)*

**A review of NUCIRC development in support of CANDU plant aging assessments**  
*D.J. Wallace, W. Hartmann, (Atomic Energy of Canada Limited)*

